Child Welfare Request for Information
and Child Welfare Case Management Legislative Report

Session Law 2019-240, Section 24.(c)

Report to

Senate Committee on Health Care
Senate Appropriations Committee on Health and Human Services
House of Representatives Committee on Health
House of Representatives Appropriations Committee on Health and Human Services

By

North Carolina Department of Health and Human Services

September 14, 2020

Contents

Context of this report

Session Law 2019-240 directed DHHS to prepare this report:

SECTION 24.(c) *The Division shall move forward with developing and issuing requests for information (RFIs) to consider a vehicle for improving or replacing the child welfare case-management component of NC FAST, but shall not issue any contracts without prior approval from the General Assembly. To ensure the request for information includes areas of greatest concerns to the pilot counties, the Division shall consult with the Executive Committee of the North Carolina Association of County Directors of Social Services. The Department shall report to the chairs of the Senate Committee on Health Care, the chairs of the Senate Appropriations Committee on Health and Human Services, the chairs of the House of Representatives Committee on Health, and the chairs of the House of Representatives Appropriations Committee on Health and Human Services no later than May 1, 2020.*

Session Law 2019-240 (S537) called for the Department of Health and Human Services (DHHS) to report on the requests for information (RFI) relating to improving or replacing the child welfare case-management component of NC FAST.

This report outlines the results of that RFI within the context of recommendations made by the Program Evaluation Division (PED), along with the strategic roadmap project that DHHS has been working on in collaboration with local DSS directors, local DSS child welfare staff, state child welfare staff, and state IT staff. This strategic roadmap project has been led by an independent IT consulting firm (Gartner) with experience in developing roadmaps for child welfare technology in multiple states. The contents of this report and its appendices include a blend of information from DHHS, Gartner's project deliverables, and information recommended for inclusion by members of the project's core team.

Executive Summary

Background

Beginning in 2012, the North Carolina Department of Health and Human Services (DHHS) envisioned establishing a statewide Child Welfare Services (CWS) technology system. In 2015, a state and county DSS workgroup developed business requirements for a CWS system that would leverage NC FAST, a project sometimes called "NC FAST P4." In 2017, the first version of NC FAST P4 rolled out to five pilot counties and then an additional six expanded pilot counties in 2018. Based on feedback from these counties regarding system usability and other concerns, DHHS paused P4 rollout in 2018. Both NCDHHS and the NC General Assembly saw the need for an in-depth analysis of NC FAST P4 that evaluated alternative options and proposed the best possible path forward.

Process Overview

To fulfill this need, NCDHHS engaged with an independent Information Technology consultancy, Gartner, to help DHHS and counties develop a strategic roadmap for Child Welfare technology in North Carolina. The request for information (RFI) directed by Senate Bill 537 aligned with the roadmap work in such a way that the two objectives were rolled together as part of the overall project. In addition to Gartner's subject matter experts, the core project team consisted of 11 State staff and 12 county staff (including leadership and staff from NC FAST Child Welfare pilot counties).

Throughout the course of the 6-month project, Gartner conducted more than 60 interviews with county and State staff, visited 7 counties in-person, and reviewed 100+ documents. The project core team focused on five deliverables:

- **Drivers and Imperatives** – What are the must-haves of a CWS case management system?
- **Current State Assessment** – What are the strengths and weaknesses of where we are now?
- **Analysis of the RFI responses** – What does the market look like when applied to NC's situation?
- **Alternatives Analysis** – What are the pros and cons of several alternative paths forward, from enhancing the current system, to augmenting it with other technologies, to fully replacing it?
- **The Final Roadmap/Go-Forward Strategy** – What should the process look like going forward?

Guiding Principles

The state and county core project team worked together to craft seven guiding principles for North Carolina's future state vision for child welfare technology:

1) The safety and well-being of children, families, and child welfare staff are of the greatest importance.
2) The system must be easy and intuitive to use, and efficiently manage data and documents.
3) Child welfare workers must be able to access and use the system 24/7 from a broad set of supported devices.
4) Whenever possible, data should only be entered once and used many times.
5) Ongoing training and support for the model of practice, the system, and changes must be aligned to maximize the quality of the service provided.
6) Counties and state representatives must be partners and active participants committed to reaching consensus at every step of the process.
7) Counties vary in size, complexity, and available resources. While any system will require some standardization, we must build a system that works for all counties.

Summary of Each Deliverable from the Gartner and State/County Core Team Assessment:

1) **Drivers and Imperatives**
   This analysis identified numerous key internal and external decision-making factors and must-haves driving state and county analysis of the best path forward. During this portion of the work, the project core team aligned on a vision statement for the future state:
   A statewide CWS system and consistent model of practice that drives positive outcomes for children, youth and families by making timely, accurate information available to inform county and state decision-making, creating an efficient to use and intuitive user experience for child welfare workers and building towards a full CCWIS-compliant[1] solution over time.

2) **Current State Assessment**
   This assessment focused on North Carolina's current state readiness across four domains: governance and management; solution fit; solution development practices; and technology environment, assets, and constraints. The assessment identified strengths and challenges in each domain and concluded that improvement opportunities exist to varying degrees in all four areas and each area has important interconnections with one another.

3) **Analysis of RFI Responses**
   The NC DHHS Child Welfare Technology RFI was posted from March 27, 2020 to May 8, 2020. DHHS received RFI responses from 25 vendors. Twelve responses described complete CCWIS solutions that are developed using modern technology (low-code/no-code development platform, cloud-based, modular design and standard-based integration architecture). Six vendors described an approach that addressed some, but not all, functionalities for a complete CCWIS solution and could be used to augment the NC FAST P4 or a different solution. Seven vendors described support capabilities such as consulting or services. Overall, there was very little demonstration of successful track records in the implementation of full CCWIS solutions.

4) **Alternatives Analysis**
   In this phase, the project core team analyzed five possible alternatives for North Carolina's go forward CWS System strategy, ranging from keeping but enhancing the existing NC FAST P4 solution to a full replacement. Based on both extensive discussions and a detailed, weighted scoring framework that considered time, cost, risk, business alignment, technology alignment and other factors, the state/county project core team agreed to pursue the "Augment and Enhance" strategy, with the nature of any specific augmentation to be agreed upon prior to any such investment. In this approach, some components of the NC FAST P4 solution would be kept and enhanced where appropriate, while others would be either layered with complementary technology solutions from other vendors or replaced.

5) **Final Roadmap and Go-Forward Strategy**
   The final Roadmap and Go-Forward Strategy includes 3 phases of work, with multiple workstreams involved in each phase. The phases include establishing the necessary foundational capabilities for success, completing collaborative solution planning, and the work of design, development, and implementation (DDI) of an augmented and enhanced CWS solution that works well for NC.

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[1] https://www.acf.hhs.gov/sites/default/files/cb/ccwis_faqs.pdf "A Comprehensive Child Welfare Information System (CCWIS) is a case management information system that state and tribal title IV-E agencies may develop to support their child welfare program needs. If a title IV-E agency elects to build a CCWIS, the federal government will provide a more favorable reimbursement than is provided for non-CCWIS systems as long as the system meets federal requirements and is designed to support social workers' needs to organize and record quality case information about the children and families receiving child welfare services."

Summary of recommendations

The overarching recommendation of Gartner and of the state/county core team is to both enhance the existing NCFAST CWS system <u>and</u> to augment it with other technologies that complement or replace components of the current system. Additional details and prioritization regarding the optimal enhancements and augmentations for the system will be fleshed out over the next several months.

To maximize the probability of successfully implementing an effective and user-friendly system, the core team also recommends changes to strengthen the NCFAST governance structure and processes including the formation of a dedicated CWS governance subcommittee, a standing committee that should be fully integrated into the global governance structure for the NCFAST platform.

Moving forward, there is also an ongoing need to carefully plan and prioritize the improvement of the existing system and the deployment of additional technologies to build momentum. The Department plans to use an evidence-based proof of concept approach where each step of system optimization is fully validated and piloted and gains the support of pilot counties prior to any further rollout.

Next steps

Overall, the next step for the Department and counties is to evolve the recently completed strategic roadmap into a practical and actionable plan. The first steps are to establish a clear and collaborative state/county governance structure and process for this effort going forward. In parallel, the Human Services Business Information and Analytics Office will lead a collaborative approach to detail and prioritize optimization opportunities and proposals.
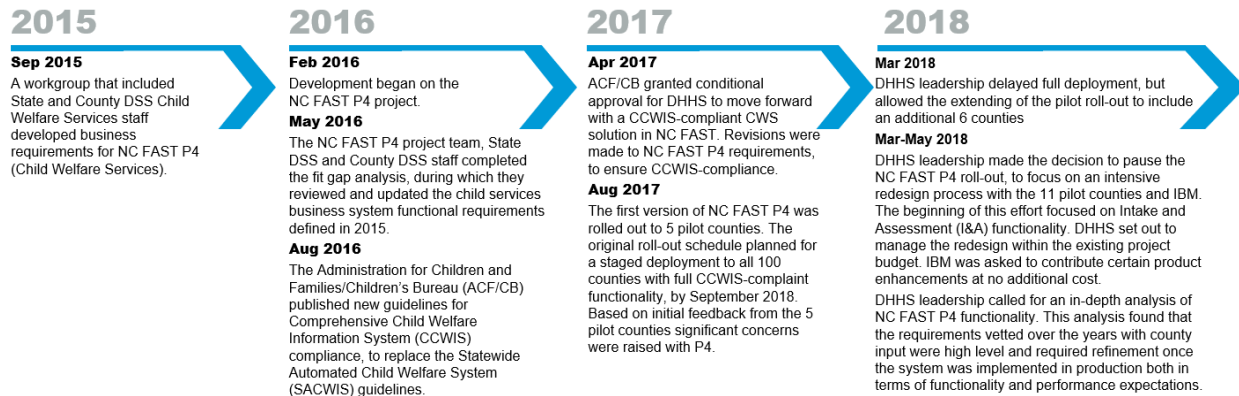
The team will build on the teamwork established by the assessment's state/county core team and will work towards creating a budget request to ensure the procurement and development work required for optimization can move forward in accordance with the overall schedule. As we move forward, the Department will work with our federal child welfare partners, the Administration for Children and Families (ACF), on financial and programmatic decisions.

What will be needed to move forward

- **Collaborative planning and prioritization** between the Department and county DSS to identify the highest value opportunities to enhance and augment the system and to build and validate business requirements to implement those improvements.

- **Clear alignment and buy-in on the vision and plan** for how we want to improve the current system and how those improvements will create value and help county child welfare workers serve children and families.

- **Financial resources,** which will be calculated and refined in coming months, will be required to implement the prioritized enhancements and augmentations to the system, as well as to continue to optimize the system over time and to ensure that critical training and technical support are available to counties both prior to implementation and on an ongoing basis.

- **Time** will be needed, as the path forward that maximizes the chances of success and minimizing risk is a deliberative, consensus-driven approach in which the state and counties work together to continue to evolve the system through multiple waves of improvements.

Background and Current Status

The decision to pursue a fully integrated statewide software system was made by the NCGA in 2009. The development of the detailed business requirements for the child welfare services components of the system began in 2015, with a workgroup that consisted of county and NC DSS staff. This work built upon work that had been completed in prior years, but ultimately serves as the basis for the development of NC FAST Child Welfare in 2016. The following timeline (2015 – 2018) shows the development and implementation history of NC FAST Child Welfare.

2015

Sep 2015
A workgroup that included State and County DSS Child Welfare Services staff developed business requirements for NC FAST P4 (Child Welfare Services).

2016

Feb 2016
Development began on the NC FAST P4 project.

May 2016
The NC FAST P4 project team, State DSS and County DSS staff completed the fit gap analysis, during which they reviewed and updated the child services business system functional requirements defined in 2015.

Aug 2016
The Administration for Children and Families/Children's Bureau (ACF/CB) published new guidelines for Comprehensive Child Welfare Information System (CCWIS) compliance, to replace the Statewide Automated Child Welfare System (SACWIS) guidelines.

2017

Apr 2017
ACF/CB granted conditional approval for DHHS to move forward with a CCWIS-compliant CWS solution in NC FAST. Revisions were made to NC FAST P4 requirements, to ensure CCWIS-compliance.

Aug 2017
The first version of NC FAST P4 was rolled out to 5 pilot counties. The original roll-out schedule planned for a staged deployment to all 100 counties with full CCWIS-complaint functionality, by September 2018. Based on initial feedback from the 5 pilot counties significant concerns were raised with P4.

2018

Mar 2018
DHHS leadership delayed full deployment, but allowed the extending of the pilot roll-out to include an additional 6 counties

Mar-May 2018
DHHS leadership made the decision to pause the NC FAST P4 roll-out, to focus on an intensive redesign process with the 11 pilot counties and IBM. The beginning of this effort focused on Intake and Assessment (I&A) functionality. DHHS set out to manage the redesign within the existing project budget. IBM was asked to contribute certain product enhancements at no additional cost.

DHHS leadership called for an in-depth analysis of NC FAST P4 functionality. This analysis found that the requirements vetted over the years with county input were high level and required refinement once the system was implemented in production both in terms of functionality and performance expectations.

In 2019, while enhancements to the system continued to be developed and implemented, counties that were using only the NC FAST Child Welfare Intake and Assessment functionality were given the option to opt out of the system. The following map shows the current status of NC FAST Child Welfare implementation in NC.

The intensive redesign effort, sometimes referred to as the "rip and replace", has yielded positive results, particularly in the Intake and Assessment (I&A) module. While there are still improvements that could still be made there, the most significant challenges identified with the system are related to

ongoing case management for in-home and out-of-home services, inadequate data/dashboarding/reporting, out-of-home financials, the lack of mobility for all field-work functions, and the lack of 24/7 system availability. While efforts to improve the system have continued, the absence of an FY 19-20 budget significantly impacted these efforts.

2020 PED Study: PED completed a study of NC FAST Child Welfare's Case Management functionality in May 2020, and reported 5 primary findings:

1) Lack of a unified practice model and resource disparities between counties hinder the State's ability to implement a child welfare case management system.
2) Lack of state policy leadership and insufficient training have stymied P4 implementation.
3) The oversight structure of NC FAST contributed to P4 development and implementation challenges.
4) NC FAST P4 is functional, but usability is poor.
5) Lack of a state budget has delayed improvements to functionality; indecision about NC FAST P4 will increase overall project costs and may subject the State to federal penalties.

NC DHHS generally agreed with PED's findings and has taken these findings into consideration for the development of its Roadmap, and the planning for all future investments in child welfare technology.

Project Overview

In response to counties' continued struggles and concerns, and parallel to the passage of S537 and the mandated PED study, NC DHHS engaged with Gartner to help identify a way forward that works for and can be implemented by the counties while minimizing risk and loss of investments made by NC DHHS and its federal partners in NC FAST Child Welfare to achieve a fully CCWIS-compliant CWS system.

The key questions that needed to be addressed by Gartner and the Core Project Team were:

- **Should North Carolina move forward with the NC FAST (Cúram) CWS solution?**
    - o If so, what enhancements or remediation strategies will be needed in NC FAST?
    - o If not:
        - What are the most viable, best-value alternatives in the marketplace?
        - What can be leveraged from the investments made to date to move forward with a successful alternative approach?
        - What exit strategy will be required and how can North Carolina minimize federal payback for the work that has already occurred with federal funding?
- **How effective is the current DHHS approach to technology project governance, including stakeholder involvement and vendor management?**
- **What insights from vendors and the marketplace can help inform our approach?**
- **How mature and effectively applied is the Nexus-Scaled Agile Framework for design, requirements validation, build, testing, quality assurance/control, pilot, deployment planning, and deployment for the envisioned CWS System?**
- **What is the current internal (DHHS and county DSS) capacity to respond to the assessment's findings and "go forward" recommendations?**

This project was broken up into five deliverables and took place over approximately 6 months, and multiple working sessions. Initially, the Core Project team included the Gartner team, 2 county DSS directors (both from NC FAST Child Welfare pilot counties), 6 county child welfare supervisors or staff (3 from counties using NC FAST Child Welfare and 3 from counties not using NC FAST Child Welfare), and 7 NC DHHS program and technology staff. As we began the later stages of the project, the core team was expanded to include 4 additional county directors, and 3 additional state child welfare leaders, to ensure broader input and feedback into the shaping of the final go-forward recommendation. The Core Team effectively came to consensus on the recommendation. The approach in this project shows the benefits of a governance structure that includes both county and state staff.

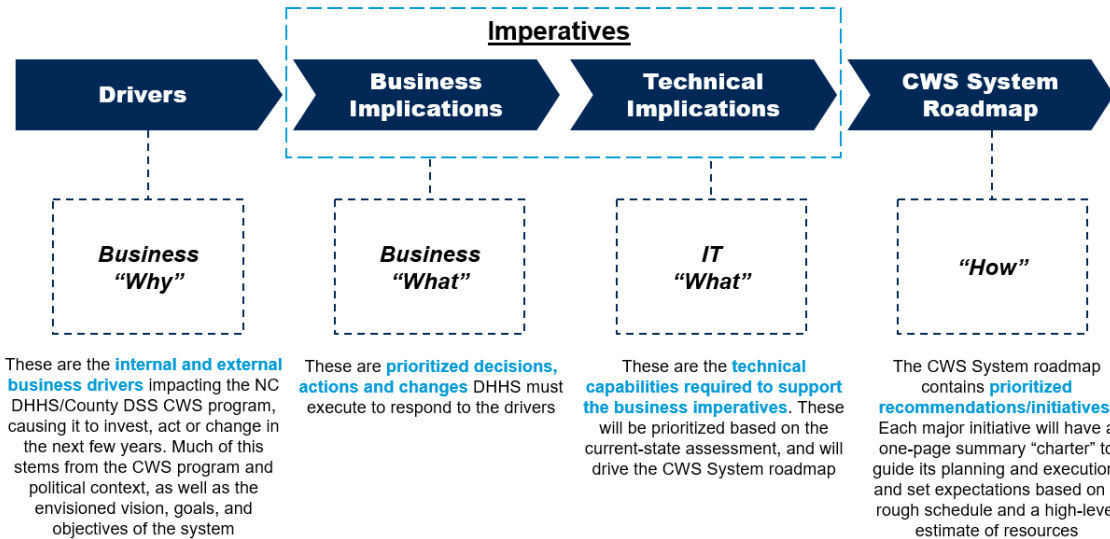The responsibilities of the team members:

- Gartner's Project Team:
    - Support high-level DHHS sponsorship and active county participation
    - Provide strong day-to-day project management
    - Leverage a senior team of project consultants with deep HHS and CWS-specific subject matter expertise
    - Ensure quality assurance throughout the project's life cycle
    - Leverage Gartner's global research capabilities as needed.

- State and County Core Team Members:
    - Act as champions of the effort and understand the importance of defining and affirming "go forward recommendations for a CWS System, without preconceived bias regarding the best value way forward (open minded).
    - Keep leadership and colleagues informed on the process and, as may be necessary, solicit their input and recommendations
    - Understand the critical role technology can play in supporting CWS's vision, goals, and objectives
    - Participate in working sessions reviewing project work products and providing input and recommendations; and as needed, provide input from their leadership and colleagues in support of finalizing project work products and materials.

Deliverable 1: Drivers and Imperatives

The first phase of the project centered on defining the internal and external Drivers and the resulting Imperatives (business and technical implications) that would shape the go-forward recommendations and roadmap for the state's CWS system. The chart below provides a brief overview:

Drivers & Imperatives Overview

Drivers → **Business Implications** → **Technical Implications** → **CWS System Roadmap**

Imperatives (spanning Business Implications and Technical Implications)

Business "Why"	Business "What"	IT "What"	"How"
These are the **internal and external business drivers** impacting the NC DHHS/County DSS CWS program, causing it to invest, act or change in the next few years. Much of this stems from the CWS program and political context, as well as the envisioned vision, goals, and objectives of the system	These are **prioritized decisions, actions and changes** DHHS must execute to respond to the drivers	These are the **technical capabilities required to support the business imperatives**. These will be prioritized based on the current-state assessment, and will drive the CWS System roadmap	The CWS System roadmap contains **prioritized recommendations/initiatives**. Each major initiative will have a one-page summary "charter" to guide its planning and execution, and set expectations based on a rough schedule and a high-level estimate of resources

To begin the project, a future state vision was defined:

A statewide CWS system and consistent model of practice that drives positive outcomes for children, youth and families by making timely, accurate information available to inform county and state decision-making, creating an efficient to use and intuitive user experience for child welfare workers and building towards a full CCWIS-compliant solution over time.

A comprehensive CWS system needs to include many functionalities that integrate with one another, including: providing intake reports of potential child abuse or neglect; assessments of the circumstances noted during the intake process; case management support for in-home services, foster care, and adoption; real-time and mobile support of data collection and decision-making for frontline workers; licensing of foster parents and facilities; and tracking of the complete history of a child's and family's involvement with social services across counties.

The Core Team also co-authored a set of guiding principles for achieving the future state vision:

Guiding Principles for achieving the future state vision

Safety and well-being of the children, families and NC Child Welfare staff are of the greatest importance.

Create a system* that is **easy and intuitive to use** and efficiently manages **data** and **documents.**

A system that child welfare workers can access and **use 24/7 from a broad set of supported devices**.

Whenever possible, **data should only be entered once** and used many times.
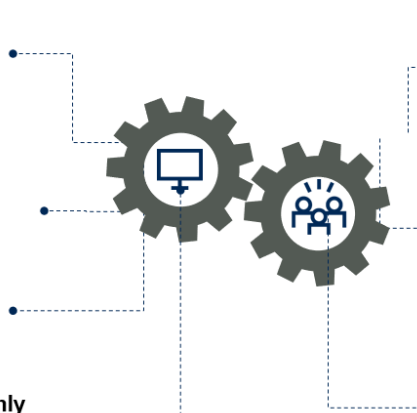
Ongoing training and support for the model of practice, the system and changes will be **aligned to maximize quality** of the service provided.

Counties and State representatives must be partners and active participants committed to reach consensus at every step of the process.

Counties vary in size, complexity, and available resources. While any system will require some standardization, we must build a system that works for all counties.

These guiding principles will be used by the Core Team and future decision-making bodies as touchpoints to frame conversations, guide decisions, and increase the chances of building the best product for NC.

The strategic goals for an optimized CWS system established as part of the Drivers and Imperatives phase of the project are:

1. Implement the required statewide CWS system, incrementally yet expeditiously.
2. Develop the overall implementation strategy with buy-in, input and approval from county and state stakeholders in 2020. During 2021, develop the details of the necessary transition and begin to execute collaboratively with county DSS representatives.
3. Gain input and approval from key stakeholders and oversight groups, including ACF and NCGA.
4. Ensure that the implementation approach:
   a. Minimizes the risk of transition to the new statewide CWS system related to impacts on children and families as well as county DSS staff and operations.
   b. Plans for sufficient county DSS staffing levels as determined by research and analysis of needs, and the human-centered design thinking used to create the new CWS system.
   c. Is incremental, aligning with the unique aspects of each county (e.g., demographics, size, geography, caseload, capacity, etc.), in consultation with county DSS leadership.
   d. Sequences the implementation of specific modules or components based on risk and prioritized needs.
   e. Is iterative, with lessons learned and staff input from each phase informing the next.
   f. Is accompanied by a change management approach that accounts for the full range of impacts on county DSS and state stakeholder groups.
   g. Includes comprehensive and timely program and technology training, resources and system support throughout the full lifecycle.

A detailed list of internal drivers, external drivers, and imperatives from this phase of the project can be found in Appendix A.

Deliverable 2: Current State Assessment

In the second phase of the project, Gartner conducted extensive interviews and analysis to assess North Carolina's current and go-forward readiness levels for four domains: governance and management; solution fit; solution development practices; and technology environment, assets, and constraints. Each domain was broken into sub-categories an analyzed within the context of strengths, challenges, current capabilities, and risks to future success. Full details for each domain can be found in Appendix B.

Current State Readiness Assessment Framework
Four Assessment Domains

- This **Current State Readiness Assessment Framework** focuses on an assessment of North Carolina's "current state," with respect to person-centered, integrated care and comprehensive CWS System, across four domains:
  - **Governance & Management**
  - **Solution Fit**
  - **Solution Development Practices**
  - **Technology Environment, Assets and Constraints**
- For each domain, an assessment was conducted of DHHS's capabilities and identified specific strengths and challenges

Governance & Management	Solution Fit
State Program and Project Governance and Management including vision, strategy, decision-making, organization stakeholder collaboration, vendor management: scope, Risk and change management	Child Welfare System Cúram viability and alignment with DHHS CCWIS current and future state needs, functional and non-functional requirements, CCWIS compliance, Agility, and total cost of ownership

Solution Development Practices	Technology Environment, Assets and Constraints
Application of the Agile Framework for design, requirements validation, build, testing, quality assurance/control, pilot, deployment planning, and deployment aligned with industry Best Practices	Child Welfare System technical infrastructure and solution enterprise architecture, including hardware, software, licensing, hosting, etc.

Go Forward Readiness Summary

Gartner found that improvements in **Solution Development Practices** and **Governance and Management** are the domains that are most in need of improvement before moving forward with any new, or augmented CWS solution.

It should be noted that much work has already begun to address challenges detailed in the Current State Assessment, and to mitigate the risks to future success. The following are examples of work that has been completed or is currently underway within each domain:

Governance and Management: DHHS has created a cross-programmatic Release Steering Committee to govern NC FAST's change management process and ensure that the limited development and testing resources are being utilized for maximum business value.

Solution Fit: DHHS has implemented simplified "wizards" for completing complex tasks such as the determination of IV-E eligibility. DHHS is also exploring new technologies to potentially augment the current system to address pain points and provide value to social workers and/or county DSS staff.

Solution Development Practices: DHHS is in the process of making many improvements and modernizations in its solutions development practices. These include improving the Agile development

process, including program and business staff within our development teams, enabling quicker feedback loops to developers, providing more transparency into capacity planning and the release process, implementing automated testing capabilities, and factoring in human centered design approaches.

Technical Environment: DHHS is planning for a migration of NC FAST to the cloud and is exploring the potential to separate Child Welfare functionality into its own software "instance," which could allow for more flexibility in augmentation and fewer dependencies on unrelated components or functionalities. DHHS is also planning to implement new DevOps processes and tools that will serve to automate testing and code deployments reducing defects, providing faster feedback loops, improve quality and potentially more frequent releases to satisfy business needs. Additionally, DHHS will be setting aside developer time within each release to address outstanding technical debt.

Deliverable 3: Request for Information (RFI) Analysis

The NC DHHS Child Welfare Technology RFI was posted from March 27, 2020 to May 8, 2020. The full list of questions asked can be found in Appendix C.

NC DHHS received RFI responses from 25 vendors. Many responses (12) described complete CCWIS solutions[2] that are developed using modern technology (low-code/no-code development platform, modular design and standard-based integration architecture). They also are available as cloud-based solutions. Each of the 12 could also presumably be scaled to serve as full-replacements or augmentation solutions to various existing parts of the current system.

Several vendors (6) described an approach that addressed a sub-set of the ten defined areas of functionality that could be used to augment the NC FAST CWS System (P4) or a different CCWIS solution (such as one of those described in the other responses).

Several vendors (7) described capabilities to provide support to a future NC CWS System project in the forms of:
- Consulting resources with skills in CWS systems development and implementations that could be part of a solution approach
- Technologies and services that could be used as part of a solution approach, some of these are technology components and/or services included in the other responses

Many of the responding vendors can point to specific state CWS experience but can demonstrate very little depth in successful implementations of their described CCWIS solutions. There are no pure next generation systems that have a demonstrated success track record in production. Most are hybrid solutions.

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[2] The Administration for Children and Families (ACF) does not officially designate any Child Welfare solutions as CCWIS compliant.

RFI Summary Analysis – Full CCWIS Solutions
Sparse Track Record

Vendor Organizations	#	In Process Projects	Complete Projects	CWS Knowledge Described	County Administered State Experience Identified
Vendor 1	0			Y	-
Vendor 3	1	LA		Y	Very Limited
Vendor 4	1	CT		Y	-
Vendor 5	4	NH, ME	DE, MI	Y	Yes (but not this solution)
Vendor 7	1	MD		Y	-
Vendor 11	1	TX		Y	-
Vendor 16	3	CT, ID	AZ	Y	-
Vendor 19	2	VA, MI		Y	Very Limited
Vendor 22	0			-	-
Vendor 23	0			Y	-
Vendor 24	1	ME	ID	Y	-
Vendor 25	0			Y (SACWIS)	Yes, worked with PA and CA

A number of these vendors can point to specific state CWS experience but very little depth in successful implementations of their described CCWIS solutions

This is, to some extent, explained by relatively recent finalization of CCWIS rules in 2016

We believe this is representative of the marketplace – "plenty of vendor enthusiasm with little track record"

Despite the pricing details requested in the RFI, the vendors that responded chose to provide only very high-level information regarding prices. In most cases, there is no information on how their prices would vary if NC DHHS chose to purchase a subset of the solution and products involved.

Complete replacement solutions are available, and the Vendors' cost estimates of 7 years Total Cost of Ownership are between $35M - $150M, however, based on Gartner's analysis of costs of similar size and scope of implementations, the high-level cost estimate range for the Design, Development, Implementation and Enhancement to the state over a 7 years period would likely be between $120-$180M (not including federal revenue and potential paybacks) and take at least 24 months for the minimum viable product to deploy.

Augmentation solutions to address some of the current NC FAST challenges are available, and there are viable approaches to integrate these new capabilities.

The RFI respondents with county-administered state experience provided some "lessons learned":
- Ensure management and front-line personnel involved in the project remain committed to improving the way child welfare workers can be supported through modernized technology. A CCWIS implementation should not merely be a technology upgrade but should bring innovation and technological tools to improve child welfare outcomes. Identify field-based "change champions" to help with driving change.
- The buy-in of all stakeholders is paramount in a county-administered system with the need for effective lines of communication between the state agency and the county administrations that allow for a successful technology implementation.
  - Obtain input from every county as to how the system should look and act.
  - Having this input can give each county a common solution that is built for them and offer the functionality, look and feel that match the characteristics of various types of counties.
- Identify and empower a forward-thinking, trusted, and knowledgeable product owner to ensure timely decision making which embraces incremental, continuous improvement.

- Make sure the state staff assigned to the project are fully freed up to do the important work of the project. Secure additional staffing before the project starts if needed.
- Begin conversion activities at the project start. Often this is deemed a back-end activity, but there are decisions and error corrections that need to be made throughout the project lifecycle to keep the project on track.

Deliverable 4: Alternatives Analysis

The purpose of the Alternatives Analysis phase of the project was to identify alternatives for the State's "Best Value" go forward CWS System strategy, including both internal and external scans of viable alternatives, technologies, structures, and approaches. This work was supported by the RFI, along with the other preceding project deliverables. The results of the Alternatives Analysis inform the development of prioritized recommendations and an actionable "go-forward" roadmap for NC.

Gartner and the Core Team defined five possible alternative pathways for North Carolina's CWS Strategy, each of which involved one or more of the following:

Enhancing: Maintaining and improving the current NC FAST CWS system.

Augmenting: Maintaining some of the current NC FAST CWS system but either complementing or replacing others with other technology solutions from other vendors.
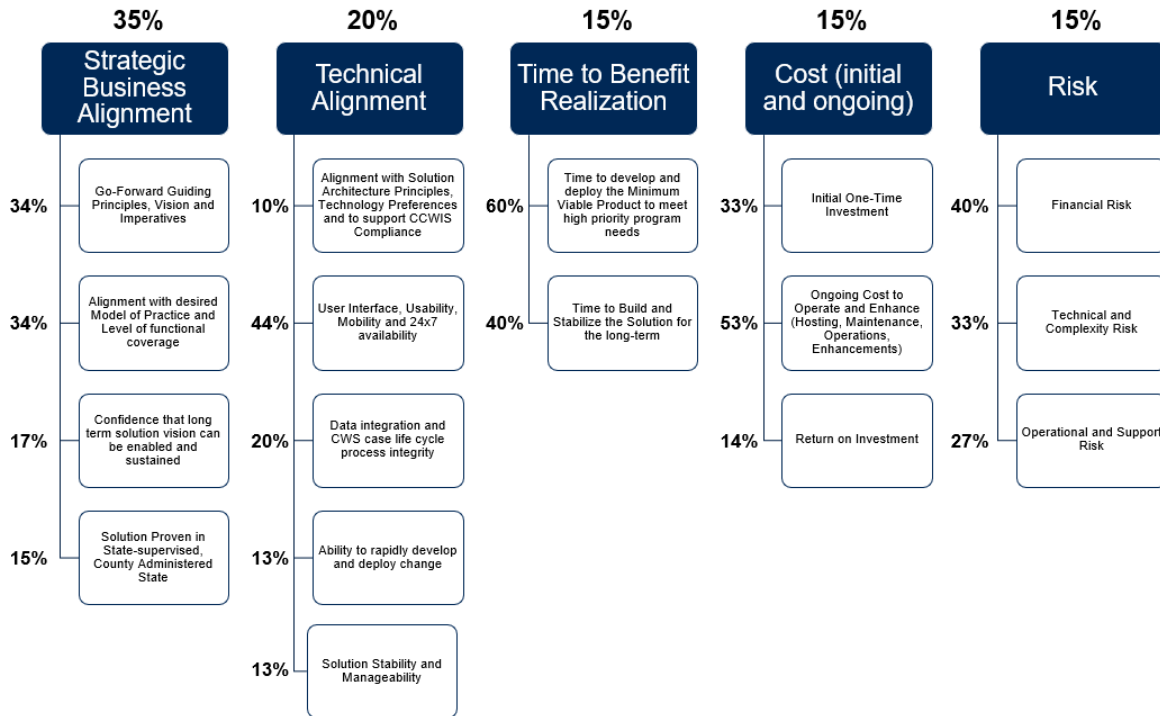
Replacing: Maintaining none of the current NC FAST CWS system and moving forward with one or more other solutions or vendors.

The list of 5 alternatives assessed **(listed in high to low order of their final evaluation score)** were:

1) Augment and Enhance NC FAST CWS System *(highest score)*
2) Replace NC FAST with COTS Application / Framework / Cloud Platform Solution
3) Enhance and Optimize NC FAST CWS System
4) Replace NC FAST with Custom Developed Solution
5) Replace NC FAST with Transfer Solution from Another State *(lowest score)*

Gartner applied a disciplined process framework to assist with the weighing of alternatives. The approach applied due diligence to the decision-making process, ensuring that key facts were taken into consideration, and that the focus remained on criteria that was most important to the business. The process encouraged stakeholder participation and buy-in for the selected alternative.

The applied evaluation weights used to generate this ranking were as follows:

Strategic Business Alignment — 35%	Technical Alignment — 20%	Time to Benefit Realization — 15%	Cost (initial and ongoing) — 15%	Risk — 15%
34% — Go-Forward Guiding Principles, Vision and Imperatives	10% — Alignment with Solution Architecture Principles, Technology Preferences and to support CCWIS Compliance	60% — Time to develop and deploy the Minimum Viable Product to meet high priority program needs	33% — Initial One-Time Investment	40% — Financial Risk
34% — Alignment with desired Model of Practice and Level of functional coverage	44% — User Interface, Usability, Mobility and 24x7 availability	40% — Time to Build and Stabilize the Solution for the long-term	53% — Ongoing Cost to Operate and Enhance (Hosting, Maintenance, Operations, Enhancements)	33% — Technical and Complexity Risk
17% — Confidence that long term solution vision can be enabled and sustained	20% — Data integration and CWS case life cycle process integrity		14% — Return on Investment	27% — Operational and Support Risk
15% — Solution Proven in State-supervised, County Administered State	13% — Ability to rapidly develop and deploy change			
	13% — Solution Stability and Manageability			

Strategic Business Alignment and Technical Alignment received enhanced weighting in order to account for several of the major issues with the current system. The usability issues that counties shared, which were reiterated in the PED report and in Gartner's Current State Assessment, along the need to support a statewide practice model, were major factors that were considered with the above weighting values.

The scoring approach was based on Gartner's research and analysis to identify strengths and weaknesses for each potential alternative. Each criterion was assessed for each of the alternatives, which produced a roll-up score based on the applied weights from the previous diagram. The scores applied to each criterion for each alternative were based on a 1 to 5 Likert scale:

Score			Description
5	●	Excellent	Alternative sufficiently meets criterion, and provides DHHS with significant value related to the criterion
4	◕	Good	Alternative sufficiently meets criterion, with some additional value added capabilities
3	◑	Acceptable	Alternative sufficiently meets criterion
2	◔	Moderately Acceptable	Alternative meets criterion; though solution may require "workarounds," changes to desired outcome, or significant effort to address the outcomes
1	○	Poor / Nonexistent	Alternative does not meet criterion

Based on feedback from the Core Team, Gartner documented the assumptions made as they worked through their analysis. Those assumptions were:

- All the alternatives are feasible in terms of the agreed vision and goals. The analysis differentiates between alternatives based on relative ability to satisfy the sub-criteria, not absolutes

- All alternatives and related implementation approaches under consideration must be acceptable to federal funding partners
- The resulting work to make the alternative successful must be fully funded
- With the exception of the "Enhance and Optimize" alternative, any chosen alternative is likely to require a competitive procurement for system integration / implementation and technology vendors and will require the definition of scope and boundaries, development of requirements specification, and evaluation of possible solution options
- A proven solution is one that has successful recent implementation stories and presents lower risk to the organization
- Any new technology investment as a part of alternatives will leverage the current state of the art technology, architecture design and deployment best practices

The finalized scores, based on the applied weights, were as follows:

		1st Augment and Enhance P4 (B)	2nd Replace P4 with COTS/SaaS (C)	3rd Enhance and Optimize P4 (A)	4th Replace P4 with Custom Solution (E)	5th Replace P4 with Transfer Solution (D)
Strategic Business Alignment	Go-Forward Guiding Principles, Vision and Imperatives	4	4	3	4	3
	Alignment with desired Model of Practice and Level of functional coverage	4	4	3	5	2
	Confidence that long term solution vision can be enabled and sustained	4	3	3	3	3
	Solution Proven in State-supervised, County Administered State	2	2	2	1	2
	Combined	3.700	3.530	2.850	3.720	2.510
Technical Alignment	Alignment with Solution Architecture Principles, Technology Preferences and to support CCWIS	4	4	3	5	3
	User Interface, Usability, Mobility and 24x7 availability	4	4	3	5	4
	Data integration and CWS case life cycle process integrity	3	3	3	4	3
	Ability to rapidly develop and deploy change	3	4	2	4	3
	Solution Stability and Manageability	3	3	4	5	5
	Combined	3.540	3.930	3.000	4.670	3.700
Time to Benefit Realization	Time to develop and deploy the Minimum Viable Product to meet high priority program needs	4	3	4	2	3
	Time to Build and Stabilize the Solution for the long-term	5	3	3	1	3
	Combined	4.400	3.000	3.600	1.600	3.000
Cost (initial and ongoing)	Initial One-Time Investment	4	3	5	4	3
	Ongoing Cost to Operate and Enhance (Hosting, Maintenance, Operations, Enhancements)	3	2	3	2	2
	Return on Investment	5	3	4	1	3
	Combined	3.610	2.470	3.800	2.520	2.470
Risk	Financial Risk	4	3	3	1	3
	Technical and Complexity Risk	3	3	3	3	3
	Operational and Support Risk	3	3	4	2	3
	Combined	3.400	3.000	3.270	1.930	3.000
	Combined Score	**3.7145**	**3.292**	**3.198**	**3.1435**	**2.889**

Appendix D shows additional detail for each alternative's respective analysis.

While both #1 (Augment and Enhance) and #3 (Enhance and Optimize) involve improving existing functionality, the key distinction that Augment and Enhance involves the acquisition of additional or replacement functionality to address high priority challenges and opportunities.

The Augment and Enhance alternative would involve incorporating one or more augmentation products that, out-of-the-box, have potential to address many of the pain points that social worker have identified with NC FAST Child Welfare functionality as it exists today.

Gartner assessed that this approach could be achieved, if paired with improvements to the project approach that was driven by the needs of county child welfare agencies.

Multiple states have had success implementing augmentation approaches, including one state that was specifically referred to during the PED study presentation in June 2020. The referenced state (Ohio)

augmented their system using artificial intelligence and case discovery software with their previous system to provide a better user experience, and to deliver key case insights from unstructured data. There are multiple vendors in the marketplace that could provide value to NC within multiple areas of child welfare.

The state and county members of the Core Project Team unanimously agreed to this statement:

*"The NC Core Team recommends that the strategic direction and go forward strategy for the planning, selection and implementation of a state-wide CWS system for North Carolina state and counties is based on the **"Augment and Enhance P4"** Alternative that received the highest scores in the Alternatives Analysis. This recommendation is based on the understanding that the strategy that evolves around this alternative will also include certain activities and constraints:*

- *_The nature of the augmentation will be specified and agreed prior to further investment:_ An in-depth analysis will be conducted that determines the scope, nature and prioritization of the main aspects of augmentation planned <u>prior</u> to any procurement or decisions regarding the specific technologies to be acquired to augment P4*
- *The go forward strategy will include a number of activities that comprise the **strategic roadmap** that will be **developed under the direction of this team** and be a product of this project*
- *This strategy and roadmap will be entirely in **alignment with the agreed Principles, Vision, Goals and Imperatives** defined by this project*
- *The strategy and roadmap will include plans to specifically ensure that **risks** identified in the Current State Readiness Assessment **will be fully addressed in a timely fashion***
- *Decisions regarding the above and all of the CWS implementation going forward will be governed by **a revised and state/county balanced governance process** implemented in accordance with the strategic roadmap"*

Deliverable 5: Go Forward Recommendations & Roadmap

The Go Forward Strategy, based on all of the work previously described, is a set of Recommendations and a Roadmap to support the State in executing the best value go forward strategy for the envisioned CCWIS compliant solution.

The Roadmap is broad in scope and includes recommended actions to address underlying systems planning and implementation practices, greater elaboration and confirmation of the chosen strategy, the anticipated timeline to achieve the agreed vision covering short, medium, and long-term actions.

The recommendations and roadmap:

- Define the go forward enhancement, remediation and/or procurement strategy
- Address current program risks and issues
- Provide the State an opportunity to minimize and mitigate future risks
- Focus on leveraging investments made to date, wherever possible, and identifying "wise investments" in time, resources and dollars going forward
- Include a number of recommended initiatives to be sequenced over time

- The final **Go Forward Strategy, Recommendations and Roadmap Report** provides the State a best value strategy(ies) and actionable recommendations for moving forward with a future state CCWIS project that addresses the current and anticipated future issues and risks.

The three phases of the roadmap include the establishment of foundational capabilities, solution planning, and design, development, and implementation (DDI). The description of each phase and their respective workstreams can be found in Appendix E.

The immediate next steps for NC DHHS are:
- Present the CWS Assessment, RFI, and Roadmap work to the NC Association of County DSS Directors (NCACDSS), including addressing any concerns from counties and answering questions
- Consult with federal partners to get feedback and guidance
- Define a sustainable governance structure that involves input and buy-in from the counties and NC DHHS
- Work with counties to define and prioritize system functionality issues that could be addressed through augmentation and/or enhancement
- Begin the work of implementing a statewide model of practice
- Develop a procurement strategy, including the free proof of concept recommended by PED
- Consult with NCGA on procurement strategy and overarching plans
- Develop a modulization plan to address the architectural issues associated with augmentation

Appendix A: Full List of Internal Drivers, External Drivers, and Imperatives

Internal Drivers

1) The national desire to reduce child abuse and neglect risks and improve outcomes has led to a need for statewide record keeping for federal compliance. Without a statewide system, information known to one county may not be readily available to another county as children and families move within the state. This lack of information sharing can result in significant safety risks.
2) DHHS' desire to provide executive, supervisor, and social worker decision-support capabilities for county DSS staff and purchase-of-service providers for the safety, well-being, and permanency of children by:
   a. Anticipating what they need to do next
   b. Supporting their decisions and activities
   c. Validating that they have done the right thing, at the right time, with the right resources
   d. Improving processes and efficiencies, and streamlining social worker data collection
3) Need for mobile technologies to support on-the-go information access and capture in-person client engagement without jeopardizing staff-client interactions
4) Compliance with NC Session Law 2017-41 (Rylan's Law), including the Center for the Support of Families (CSF) recommendations for strategic reforms of the child welfare system and other social services programs
5) Alignment with the 2020-2024 Child and Family Services Plan, including:
   a. A consistent, standard statewide MoP for child welfare services
   b. A statewide case management system for child welfare services
   c. State/county continuous quality improvement (CQI) and supporting information systems
   d. Access to reliable data for state and county child welfare leaders
6) Governance complexity due to state-supervised/county-administered CWS approach:
   a. In North Carolina, CWS is county administered and state supervised, with each county responsible for federal and state compliance
   b. There are 100 counties, each with a County Department of Social Services accountable to a County Board
      i. Each county is responsible for staffing, direct oversight of the day-to-day work and fund the bulk of administrative costs associated with child welfare
   c. An independent body representing the collective views of the County Directors — North Carolina Association of County Directors of Social Services (NCACDSS)
7) Ongoing NC FAST P4 challenges that reduce trust and credibility of state leadership:
   a. With pressure on NC FAST to meet deadlines and budget constraints, P4 was implemented with substantial functionality gaps that, although partially addressed, some have never been fully resolved despite considerable system redesign
   b. NC FAST governance process was ineffective in fully aligning the business requirements with the needs of the counties
   c. NC FAST reduces productivity and increases staff costs due to usability issues with the system and the total time required to enter data and complete tasks in the system
   d. NC FAST integrated HHS technology approach (across economic assistance and child welfare case management) causes constraining and avoidable dependencies

External Drivers:

1) Compliance with federal CFSR, Title IV-E and CCWIS requirements
2) The welfare of children is important to the public, and the activities of government authorities are under constant scrutiny by the news media and citizen advocates
3) The NC Legislature's pause on the rollout of NC FAST P4, and their continuing interest in the fate of P4
4) Investment strategy options available may be significantly impacted by:
   a. Any Federal Financial Participation (FFP) funds that may need to be repaid to federal agencies due to a change in strategic direction
   b. North Carolina was without a SFY 19-20 budget
   c. COVID-19 economic slowdown could impact funding or the timing of available funds

Imperatives:

1) **Transformation Imperatives**
   a) **Align with the 2020-2024 Child and Family Services Plan** (Demonstrate alignment with and support of the five-year plan that is pervasive throughout the organization)
      i. Business Implications
      (1) DHHS and county Child and Family Services Plan stakeholders must be actively involved in strategy and decision making for the NC Optimized CWS System Program (OCSP) through a well-defined and robust governance body which comprises leadership roles in procurement, implementation, and operations processes
      (2) Each leadership stakeholder is responsible for the buy-in of their direct reports and their organizations
      (3) Cross-departmental state and county staff interfaces must be developed and nurtured to achieve agreement and buy-in at these levels
      (4) Establish direct linkage between strategic priority target metrics of the Child and Family Services Plan and the OCSP measures of success
      (5) Ensure changes required to move to a statewide MoP and support for CQI targets are fully agreed and communicated with proper authority as part of the optimization program
      ii) Technical Implications
      (1) IT must be considered by the counties as a business enabler to support the mission and vision of the Department
      (2) The OCSP staff for NC FAST, currently within the IT organization, must work closely with all business (program, policy and operations) customers of the program to define, refine and execute needs of the business customers
      (3) A "statewide system" can be achieved by implementing multiple systems that are well integrated:
         (a) The Child and Family Services Plan must include a strategic priority for CQI with targets for state and county child welfare leaders and staff to have access to reliable data and a statewide case management system that captures all federally and state required data and increases efficiencies for users

      (b) A key driver for the statewide case management is to easily and quickly track "at risk" children and families across county boundaries. Statewide tracking and consistent practices, data, and measures could be achieved by compliance of standards across multiple systems

b) ***Make governance transparent and inclusive*** (Establish and enable program and project governance policy and processes, and roles and responsibilities for the management of the OCSP and associated enterprise scope)

  i) Business Implications

    (1) Governance and decision making must be inclusive of key stakeholders of the NC OCSP, and the governance mechanisms must maintain the confidence of the County DSS directors and the NCACDSS

    (2) Each body within the governance and decision-making structure must have clear guidance on the scope of their authority — both their responsibilities for making decisions, and the limits of their authority

    (3) The decision-making process must be routed through the governance process via transparent and planned routes

    (4) Governance entities must be staffed by knowledgeable and empowered individuals, and should not be delegated to others

    (5) Governance entities must be fully empowered with authority that is respected by the stakeholders

  ii) Technical Implications

    (1) IT projects need to be coordinated and managed as a set of business-enablement initiatives

    (2) Comprehensive IT considerations must be brought to each governance body with specific context to facilitate the body to make the requested decision

c) ***Adopt a product management approach*** (Use a product management approach to ensure that both the plan and the execution matches the prioritized needs and expectations)

  i) Business Implications

    (1) Drive program activities and prioritization based on defined business needs and current strategic priorities resulting in products having new or enhanced capabilities with defined customers and outcomes/benefits

    (2) Implement product management by assigning responsibility to manage products and make product managers accountable for the achievement of outcomes/benefits. This function must be fully funded, empowered and established organizationally with credibility, inclusive of representatives of key stakeholders at the county and state level

    (3) Prioritize all the competing elements of the OCSP and elsewhere in line with and responsive to changing business conditions and the long-term goals

    (4) Engage in detailed and transparent planning across all elements and projects of the OCSP to coordinate activities and state resources for each county's planning efforts

    (5) Ensure appropriate changes to move to a statewide MoP. Also ensure the support of CQI targets is fully agreed and communicated with authority as part of the OCSP, and fully supported by authoritative state resources

    (6) Link details of planned deliverables to measured outcomes via appropriate communications mechanisms to align stakeholders' expectations of the deliverables and benefits achieved

  ii) Technical Implications

(1) Central IT and OCSP organizational structures should align to the business context to directly support the business processes and organization

(2) Each procurement, technology component and contract initiative must have built-in initial and ongoing measurement criteria to demonstrate meaningful resultant business outcomes

(3) The Program Office and operations staff must be in a position to measure, report, and manage the success criteria to demonstrate ongoing alignment with the Child and Family Services Plan, as well as areas where shortfalls or risks need to be addressed

2) **Organization Imperatives**

a) ***Implement a wise investment strategy*** (Devise a wise investment strategy considering the impact on users (internal and external), total cost of ownership, and vision for the required business and systems capabilities)

   i) Business Implications

   (1) Establish and pursue risk mitigation strategies — from investment decisions to procurement strategy, development, deployment, maintenance and operations, while ensuring that funding meets the needs to manage the ongoing product life cycle for achieving the desired benefits. These strategies must include:

   (a) ongoing investment in functional enhancements making the system better over time, and evolving it to continuously improve to meet county needs and emerging successful models of practices

   (b) robust ongoing training and technical support for existing and new county staff

   (2) Fully leverage FFP while ensuring federal funding criteria is aligned with DHHS' vision, strategy, and goals and takes into account the risks to FFP from changes in strategy

   (3) While ensuring the system fully supports the seamless statewide provision of CWS for children and families across the counties of North Carolina, allow counties to have choices in system deployment and county IT investment that reflects local context, circumstances and demographics

   ii) Technical Implications

   (1) Enhance ability to integrate highly effective, existing systems through the use of interoperability standards and near real-time integration technologies

   (2) Align IT investment strategies with federal funding requirements for interoperability, architecture design guidelines, and data quality standards to achieve compliance with CCWIS requirements

b) ***Holistically manage organizational change and readiness*** (Implement and maintain a robust communication plan and organizational change management activities to ensure that stakeholders, at all levels in state and county operations, and partners are aware, understand and feel as part of the OCSP efforts)

   i) Business Implications

   (1) The entire CWS enterprise (state, county operations and partners) must be prepared to embody changes that will come with evolving business strategy and technology

   (2) The communications and change management efforts should demonstrate a coherent plan to move from the "current state" to the envisioned "future state" NC Optimized CWS System

   (3) The OCSP involves a large and varied set of stakeholders at several levels across DSS and its partners who need to be informed and made aware of the impact of the future state on their role and responsibilities, as well as have opportunities to provide inputs. The

communications and change management activity must deal appropriately with all of these groups

    (4) Key roles must be staffed, including county-level support for practice change management, implementation planning and readiness, data, reporting and analytics, governance, and quality assurance coordination

    (5) Ongoing workforce alignment based on evolving regulatory requirements and mandates as well as changes in workload and the complexity of work

  ii) Technical Implications

    (1) IT and OCSP successes must be messaged to match the needs and priorities of each stakeholder group

    (2) Consistent communication of planned and achieved IT-business-enablement are critical for ongoing OCSP support

    (3) Details of changes, releases, training and implementations must be communicated efficiently so that stakeholders are aware of what they need to know in a timely manner

c) ***Strategically establish and manage OCSP human resources*** (Establish the optimal organizational structure and assign multidisciplinary dedicated resources essential to implement and support the CWS System solution across the state)

  i) Business Implications

    (1) Need to include specialists from multiple disciplines:

      (a) Business Process and Policy — CWS and supporting functions

      (b) Governance Support

      (c) Data Analysis and Management

      (d) Information Technology

      (e) Analytics Techniques and Methodologies

    (2) Strategically Sourced — Each case and position is driven by an enterprise-level strategy regarding the sourcing of staff resources (contracted vs. state positions)

    (3) Chosen from a variety of centralized, distributed and virtual models

    (4) Develop Responsible, Accountable, Consulted, and Informed (RACI) models and clear role definitions

    (5) Key roles must include county-level support for practice change management, implementation planning and readiness, data, reporting and analytics governance and quality assurance coordination

  ii) Technical Implications

    (1) Allow for flexibility in both modes of operation and staffing approach where responsibilities, competencies and skills traditionally retained in IT can be located outside the central IT organization

    (2) System design and capabilities will be critical to efficiently facilitate the required flexibility

3) Infrastructure Imperatives

a) ***Design in-process improvement*** (Establish improvements in process execution, synchronization, and client-centricity throughout the product management life cycle)

  i) Business Implications

    (1) Create a statewide standardized MoP and CQI metrics as targeted in the 2020-2024 Child and Family Services Plan

    (2) The welfare and safety of children and empowerment of the family for child welfare must be at the center of all process and solution design considerations

   (3) CWS staff works in a variety of settings (in county offices, in client homes, courts, medical providers premises, in their cars, etc.). Maximum process support and enablement will facilitate use in these settings and circumstances, taking into account the location and presence of clients and others while maintaining the necessary confidentiality

   (4) The CWS System must support key decision-making at many supervisory and management levels as well as frontline staff throughout the life cycle of the child welfare case

  ii) Technical Implications

   (1) The solutioning processes used must focus on the future state (the "to be") rather than the current state (the "as is") — Beginning with the CWS business transformation approach, and eventually moving on to a more child and family-centric strength-based and trauma informed model, instead of the siloed and program-centric model of the past decades

   (2) The application of agile methodologies must focus on requirements for process integration and end-to-end customer journeys, leveraging a CCWIS-compliant vision for an enterprise integration platform, and the critical need for the flow of data/information for the consumer, state staff, county staff and purchase-of-service providers

   (3) A unified and integrated approach to training and support that addresses both process flows and correct practices along with system use will ensure that the rich variety of changes introduced during this work are holistically explained and the system is fully and effectively utilized

b) ***Manage transformation of business, information, and technology through enterprise architecture planning*** (Identify strategies that support ACS' CCWIS drive for solution and implementation in a modular approach with associated enterprise capabilities and reduce risk approaches to CWS System modernization

  i) Business Implications

   (1) Enterprise architecture governance, principles, and policies must be developed and enforced to ensure coherent integration of business processes and supporting technologies

   (2) Balancing the vision for modularity with the need for a statewide "joined-up" CWS capability must be carefully planned given DHHS' vision, goals and priorities from the 2020-2024 Child and Family Services Plan:

    (a) Too much modularization creates an overly complex system of software modules, vendors/service providers and technologies where management complexity and costs can be untenable and production stability an overwhelming challenge

    (b) Minimizing modularization encourages perpetual use of monolithic systems and promotes vendor dependency and concentration of risks

  ii) Technical Implications

   (1) Any solutions considered must be amenable to a hybrid cloud-based operation

   (2) Strong application and cloud service integration capabilities along with rich integration hub/service bus technologies need to be leveraged

   (3) Ensure the solution architecture will enable extensible, maintainable and sustainable CCWIS compliant components and interface

   (4) In addition to application-specific modules, suitable solution architectures require enterprise data services to enable data sharing, enterprise analytics and interoperability

(5) Support adoption of national standards and best practices for interoperability, data exchange, and strong data management practices

(6) Exploit current proven solutions through reuse and extensibility where appropriate

c) **Proactively manage and optimize use of data** (Establish data governance, improve data quality (through improvements to usability, processes, and system design), and focus on a data-led approach to planning and decision making — moving data to information, knowledge and actions, to improve access, quality, cost, and outcomes of CWS)

　i) Business Implications

　　(1) Statewide data sharing requires centralized data governance and coordination. This must include a structure and processes for establishing agreed definitions of data elements

　　(2) Responsibility and accountability for the quality of data is most effective when assigned to where the sourcing of the data is controlled. This requires accountabilities to be assigned and audit/quality processes to be formalized and documented

　　(3) Drive reporting and analytics consistent with the 2020-2024 Child and Family Services Plan and a collection of balanced portfolios of leading and lagging measures

　ii) Technical Implications

　　(1) Establish metadata/data catalog tools to help the governance and stewardship processes understand the interrelationships across systems

　　(2) Create the ability to provide data quality exception reporting

　　(3) CWS System solution must have strong usability/data quality alignment — edits on input and "pick lists"

　　(4) All analytical data needs to be sourced from the authoritative system of record

　　(5) Use standard business intelligence (BI)/analytics tools and processes aligned to reporting and analytics roles across NC DHHS DSS at the state and county level

Appendix B: Full list of Strengths, Challenges, Current Capabilities, and Risks to Future Success for each Current State Assessment Domain:

1) **Governance and Management (State Program and Project Governance and Management):**

- *Vision and Strategy:*
  - o Strengths
    - ▪ P4 is the manifestation of the State's NC FAST strategy to implement a consistent statewide approach to system support for Child Welfare Services (CWS)
    - ▪ With relatively new executive leadership in a number of positions, communications are improving between NC FAST Product leadership and county DSS stakeholders
    - ▪ Across State DHHS and county DSS leadership there is an understanding of and a desire for a consistent statewide CWS system to increase child safety, meet Federal requirements, improve customer service, and process efficiency
    - ▪ There is strong direction and support from the State leadership to establish a single statewide CWS system as part of the NC FAST program and integrated with the other NC FAST systems
  - o Challenges
    - ▪ Due to the lack of a statewide practice model and a sufficient governance model, NC FAST drove some changes rather than the program/business.
    - ▪ The EAC governance model did not effectively address the pilot counties' concerns about the readiness of the system for expansion to new counties. The original pilot counties expressed many concerns and reservations about the system's readiness, but the decision was still made by DHHS to expand to additional counties.
    - ▪ NC FAST has not delivered and/or has not been able to deliver all desired changes and improvements.
    - ▪ NC FAST has acquired a negative reputation in many counties due to the challenges of major system changes implemented against unrealistic timelines
    - ▪ There is lack of clarity on the extent to which there is state-wide consistency (resources and outcome expectations) and a standard Model of Practice (MoP) for CWS across the State with what appears to be a wide variety of approaches that are semi-manual to handle CWS cases across the 100 counties
    - ▪ Promoting the critical need for MoP consistency and operating principles as a precursor to a single statewide system seems to have been absent and some associated invalid planning assumptions and decisions were made
  - o Current Capabilities
    - ▪ Vision and Strategic Goals agreed as part of the Imperatives work in this assessment project and will provide the basis for the resultant recommendations and strategic roadmap
  - o Risks to Future Success
    - ▪ The formal strategy and plan is evolving and has not been fully adopted by a mature DHHS Program and Project Governance

- ▪ It must be understood across DHHS and the counties that consistency of MoP is the strategy driving the nature of the system and approach NOT the reverse
  - ▪ The new governance structure must emphasize transparent and inclusive decision making, with clear documentation of assumptions and risks.
- *Program Organization Structure, Staffing, and Skills*
  - o Strengths
    - ▪ Establishment of the EAC (Executive Advisory Committee) represents a considerable effort to ensure stakeholder communication and involvement in the Governance of the NC FAST program
    - ▪ The EAC was chartered to provide overall strategic direction for the entire NC FAST Program. The EAC reviews program progress, staffing, and expenditures; facilitates identification and development of program benefits; and provides issue resolution and risk mitigation
    - ▪ The EAC is co-chaired by the senior DHHS leaders and composed of stakeholder division directors, leadership from other stakeholder state agencies, and representative county department of social services directors
    - ▪ The EAC voting members include state and county Directors of Social Services and NCACDSS (North Carolina Association of County Directors of Social Services) representatives
    - ▪ Substantial staff resources in place in the central NC FAST team for P4
    - ▪ The staff resources augmented with the addition of skilled and experienced contractors
    - ▪ CWS business subject matter experts (SMEs) and staff assigned as full-time resources as part of the P4 team
    - ▪ The P4 Project created a dedicated team to assist county CWS operations to provide training and attain the correct level of readiness as part of the Pilot (original 5 and the Expanded Pilot of 6 counties) and the subsequent limited (I&A only) roll out
  - o Challenges
    - ▪ The EAC is a large body (with a relatively small proportion designated as voting members) that has met on a monthly basis, with parts of the meetings open to the public, and a formality that has reduced its effectiveness
    - ▪ Governance for the P4 project was not effectively inclusive:
      - • Feedback from the Counties indicate they do not feel fully represented in NC FAST decision making
      - • Due to county dissatisfaction with the process NC FAST changed the title from UAT to state and county User Testing, to indicate that signoff signified completion of testing and that issues were recorded, not "acceptance" of the system.
      - • No indication of an agreed governance model that properly represents the interest of different size Counties and builds a consensus among all players
    - ▪ The P4 implementation was introduced to the Pilot counties prior to broad-based agreement on or introduction of a state-wide model of practice. This

contributed to disagreements and confusion when trying to address issues with the operational use of the system by the pilot counties alongside usability issues and other key shortcomings.

- The Office of NC FAST governance processes were established with agreement from executive and federal stakeholders and were parallel to and independent of the DHHS ITS governance processes
- Business SMEs were very siloed in their knowledge of components of P4 with no one having adequate skill and knowledge of the entire CWS program. Implementation teams were also lacking in knowledge, usually having knowledge of only one service area.
- The training and readiness efforts appear to have been inadequate despite NC FAST P4 readiness team's efforts. Possible contributing factors:
  - The level of knowledgeable and skilled resources assigned to these activities were inadequate for an IT implementation of this scope and complexity, including:
  - The level of state staffing assigned
  - Individual counties could have better (and more effectively) contributed (staff and funding) to these efforts
  - Lack of change management planning around the differences in scale and complexity by county
  - The underestimation of the depth of details the implementation of technology would have on the gaps in Model of Practice, Policy and other guidance as well as process change needed.
  - No plans for ongoing integrated practice/technology training
- Crisis-level turnover of implementation, training and field staff created a further readiness and training challenge in some counties
- CWS staff working directly with clients are managed by counties with inconsistent funding, hiring practices, and salaries
- DHHS leadership and CWS staff assigned to NC FAST perceived as representing the single integrated system, NC FAST strategy and priorities vs. CWS strategic intent and desired outcomes

o Current Capabilities
  - NC FAST Program Governance and EAC remains in place albeit meeting less frequently (move to meeting on a quarterly schedule)
  - NC FAST IT Project resources being realigned as part of the ITD (Information Technology Division) Application team now reporting into the ITD CIO (Chief Information Officer) organization
  - Business Analysts' functional expertise realigned and now reports into the DHHS Business Information Office — independent of ITD
  - The State of NC CIO has established an Enterprise Project Management Office (EPMO) that provides and supports a comprehensive Quality Management System (QMS)

o Risks to Future Success

- ▪ Future success is dependent on a governance structure (with an effective voice and participation of the counties) focused on providing a working, statewide CWS system acceptable to the counties
- ▪ Staffing and skills of both ITD and the Business Information Office needs to be considered and must be aligned with the future procurement/sourcing strategies and choice of solution as part of the strategic roadmap

- *State and County DSS Stakeholder Collaboration and Meaningful Participation*
  - o Strengths
    - ▪ Select state and county staff participated in the early requirements development, review/gap-fit/design specification
    - ▪ Further, such interactions occurred as Pilot counties identified significant gaps and issues with the design resulting in substantial enhancements
    - ▪ The closer and more frequent collaboration with the counties and the more agile-based approach to P4 was a key lesson learned from earlier NC FAST project implementations
  - o Challenges
    - ▪ Lack of clarity regarding authority and required consensus on the statewide model of practice, and needed changes to legacy county processes and terminology to align to the statewide model of practice vs. changes to minimize NC FAST system change or to adhere to a system constraint
    - ▪ There was insufficient thought and planning regarding the extent, depth and variety of change and its impact (perceived and real) on the counties and therefore the degree of Organizational Change Management effort required
    - ▪ Consensus not yet reached among the pilot counties (11 in total) that the process flow/usability of P4 is acceptable
  - o Current Capabilities
    - ▪ A number of senior managers with responsibility for the future of implementing a statewide CWS system have direct experience of working at the county level and have subject matter expertise, credibility and authority based on this
  - o Risks to Future Success
    - ▪ County and state-level business stakeholders need to be involved in the life cycle of the future CWS System initiative
    - ▪ Procurement strategy
    - ▪ Proposal evaluations
    - ▪ On boarding of vendor(s)
    - ▪ Requirements validation
    - ▪ User Acceptance Testing
    - ▪ Deployment Planning and Training
    - ▪ Definition and measurements of success metrics
    - ▪ This must include direct line workers that know day to day or risk a result that does not match the real need

- *Vendor Management*
  - o Strengths

- Knowledgeable and skilled resources provided by NC FAST vendor partners IBM and Accenture
- The contracts with IBM and Accenture are both deliverables-based with penalties defined for failure to deliver as well as time & material for augmentation
- These include services contracted over and above the software license fees and specified service-level agreements

- Challenges
  - To a large extent, staff needed to complete the project successfully were contracted as skilled individuals on a staff augmentation basis. Such staff are managed in a similar way to full time state resources. State employees, NC FAST contractors, and vendors worked together as an integrated team. This integrated staffing approach reduces the opportunity for the state to hold a contracted vendor fully accountable for delivery
- Current Capabilities
  - The RFI issued as part of this project was conducted in compliance with DHHS Office of Procurement and Contract Services (OPCS) standards
  - This RFI will provide important market perspective that will inform any future procurements
  - Standards and guidance from OPCS available to support future procurements and subsequent management of vendors
- Risks to Future Success
  - If comprehensive Vendor Management (standards, regular interactions and reporting) is not engaged early in the procurement life cycle DHHS risks having inadequate or unenforceable performance assurance from vendors
  - Lack of enforceable Service Level Agreements, or reluctance by the state to enforce contractual penalties, will hinder the state's ability to ensure vendor delivery
  - Warranty of performance is required
- *Federal Funding Partners*
  - Strengths
    - *Advanced Planning Documents (APD) and updates (e.g., IAPD-U) maintained in detail throughout the life of the project*
  - Challenges
    - *ACF has expressed concern about North Carolina's commitment to implement a statewide CWS system including the potential for NC to change course away from implementing a CCWIS-compliant solution based on federally funded NC FAST infrastructure*
    - *ACF has reminded the state that for contracts that had been extended, new procurements should be initiated*
    - *The state has not always followed the funding rules closely enough, and may be at risk of loss of some enhanced funds*
  - Current Capabilities
    - Experience in working with Federal agencies on APD development and reviews

- o Risks to Future Success
    - Any substantive change in strategy (where further investment will be needed to replace capabilities purchased using FFP funds) may result in a need to reimburse a proportion of these funds after negotiation with the relevant federal agencies
    - Funding disparities between counties and general local resource constraints may hinder the successful implementation of practice changes, process changes, and technology. These must be accounted for in planning and implementation
- *Scope and Change Management*
  - o Strengths
    - Cúram customization, configuration and extensions to meet CWS needs were defined in several functional gap analyzes since the awarding of the Cúram contract in 2008 that resulted in modification of the requirements and scope during the 2015 pre-planning. This happened through various planning sessions, process simplification, county readiness and business process improvement activities, mobility and CCWIS compliance requirements reviews
    - Substantial investment made in requirements definition, design and development to better align the system to identified priority needs
    - The NC FAST Program manages change formally though a Change Control Board (CCB)
  - o Challenges
    - Level of customization required for the Cúram product was substantially more than was expected or allowed for by the plan
    - Lack of clarity regarding authority on implementing the statewide model of practice and changes to legacy county processes and terminology required to align to the statewide model of practice vs. changes needed across all counties to achieve a single, uniform statewide IT solution
    - The Change Management process has not always been consistently followed. Development work for Change Requests is often started and sometimes completed prior to obtaining CCB approval and approval from Executive Management
  - o Current Capabilities
    - The Change Control Board (CCB) within the M&O group and managed at the NC FAST Program level ensures system changes are controlled and auditable
  - o Risks to Future Success
    - Important to align technology and operational change control with the future state infrastructure and management, in order to reduce the risk that reliability of services provided may be compromised by changes in system operational and infrastructure strategy (e.g., introduction of cloud solutions)
- *Risk Identification, Mitigation, and Management:*
  - o Strengths

- The NC FAST Program's risk management strategy involves documentation of project risks through risk identification, assessment (assessing risk based on probability and impact for prioritization), and response formulation
- Once identified, program risks as well as project-related risks are prioritized by risk score. If the risk priority is high, a risk mitigation strategy must be defined and implemented immediately. If the risk priority is low, a risk mitigation strategy is still defined, but may not be immediately implemented
    - o Challenges
        - Some of IV&V (NC FAST's Independent Validation and Verification consultant – Maximus) identified risks have received insufficient attention: with long running, unresolved risks
        - The Risk Management process identified an ongoing concern with the P4 project not following the Change Management process and rated this as a low level of risk
        - The Risk Management process, as reported by IV&V, did not report (in sufficient detail nor at an appropriate level of risk) the extraordinary level of dissatisfaction with the system expressed by the Pilot counties that led to the halting of deployment of P4 by the state legislature until the state Legislature action had occurred (the December 2019 IV&V report)
    - o Current Capabilities
        - Independence of IV&V activity ensured by vendor being contracted and managed by a DIT resource
        - IV&V vendor conducts monthly independent review of the processes (including random sampling of various deliverables to ensure the appropriate level of detail meets acceptance criteria) across the entire NC FAST Program
    - o Risks to Future Success
        - Value of independent oversight is diminished when the reporting and prioritization is technology focused and spread across a variety of business programs and stakeholders within a large integrated system initiative (i.e., insufficient focus on the needed business transformation and realization of benefits)
        - IV&V value will be further enhanced with a QA focus that sufficiently addresses the CWS business intent and program transformation perspective rather than primarily a technology platform and systems integration lifecycle perspective

2) **Solution Fit (Child Welfare System's viability and alignment with DHHS CCWIS current and future state needs):**

- *Functional Requirements*
    - o Strengths
        - Original CWS system functional requirements (aka, "Business System Functions," BSF) were developed in stages, between 2007 to 2015. In 2016, P4 team engaged in a Fit/Gap analysis of these requirements against out-of-the-box Cúram Child Welfare Services functionality. This Fit/Gap analysis identified the functionality NC requires that Cúram can provide: (a) Out of the box; (b) via

extension; (c) via configuration. Both the requirements and the Fit/Gap analysis will be helpful for continuing to implement and enhance CWS functionality with NC FAST

- Since the P4 Pilot implementations, DHHS has invested considerable effort and resources in addressing critical system issues and ensuring NC FAST meets county DSS staff functional requirements

o Challenges
- Initial business process analysis and requirements definition efforts may have been under-resourced in terms of business SMEs (especially from the county DSS). As such, the requirements may not have adequately detailed and obtained statewide consensus on the implications of the existing policies and guidance as currently interpreted by the 100 county offices. A statewide "model of practice" has not been formally defined and supported by NC DSS
- The process of BSF reviews and approvals was siloed by functional domains, resulting in lack of end-to end process and data flow alignment (e.g., information did not flow from CPS assessments to ongoing services, SDM tools did not transfer, reporter names were separated in the system which directed reporter letter to parents, etc.)
- Although the initial P4 implementation was rolled out in pilot phases there was no formal process for defining or gathering success metrics for these **phases.** Consequently, there are no agreed metrics to gauge how successful the pilots have been
- Reporting and Analytics functionality provided as part of P4 is regarded as inadequate (certainly with regard to CWS decision-making, trend analysis and in other ways)
- Lack of consistent authority/decision making and level of knowledge across the group determining prioritization and making decisions regarding functional changes
- NC will have to continue to customize the solution where configuration changes to the out of box solution cannot meet the agreed to statewide model of practice and/or county adaptations

o Current Capabilities
- NC DHHS has completed an extensive effort to define functional requirements for the P4 project. These requirements can be leveraged for any future CWS solution that DHHS selects

o Risks to Future Success
- Prior business requirements definition efforts were successful in documenting the things the system must do and what information it must capture. And, the process NC DHHS used to identify these requirements did attempt to identify the functional requirements in the context of the business processes that county DSS CWS staff perform. However, from county to county, there still is significant variance in how CWS business processes are performed. Without agreement and commitment to standardize on common processes and procedures, any statewide CWS solution is at risk of successful implementation

- *Non-Functional Requirements*
    - Strengths
        - In general, given that the state is already using NC FAST for other key DHHS programs & services, this solution meets a number of DHHS's non-functional requirements
    - Challenges
        - P4 system does not currently meet select Non-Functional Requirements (e.g., 24/7 read/write access, 365 days/year, mobility, etc.)
        - P4 Reporting does not provide reports on some important data
        - P4 system does not currently meet data quality expectations of pilot county DSS users. However, it is not clear if these issues are related to the system and joint reporting of data from with legacy systems, or if the issues stem from usability or system adoption issues
    - Current Capabilities
        - NC DHHS has completed an extensive effort to define functional requirements for the P4 project. These requirements can be leveraged for any future CWS solution that DHHS selects
    - Risks to Future Success:
        - Prior business requirements definition efforts were successful in documenting the things the system must do and what information it must capture. And, the process NC DHHS used to identify these requirements did attempt to identify the functional requirements in the context of the business processes that county DSS CWS staff perform. However, from county to county, there still is significant variance in how CWS business processes are performed. Without agreement and commitment to standardize on common processes and procedures, any statewide CWS solution is at risk of successful implementation
- *User Interface, User Experience, and Users' Needs*
    - Strengths
        - P4 is built on the same platform as the rest of the NC FAST modules. As such, it provides a similar UI/UX (User Interface/User Experience) for county DSS staff as the other modules and applications
    - Challenges
        - Many of the pilot county DSS staff issues with P4 relate to its user interface and usability issues. Commonly described concerns (some of which have subsequently been addressed) include:
        - Being forced to break from their normal workflow process in order to complete basic tasks in the system (e.g., move through different areas of the system in order to fill out a form)
        - Having to perform repeated actions in the system (e.g., excessive clicking) in order to achieve basic tasks
        - Defined security constraint that locks users out of the system after brief periods of inactivity (normal when using the system while interacting with a child or family member)
        - Challenges with searching on individuals due to search functionality constraints

- Continued to have the need to update terminology in the system to that does not match real world terms
- Constraints related to Cúram configuration decisions lead to Cúram not relating family members in a way that matches real world situations (e.g., case head of family should be a parent)
- In discussions with the development team, inherent platform design constraints appear to limit their ability to address these sorts of usability issues with enhancements or customization
- System use is dependent on the use of job aids and these are neither comprehensive nor entirely accurate
- Online training function (learning gateway) site is difficult to use with limited search functionality. The learning gateway site is not always kept current, and it requires a different log-in to access its content
- The Cúram-based NC FAST solution is also limited in meeting user expectations around mobility. Out-of-the-box, Cúram is available via web browser only, and pilot phase county DSS staff report a poor user experience when accessing via mobile device browsers. Cúram can be extended to meet mobile needs (e.g., via iPhone or Android apps), but this requires the purchase/development of specific add-on mobile applications
  - o Current Capabilities
    - The effort to define requirements for NC FAST and then the experience of implementing the NC FAST CWS system in pilot counties has highlighted key UI/UX needs of county DSS staff. These lessons learned will inform any future CWS solution that DHHS selects
  - o Risks to Future Success
    - Lack of a defined set of UI/UX expectations and requirements, prioritized by county DSS staff, presents a risk to any potential CWS solution. For example, such a set of requirements should cover:
    - How the system mimics the county DSS staff user experience when completing a CWS form via paper, and how the form guides their interaction with the client
    - The acceptable range of processing throughput and timing, so as to maximize DSS county staff time with the client
    - Mobility requirements of county DSS staff (vs staff using the solution via desktop environment) that supports location-independent system access and reduces the risk of disjointed processes, redundant data entry, compromised data quality and associated inefficiency
- *Federal (CCWIS Compliance)*
  - o Strengths
    - The P4 team has identified design enhancements and interface specifications to comply with CCWIS requirements, including:
      - Modularity — As part of design and development, complex functions were broken into separate, manageable, and independent components
      - Reuse — Solution design promotes reuse of the existing framework and rules in NC FAST

- Interoperability — Solution makes use of the NC FAST's underlying enterprise service bus (ESB) to provide open and documented bidirectional interfaces to CCWIS required systems (e.g., NIECE, Medicaid Claims, Courts, Education, etc.)
  - o Challenges
    - As of this assessment, some, but not all, of the enhancements and interfaces required for CCWIS compliance have been implemented
    - In a December 2019 letter to NC DHHS, the HHS Administration for Children and Families (ACF) conditioned approval for further funding of P4 on the completion of a set of activities to be completed by NC DHHS. DHHS requires this ACF enhanced funding in order to complete enhancements and interfaces required for CCWIS compliance. Conditions of the Dec 16, 2019 ACF letter were met and approval letter was received on April 14, 2020
  - o Current Capabilities
    - In order to plan for NC FAST CCWIS compliance, NC DHHS has completed advance planning and preparation work, which will be useful for any future CWS solution that DHHS selects. One key example is the identification of systems the solution will need to communicate with bidirectionally (e.g., Medicaid, NEICE, Courts, Education, etc.)
  - o Risks to Future Success
    - CCWIS compliance cannot be achieved with the purchase of product alone. It requires NC DHHS undertake key activities like developing data quality plans, implementing bidirectional interoperability with peripheral systems (e.g., child welfare courts), and defining business rules (to be separate from core processing capabilities). Unless NC DHHS successfully completes these activities, it will not be successful at achieving CCWIS compliance.
- *Solution Configurability*
  - o Strengths
    - IBM Cúram's Social Program Management for Child Welfare package (commercial off-the-shelf application software package) provides a wide range of configuration options. NC DHHS initially selected this product, on the basis that it would satisfy a large proportion of DSS Child Welfare program functional requirements with minimal customization or configuration
    - As NC DHHS is using NC FAST for other programs and services, it has experience configuring and customizing Cúram to meet their unique business
  - o Challenges
    - Based on the experience of implementing NC FAST for the pilot implementations to-date, the level of effort to configure/customize NC FAST has been substantially more than was initially planned or expected
    - Changes to configuration and additional customization is likely to continue as pilot counties continue to find ways to make the system work for them
    - In attempting to configure Cúram to meet CWS-specific requirements and user needs, the P4 team has been constrained in configuring/customizing the solution. The State has attempted to balance the degree of customizations to: (a) ensure that future upgrades of the COTS product are maintainable; (b)

adhere to the Federal expectation that states should not excessively customize a COTS product; and (c) ensure that State-specific policy and user requirements are met
- o Current Capabilities
  - ▪ N/A until the future solution approach has been determined
- o Risks to Future Success
  - ▪ There will likely be variance between statewide CWS processes and procedures and how each county DSS office staff perform these processes. Most modern CWS solutions are configurable, providing flexibility to accommodate multiple ways of performing standard processes. NC DHHS and county DSS leadership should agree to how much variance each county DSS has from the standard process, and how it will govern investments in solution configurations. If they do not, the implementation of any CWS solution might become burdened with configuration requests.
- *Agility and Flexibility in Response to Changing Needs and Rules*
  - o Strengths
    - ▪ Since taking delivery of the Cúram Social Program Management for Child Welfare package a considerable level of change has been specified, designed, and implemented using the tools and processes available:
      - Incorporated county feedback into the requirements development process through frequent JAD sessions
      - Collected 4,000 line of requirements in 2012, and organized the development effort into 4 Epics/application development tracks
      - Continued effort at improving the system usability and functionality
  - o Challenges
    - ▪ As the system is not yet fully rolled out in production across all 100 counties the ability to respond to ongoing business change and optimization for different county settings has not been exercised or tested
  - o Current Capabilities
    - ▪ NC DHHS has established governance structures to manage decisions relating to NC FAST, specifically including members from the NCACDSS. These governance structures and processes may also be leveraged to govern any CWS solution that NC DHHS selects
  - o Risks to Future Success
    - ▪ Lack of fidelity to an agreed upon governance structure will risk NC DHHS's ability to respond to evolving drivers (e.g., changing needs and rules) and thus impact the successful implementation or adoption of a CWS solution
- *Performance, Extensibility, and Scalability*
  - o Strengths
    - ▪ In terms of extensibility, per the BSF Fit/Gap analysis, of the 3,254 identified "must" have items:
    - ▪ 2,466 were able to be provided out-of-the-box
    - ▪ 350 were able to be provided via configuration

- - - 436 were able to be provided via extension (e.g., additional development)
    - In terms of scalability, NC FAST Cúram is sufficiently capable of meeting any requirements DHHS might have related to its CWS program
  - Challenges
    - In terms of performance, pilot county DSS staff did report system slowness and report that this is often identified by the help desk as related to system change teething problems
    - We note that NC FAST regularly runs performance tests prior to releases and uses Dynatrace to isolate any performance issues and monitor system health
    - Observed system slowness has been documented as the result of system updates and latency issues, along with computer and network connections that are under the control of county IT support organizations
    - Current Cúram configuration limits document size and when the "oversize" documents are stored outside of NC FAST they are not easily available for sharing
  - Current Capabilities
    - N/A until the future solution approach has been determined
  - Risks to Future Success
    - Unless future CWS solution definition incorporates comprehensive non-functional requirements (including specification of the required level of performance, extensibility, and scalability) the CWS solution may suffer from user experience frustrations, reliability and performance concerns, or functional gaps
- *Maintenance and Operations and Hosting Requirements*
  - Strengths
    - NC has a dedicated M&O team who is working on improving the testing automation and DevOps infrastructure
    - Out of the Box functionality provided productivity gains and faster time to deployment advantages to the development team
    - State hosting services has been able to deliver consistent uptime and response times for all Programs migrated to the NC FAST platform
    - There is a planned project to migrate NC FAST to the cloud. The Infrastructure Modernization project is in the pre-planning stage.
  - Challenges
    - NC will need to consider modernization and refactoring efforts through further modularization and user experience platform upgrades
    - Roll-out of additional NC FAST functionality and support needed to implement NC FAST for remaining county DSS offices will need to be carefully planned and resourced in order to be successful
    - Cloud migration may introduce additional operational risks if not adequately tested and piloted
  - Current Capabilities
    - NC has a dedicated M&O team that has improved the testing automation and DevOps infrastructure, resulting in increased efficiencies and quality of M&O

support. Though this team is currently supporting the NC FAST system and development environment, if needed, NC DHHS should be able to adapt these DevOps practices and test automation tools and methodologies to support other CWS solutions
- NC DHHS has established its architectural preferences for systems to be cloud first. To support this strategy, the CTO's office has established a "Cloud Center for Innovation," which provides a set of capabilities that will be available to the CWS solution

- o Risks to Future Success
  - Unless future CWS solution definition incorporates comprehensive non-functional requirements (including M&O specifications, hosting configurations, cloud architecture standards, etc.) the CWS solution may prove exceedingly resource-intensive to support
- *Total Cost of Ownership Considerations*
  - o Strengths
    - NC has experienced productivity gains, speed and cost-to-develop advantages due to out-of-the-box functionality
    - IBM continues to maintain and invest in Cúram functionality and underlying infrastructure renewal
    - The Cúram integrated Social Program Management Platform provides built-in integration to other critical social care programs' data, thereby reducing integration costs in development and maintenance
  - o Challenges
    - The IBM Cúram ongoing application M&O fees may not always provide the level of expected value for the expenditure
    - A single integrated platform will make governance, prioritization of development resources, and enhancement requests across diverse programs more challenging and costly
    - The IBM Cúram social care platform and development environment requires specialized technical expertise which may be difficult to find in the marketplace or come at a pricing premium
  - o Current Capabilities
    - NC FAST has provided NC DHHS with experience in planning, management, and budgeting for the Total Cost of Ownership (TCO) of a CWS solution
  - o Risks to Future Success
    - Without adequate planning and budgeting for refactoring and technical debt reduction, the CWS solution may not be able to rapidly respond to changes in business environment in a cost-effective fashion

3) **Solution Development Practices (Application of the Agile methodologies for design, requirements validation, build, testing, quality assurance/control, pilot, deployment planning, and deployment aligned with Industry Best Practices):**
- *Project Management Planning*
  - o Strengths

- P4 leveraged the Project Management infrastructure and planning approach from previous NC FAST projects
- Agile techniques were integrated into the approach and leveraged Nexus Scrum of Scrums methodology
- Software defects, change requests, and risks/issues are tracked across all NC FAST projects using Jira
- P4 has developed plans that reflect development and deployment tasks and the Project manager is responsible for driving success
  - Challenges
    - The project initial approach was to meet a state mandated deadline of December 2017 (NC law: SESSION LAW 2016-94 SECTION 12C.1.(c))
    - The project timelines were not realistic to define and develop consensus to statewide policies required to move 100 counties in a consistent direction and model of practice
  - Current Capabilities
    - The state has well developed standards and practices to manage large and complex undertakings
    - The move to Nexus Scaled Agile Methodology provides the state with an improved client engagement and software delivery model
    - The state has assigned experienced and capable project and development teams to NC FAST
  - Risks to Future Success
    - Lack of effective governance processes to productively engage the county stakeholders and build consensus on planning and execution approach will continue to put project progress at significant risk
    - Lack of clear vision and commitment from state leadership on policy and model of practice, and proper organization change management can present significant challenges to project leadership team in delivering the expected benefits
- *Iterative and Incremental Value Delivery*
  - Strengths
    - Solution development incorporated county feedback into the requirements development process through frequent JAD sessions
    - 4,000 individual requirements were collected in 2012, and organized the development efforts into 4 Epics/application development tracks
    - P4 became focused on improving the Intake and Assessment functionality to meet extended pilot feedback
    - There has been a continued effort at improving the system usability and functionality
  - Challenges
    - There is not a broad understanding and consensus by the counties that the P4 development team is delivering and/or improving the highest priority business functions in earlier releases (i.e., Min Viable Product), and then working on the next set of prioritized features/stories for the next Release

- There is not enough evidence to show that the pilot counties have ongoing input into defect-related Change Requests, Sprint planning and backlog grooming
- The Production Release cycles happen every 3-4 months as of Feb 2020 whereas the tested code from sprints are available every month due to cut in staffing budget
  - o Current Capabilities
    - The NC FAST team's adoption of the Nexus scaled agile methodology positions the development team well to focus on highest business value features and functions in each sprint and seek to move toward Continuous Integration and Delivery models
  - o Risks to Future Success
    - Lack of county engagement, participation, and influence in governance and effective expectation management can negate the positive impact of more frequent, high value business functionality into production
- *SDLC Methodology*
  - o Strengths
    - The Software Development Life Cycle was updated with Nexus Scrum of Scrum scaled agile methodology
    - NC FAST has started to move toward implementing DevOps culture and methods based on an Accenture study
    - NC FAST uses Atlassian Jira and HP QC/ALM to keep track of requirements, test cases, and defect fixes
    - NC FAST has recently brought in Tricentis Tosca test automation tool and started staff training with an expectation of 40% improvement in testing speed and throughput
  - o Challenges
    - P4 SDLC methodology is scaled agile using Nexus Scrum of Scrum, but M&O and enhancements are still waterfall
    - DevOps practices, feedback loops, learning, and experimentation have not been fully adopted
    - Research based, Human Centered Design and Design Thinking approach and disciplines do not appear to be used consistently to fully discover solutions to usability concerns
    - Testing is mostly manual, and efforts at Continuous Integration have not advanced sufficiently since the 2018 DevOps engagement with Accenture
    - Test coverage and testing paths have not been adequate at times in order to help detect and correct defects and often fixes expose new system defects
  - o Current Capabilities
    - The team has adopted the Nexus agile methodology and conducts monthly sprint planning sessions to deliver working software within the span of 4 weeks
  - o Risks to Future Success

- - Lack of adoption of effective hybrid Project and Product Management practices may prevent the project/M&O teams from securing the resources needed to properly respond to business demand for change
    - SMEs knowledgeable in program policy and procedures in addition to NCFAST system are necessary for successful implementation
- *Requirements Development and Validation*
    - Strengths
        - Over 4,000 Business System Functions/requirements were captured and documented in 2012, and conducted fit/gap analysis of all requirements against the Cúram OOB (out of the box) functionality in 2016
        - Requirements were organized into 4 development tracks/Epics for elaboration, design, and development
    - Challenges
        - Pilot counties' engagement, input, and feedback loops into optimization and improvement change requests are insufficient or in some cases lacking
        - The Product Owner and Product Manager roles and their formal delegated authority and responsibility are not well known and accepted by all key stakeholder, especially the Counties
    - Current Capabilities
        - The project team has developed a consistent process and the underlying technology automation to capture and manage functional requirements
    - Risks to Future Success
        - Lack of clear non-functional requirements and objectives around modernization, modularization and refactoring may progressively and negatively impact the NC FAST system's maintainability and responsiveness to change over time
- *Testing and Quality Assurance*
    - Strengths
        - NC FAST conducted an engagement with Accenture to define the need and strategy for DevOps culture and capabilities in 2018
        - NC FAST has invested in Test Automation tool (Tricentis Tosca) and started staff training with an expectation of 40% improvement in testing speed
        - P4 has started to target critical defects and has been able to exceed its monthly % reduction goals
    - Challenges
        - The testing cycle requires a minimum of 9 weeks (up from 4 weeks) between production releases due to reduction in staff
        - There is no evidence of behavior or test-driven development (BDD or TDD) with a focus on clearly defined acceptance criteria to push defect detection and prevention up stream in development life cycle
        - Testing scenarios, testing capacity, and impact analysis continue to be key challenges for testing teams
    - Current Capabilities
        - P4 has started to focus on defect reduction
        - Recent investments made in test automation tools

- ▪ NC FAST is now moving toward Continuous Integration and Continuous Delivery models
    - o Risks to Future Success
        - ▪ Lack of fully automated Unit, System, Security, Performance, Integration and Regression testing will continue to present an ever-increasing burden of delays and defects on the development and M&O processes
- *Deployment, Training, and OCM*
    - o Strengths
        - ▪ P4 had a dedicated team for county migration readiness who developed a training approach and coached the county to prepare for migration
        - ▪ Contracted Accenture resources provide some support for development of training content and readiness assessments
        - ▪ Readiness team conducted both in-person and virtual training sessions as appropriate
    - o Challenges
        - ▪ There are inadequate ongoing training resources to address future county rollouts and county staff turnover
        - ▪ The online learning courses are in some cases insufficient to cover the use of technology within the context of the model of practice
        - ▪ Some counties required greater support and communications than others with approximately the same number of staff
        - ▪ The Deployment Readiness team may not be adequately staffed for rapid deployment to multiple counties in the span of one month
        - ▪ No user manual was provided, instead users must access and review multiple, cumbersome, unclear job aids that are not conducive to learning
        - ▪ Job aids would change often, requiring staff to "unlearn" and "relearn" processes
        - ▪ Frequent turnover on the readiness teams
        - ▪ Limited/insufficient child welfare knowledge on readiness teams
        - ▪ Use of Sandbox is critical to onboarding new staff. However, it does not mirror production environment, thereby creating frustration for end users
    - o Current Capabilities
        - ▪ There is a dedicated project deployment and training team in place with support from Accenture resources
        - ▪ Accenture is providing support for development of training curriculum and content for the online and in-person sessions
        - ▪ There are structured readiness assessment tools in place to help the deployment team prepare the county for the anticipated migration to P4
    - o Risks to Future Success
        - ▪ Without a robust and ongoing in-person and virtual training approach to new deployments, the rate of user adoption and successful deployments will not meet project sponsor's expectation

- Lack of adequate resources (quantity and quality) for effective readiness assessment, training, and deployment can have a negative impact on overall project reputation and project success
- Without an integrated tool and model of practice training approach, the user's ability to reach full productive system use will be negatively impacted
- Without business process change resources to help with the county's migration to P4, many of the larger counties' users may not readily adopt the new system

4) **Technology Environment, Assets, and Constraints (Child Welfare System Technical Infrastructure and Solution Enterprise Architecture, including hardware, software, licensing, hosting, etc.):**
- *Enterprise Architecture Standards*
  - Strengths
    - The State of NC has well established and communicated statewide standards that are enforced through established governance processes
  - Challenges
    - The larger counties may have their own Technology Architecture Standards that are not supported by NC FAST (e.g., convertible Windows tablets vs. iOS tablets)
    - The P4 mobile Application Development architecture and approach is not yet fully defined
  - Current Capabilities
    - The state has well established processes and published standards on key technologies
    - The state conducts detailed studies to evaluate new technical standard candidates
  - Risks to Future Success
    - Without defining the P4 standards and fully funding the appropriate set of infrastructure and tools such as desktops, laptops, tablet, networks and software applications, there is a high chance that many county users may be inadequately prepared to take full advantage of P4 in the field
- *Enterprise Solution Architecture*
  - Strengths
    - The single instance of Cúram for all social programs provides for an integrated Eligibility, Benefit and Case Management environment
    - The Cúram platform provides certain level of out of the box functionality for social programs that can be configured or customized to client needs
    - IBM appears to intend to continue its investment in the platform through re-architecture efforts and migration to cloud based container architectures
  - Challenges
    - The Cúram platform is over 20 years old and has a monolithic Web Architecture that makes changes difficult
    - Lack of modularization presents challenges for multi-team development efforts whose changes may negatively impact the other teams

- Technical debt is not proactively considered or managed as a part of major enhancements to the system
- Deployment of the solution for 24/7 access over the weekends and maintenance period using Golden Gate data replication technology has been postponed due to budget constraints
- The current mobile solution functionality is limited to investigations/assessments, and are only supported by iPads at this time

- o Current Capabilities
  - The state has established a target Commercial Off the Shelf case management platform (Cúram) for all social programs and has successfully deployed many of the programs on that platform
  - The NC FAST system is developed on well-supported commercial off the shelf middleware software from established vendors
- o Risks to Future Success
  - Lack of a continuous modernization and refactoring strategy will quickly lead to reduced system flexibility and extensibility and can become another legacy system that is unresponsive to customer demand to ongoing change
  - Without addressing the need for improvements in user experience and impact on user productivity, system adoption and uptake will remain a key challenge to success
  - Without migration to a scalable cloud infrastructure as a service, the state may not be able to respond rapidly to rapid changes in volumes and user demands

- *Enterprise Integration Platform*
  - o Strengths
    - DHHS has deployed IBM WebSphere Internet Information Broker/Enterprise Service Bus for integration with other applications and components
  - o Challenges
    - Current ESB implementation does not address the four key dimensions of the hybrid integration capability that is emerging: integration personas, integration domains, endpoints, and deployment and operating models
  - o Current Capabilities
    - The state has established an on-premises Enterprise Service Bus implementation using IBM WebSphere Integration Bus for all Application to Application integrations
  - o Risks to Future Success
    - Lack of support for REST APIs and API Gateway capabilities may negatively impact the state's ongoing need for continuous modernization, modularization, and refactoring of the system to enable long term viability of the solution

- *Software and Technical Infrastructure*
  - o Strengths
    - NC FAST uses proven and commercially supported software infrastructure from leading vendors
    - DHHS has an aggressive plan to migrate NC FAST into IaaS cloud infrastructure
  - o Challenges

- - Testing and deployment infrastructure is not adequately automated to support a continuous integration/continuous deployment environment
    - Cúram software has not been upgraded to latest release in over 2 years
  - Current Capabilities
    - The system is built on top tier commercial middleware software components vendors
    - The hardware infrastructure is housed at the state data center
    - There is active monitoring and performance management oversight over the current technical infrastructure in a professional run and secure data center
  - Risks to Future Success
    - Without migration to cloud IaaS, the state may not be able to respond adequately to rapid changes in patterns of use
    - Lack of adequately automated testing and deployment infrastructure to support a continuous integration/continuous deployment environment will negatively impact the development team's ability to respond to requested changes in a timely fashion
    - Without keeping Cúram software current with the latest release, the state risks higher potential for system downtime once an upgrade is forced by the vendor
- *Stability and Responsiveness*
  - Strengths
    - The system has achieved more than 99.5% availability
    - Reduction in number of defects is a focus of the development and M&O team in the last year
  - Challenges
    - Some of the county network connectivity and computing infrastructures may be insufficient to provide for consistent performance and access to NC FAST
    - Defects in the first few production releases caused loss of work in progress that has hurt user trust in the system. System changes were made to add auto-save data in key areas in conjunction with the security timeout feature
  - Current Capabilities
    - The system has been available more than 99.5% over the last 18 months
    - Critical defects reduction is a focus of the development and M&O Teams and have exceeded the monthly goals set by the team
  - Risks to Future Success
    - Without adequate testing infrastructure and automation, the state may continue to face excessive and recurring defects in the production environments
    - Lack of adequate county infrastructure will impact the user's perception of system reliability
- *Maintenance and Operations*
  - Strengths
    - M&O and enhancements activities and resources are being centralized under professional management with a focus on efficiency and effectiveness

- There are planned investments in DevOps tools and practices as well as test automation
  - o Challenges
    - M&O follows a waterfall methodology with long testing cycles that may not be responsive enough to business demands and need for pace of change
    - Continued optimization needs in the M&O stage may not sufficiently funded to address the pent-up demand for missing functionality
  - o Current Capabilities
    - NC FAST has a dedicated M&O team that is putting a repeatable process in place to measure performance and quality
    - Recent investments have been made to introduce automated testing and DevOps capabilities
  - o Risks to Future Success
    - Without continued investment in the development and delivery pipeline in the M&O process, the user's level of satisfaction with NC FAST response time will decrease
    - Lack of a Product Management approach to evolving and enhancing the system may lead to user dissatisfaction

Appendix C: Request for Information (RFI) Questions to Vendors

Respondents were asked the following questions:

1. Please provide an overview of your company's history, scope of products and services offered, and locations of operation.
2. Describe your company's experience in providing solutions within each of the applicable CWS modules defined in this RFI. Please include Customer Name, Contract Start and End Date, Description of Scope of Work, and Implementation Duration. Describe partnerships you have developed to provide solutions within each of the applicable modules defined in this RFI.
3. Please provide lessons learned from working with other states to implement and operate solutions for each of the applicable CWS modules or an overall CWS System replacement as defined in this RFI.
4. In addition to the CWS modules previously described, please discuss any additional Child Welfare-related capabilities and services that your company may offer. Include existing or emerging advanced products that can improve the data collection burden as well as predictive and prescriptive analytics that can help identify and prioritize those children at highest risk.
5. Describe your company's ability to specifically provide systems integration and organizational change management services.
6. Describe your experience working with system integrators to implement Child Welfare Services technology solutions.
7. Describe your company's experience working as a system integrator for similar projects.
8. Please provide the name, title, email address, and phone number for the best person in your organization for the Department to contact if any additional information is needed regarding your response to this RFI.
9. Describe your product development plans, roadmaps, and current status with regard to CCWIS compliance and modularity of your solutions and the status of implementations in other states. Include discussion of new modules or functionality in pilot at this time and an estimate for general release timelines.
10. Describe your company's experience and ability to support the APD process in general and knowledge of combined APDs to address ACF and CMS requirements.
11. Describe how you support states in engaging with and gaining ACF approval of submitted contracts.
12. Please indicate if your company participated in any ACF pilots and if so, the outcome of the pilots.
13. Describe your capabilities and experience in implementing CCWIS-compliant interfaces to external systems.
14. In accordance with modularity guidance from ACF and relevant architecture frameworks including NHSIA and MITA, please describe how your solution and strategy support loose coupling and a modular development approach. Describe any advantages and disadvantages you perceive with a modular approach.
15. The Department prefers vendors who leverage an agile methodology and design thinking / human-centered design approach when implementing their technology. Describe how your development and implementation methodology utilizes an incremental, user-focused, and agile approach.
16. Describe your capabilities and approach for legacy data conversion and the technology/methodology used for the conversion process.

17. Several counties have their own systems. Describe how the solution addresses data conversion of disparate systems.
18. Based on the CWS functionality described in Section 3.2 of this RFI, provide your estimated timeline to implement support for each business capability and include any major assumptions behind estimated timelines. In addition, please indicate your suggested order to implement the CWS modules.
19. Describe your approach to implementing a system that supports a large number of diverse counties in size and practices, including state supervised and county administered states.
20. Please describe your approach on assisting counties with organizational change management.
21. Describe your staffing resources needed to support each CWS module you provide.
22. Describe your capabilities to provide training support for implemented CWS modules.
23. Please provide your experiences around meeting SLAs around availability, transaction time, storage, and performance.
24. Please provide your experience in supporting your solutions in other states, including technical operations, support operations, reporting, etc.), and data quality management.
25. Please provide recommended SLAs that would help monitor and manage solution provider's performance during the contract.
26. Describe your experience working in a multi-vendor / solution environment from a service level and operating level perspective.
27. Please provide any Key Performance Indicators (KPIs) that would assist in accommodating future changes and growth strategy.
28. Describe pricing approaches for each of the applicable CWS modules defined in this RFI, including implementation and ongoing operations using the attached pricing template. Please include details on any transaction-based pricing approaches.
29. Describe potential value-based payment models that could be used to align the solution provider and Department's incentives to achieve the Department's targeted objectives.
30. In the table below, identify the functionality that your solution could provide and indicate whether your company would directly provide the functionality or use subcontractors to provide the functionality.

CWS System Functionality	Can Provide? (Yes / No	Who Provides? (Company / Product / Module)
Screening and intake for Child Protective Services (CPS); intake for general services and Structured Decision-Making Tools		
CPS assessment (investigative and family)		
IV-E Eligibility Determination		
Service and case planning and provision of services to families and individuals in home		
Child and Family Team documentation		
Court activities – including an interface to the court system for orders and hearing dates.		
Service planning and provision of services to families and individuals out of home		
Provider Data Facilities and service providers' licensure support		
Foster Care placement and payment for residential care (including out of state placements and receiving requests).		
Adoption filing and finalization		

31. Describe your complete replacement CWS solution or the augmentative CWS modules described in response to this RFI (COTS, SaaS or ASO offering). The Department prefers a cloud-ready or cloud-native solution, so please include your current approach to hosting the modules and how they will interact with the Cúram components that are leveraged.
32. Please provide a depiction of your solution's proposed overall architecture in a diagrammatic form, preferably as a single diagram.
33. Describe how your solution will decrease the users' administrative overhead related to data entry and document capture so that a minimum of 60% of a case worker's time is spent with the children and families.
34. Describe the technical platform and application components of your company's solution to address the required CWS system scope as identified in Section 3.2, and whether and how the solution leverages a microservices architecture approach.
35. Describe how your company's solution can support the state's data retention requirements as defined in the state's Public Assistance and Support Services functional schedules. https://archives.ncdcr.gov/government/retention-schedules/state-agency-schedules
36. Describe how your company's solution supports and performs incremental and full application backup
37. Describe how the solution will provide 24 hours per day, 7 days per week coverage in such a way that use of the system is available for input during both normal working hours and other "on-call" times in such a way that does not cause additional work or require additional work-around processes.
38. Describe the availability and recoverability of your solution. How is business continuity implemented and managed? Please include uptime of your solution, Recovery Point Objectives (RPOs) and Recovery Time Objectives (RTOs), and scalability approach for performance management.
39. Describe the security principles built into the solution and how that architecture protects the data in the system. This also includes how user security is implemented.
40. Describe how the solution provides role-based access.
41. Describe how the solution can integrate with the North Carolina Identity Management System (NCID) for authentication and authorization services. https://it.nc.gov/services/vendor-engagement-resources#dit-services
42. Describe the solution's native user authentication and authorization features, including whether multi-factor authentication is available.
43. Describe your approach to reporting, the provision of dashboards, self-service analytics, and data quality management.
44. Describe your solution's ability to provide improved user experience by helping guide the user through capture and entry of the minimum data set required by policy for completion of the process within the lifecycle of the child welfare case.
45. Describe how your system supports user searches for prior case participants or existing family relationships.
46. Describe how your solution has pre-configured rules to determine IV-E Eligibility.
47. Describe the architectural configuration of the proposed CWS modules. How are the modules built using standards such as APIs that are interoperable with modules from other vendors without significant custom integration? Also, describe how independently each module can operate from one another including any published API catalogues.
48. Describe how your solution is flexible and scalable. Describe flexibility and scalability in terms of volumes, ability to manage Child Welfare cases, incorporation of additional business processes, multi-county capabilities in a state-supervised, county administered environment, etc.

49. Describe your solution's rules engine (for a full CWS System replacement scenario) for handling different types of cases. Describe the functionality of your rules engine and your company's definition of a rules engine. Also describe the ease of adding new rules (including typical development or configuration timelines) to support a new program or case type.
50. Please describe how your Intake Processing module allows for self-service reporting and streamlined or technology-assisted data collection and entry.
51. Please describe if each module leverages an independent database, or if all modules are interconnected through a single database. If they are independent, how do the modules interact (e.g., APIs, Operational Data Store)? How is reference data stored and shared?
52. Describe how each of the modules supports reporting and what is the standard report output format (e.g., Excel, PDF). How does self-service reporting work in each module? Describe if the reporting capability is a separate module or if it is integrated into each of the stand-alone modules.
53. Describe how your solution supports IV-E financial management.
54. In addition to describing financial management of IV-E payments in a reimbursement model, please also describe your system's capabilities and your experience in calculating and processing payments to adoptive parents in a reimbursement and/or payment in advance model.
55. Describe your overall approach to end-user portals. Please indicate if each of the modules includes a separate portal specific to that module. How do the portals interact with other modules? Also, please indicate if the portal solution is a separately licensed. Please include an explanation of how security is handled.
56. Describe how your solution can collect and/or derive data that can be incorporated into state and federal quality reporting.
57. Does your solution include Mobile Apps? How do the Mobile Apps support the full lifecycle of a Child Welfare case from a tablet and smartphone? Are the Mobile Apps available for iOS, Android, and Windows?
58. Describe your approach to operational monitoring such as performance monitoring, availability and uptime, etc. Please also describe how current and historical information can be accessed by operational management.
59. Describe how your solution or proposed module can create a view of families and cases to help caseworkers and supervisors understand history and context quickly.
60. Describe how your solution or proposed module(s) can create graphic visualizations to help users "see" family networks and manage complex relationships.
61. Describe how your solution or proposed module(s) provides support for virtual case collaboration to reduce phone and travel time, minimize data loss, and encourage information sharing.
62. Describe how your solution or proposed module(s) can create alerts, notifications, and progress status indicators that help keep case management efforts on track.
63. Describe how your solution or proposed module(s) provides placement-matching tool(s) that helps caseworkers place children in care in the most appropriate setting and family.
64. Describe how your solution or proposed module(s) can provide access to dashboard metrics that help caseworkers prioritize their work based on real-time data and allow supervisors to effectively manage their teams.
65. Respondents may provide any additional information that is relative to the scope of this RFI in the space below.
66. Describe your approach to share and reconcile data with a data warehouse solutions. Include out of the box integration with a data warehouse/mart and business intelligence solutions.

67. Describe any services that you offer related to preparation and modernization of the current technology environment to help prepare for integration of new technology capabilities.

Appendix D: Alternatives Analysis – Overview of each alternative and scoring output

1 – Augment and Enhance

Augment and Enhance NC FAST CWS System

- Acquire new (additional or replacement) system functionality/capability components and cloud services to address high priority challenges and enhancement opportunities including such areas as improved:
  – Intake, Mobility, Forms, Documents
  – Case Planning Process
  – Insights from quality data/metrics, reports, dashboards and chatbots
  – Foster Care: ID, Licensure, Matching, Placements and Payments,
- Integrate with the NC FAST to create an optimized solution.
- Deploy to pilot counties with clear acceptance criteria; and, once accepted, implement in all counties in 2-4 implementation waves

On the shortlist as it:

- Seeks to incorporate one or more augmentation products that, out-of-the-box, are more closely aligned with social work through the lens of social workers to address many of pain points associated with P4
- Wastes no effort in replacing the aspects of NC FAST P4 that are acceptable
- Continues with the overall NCFAST technology Strategy
- Can be achieved along with significant improvements to the project approach - driven by county needs
- Would also include many of the enhancements described in Alternative A

Scoring

Strategic Business Alignment – "Good"
- Confident in being able to integrate with augmentation product(s) and make the result more social worker aligned

Technical Alignment – "Good"
- Integration infrastructure in place

Time to Deployment – "Excellent"
- Augmentation solution features will help drive focus, increase confidence and shorten timeframe

Cost (initial and ongoing) – "Good"
- Limited additional outlay for high return

Risk – "Good"
- Multi-vendor issues balanced by long-term platform confidence

Weighted and combined score is the highest (>3.7) puts B in first place, while rating remains "Good"

Excellent　Good　Acceptable　Moderately Acceptable　Poor/Non-Existent

2 – Replace with COTS Application / Framework / Cloud Platform Solution

Replace NC FAST with COTS Application / Framework / Cloud Platform Solution

Secure a Systems Integrator to configure and deploy a Commercial-off-the-Shelf (COTS) Business Process Management, Case Management Solution or Cloud Platform based solution including aPaaS, SaaS, etc.

Deploy to pilot counties with clear acceptance criteria; and, once accepted, implement in all counties in 2-4 implementation waves.

On the shortlist as it:

- Takes advantage of the current market for new modular CCWIS solutions and invest in acquiring a solution developed specifically with the needs of state agencies responsible for Child Welfare Services who want to implement a system that complies with ACF CCWIS rules.
- Benefits from investments made in the chosen product by a number of states both in the original development and as the product develops in accordance with changing needs and focus of the client states.
- Implements a packaged solution based on modern low-code/no-code development platforms and modern integration techniques that allow for a high degree of configuration to fit with the state's specific needs.
- Will, if a cloud deployment, support rapid initial deployment and allow for substantial flexibility in responding to system scale changes (changes in number of customers and number of interactions etc.).

Scoring

Strategic Business Alignment – "Good"
- Pre-configured good (but not perfect) fit, can be acquired

Technical Alignment – "Good"
- Modern architecture and vendor experience with the integration architecture

Time to Deployment – "Acceptable"
- While Cloud deployment can help this is a complex implementation

Cost (initial and ongoing) – "Acceptable"
- Substantial additional outlay

Risk – "Acceptable"
- Substantial and significant change from NC FAST with complexity and increasing risk

Weighted and combined score (3.292) puts C in second place, while maintaining an overall rating of "Good"

Excellent　Good　Acceptable　Moderately Acceptable　Poor/Non-Existent

3 – Enhance and Optimize

Enhance and Optimize NC FAST CWS System

- Move forward by making key priority enhancements to the existing P4 Cúram solution.
- Deploy to pilot counties with clear acceptance criteria; and, once accepted, implement in all counties in 2-4 implementation waves.
- This option includes technical architecture changes to the existing CWS solution such as: deploying CWS functionality on a separate instance of Cúram, migrating to Amazon web Services (AWS) cloud, enhancing mobile device access to functionality, enabling 24/7 application availability, etc.

On the shortlist as it:

Will extract the most value out of NC FAST investments and efforts to date and maintain continuity with the overall NCFAST technology Strategy. It can be achieved along with significant improvements to the project approach - driven by county needs.

Scoring

Strategic Business Alignment – *"Acceptable"*
- Much remains to be achieved in aligning with counties needs and expectations

Technical Alignment – *"Acceptable"*
- Cúram platform requires significant modernization

Time to Deployment – *"Good"*
- Many assets available for speedy deployment

Cost (initial and ongoing) – *"Good"*
- Leverages current investments

Risk – *"Good"*
- Financial risk lower due to an anticipated serious challenge in obtaining agreement on required funding
- Some technology-related new risks

Weighted and combined Score (3.198) of *"Good"* puts A in third place

Excellent   Good   Acceptable   Moderately Acceptable   Poor/Non-Existent

4 – Replace with Custom Developed Solution

Replace NC FAST with Custom Developed Solution

Secure a Systems Integrator to have a custom system developed in NC DHHS's preferred technology platform based on NC requirements and lessons from efforts to date.

Deploy to pilot counties with clear acceptance criteria; and, once accepted, implement in all counties in 2-4 implementation waves.

On the shortlist as it:

- Can result in a solution with the highest possible level of alignment with North Carolina's specific needs, even though it will likely take longer to develop and deploy the minimum viable product.
- Will be built, to North Carolina's specification, by a professional and experienced Systems Integrator (SI) vendor based on a fixed-price contract with the majority of the financial risk incurred by the vendor.
- Will be deployed using modern development technologies (such as modern low-code/no-code development platforms and modern integration techniques) and Agile methods that facilitate rapid development and deployment of the minimum required solution / viable product.
- Will allow future enhancements and their prioritization to be fully under North Carolina's control; and, required investments would need to be primarily funded by North Carolina and ACF.

Scoring

Strategic Business Alignment – *"Good"*
- Very high level of functional fit but with an untried system

Technical Alignment – *"Excellent"*
- System built with great alignment with NC standards and user experience needs

Time to Deployment – *"Moderately Acceptable"*
- Extended efforts in defining, agreeing and prioritizing requirements across a wide range of options

Cost (initial and ongoing) – *"Acceptable"*
- Custom development is very costly for initial build and future enhancements, all at NC's cost

Risk – *"Moderately Acceptable"*
- All three categories of risk negatively impacted by custom development

Weighted and combined score (3.1435) puts E in 4th place by a small margin, while maintaining an overall rating of *"Acceptable"*

Excellent   Good   Acceptable   Moderately Acceptable   Poor/Non-Existent

5 – Replace with Transfer Solution from Another State

Replace NC FAST with Transfer Solution From Another State

Secure a Systems Integrator to transfer an existing (potentially) CCWIS compliant system from another state supervised / county administered state.

Deploy to pilot counties with clear acceptance criteria; and once accepted, implement in all counties in 2-4 implementation waves.

On the shortlist as it:

- Can be based on a proven system (including configuration and elements of data conversion and legacy system interfaces) from a state with strong similarities to North Carolina with respect to Child Welfare Services (such as CWS being county-administered). For success with alternative D, NC must complete "due diligence" work in this regard.

- Includes a system to be transferred that may be matched with North Carolina's needs, such that reasonable customization and configuration change is required, and can be deployed on an acceptable timeline.

- Opens the opportunity for the North Carolina team to partner with their peers in the state that is the source of this solution and directly learn substantially from their experience.

Scoring

Criterion	Rating
Strategic Business Alignment – *"Acceptable"* • Likely to require customization for NC and counties specific needs	◑
Technical Alignment – *"Good"* • Well "road-tested" in the sourcing state but likely to have elements of vendor proprietary architecture	◕
Time to Deployment – *"Acceptable"* • Time frame likely to be extended by the need to customize for NC and counties specific requirements	◑
Cost (initial and ongoing) – *"Acceptable"* • Substantial additional outlay in customization, integration and some licensing	◑
Risk – *"Acceptable"* • Substantial and significant change from NC FAST along with customization complexity increases risk	◑

Weighted and combined score (2.889) puts D in last place by a small margin, while maintaining an overall rating of *"Acceptable"* ◑

● Excellent　◕ Good　◑ Acceptable　◖ Moderately Acceptable　○ Poor/Non-Existent

Appendix E: Go Forward Roadmap – Recommendations and Workstreams

	Description	Workstreams
Establish Foundational Capabilities	▪ Establish and launch the OCSP ▪ Enhance and develop a number of focused management and organizational capabilities in support of North Carolina's transition to a state-wide Optimized Child Welfare System ▪ Implement a consistent, statewide approach to the practice of CWS	1A – Define and Deploy Representative Governance
		1B – Optimized CWS System Program (OCSP) Initiation and Management
		1C – Align Support Organization with OCSP Needs
		1D – Enhance Organizational Change Management and Communications Capabilities
		1E – Statewide CWS Model of Practice Enhancements*
Solution Planning	▪ Determine how the NCFAST CWS System will be enhanced and augmented in order to make it an acceptable state-wide system ▪ Acquire technologies and services required to complete the augmentation and enhancement ▪ Plan in detail how this new and improved state-wide system will be fully tested and deployed	2A – Determine high priority areas for minimal viable optimization
		2B – Define the approach for proof of concept and strategy confirmation
		2C – Acquire augmentation technology and services
		2D – Plan design, development and implementation of optimization solutions
Design, Development and Implementation (DDI)	▪ Combine "on hold" infrastructure enhancements, functional with high-priority enhancements and augmentation from the application of additional tools and technologies ▪ Demonstrate and provide compelling evidence that the optimized system is operating successfully for the pilot counties ▪ Carefully deploy the optimized system at all 100 counties **Workstream 1E is a project important to OCSP but may not fall within the governance and program management of OCSP*	3A – Plan and deploy "on hold" NCFAST infrastructure enhancements
		3B – Immediate Deployment of low-effort/high-value opportunities
		3C – Complete design and development of the minimum viable product / feature
		3D – Conduct POC, operational validation, and implementation in the pilot counties
		3E – Conduct State-wide deployment by wave
		3F – Conduct Post implementation review and improvement