

Pay1 System Replacement

Engrossed Substitute Senate Bill 6032, Section 213(2)(e); Chapter 299;
Laws of 2018

September 30, 2018



Pay1 System Replacement



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Table of Contents

- Executive Summary..... 2
- Background..... 4
 - Employees and Retirees Benefits Division..... 4
 - North Highland Consulting..... 4
 - Pay1 System..... 5
- Why Pay1 Needs to Be Replaced..... 5
- Replacement Benefits 6
- Replacement Goals..... 8
- Recommendation and Options..... 9
 - Trends in the Public Sector..... 10
 - State Benchmarking..... 12
 - Possible Vendors..... 12
 - Feasibility of Using Existing State Information Technology Assets..... 13
 - Other Alternatives Examined 14
 - Recommendation Rationale..... 16
 - How Well Options Align With Goals and Objectives..... 16
 - Cost Comparison of Three Implementation Options 17
 - How Well Options Fulfill Key Benefits 19
 - Risk Analysis 20
 - Option Scoring Summary..... 22
- Implementation Strategy..... 23
 - Implementation Timeline..... 23
 - Strategy Benefits 25
- Conclusion 26
- Appendix A: ERB Division Key Functional Business Processes and Technical Components..... 27
- Appendix B: HCA Steering Committee and ERB Division Pay1 Replacement Objectives..... 28
 - HCA Steering Committee Objectives..... 28
 - ERB Division Staff Objectives..... 28



Executive Summary

The Washington State Health Care Authority (HCA) is providing this report in response to Engrossed Substitute Senate Bill 6032; Section 213(2)(e); Chapter 299; Laws of 2018:

“...the authority, in consultation with one Washington within the office of financial management, the office of the chief information officer, and other state agencies with statewide payroll or benefits systems, shall prepare a report describing options for the replacement of the Pay1 information technology system. The report shall evaluate the potential costs, benefits, and feasibility of integrating the functions currently performed by Pay1 into an existing or new statewide system, as well as for a stand-alone system. The report shall also update the business and system requirements documents previously developed for a Pay1 replacement system. This report shall be provided to the governor and appropriate committees of the legislature by September 30, 2018.”

The Pay1 benefit and enrollment system supports the Public Employees Benefits Board (PEBB) Program’s insurance administration functions. However, the Pay1 mainframe system is over 40 years old and is becoming increasingly difficult to maintain and learn. There are few application developers with mainframe knowledge and few staff to learn and train users in this old technology. System modifications can be challenging due to the inflexibility of the platform. Pay1 system users (HCA Employees and Retirees Benefits Division, agency personnel, payroll and benefits office, and employer group staff) report the system is hard to learn and understand—especially when system-wide changes need to be made.

Replacing Pay1 is critical. HCA’s ability to continue to support this aged system is steadily decreasing, with anticipated retirement of a key subject matter expert, and for the reasons noted above. The Pay1 system currently supports benefits coverage for 378,000 PEBB Program covered lives for state employees, higher education employees, numerous local government employees, and retirees. In addition, when the new legislatively-mandated School Employees Benefits Board (SEBB) Program launches in 2020, a new system would be better able to handle benefits administration with an estimated addition of 300,000 more covered lives. With this added population, the Pay1 system will be increasingly vulnerable to security breaches and may not meet critical benefits management needs for both the PEBB and SEBB Programs.

Based on our research and analyses, we recommend incrementally replacing Pay1. This long-term strategy provides a single solution for both the PEBB and SEBB Programs that:

- Modernizes business practices;
- Overcomes existing maintenance and user challenges;
- Reduces risk; and
- Efficiently uses state funding.



HCA hoped a full replacement could be in place in time for the initial October 2019 SEBB Program open enrollment, and PEBB Program covered lives could be transitioned to the new platform shortly thereafter. However, independent analysis revealed that a full Pay1 system replacement cannot be achieved that quickly. Therefore, we envision the full replacement process beginning in 2019 and continuing through 2024 for both programs. HCA will be submitting a decision package for funding for the first part of the Pay1 replacement to occur beginning in the 2019-21 biennium. Completion of this project will require future biennial decision packages.

At this time, initial SEBB benefits administration needs are being pursued with the existing Washington School Information Processing Cooperative (WSIPC) Skyward School Management System (SMS).¹ However, this initial step should be followed by fully replacing Pay1 with a modular, new technology solution, such as a Commercial Off-The-Shelf (COTS)/Software as a Service (SaaS) system, a modified version of an existing state solution, or a combination of both. The modular approach means that replacement will happen piece-by-piece; each Pay1 system component (i.e., COBRA module, retiree module, etc.) is treated as a module that can be independently replaced. This type of implementation decreases costs and reduces risks.

¹ “WSIPC is a unique public agency that provides information services at a reasonable cost to school districts.” WSIPC provides the complete and integrated Skyward School Management System (SMS) software. (<http://www.wsipc.org/about/our-story>)
Pay1 System Replacement
September 30, 2018



Background

Employees and Retirees Benefits Division

The HCA's Employees and Retirees Benefits (ERB) Division administers both the PEBB and SEBB Programs. The PEBB Program provides medical, dental, life, long-term disability insurance, and optional insurances to eligible state, higher education institution, and community and technical college employees — and their eligible dependents. Most of these PEBB benefits also extend to eligible employees of non-state public entities (under a contractual agreement), retirees, continuation coverage subscribers, and their eligible dependents. The PEBB Program covers approximately 378,000 lives. Beginning in 2020, HCA will also administer the legislatively-mandated SEBB Program.² This program will manage benefits for employees of school districts, educational service districts, charter schools, and their eligible dependents. HCA estimates the SEBB Program will cover 300,000 lives.

North Highland Consulting

HCA contracted with North Highland Consulting through a competitive procurement process. North Highland and HCA collaborated on reviewing options for Pay1 system replacement. North Highland worked with HCA to:

- Review prior work and existing documents from previous replacement efforts.
- Update replacement business and system requirements.
- Conduct a market analysis.
- Evaluate replacement options.

² SEBB Program created in Engrossed House Bill 2242 (2017) and amended by Engrossed Substitute Bill 6241 (2018).



Pay1 System

Pay1 is the PEBB Program's primary electronic system of record,³ handling enrollment and eligibility information for employees, retirees, continuation coverage subscribers, and their eligible dependents. The system contains personal information such as Social Security numbers, birthdates, addresses, marital statuses, etc. for subscribers and their enrolled dependents. The Pay1 system also sends daily eligibility and enrollment data and monthly payment information to more than a dozen contracted vendors.

Pay1 is a Common Business-Oriented Language (COBOL)⁴-based system hosted on the state's mainframe for internal and external stakeholder use. Because it is over 40 years old, it is becoming increasingly difficult to learn, use, and maintain.

Why Pay1 Needs to Be Replaced

Pay1 is Washington State's oldest information system. The 40-year-old system, which has not had any recent or significant upgrades, presents multiple long-standing challenges for the PEBB Program with risks increasing each year as Pay1 ages. These challenges will become more pronounced when the SEBB Program begins in 2020.

- **Customer service constraints:** HCA employees; agency personnel, payroll, or benefits office staff; and employer group staff report the system is hard to learn and understand — especially when system-wide edits and changes need to be made. More than 2,000 system users must have extensive knowledge of command entries to enroll their benefits-eligible employees and dependents. Additionally, the system does not allow PEBB subscribers to complete tasks themselves for their account through a self-service system.
- **Diminished support:** Support required for upkeep dwindles each year because of reduced COBOL-knowledgeable resources and a shift to more modern technologies/products; there are few application developers with mainframe knowledge.

In addition to regular maintenance, HCA must rely on editing Pay1 in response to legislative or federal mandates, new and revised rules, and other required system updates. After multiple rounds of edits and maintenance over the years — all while attempting to work around the system's technical limitations — Pay1 has become a patch-worked system that lacks automated work flows. Additionally, shadow systems (multiple access databases, spreadsheets, tickler files, etc.) make finding information difficult.

Because of the system's archaic code, it is only a matter of time before Pay1 is unable to support HCA's business needs. If we wait until the system fails, it will take more time and

³ Two non-HCA systems handle select PEBB Program benefits information. Beginning January 1, 2017, life insurance benefits transitioned to MetLife (HCA's vendor). The University of Washington's Workday system began handling university employees' PEBB benefits (except life insurance) on June 27, 2017.

⁴ COBOL is a computer programming language for business use.

money to bring in a replacement under those conditions than to do so while the system is still operational (and subject matter experts are still in the workforce). Additionally, system failure could interrupt service to PEBB (and eventually SEBB) subscribers and leave the state open to legal action by covered individuals or entities.⁵

- **Increased costs:** Costs to support the system grow higher each year because of decreased COBOL service availability. This limits HCA's purchasing and updating power. And, as other agencies migrate away from the mainframe (hosted by Washington Technology Solutions [WaTech]), HCA costs will continue to increase because mainframe costs are divided between fewer and fewer customers.
- **Lack of flexibility:** Pay1 lacks the flexibility needed to handle the ERB Division's evolving business needs. This includes accommodating evolving business rules and new or amended state and federal mandates. The lack of flexibility limits innovation and efficiency that benefit the customer experience.
- **Vulnerable security:** Pay1 does not have the most modern security capabilities. HCA has the highest obligation to use best practices and the best available technology to minimize the risk that 378,000 PEBB (and eventually an additional 300,000 SEBB) enrollees' sensitive personal information could be exposed in a data breach.

Replacement Benefits

HCA recommends replacing Pay1 with new benefits administration technology that will meet current and future business needs.

Research by Gartner, a research and advisory company, found that for leading cloud human capital management systems, the top objectives in system solutions include:⁶

- Improved quality of reporting and members' information.
- Improved process automation.
- Standardized processes.
- Reduced cost of human capital management operations.
- Improved quality of service to internal and external customers.
- Consolidated processes.
- Single system of record.
- Increased workforce efficiency/effectiveness.

Moving to a modern technology platform will accomplish relevant Gartner objectives. For example, a new system will enable ERB Division leadership to use data and technology tools to better

⁵ WA State Health Care Authority. (n.d.). PL-DA Pay1 System Replacement, Decision Package, 2018 Supplemental Budget Request, p. 2.

⁶ Hanscome, R., et al. (August 15, 2017). Magic quadrant for cloud HCM suites for midmarket and large enterprises. *Gartner*. p. 21.



manage the benefits administration business; improve customer experience; and quickly adapt to legislative and executive branch policy changes, new federal requirements, and other ad-hoc requests. A new system will also give HCA access to state-of-the-art security tools and technologies, reducing the potential for a data breach.

A modern, configurable platform will not have the limitations of Pay1. COTS-based software products built for benefits administration are updated quarterly by subject matter experts who track the latest trends in the health insurance and benefits administration marketplace. Leveraging other Washington State systems could also support additional flexibility through the application's modern infrastructure and configurability. State solutions provide continuity to the HCA customers currently being served through the Exchange, and could provide an enhanced customer experience for members currently served by Pay1. These types of systems should be able to handle the volume and complexity of PEBB (and eventually SEBB) benefits and be adaptable enough to accommodate future growth and changes.⁷

Most modern benefits administration systems have web-based self-service functions and Customer Relationship Management modules that allow subscribers to access their own accounts online. These tools reduce the need for multiple points of contact and will allow HCA staff to provide more personalized in-person or phone service to those who need additional assistance. These changes will likely increase customer satisfaction and improve business workflows.⁸

Additionally, a new system will reduce redundant processes across the state enterprise benefits administration landscape, increasing operational efficiency and reducing PEBB's (and eventually SEBB's) future administrative support costs. Manual operational processes and tasks that currently require significant time and effort will be much easier, allowing staff time to be spent on strategic and higher value activities.

⁷ WA State Health Care Authority. (n.d.). *PL-DA Pay1 System Replacement, Decision Package, 2018 Supplemental Budget Request*. p. 2.

⁸ WA State Health Care Authority. (n.d.). *M2-EI PEB Customer Support, Decision Package, 2018 Supplemental Budget Request*. p. 1.



Replacement Goals

The HCA steering committee⁹ first outlined key ERB Division business processes and technical components (see Appendix A), and steering committee and ERB divisional objectives for a replacement system (see Appendix B). This work led to the following goals and business values.

Table 1: Pay1 System Replacement Goals

#	GOAL	DESCRIPTION	BUSINESS VALUE
1	Implementation speed	Speed at which full implementation of system solution takes to deploy	A system with a quick implementation timeframe allows HCA to meet the January 1, 2020 “go-live” date for the SEBB Program and then transition the PEBB Program to the new platform.
2	Modular (piece-by-piece) approach	System solution implemented in a phased/piece-by-piece approach	This approach allows for “quick-wins,” early adoption of prioritized system components and functionality, and spreading costs across implementation.
3	Flexibility related to legislative, system, and business rules; new legislative mandates; or federal changes	System has the agility and capacity to react to changes from internal and external sources	The system is adaptable enough to accommodate future growth and changes through configuration.
4	Low ongoing maintenance	Operations and maintenance costs are minimal in comparison to alternatives	A system that addresses all PEBB (and eventually SEBB) Program needs, has low operations and maintenance, and costs less than \$1 million per year would provide substantial cost savings to HCA. ¹⁰
5	Full support of both the PEBB and SEBB Programs	HCA is able to support existing PEBB Program operations — as well as new SEBB Program operations — on a single platform	The new system is a robust, modular application that handles volume and complexity without failure and is adaptable enough to accommodate future growth and changes.
6	Real-time data access	Keyed-in data and information is instantly and automatically updated for on-demand access.	ERB Division staff and external system users work more efficiently, process workloads faster, have access to data when needed, respond to customer inquiries within mandated timeframes, and provide global access to data/information. Easy to train.

⁹ The HCA steering committee included ERB Division management, HCA information technology management, the North Highland Consulting engagement manager, and representative from the Office of the Chief Information Officer.

¹⁰ WA State Health Care Authority. (n.d.). *PL-DA Pay1 System Replacement, Decision Package, 2018 Supplemental Budget Request*. p. 3.



Recommendation and Options

We recommend incrementally replacing Pay1. This long-term strategy provides a single solution for both the PEBB and SEBB Programs that modernizes business practices and overcomes existing maintenance and user challenges.

- **HCA should pursue using the Washington School Information Processing Cooperative (WSIPC) Skyward School Management System (SMS) for the initial SEBB Program implementation.** This could minimize disruption and stabilize the program's requirements. This strategy takes advantage of existing school district benefit systems. Over 300 SEBB organizations (including 295 school districts, 13 charter schools, and 9 educational service districts) currently use the WSIPC system. A much smaller number (around 20 school districts) use a different benefits administration system. HCA would work with WSIPC and the non-WSIPC school districts to develop point-to-point data integration with Pay1. Such integration would regularly funnel benefits and eligibility data to Pay1.
- **This initial implementation should be followed by a phased and modular implementation that will fully replace the legacy Pay1 system.**

Incremental replacement will meet both the PEBB and coming SEBB Programs' needs while also taking into account the timeframes most vendors need to fully implement their products. As part of a market analysis, we gathered information on potential COTS solutions and found that most vendors require two to five years to implement; the average time was two years. In addition, HCA needs a minimum of 6–12 months for contract procurement and associated tasks.

Based on this information, it will not be possible to procure and implement a Pay1 system replacement (starting with the new SEBB Program needs, and then transitioning over to PEBB Program support) before the SEBB Program open enrollment begins on October 1, 2019. This report discusses short- and long-term work efforts that will permit HCA to meet the SEBB Program's open enrollment deadline while also continuing to work toward the long-term objective of implementing new benefits administration and insurance accounting technology for the PEBB and SEBB Programs.

Note: We developed business requirements and conducted the market analysis during the first calendar quarter of 2018. The results are therefore a snapshot of PEBB Program requirements and the COTS products and third-party benefits service providers at that time. The benefits administration system solution market evolves rapidly. Existing products receive functional upgrades by vendors to address new requirements, new vendors with new products appear in the marketplace, occasionally vendors/products leave the market entirely, and product pricing changes. As more time passes, there is more risk that substantive changes have occurred with the technology or that business needs have changed.



Trends in the Public Sector

Over the past decade, public employee benefits groups have placed a greater importance on streamlining benefits administration management processes to better serve their constituents and adapt to changing operational needs. Such needs include benefits administration, document management, human resources, financial management, service desk, Customer Relationship Management, reporting, self-service capabilities, and mobile support. It is these same requirements that constantly stress available ERB Division resources.

Modern benefits administration systems have evolved rapidly over the last decade and offer solutions that can address PEBB's baseline requirements and associated issues. Rather than having to implement multiple systems with a singular capability and focus, the market now offers all-encompassing benefits administration systems. These systems will meet HCA's requirements, including providing a fully-integrated user interface for customers.

The North Highland team conducted information-gathering sessions with multiple vendors, peer states, and other Washington State agencies to further analyze the benefits administration market. These sources included:

- Interviewing representatives from leading public-sector benefits administration system providers (Workday, Oracle, SAP, Vitech, ADP, Physmark, CNSI, TriZetto, and Salesforce).
- Interviewing public employee benefits groups in peer states (Oregon, Oklahoma, Georgia, South Carolina, and New York).
- Interviewing partner Washington State agencies including the Washington Health Benefit Exchange, Washington Department of Retirement Systems, Washington Office of Financial Management, WaTech, and the other impacted HCA divisions (i.e. information technology, financial services, etc.).
- Reviewing research papers and studies focusing on benefits administration market solutions and their associated advantages and disadvantages.

From this research, the following key themes emerged:

- **Customer service as part of the solution:** State agencies that have successfully implemented new benefits administration systems that utilize workflow and self-service functionality have experienced quicker issue resolution and empowered their users to find solutions.
- **Business process re-engineering (BPR) prior to implementation:** Data cleanup, migration, mapping, and conversion are better executed if business process engineers familiar with the data map out the system's functionalities prior to implementation. One of the most common themes from state agencies that have recently implemented a new benefits administration system is that it took far longer and required more staff resources than anticipated. Doing the BPR work prior to implementation helps mitigate some timing concerns.



- **Limit system customizations:** Limiting customizations reduced implementation and maintenance cost for packaged systems and enabled the agency to take advantage of new functionality via regular vendor upgrades.
- **Phased implementation approach:** Gradual implementation that highlighted early successes allowed the agencies to break down the initiative in smaller, more manageable pieces, realizing benefits sooner.
- **Strong integration capability:** Benefits administration software that has strong Application Programming Interfaces allows for connectivity in cross-functional environments.
- **Focus on organizational change management:** Getting buy-in from every person in the organization — especially those at higher levels — leads to an easier transition and more successful implementation. Key components of this process include organization transformation, internal communication, job training, system training, and stakeholder communication.

North Highland then cross-evaluated these key themes with the desired functionality of a Pay1 replacement system, which includes the ability to:

- Administer the insurance coverages (medical, dental, life, and long-term disability coverage, including retirees and continuation coverage enrollees) Pay1 currently supports.
- Support the scale required for both the PEBB and SEBB Programs by January 1, 2020 enrollment (i.e., 600,000+ lives for employees, retirees, continuation coverage subscribers, and their dependents).
- Support the size of Pay1’s user base (currently 2,000+ users).
- Function as the benefits enrollment system of record.
- Integrate with other systems.
- Generate eligibility feeds and file interfaces to other vendors and carriers.

North Highland also considered prominent and leading market assessment factors¹¹, including:

- Scalability.
- Current offering from core and extended functional and technical capability perspectives.
- Strategy.
- Market presence.
- Software as a Service (SaaS)/cloud delivery model/offering (provides persistent versioning, faster deployment, and better flexibility than traditional systems)¹².

¹¹ Hamerman, P. D. (August 23, 2017). The Forrester Wave™: SaaS Human Resource Management Systems, Q3 2017. *Forrester*. pp. 4–5.

¹² Hamerman, P. D. (August 23, 2017). The Forrester Wave™: SaaS Human Resource Management Systems, Q3 2017. *Forrester*. pp. 4–5.



State Benchmarking

We conducted benchmarking interviews with peer state public employee benefits groups in Oregon, Oklahoma, Georgia, South Carolina, and New York.

From a functionality perspective, all of the states' systems include the base functionalities of Enrollment, Employer Self-Service, and Benefit Administration. Each state also reports Billing/Payment functionality. All the states except Georgia have Workflow functionality, and all but South Carolina have Analytics/Business Intelligence capabilities. We did not get information on Customer Relationship Management capabilities.

From a technical perspective, all of the states had both front- and back-end capabilities. Oklahoma provided information related to a business rules engine, and both Oklahoma and Georgia provided information related to their system's security features and capabilities.

Related to pricing, the states reported that their system implementations ranged from \$7 million in New York, \$10 million in Georgia and Oklahoma, and \$34 million in South Carolina. Implementation timeframes varied with each of these dollar amounts — despite an average implementation timeframe of two years. There are also licensing and subscription costs that will need to be added to the implementation cost. Some of these dollar costs included state resources, but most reflect vendor costs only.¹³

Based on what we learned from these states, HCA can expect to supply a team of more than 10 full-time agency resources dedicated to the implementation efforts. One key challenge documented across the states is that the implementation process took longer than anticipated.

Possible Vendors

We interviewed representatives from leading public-sector benefits administration system providers, including Workday, Oracle, SAP, Vitech, ADP, Phymark, CNSI, TriZetto, and Salesforce.

Based on high-level review conducted during the market study, Vitech provides the most robust set of functional business processes aligned with ERB Division needs. Workday, Oracle, and ADP all provide most of the functionalities desired by HCA. We will need to verify during the procurement process that vendors can support HCA needs regarding regulatory compliance, financial management, and human capital management.

Workday, Oracle, Vitech, and ADP all seem to provide sufficient technology coverage. This includes user interface, back-office processes, business rules, integration, data storage, and security. Without detailed specifications from each vendor, compliance with the Health Insurance Portability and Accountability Act (HIPAA), Washington State Office of the Chief Information Officer policies, and

¹³ North Highland completed this market research in the first quarter of 2018. Because the years in which the other states worked on their implementation varied (for example, the New York project was from 2009–2012), future costs on such a project could differ.



HCA organizational privacy and security requirements cannot be fully assessed. However, it appears that most solutions will be able to comply with the security and privacy requirements.

Vendor implementation costs range from \$1.45 million (ADP) up to \$25 million (Vitech). However, these numbers tell only a small part of the story:

1. The full scope of requirements and implementation has not been calculated using a “bottom up” analysis. Vendors have provided their best guesses, but they should only be considered rough orders of magnitude at this stage.
2. ADP’s business model is significantly different than the other vendor’s models; fees are recovered through “per employee, per month” billing.
3. Some of the most popular vendors declined to provide pricing, thereby skewing the range provided in this report.
4. The numbers do not reflect an “apples to apples” cost comparison. Some vendors may have included integrations or conversions where others have not. Assumptions around the costs of state staff may or may not have been included.

North Highland encourages HCA and the Legislature to use these initial numbers as a starting point only; total costs will need to be clarified prior to procurement.

Related to ongoing costs, annual licensing fees range from \$500,000 for Vitech to \$3 million for Workday, and \$7 million for Oracle. ADP’s licensing is based upon a “per employee, per month” structure. These pricing estimates provide a good range of solution costs. However, specific pricing related to software, licensing, and ongoing support will vary depending on which solution is chosen. This is a critical topic that will need to be discussed and negotiated prior to and throughout the procurement process.

Implementation timeline estimates varied between vendors with durations ranging from five months to four years. TriZetto offered five months, ADP 12 months, and Vitech two to four years. Several vendors said implementation time varies. While these timeframes provide a good range, actual implementation timelines will vary depending on which solution is chosen, the scope of the effort, the pace at which the Enterprise Resource Planning entity enterprise can adapt to change, the number of resources that the state can provide, and many other variables. North Highland estimates that implementation will likely range from 18 to 36 months.

Feasibility of Using Existing State Information Technology Assets

We conducted interviews with partner Washington State agencies including the Washington Health Benefit Exchange, Washington Department of Retirement Systems, Washington Office of Financial Management, WaTech, and the other impacted HCA divisions to identify existing state IT assets or future systems under development that could serve as a Pay1 system replacement.



Based on our research, we concluded that no existing state system — or system in development — can fully meet HCA’s needs in their current state. In many instances, introducing new scope into other agencies’ projects risks overall success for their efforts.

There are opportunities to leverage and expand portions of existing applications in a modular, piece-by-piece approach to replace Pay1. Care must be taken to evaluate both the overall cost of this approach and whether it can best support HCA needs for both the PEBB and SEBB Programs. For example, ProviderOne¹⁴ or the Washington HealthPlanFinder were the only potentially viable options to support the SEBB Program’s first open enrollment period starting October 2019. Neither of these two platforms could fully support long-term business needs without customization and configuration.

However, the Health Care Authority will take into consideration the potential merits of using an existing state application with modifications. For example, benefits of using ProviderOne or Washington HealthPlanFinder (modified for PEBB and SEBB Program needs) could include:

- Expanding its use of existing state resources rather than bringing on a new system.
- Supporting the state’s ongoing success with implementing the Affordable Care Act by adding functionality to our health benefit exchange, which already serves our individual market.
- Potential leverage of federal funds, as federal cost-allocation interpretations continue shifting in favor of greater system cross-utilization.
- Positioning our state to respond to the continuing evolution of the health care system.

Finally, in considering existing state IT assets, HCA and the Legislature should carefully consider not only the functional fit of the existing application, but its ability to grow and change over time.

Other Alternatives Examined

We examined three alternative Pay1 replacement solutions.

Option 1—Leverage Existing Washington State Agency System: As mentioned above, this option looked at enhancing an existing or intended future system used by another Washington State agency. However, meeting the unique needs of both the PEBB and SEBB Programs would require extensive customization and development.

Option 2—COTS/SaaS Solution: This option considered procuring a COTS/SaaS solution built to support the benefits administration business. Most of HCA’s processes would be supported by a COTS solution. However, some customization and business process standardization may be required.

Option 3—Configured COTS/SaaS Platform: This option considered procuring a COTS platform not specific to the benefits administration space that, with configuration, could perform benefits administration functions. This type of solution must come with built-in core functionality such as

¹⁴ ProviderOne is Washington’s social and health services online provider billing and claims system.
Pay1 System Replacement
September 30, 2018



interfaces, web and mobile platforms, and data management that must be configured to HCA's processes.

Table 2: Pay1 Replacement Alternatives

ALTERNATIVES	ADVANTAGES	DISADVANTAGES
Option 1: Leverage Existing WA State Agency System	<ul style="list-style-type: none"> Existing operational organization Strong agency partnership Potential cost savings Continuity to the HCA customers currently being served through the Exchange May provide an enhanced customer experience for members currently served by Pay1. Supports operational alignment of key, shared health purchasing initiatives to improve quality and lower costs. 	<ul style="list-style-type: none"> Locked into potentially outdated technology Doesn't utilize industry best practices May not have all needed functionality Requires a separate COTS product for the financial management and related functionality
Option 2: COTS/SaaS Solution	<ul style="list-style-type: none"> Pre-built solution with industry-leading best practices Product updates by vendor Drives standardization Shorter implementation 	<ul style="list-style-type: none"> Customizations may impact upgradability Longer implementation Potential large Organizational Change Management (OCM) impact
Option 3: Configured COTS/SaaS Platform	<ul style="list-style-type: none"> Pre-built solution with industry-leading best practices Product updates by vendor Drives standardization Shorter implementation Extended development toolkit Extends flexibility 	<ul style="list-style-type: none"> Customizations may impact upgradability Longer implementation Potential large OCM impact

HCA and the Legislature will need to evaluate the costs and benefits of a modular Pay1 replacement using pieces of each of these options. Examples of project options using modularity are endless. For example:

- Implement a single COTS product in functional modules until all functions are transitioned from the Pay1 system.
- Use the Health Benefit Exchange's benefits administration functionality with a COTS accounting system.
- Select different COTS products to support different functions of ERB Division business.

Our recommendation of a COTS solution supports the incremental piece-by-piece, modular approach. Most COTS products have distinct functional modules that can be implemented in a sequential approach. Having products from a single software vendor reduces integration challenges, OCM efforts, and training costs.



Recommendation Rationale

In addition to considering the advantages and disadvantages of each option, we also evaluated them to determine how well they align with Pay1 system replacement goals and how they compare on overall costs, benefits, and risks.

How Well Options Align With Goals and Objectives

We assessed each option against the HCA vision and goals for the Pay1 system replacement. This assessment was qualitative with the alignment presented for each option relative to the other options.

Each option was given an average score for how well the option aligned to the vision and goals.

Scoring:

High = 3 points

Medium = 2 points

Low = 1 point

Table 3: Replacement Vision and Goals Scoring

EVALUATION OF QUALITATIVE CRITERIA	OPTIONS CONSIDERED		
	OPTION 1: LEVERAGE EXISTING WA STATE AGENCY SYSTEM	OPTION 2: COTS/SAAS SOLUTION	OPTION 3: CONFIGURED COTS/SAAS PLATFORM
Vision: New benefits administration system is a robust, modular application that can handle the volume and complexity of the PEBB and SEBB Programs without failure and be adaptable enough to accommodate future growth and changes ¹⁵	Low	High	Medium
Goal 1: Implementation speed Speed at which full implementation of system solution takes to deploy	High	Medium	Medium

¹⁵ WA State Health Care Authority. (n.d.). PL-DA Pay1 System Replacement, Decision Package, 2018 Supplemental Budget Request, p. 2.
Pay1 System Replacement
September 30, 2018



OPTIONS CONSIDERED

EVALUATION OF QUALITATIVE CRITERIA	OPTION 1: LEVERAGE EXISTING WA STATE AGENCY SYSTEM	OPTION 2: COTS/SAAS SOLUTION	OPTION 3: CONFIGURED COTS/SAAS PLATFORM
Goal 2: Modular approach			
System solution to be implemented in a phased/piece-by-piece approach	Low	High	High
Goal 3: Flexibility related to legislative, system, and business rules; new legislative mandates; or federal changes			
System has the agility and capacity to react to changes from internal and external sources	Low	Medium	High
Goal 4: Low ongoing maintenance			
Operations and maintenance costs are minimal in comparison to other alternatives	Low	Medium	Low
Goal 5: Full support of the PEBB and SEBB Programs			
	Medium	High	Medium
Average Score	1.5	2.5	2.2

Cost Comparison of Three Implementation Options

We evaluated each option based on the pricing ranges provided for the initial implementation and ongoing support costs associated with a January 1, 2020 SEBB Program “go-live” implementation date and then transitioning PEBB Program covered lives shortly thereafter. Vendors provided this data during interviews and should be considered a rough order of magnitude for initial planning purposes.

It is important to note that these price ranges span initial implementation, ongoing support, and annual licensing costs. These estimates are not indicative of the lifespan of any Pay1 system replacement. In all cases, the replacement should far outlive the estimated timeline.



The table below summarizes draft investment plan and price ranges for each option. The total price range includes:

- Implementation cost: Internal (employee FTEs and time)¹⁶ and external (contractors and purchases) expenditures required to design and implement the benefits administration system.
- Existing support cost: Expenses associated with supporting Pay1.
- New system support cost: Expenses associated with supporting the new system during and after implementation.

Scoring:

Less than \$10 Million = 3 points

Less than \$20 Million = 2 points

Less than \$30+ Million = 1 point

Table 4: Replacement Cost Scoring

COST CATEGORIES (MILLIONS)	OPTIONS CONSIDERED		
	OPTION 1: LEVERAGE EXISTING WA STATE AGENCY SYSTEM	OPTION 2: COTS/SAAS SOLUTION	OPTION 3: CONFIGURED COTS/SAAS PLATFORM
Implementation Cost	\$5,000,000–\$25,000,000	\$5,000,000– \$50,000,000	\$5,000,000– \$25,000,000
Solution Support Cost	\$0–\$2,000,000	\$0–\$2,000,000	\$0–\$2,000,000
Annual License/ Subscription Cost	\$1,000,000–\$10,000,000	\$500,000–\$8,000,000	\$500,000–\$10,000,000
Total Pricing Range*	\$7,000,000–\$35,000,000	\$10,000,000– \$35,000,000	\$10,000,000– \$35,000,000
Average Cost Score	1.0	1.0	1.0

*Total Pricing is for vendor implementation and support costs only. Total Pricing does not include costs for the SEBB Program's short-term data integration or for HCA project management, organizational change management, quality assurance, or independent verification & validation.

¹⁶ Includes 7.44 average span of control, as referenced in: Bandiera, O., Prat, A., Sadun, R., & Wulf, J. (April 30, 2014). Span of control and span of attention. (Working Paper). *Harvard Business School*. http://www.hbs.edu/faculty/Publication%20Files/12-053_5de59810-1c7a-4101-a58b-309376366347.pdf
Pay1 System Replacement
September 30, 2018



How Well Options Fulfill Key Benefits

We evaluated all three options for realized benefits.

Each option was given an average score for how well it would realize each benefit.

Scoring:

High = 3 points

Medium = 2 points

Low = 1 point

Table 5: Replacement Benefit Scoring

BENEFIT	OPTIONS CONSIDERED		
	OPTION 1: LEVERAGE EXISTING WA STATE AGENCY SYSTEM	OPTION 2: COTS/SAAS SOLUTION	OPTION 3: CONFIGURED COTS/SAAS PLATFORM
Reduction of Overall Maintenance Cost	Low	Low	Low
Automation of Manual Work Processes	Medium	High	High
Enhanced Customer Experience (Internal and External)	Medium	High	High
Self Sufficient Technical Infrastructure	High	High	High
Average Score	2.0	2.5	2.5



Risk Analysis

All three options are complex and challenging. Implementation timelines are measured in years — not weeks or months — and require significant vendor and HCA staff resources to achieve successful completion. Because of their complexity and breadth, the implementation options share many of the same risks, but differ in the likelihood and impact severity of each of the risks. Table 6 highlights the common risks we may encounter during the implementation — regardless of the selected option — along with the likelihood and impact severity of each.

Each option was given an average score based on the likelihood that each risk would occur.

Scoring:

High = 1 point

Medium = 2 points

Low = 3 points

Table 6: Replacement Risk Scoring

RISK	OPTIONS CONSIDERED		
	OPTION 1: LEVERAGE EXISTING WA STATE AGENCY SYSTEM	OPTION 2: COTS/SAAS SOLUTION	OPTION 3: CONFIGURED COTS/SAAS PLATFORM
Loss of political/executive sponsorship	Low	Medium	Medium
Ineffective governance processes prevent decision making	Medium	Medium	Medium
Funding not available	Low	Medium	Medium
Third party software developers and/or COTS implementation experts not available	High	Low	Medium
New and existing system users not able to adapt to new system and processes	Medium	Medium	Medium



OPTIONS CONSIDERED

RISK	OPTION 1: LEVERAGE EXISTING WA STATE AGENCY SYSTEM	OPTION 2: COTS/SAAS SOLUTION	OPTION 3: CONFIGURED COTS/SAAS PLATFORM
Lack of HCA and program buy-in and support	Medium	Medium	Medium
HCA may not have the skills, experience, or resources to design, develop, test, and roll-out the solution	Medium	Medium	Medium
Business processes not standardized	High	Low	Medium
Sufficient subject matter expert resources not assigned to perform ongoing system support and upgrades	Medium	Low	Low
Average Score	2.0	2.3	2.1



Option Scoring Summary

The table below provides a comparison of the three options across each of the key elements: alignment to goals, cost, benefit achievement, and risk.

Table 7: Replacement Key Option Scoring

REVIEW CATEGORIES	OPTIONS CONSIDERED		
	OPTION 1: LEVERAGE EXISTING WA STATE AGENCY SYSTEM	OPTION 2: COTS/SAAS SOLUTION	OPTION 3: CONFIGURED COTS/SAAS PLATFORM
Alignment to Vision and Goals	1.5	2.5	2.2
Total Cost of Ownership	1.0	1.0	1.0
Achievement of Benefits	2.0	2.5	2.5
Risk	2.0	2.3	2.1
Average Score	1.6	2.1	2.0

Based on these analyses, we conclude that a competitive procurement that compares proposals from vendors is the best option for Pay1 replacement. This option best aligns with the HCA vision and will provide a robust, flexible platform that will support both the PEBB and SEBB Programs over time.



Implementation Strategy

Although HCA desired to implement the replacement before the October 2019 SEBB Program initial open enrollment, and then perform the much needed transition of PEBB Program covered lives shortly thereafter, there is insufficient time to fully implement a long-term solution that could support the SEBB Program open enrollment beginning October 2019. However, progress can be made to incrementally provide business value each step along the way.

The recommended implementation timeline and strategy will permit HCA to meet SEBB Program open enrollment and implementation, while also continuing to work towards the long-term objective of implementing a new benefits administration system for both the PEBB and SEBB Programs.

Implementation Timeline

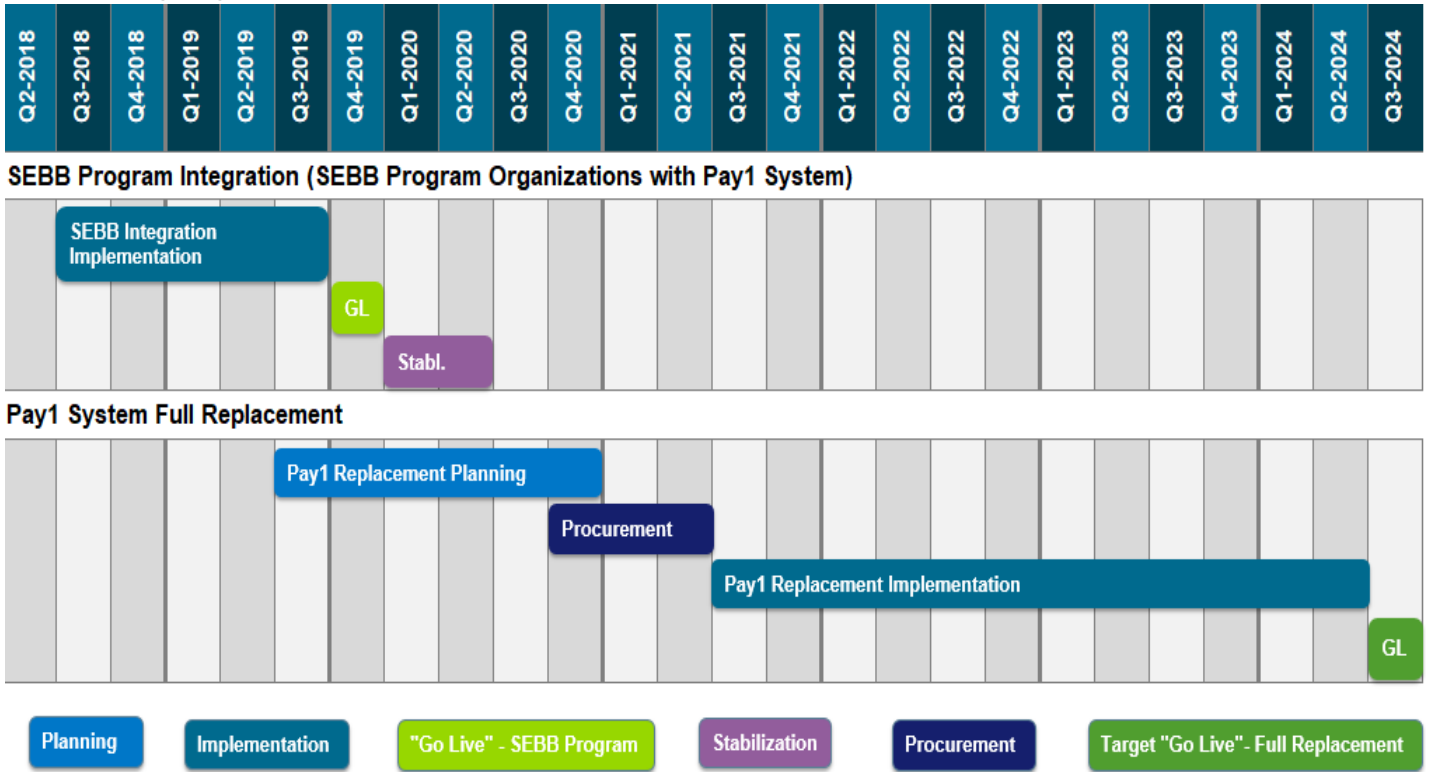
We developed a program roadmap that supports responsibly transitioning PEBB Program functions, the new SEBB Program timelines, minimizes transition risks, clarifies requirements, and ultimately replaces Pay1 completely with modern technology.

Pay1 modular replacement covers 61 months from June 2019 through June 2024. The Pay1 modular replacement work includes planning, procurement, implementation, testing, and end-user training of a new solution designed to support both the PEBB and SEBB Programs. The target “go-live” date for the Pay1 system replacement is July 1, 2024.

Running in parallel, the SEBB Program integration and stabilization timeline covers 39 months from April 2018 through June 2021. This SEBB work includes remediation of the current Pay1 system and the existing school district systems to support SEBB Program benefits design, data integration with Pay1, and a stabilization period following SEBB open enrollment conclusion in November 2019.



Chart 1: Pay1 System Replacement Implementation Roadmap



Note: This includes modification to the Pay1 system and the various school district systems to support the SEBB Program.



Strategy Benefits

The recommended implementation approach offers many benefits:

- First, for the new SEBB Program the short-term strategy allows the school districts to continue using their existing benefits systems. This keeps transition costs for both HCA and the school districts to a minimum. It also reduces much of the cost and time needed to train school district staff on a new system.
- Second, the short-term approach requires limited system development work and can be executed within the mandated timeline for SEBB integration.
- Third, aggregating PEBB and SEBB benefits data in a single repository (Pay1) provides for central management and reporting of benefits and enrollment data by HCA. If each school district was required to individually report benefits and enrollment data to HCA, districts would need additional resources. A single entity (HCA) functioning as data aggregator and reporter requires fewer resources and leads to more comprehensive and consistent data and reporting. This approach aligns with the SEBB Program legislation.
- Finally, the recommended short-term approach supports the long-term strategy by providing a foundation for the eventual replacement of Pay1 with a more modern solution.

The recommended long-term strategy for replacing Pay1 is to implement a modularized solution.

- Although some level of customization and business process standardization may be required, a modular product offers a pre-built solution with current technology and regular product updates.
- Modern solutions are better designed to handle the volume and complexity of both the PEBB and SEBB Programs.
- Such a system will also be adaptable enough to handle future growth and changes, while also driving standardization and reducing manual processes.
- This replacement system can be implemented in a shorter timeframe and with less risk than a custom-developed solution.

Having a long-term strategy that is separate from the short-term SEBB integration approach is warranted for multiple reasons. As noted earlier, a COTS, SaaS, and modified state solutions cannot be procured and implemented in the timeframe available to integrate the SEBB Program. Furthermore, the short-term strategy has gaps in achieving many key business outcomes such as lowering maintenance risk and cost and enhancing usability. Also, the short-term SEBB Program integration offers learning opportunities that will be incorporated in the Pay1 system replacement requirements, yielding a better future solution for both the PEBB and SEBB Programs. Finally, the planning, procurement, implementation, and post-implementation efforts of a Pay1 system replacement in the long-term strategy is timed to avoid potential resource conflict with the short-term SEBB Program integration work.



Conclusion

Our recommendation to **incrementally replace Pay1** will help ensure that we can meet the PEBB and SEBB Programs' needs today — and continue to safeguard sensitive information in the future. This long-term strategy:

- Provides a single solution for both the PEBB and SEBB Programs that modernizes business practices;
- Overcomes existing maintenance and user challenges;
- Reduces risks; and
- Uses state funding efficiently.

Although HCA desired to implement the full replacement before the October 2019 SEBB Program initial open enrollment, and then perform the much needed transition of PEBB Program covered lives shortly thereafter, there is insufficient time to fully implement a long-term solution that could support the SEBB Program open enrollment beginning October 2019. At this time, initial SEBB benefits administration needs are being pursued with the existing Washington School Information Processing Cooperative (WSIPC) Skyward School Management System (SMS). This first step should be followed by fully replacing Pay1 with a modular system for both the PEBB and SEBB Programs.

Replacing Pay1 is critical. Continuing to use this outdated and aged system increases the risk of a major data breach and the risk of a system failure that would prevent the state from meeting its current benefits obligations for over 378,000 PEBB Program covered lives who are state employees, higher education employees, numerous local government employees, and retirees. The Health Care Authority's ability to continue to support this aged system is steadily decreasing, with anticipated retirement of a key subject matter expert, and for the reasons noted in this report. In addition, the integration of the SEBB Program into HCA's benefits portfolio amplifies these risks. The current system will be challenged by the increasing demands of a new program with new policies and processes — and the benefits administration of 300,000 additional covered lives.

The over 40-year-old system has outlived its useful life to support existing PEBB Program business processes and new SEBB Program business processes. Bringing our state's benefits administration into the 21st century with a modern infrastructure will increase business efficiencies (including improved data availability), allow for system modification in a changing health care environment, and increase customer service for all our users.



Appendix A: ERB Division Key Functional Business Processes and Technical Components

The following system components and business process areas align with ERB Division management needs to administer benefits for the PEBB and SEBB Programs. Considering these functional and technical components is critical to any Pay1 system replacement to ensure it meets HCA business and information technology needs.

FUNCTIONAL BUSINESS PROCESS AREAS

Account Management	Enrollment
Administration	Employer Management
Carrier and Vendor Management	Financial Management
Communications Management	Reporting
Customer Service Management	

TECHNICAL COMPONENTS

Ad-Hoc Reporting	Enterprise Service Business
Cloud-Based	Notifications/Alerts
Commercial-off-the-Shelf (COTS)	Operational Reporting
Commodity-Based Purchasing (pay for use)	Retention
Configurable Business Rules Engine	Role-Based Access Controls (RBAC)
Conversion	Security and Privacy Standards
Data Exchanges	Services Oriented Architecture (SOA)
Data Standards and Services	Web-Based
Disaster Recovery/Business Continuity	Workflow Orchestration



Appendix B: HCA Steering Committee and ERB Division Pay1 Replacement Objectives

HCA Steering Committee Objectives

Based on North Highland's discussions with the HCA steering committee, HCA documented the following Pay1 system replacement objectives during an agency-wide Strategic Visioning Session with key executive staff:

- Low ongoing maintenance
- Speed to market
- Flexible (related to new legislative or federal mandates and system changes)
- Streamline/improve existing and future business processes
- Better user experience — including PEBB and SEBB members (new or existing)
- Sustainable (scalable, supportable, etc.)
- System uniformity (PEBB and SEBB)
- Integrated with SEBB and ability to handle increased workloads
- Interoperability
- Modern (supportable/flexible, in compliance, less security/data breach risk)

ERB Division Staff Objectives

Based on North Highland's discussions with ERB Division staff, the key business objectives for improved internal capabilities include:

- Ease of system use
- Increased functionality and capabilities
- Enhanced speed with real-time updates/functionality for internal and external users
- Historical views of internal/external activity, transactions, documentation, and interactions
- Full automation
- Smart-applications and user-assistance functionality
- Data management and Enterprise Data Warehouse
- Configurability and integration with potential new systems, interfaces, and Application Programming Interfaces
- Unified Service Desk
- Enhanced Customer Relationship Management
- Enhanced security management
- Enhanced reporting tools
- Online portal specifically for carriers
- Data/application integrations
- Enhanced training for ERB Division staff, members, employer groups, and agency personnel
- Business rules engine
- Self-service portal for customers and employers

