Technology Choices for State Healthcare IT Implementation

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Introduction

Under the Affordable Care Act (ACA), states have the option of operating their health insurance marketplace on the Federally Facilitated Marketplace (FFM or healthcare.gov), setting up a State-Based Marketplace (SBM), or using a blended model known as a State-based Marketplace-Federal Platform (SBM-FP). As states begin to seek cost savings or to gain more local policy control, they are moving from the FFM and SBM-FP models to setting up their own exchanges (SBMs).

These implementations come with a unique set of technology challenges. States must consider that the technology that powers their exchanges will need to respond to policy and regulatory changes, state-specific requirements and desired integrations with state systems, data ownership and security mandates, and of course, budget constraints both for the initial implementation and ongoing maintenance.

The choice of a technology platform for the state-based exchange is one of the most consequential decisions a state will need to make to ensure it will meet its policy and budget goals. There are several options available today, and they include platforms that are fully custom builds, builds that leverage accelerators to reduce risk and development time, technology transfers from another state, open-source platforms, and systems that are delivered through software as a service (SaaS). Following, we take a high-level look at how each of these solutions work.

Custom Builds

In the early days of state-based marketplaces, after the passage of ACA in 2010, custom built solutions were the only viable way to deliver a workable solution. States needed a platform that conformed to their specific needs, and with no experience in ACA exchanges yet under the industry's belt, states invested tens, and sometimes hundreds, of millions of dollars into building and hosting a custom application. It was quickly realized that these systems were cumbersome and expensive to maintain. Many failed to work as expected, leading to frustrated consumers who could not enroll in health coverage, and additional costs as states worked with technology vendors to shore up the system failures or even to abandon their initial investment and replace the system entirely.[1]

In the years since, states that deployed custom solutions have had to respond to ever-changing requirements and regulations. In addition, ongoing bug fixes, security updates, and additional features to promote operational efficiency inevitably require continued investment beyond the initial implementation. This makes custom solutions both resource intensive and expensive to maintain. Implementation and ongoing operations costs are critical to the sustainability of the exchange because high ongoing IT costs are passed on to consumers by way of higher monthly premiums. It is therefore important to keep operating costs and ongoing IT investment as low as possible.

High cost is not the only important factor to consider when it comes to custom solutions; development time can also be quite lengthy. The amount of time to design and develop a custom state-based marketplace solution with 100 percent of IT resources allocated to the build has been estimated at two to four years, depending on the resources and skills available. During this development time, states' needs and policies can, and likely do, change, making the solution potentially obsolete by the time it is deployed.

Custom solutions are also unproven until the system development is complete, often having compliance issues, software bugs and gaps in functionality to be remediated on the fly while the exchange is live and servicing consumers. Some states learned this lesson the hard way during their first few open enrollment periods.[2] For the most part, custom build solutions have proven to be too risky to stand up, and too expensive to be truly sustainable for the long term.

Custom Exchange Failures

Some states that set up custom builds at the start of the Affordable Care Act learned the hard way that custom solutions are not always the right choice.

- Oregon sign-up an 'epic failure' (2013)
- Maryland struggling with technological problems with online insurance exchange (2013)
- What Went Wrong With Minnesota's Insurance Exchange (2014)
- How Massachusetts screwed up Obamacare (2014)
- Xerox loses Nevada health insurance exchange contract (2014)

Accelerators

System integrators, who offer custom built solutions, often point to the use of accelerators to de-risk the implementation of a solution. Accelerators typically refer to pre-built tools or widgets that can be used as building blocks to develop some of the functionality that is required to deploy a new exchange and are frequently presented as out-of-the-box functionality. These accelerators can certainly reduce the development time needed for initial deployment of the exchange, but they don't address the ongoing maintenance needs of the exchange and the ongoing cost of enhancing a custom solution to ensure that the needs of the state are met.

Technology Transfers

In some cases, vendors can "transfer" a platform from one state to another. This means that the source code from one state is copied and used as the basis to begin work on another state's platform. While this may shorten the initial implementation timeline and seem like an efficient way for a new state-based marketplace to reuse an existing platform, in practice this process still requires the new state to take ownership of the code base, and to continue to invest in it to further develop and customize it to fit their needs. Over time the code bases for the platform in the two states diverge as state specific requirements and priorities are addressed separately in each state. Further, no mechanism exists for the transfer state to leverage corrected errors and deficiencies (bugs) in the originating state's platform that have been fixed after the transfer. While presented as a "transfer," the new state exchange is truly signing up for a custom build.

Open Source-Based Custom Builds

Open-source software is typically released into the public domain by a developer and made available for others to use and build upon as they see fit. Open-source technologies benefit from a community of users supporting and improving the technologies. There are a range of other benefits inherent in using open-source software. For example, better reliability and security due to the community continually identifying and patching issues. This model also has an initially low cost, since open-source technologies don't bring along the burden of licensing fees. However, open-source initiatives only fulfill their promise when a robust community of users and developers commit to the ongoing development and maintenance of the software and follow through to put all updates made to the shared code base into the public domain.

Open-source initiatives work well for operating systems and widely used components with broad developer community support. For example, open-source projects such as the Linux operating system, a commonly used operating system, and MySQL, the second most widely used database server in the world, are largely successful due to their broad applicability and deep support from the developer community.[3,4] Purpose-built state healthcare IT solutions such as exchanges do not have the broad developer support needed to maintain and enhance the platform. Such solutions demand client states make continued investments to improve or

enhance the platform, since no financial incentive exists for independent developers or other institutions to invest in the platform. Core product improvements specific to the state's requirements and enhancements driven by state or federal policy and regulatory changes will drive added costs and investment.

Like custom built solutions, narrow use open-source platforms require extensive customization and maintenance by specialist firms, adding an unpredictable cost component to build the features and functionality needed to maintain the underlying platform on an ongoing basis. In addition, all the issues around infrastructure maintenance, management, data security and operational issues are identical to those outlined in the custom build section above and are not addressed by adopting an open-source code base.

The IT platform budget for DC Health Link, which runs on open-source technology, works out to roughly $61 per enrollee in operation costs for 2021.[5] Comparatively, Nevada Health Link, which has roughly the same number of enrollees but runs on a SaaS platform, is spending roughly $38 per enrollee 2021.[6] In fact, the District of Columbia's health insurance marketplace, DC Health Link, was identified as the nation's second most expensive on a per enrollee basis in 2014.[7]

Software-as-a-Service (SaaS)

SaaS is a methodology of delivering software services that has rapidly gained acceptance in private industry. SaaS vendors deliver functionality "on tap" by deploying their software in the cloud and leveraging a common code base across clients. This approach is extremely efficient since it enables development, infrastructure, and other costs to be shared, and does not require clients to have large technical teams to maintain and support the platform. While many SaaS solutions make use of widely used open-source technology, the codebase is typically proprietary, and is maintained by the SaaS vendor. Providing a SaaS product that uses open-source technologies delivers an out-of-the-box exchange that benefits from open-source principles without requiring large investments from clients.

Reduced implementation timeline

State-based marketplaces built as a SaaS solution can be ready for deployment on an accelerated timeline based on the number of modules deployed, features required and complexity of integrations. Even within this reduced design, development, and implementation (DD&I) period, a SaaS solution offers the flexibility for customization based on the state and exchange policies. Change is inevitable for state-based marketplaces – both due to changing state and exchange policies, and due to changes to the regulatory landscape. A well-designed SaaS solution affords the ability to incorporate such changes during the implementation phase, so that the exchange is set up correctly right from the beginning; it is also configurable and enables the SBM to introduce new policies and adapt to regulatory changes.

Flexibility

During the COVID-19 pandemic, and the subsequent American Rescue Plan Act, continual state and federal policy, as well as regulatory changes, necessitated numerous updates to exchange IT systems in order to support

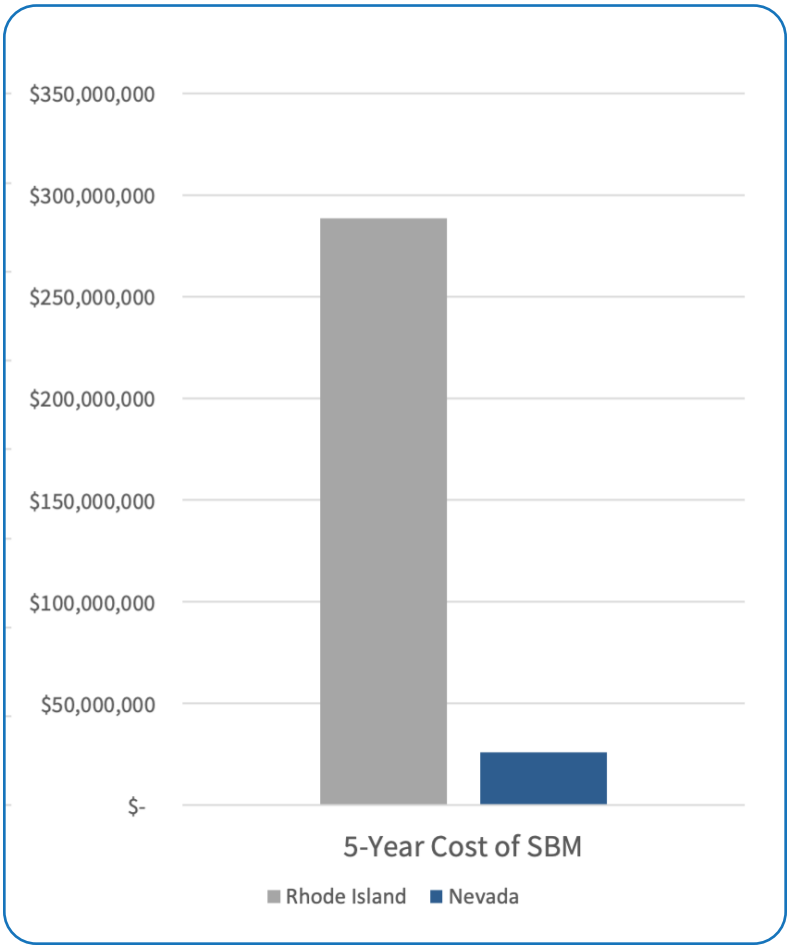
state residents. In the absence of a shared platform, it can be expensive for one state to translate high-level statutory or regulatory guidance into system requirements, and to pay for all the changes to be implemented on a custom basis. States operating on a shared SaaS platform — Idaho, Minnesota, Pennsylvania, Nevada, New Jersey, for example — were not only able to share the codebase required for these updates, but also to collaborate on key learnings and best practices for implementing these changes.

Innovation

SaaS also presents the opportunity to innovate and improve based on a current customer base. For example, bug fixes for one state are available automatically and applied proactively to other states, resulting in a reduction of overall consumer visible issues. Similarly, product improvements that are designed based on one state's experience, benefit other states as well. This ensures that customers have the capabilities needed for competitive success. Think about some of the most common examples of SaaS we use every day — SalesForce CRM, Microsoft Office 365, and Google Docs, for example — where new features are delivered as part of platform enhancements that are available to all users. In the custom, open source, and transfer models, this type of shared improvement does not take place. Even systems Integrators who have been the largest prior proponents of custom builds have begun to acknowledge that SaaS is the way forward.

Lower Costs

In addition to spending less on the initial implementation costs with a SaaS-based platform, we can see that over time, SaaS models continue to cost millions of dollars less than a custom build. Below are the five-year costs for the custom exchange in Rhode Island as compared to the SaaS-based platform in Nevada.



As we mentioned earlier, the selection of an exchange technology platform can (and will) impact a state's success in meeting its goals. Financially sustainable exchange IT platforms can help control monthly premiums by reducing exchange operating costs, leading to higher consumer retention rates and more new enrollments. For example, by leveraging a SaaS platform:

- The Pennsylvania exchange (PennieTM) increased the number of enrollees by 9.7 percent year-over-year and was able to offer lower premiums in its first open enrollment period as an SBM.[8]
- Get Covered New Jersey plan selections for 2021 coverage increased 9.4 percent year-over-year, as the state successfully expanded access to health coverage through its new state-based marketplace, Get Covered New Jersey, during its first open enrollment period.[9]
- Nevada Health Link saw a 6.2 percent decrease in premiums after switching from an SBM-FP state to a state-based marketplace.[10]

Case Study: Nevada Health Link

The Silver State Health Insurance Exchange (Nevada Health Link) is an example of how a SaaS platform can best serve a state. In 2013, Nevada Health Link awarded a $75 million contract to build and operate its state-run health insurance exchange. Plagued with technological issues—from computer errors to billing and enrollment problems—the on premise, complex custom system (based on technology that had not been operationalized for any other state exchange) prevented consumers from enrolling successfully. Failing to meet enrollment targets, an independent assessment revealed that the custom system had more than 1,500 outstanding defects.

Faced with loss of credibility among consumers and insurers, and with extremely expensive options to deploy an operational exchange, Nevada abandoned the custom system, transitioned to the federal online exchange platform, HealthCare.gov, and used the federal system while focusing Nevada Health Link on consumer assistance and advocacy.

However, rising fees to use HealthCare.gov — from $5.5 million in 2017 to a projected $13.2 million by 2020 — were reducing operating revenue at Nevada Health Link to unsustainable levels. Additionally, relying on the federal platform prevented the exchange from having real-time access to comprehensive consumer data, the ability to do targeted marketing and outreach, and the flexibility to implement new policies to benefit their residents. In 2018, Nevada decided to be a fully state-run exchange again so that it could benefit from operational cost savings and autonomy.

Nevada awarded the contract to GetInsured to design, develop, and implement a state-based platform for the Exchange and provide ongoing consumer assistance. The state wanted a proven platform that had already been operationalized for other state-based marketplaces, and the GetInsured SaaS platform had been successfully operationalized in many states. Additional benefits of the GetInsured platform include cost savings for the exchange of approximately $18.9 million through 2023; the exchange personnel have access to comprehensive, real-time data; and the autonomy to implement policies to drive increased enrollment and to better serve their residents.

As states make moves to lower operating costs, increase policy flexibility and autonomy, and leverage product innovation to drive enrollments, SaaS state-based marketplace solutions are the platforms of the future. By leveraging a SaaS solution, states can focus their efforts on how to best use a state-based marketplace in their state instead of focusing on design, development, and maintenance activities. Expertise, security and compliance are automatically built into experienced SaaS platforms in lieu of outsourced IT or staffing, which in turn frees up internal capacity to focus on other technology, operations and policy challenges. Plus, this platform structure also gives the exchange a single point of contact to manage and maintain not just the proprietary solutions but the open-source platform components and infrastructure in a single place. At the same time, not all SaaS platforms are created equal. Some vendors have more mature models and a wider breadth of experience implementing exchanges in several states. When compared to newer platforms, mature models can offer best practices, lessons learned, and proven integration methods — a partnership in the transition to a state-based model.

In Summary:

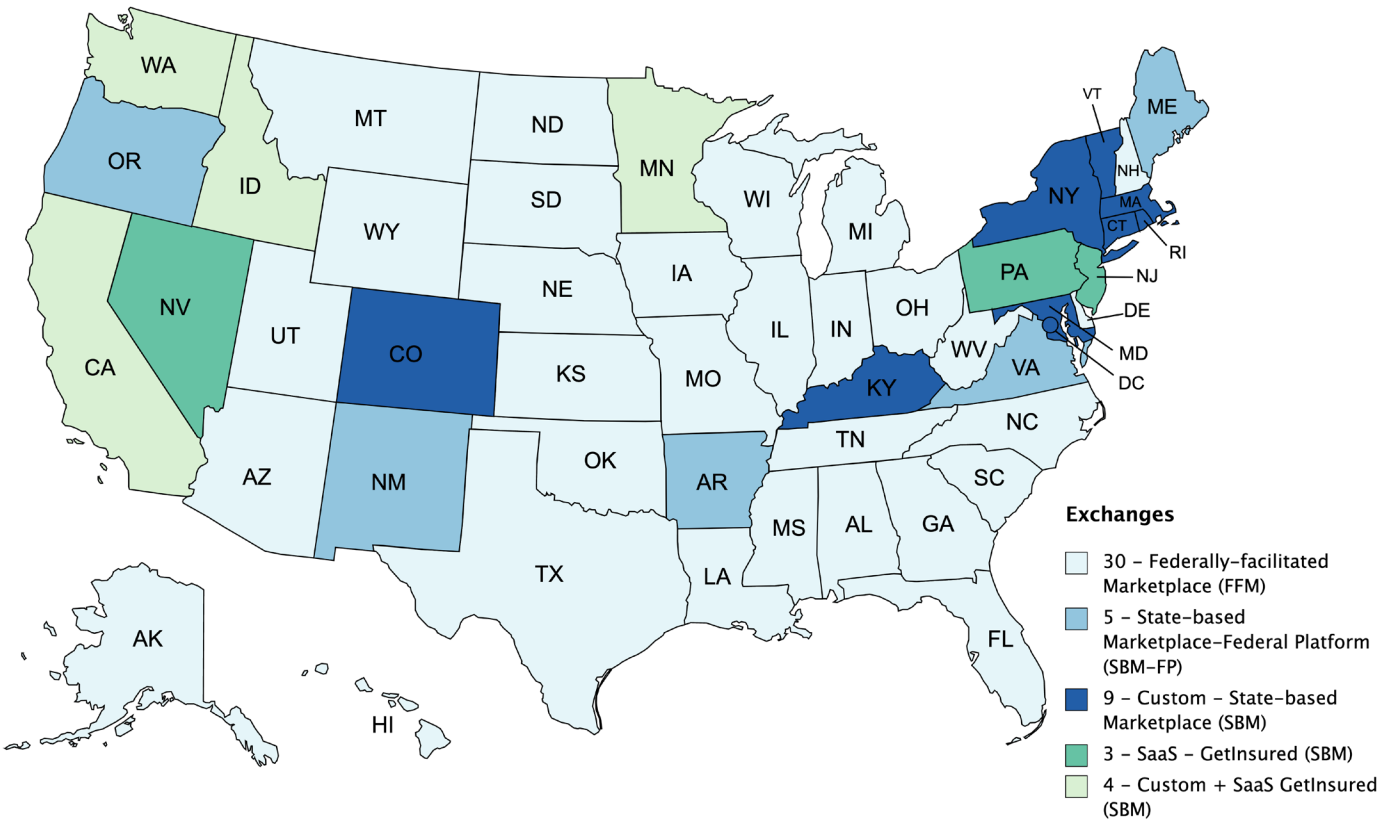
	Custom Build	SaaS Platform
Cost	High initial investment; ongoing development costs	Fraction of custom build costs
Implementation Time	1-3 years	6 – 12 months, due to configurability of SaaS platforms
IT Staffing	Ongoing	Included
Intellectual Property	State Owned	Vendor Owned
Bug Fixes	Typically, one-year warranty	• Unlimited Warranty • Community updates and improvements
Enhancements	Custom State Change Requests only	• Vendor-driven roadmap enhancements • Opportunity for State to provide input into roadmap enhancements • Shared Change Requests • Custom state Change Requests
Hosting	Separate and additive	Included
Software Code Base	One source base per state	One common source code base
Security	Managed per state by Vendor or State. No leverage across implementations.	Vendor managed. Shared best practices across all SaaS implementations

Appendix
Supplemental Information

Marketplace Type Breakdown

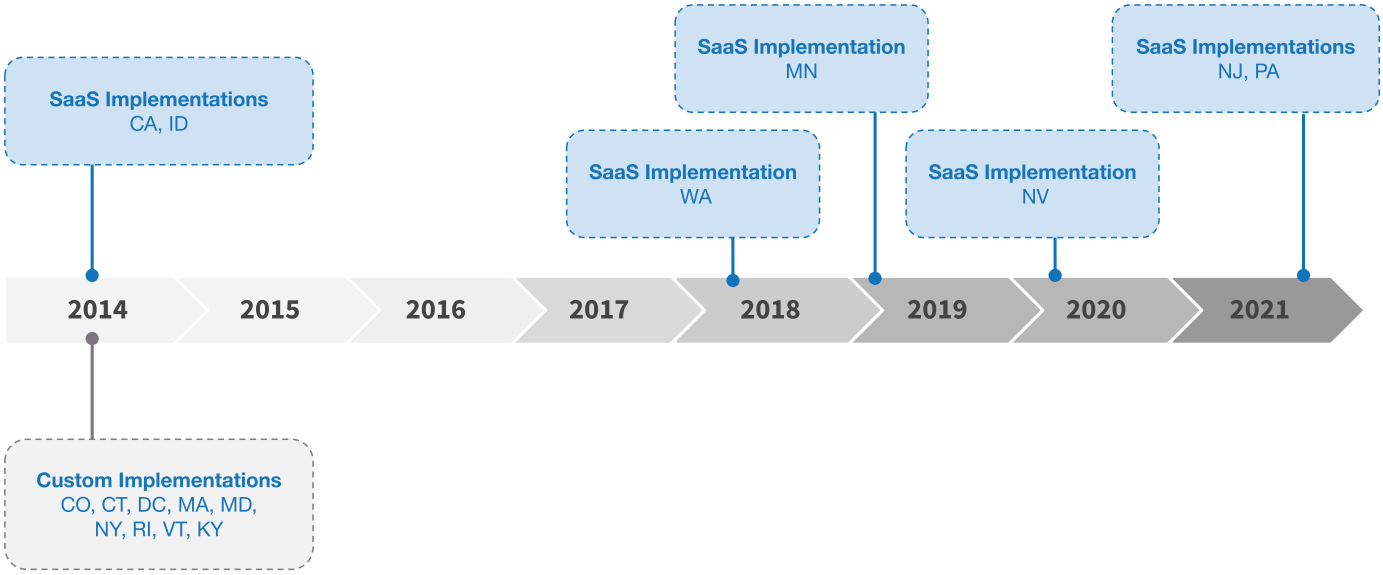
The trend of moving off the FFM to a state-based marketplace is increasing. Currently, there are 15 states across the country that operate their own marketplace, while several are in the process of or are considering moving to an SBM. The breakout is as follows[11]:

Federally-facilitated Marketplace (FFM)	State-based Marketplace (SBM)	State-based Marketplace-Federal Platform (SBM-FP)
30	15	5



The SaaS Trend

While custom solutions were considered ideal initially, the trend is for states to implement SaaS-based state-based marketplaces.



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