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Joint Committee on Finance

Paper #791

Modernization of DOT Software Systems (Transportation -- Motor Vehicles)

[LFB 2023-25 Budget Summary: Page 649, #2 and Page 661, #4b]

CURRENT LAW

The Department of Transportation (DOT) utilizes a portfolio of over 150 software applications to perform a variety of essential functions, including applications used by the Department of Motor Vehicles (DMV) to manage customers' personally identifiable information and issue driver licenses and identification cards.

DISCUSSION POINTS

1. This paper discusses two provisions contained in Assembly Bill 43/Senate Bill 70 (AB 43/SB 70) that would provide funding to modernize DOT software systems: (a) a DMV software system modernization project; and (b) employment of two contractors improve the security of DOT software applications.

A. DMV Software System Modernization

2. DOT's Division of Motor Vehicles (DMV) operates 80 permanent customer service centers and eight satellite service centers around the state. These centers provide essential motor vehicle services, including the registration and titling of motor vehicles, and the administration of driving skills and knowledge tests. In addition, the centers provide other critical services to Wisconsin residents, such as issuing driver licenses and identification cards, which are the two most common sources for proof of identification for voting purposes, and providing REAL ID-compliant identification cards, which are currently set to be required for federal identification purposes beginning May 7, 2025.

3. DMV utilizes a variety of software applications to perform essential functions including

serving customers, processing revenue, sharing information with external agencies, and storing data including customers' personally identifiable information. The Department indicates that its most recent software system update occurred in 2004 when it introduced its current vehicle registration and title system, which is used to perform a wide range of functions related to motor vehicle administration. Due to the Department's widespread use of 1980s software at that time, the registration and title system was developed based on functionality with this existing older software. The Department indicates that it continues to use the 2004 registration and title system, along with approximately 30 software applications from the 1980s.

4. The Department states that these aging software systems require significant resources to maintain and keep operational. In 2021, the Department received approximately 1,400 information technology (IT) requests related to problems or failures with DMV software systems. The Department also indicates that continued use of the older software systems would increase the risk of data breaches and cyber-attacks, which could compromise the security of customers' personally identifiable information, and that it faces challenges finding technicians who are capable of maintaining these increasingly obsolete systems.

5. DMV software systems must also interface with several national applications in order to verify information on customers' driver license status, voter status, lawful status, vehicle title history, driver discipline records and more with data from other states. The American Association of Motor Vehicle Administrators has indicated that beginning in 2025 it will no longer provide support for legacy systems to connect with federal interfaces, which could significantly impede DMV's ability to carry out these essential functions.

6. In addition, the Department has recently launched initiatives to shift some DMV customer operations online, which can reduce workload on DMV staff, create cost savings, and provide increased convenience to customers. The Department indicates that while these types of technology-based initiatives are increasingly being used nationally and can improve the efficiency of DMV operations, they have also further exposed the limitations of its current software systems. For example, in 2020 the Department introduced the alternating online driver license renewal pilot program, which allows customers to renew their driver license online in alternating eight-year periods, and the skills-test waiver pilot program, which allows new drivers to attain driver licenses without taking an in-person road test.

7. In the 2021-23 budget, the Governor recommended providing \$400,000 in one-time funds for a system modernization survey, which would have hired a consultant to help DMV to develop a business plan for improving and replacing its outdated software systems. However, this recommendation was not included in the 2021-23 budget act. The Department indicates that the a higher level of funding recommended in 2023-25 would be used to directly implement software upgrades rather than carry out a survey, as a more imminent need to address DMV's current software issues exists.

8. DMV currently has 10.0 budgeted IT-related FTE positions, and employs 11 additional IT contractors. DMV's FTE positions are employed under DOT's agency-wide Bureau of Information Technology Services (BITS), which is discussed further below. In 2022-23, DMV budgeted \$366,000 for employee computer system access, and an additional \$1,649,999 for IT contractor support. The

Department indicates that these budgeted amounts are used to help maintain current operations and make limited updates and troubleshoot problems with DMV's existing software systems, but are insufficient to implement the recommended DMV software system modernization project.

9. AB 43/SB 70 provides \$5,000,000 in 2024-25 to DMV's general operations appropriation, which would be used to initiate a ten-year master lease to fund the development and implementation of a software system modernization project. This would establish an ongoing increase of \$5,000,000 in base-level funding for DMV, which could be used to continue funding a master lease for the software system modernization project in future years. [Alternative A1]

10. The Department included an estimate for the cost to replace its current registration and title software system, as well as other DMV software systems in its 2023-25 biennial agency budget request, which is based on a case study from Michigan DMV's recent replacement of similar software systems. Michigan DMV reported that its software system modernization project lasted approximately five years and cost approximately \$68.7 million. The Department indicates that the recommended software modernization project in Wisconsin would be less extensive than Michigan's, estimating that a project to implement the modernization would cost an estimated \$30 million and last approximately three years. While the project is estimated to last three years, a ten-year master lease is recommended in order to pay project costs over a longer time period. The Department indicates that the project would provide several benefits including advancing DMV's capability to provide electronic vehicle titling, increasing user-friendliness for DMV staff and customers, improving integration with other software systems both within and outside of DOT, and increasing DMV's operational efficiency.

11. Given the Department's \$30 million estimate for the ten-year project master lease, the Committee could instead provide ongoing funding of \$3,000,000 in 2024-25. This would provide continuing funding sufficient to cover the estimated cost of the lease over its 10-year lifespan. In addition, if costs in future years exceed the Department's estimate, the Department could request additional funds at a later time as such needs arise. [Alternative A2]

12. AB 43/SB 70 includes a variety of items for the appropriation of additional SEG funding, which introduce competing demands on the transportation fund while limited revenues are available. Conversely, the general fund has large one-time revenues available. DMV is typically provided with SEG funds derived from taxes and fees on users of the transportation system, aligning with the Division's primary responsibility of providing services related to vehicles. However, use of GPR funds for the software system modernization project may be warranted given DMV's broader impact statewide impact on elections, personal data security, and identification cards for residents, as well as the large balance in the general fund that is available for one-time expenses. Appropriating one-time funding of \$30,000,000 GPR in 2023-24 to fund the total estimated cost of the software system modernization project would fund the needed system modernization and address the related security and national interface concerns without putting additional strain on the transportation fund. This action would require the creation of a GPR appropriation for DMV. [Alternative A3]

13. As mentioned previously, AB 43/SB 70 included a recommendation in the 2021-23 biennial budget to provide DMV with one-time funding of \$400,000 in 2021-22 to complete a survey of DMV information technology systems, which would prioritize potential software system upgrades

and identify liabilities. The Committee could choose to provide \$400,000 in 2023-24 to implement the system modernization survey. The Department could then request additional funds in the 2025-27 budget to implement the project based on outcomes from the survey. However, the Department indicates that there is an imminent need to directly implement software system upgrades in the 2023-25 biennium due to the significant risks posed by DMV's increasingly dated software systems. [Alternative A4]

14. As noted, DMV intended to compete a system modernization survey of its information technology system, but funding was not provided. DMV could allocate \$400,000 in existing funding to complete the survey if it is a priority. Once the survey is completed DMV could request funding in the 2025-27 biennial budget to fund the identified improvements. [Alternative A5]

B. DOT Software Application Security

15. DOT operates a portfolio of over 150 software applications, including those used by DMV. The Department of Administration provides information technology (IT) security services for many of these applications, and charges "assessments" to DOT which reimburse for these services. AB 43/SB 70 includes a separate recommendation to provide DOT with funding to cover increased DOA IT assessment costs. However, the Department indicates that it operates some applications that are specific to the Department and not supported by DOA, including applications that are used for the state highway improvement program, local programs, and issuing vehicle titles and registrations.

16. The Department indicates that many of its software applications were designed years ago, and have become increasingly vulnerable to cybersecurity threats. These threats require DOT staff to spend significant time patching and fixing the older applications. For example, the Department states that addressing threats from a recent security incident with the Department's Log4J application consumed over 1,600 hours of staff time. In addition, the Department performed a study of its IT applications in 2020, which determined that it would take approximately 4,055 hours of staff time to remediate existing application bugs and vulnerabilities, and 9,946 hours to modernize DOT's existing applications.

17. While the Department of Administration provides support for DOT software applications, DOT also operates BITS, which provides a range of IT support services across DOT's six divisions, including dedicated positions that provide IT support at DOT's many locations across the state. The Department has budgeted 179.00 positions and \$21,408,400 for BITS in 2022-23, including costs for position salaries, fringe benefits, contractor and limited term employee expenses, and supplies and services.

18. AB 43/SB 70 provides \$334,000 SEG annually to DOT's department and management appropriation to enlist two IT contractors that would work to increase the security of DOT software applications that are not supported by the Department of Administration. DOT contends that it would be unable to meet these needs under its existing IT budget. This would establish an ongoing increase of \$334,000 for DOT operations, which could continue to provide ongoing resources for software application security. The Department indicates that improving its IT security will reduce future costs from supporting its software systems, and increase DOT's operational efficiency. [Alternative B1]

19. If the recommended funding is not provided for improving the security of its software applications, DOT would have to find existing budget resources to fund the contractors' work on increased security of the Department's applications. If existing resources cannot be found, potential increased costs from ongoing upkeep of the Department's existing older applications could result and the potential cybersecurity risks would continue. [Alternative B2]

ALTERNATIVES

A. DMV Software System Modernization

1. Provide \$5,000,000 in 2024-25 to the Division of Motor Vehicles general operations appropriation to fund the modernization of the Division's software systems. This would establish an ongoing increase of \$5,000,000 to the base level of funding for the Division's general operations appropriation.

ALT A1	Change to Base
SEG	\$5,000,000

2. Provide \$3,000,000 in 2024-25 to the Division of Motor Vehicles general operations appropriation to fund the modernization of the Division's software systems. This would establish an ongoing increase of \$3,000,000 to the base level of funding for the Division's general operations appropriation.

ALT A2	Change to Base
SEG	\$3,000,000

3. Provide \$30,000,000 GPR in 2023-24 to the Division of Motor Vehicles. Create a new GPR continuing appropriation for the Department of Motor Vehicles for use in the modernization of DMV software systems.

ALT A3	Change to Base
GPR	\$30,000,000

4. Provide \$400,000 SEG in 2023-24 to the Division of Motor Vehicles to fund a software system modernization survey.

ALT A4	Change to Base
SEG	\$400,000

5. Take no action.

B. DOT Software Application Security

1. Provide \$334,000 annually to DOT's department management and operations appropriation to hire two contractors to improve the security of the Department's software application systems. This would establish an ongoing increase of \$334,000 to the base level of funding for the DOT department management and operations appropriation.

ALT B1	Change to Base
SEG	\$668,000

2. Take no action.

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