

NC DPI organizational assessment

State Board of Education

May 1, 2018

Agenda

- ▶ Describe the process of our organizational assessment (5 mins)
- ▶ Share a summary of our observations and recommendations (25 mins)
- ▶ Take questions and feedback (60 mins)

Project overview

This report is the result of a 12 week organizational assessment of North Carolina Department of Public Instruction (NC DPI)

Process

- ▶ Over the last 12 weeks, EY conducted an organizational assessment of NC DPI
- ▶ The goal of the organizational assessment was to identify areas of potential improvement for NC DPI, in terms of effectiveness, efficiency, or both
- ▶ As part of the assessment, EY received feedback from over 200 people, including NC DPI staff as well as Superintendents, principals, teachers, and district staff
- ▶ EY also analyzed budget and personnel data to understand how resources are being allocated at NC DPI today, and assessed existing systems and processes to identify opportunities for improvement and potential efficiency gain

Outcomes

- ▶ Based on stakeholder input, analysis, and EY's experience, this report lays out 18 recommendations that, in aggregate, describe a potential transformation of key aspects of NC DPI
- ▶ These recommendations are organized into four themes: impact, support, technology and people
- ▶ We have assessed potential external dependencies of the recommendations at the direction of NC DPI management based on our interviews and analysis
- ▶ The potential financial implications associated with the recommendations have been shared with, and all the assumptions and parameters have been confirmed by NC DPI
- ▶ Together, the recommendations aim to assist NC DPI in planning to more effectively and efficiently focus on its core mission of supporting high-quality education for the 115 districts, 173 charters, and 1.5m students in the state

The School Business Systems Modernization (SBSM) effort is focused on modernizing business systems that impact LEAs. While this organizational assessment focused on the NC DPI core agency it does identify areas of overlap and opportunities for coordination with SBSM.

Project overview

Certain areas of NC DPI were excluded from the scope

- ▶ The following were excluded from the scope as defined by NC DPI
 - ▶ **North Carolina Virtual Public Schools**
 - ▶ **North Carolina Center for Advancement of Teaching**
 - ▶ **Innovative School District**
 - ▶ **Licensure division**
 - ▶ **Residential Schools**
- ▶ However, with respect to Licensure, we did work to consider how the division could align with other talent-related functions, and assess our recommendations in light of a separate report commissioned by NC DPI focused on licensure

Project overview

Over the course of the project, EY received feedback from over 200 NC DPI core agency staff, LEA staff, and other external stakeholders

Interviews, Survey Respondents and Focus Groups (n=224)

Internal NC DPI Interviews (n=123)

Data Gathering

- ▶ Academics (n=17)
- ▶ District and School Support (n=10)
- ▶ Technology (n=14)
- ▶ School Operations (n=7)
- ▶ Financial and Business Services (n=14)
- ▶ Superintendent's office (n=4)
- ▶ State Board of Education Members and Staff (n=5)
- ▶ Human Resources (n=5)
- ▶ Internal Audit (n=1)
- ▶ Licensure (n= 2)
- ▶ Anonymous Survey Respondents (n=44)

External Interviews (n=101)

- ▶ District Superintendents and Regional Education Service Alliance (RESA) Directors (n=21)
- ▶ District Chief Finance Officers (CFO) (n=24)
- ▶ District Chief Information Officers (CIO) (n=13)
- ▶ District Chief Academic Officers (CAO) or Asst. Superintendent of Academics (n=15)
- ▶ School Principals (n=5)
- ▶ Teachers or other district staff (n=14)
- ▶ Friday Institute (3)
- ▶ North Carolina Department of Information Technology (DIT) (1)
- ▶ Former NC DPI leadership team member (1)
- ▶ Former LEA Superintendent, North Carolina (1)
- ▶ Other state education agencies (5)

Additional Steps to Gather Feedback on Draft Recommendations

- ▶ *In addition, held a day-long workshop to refine draft recommendations with 24 NC DPI leaders*
- ▶ *In addition, presented to and gathered feedback on draft recommendations at Superintendent's Quarterly Meeting (n=~80 attendees)*

Context on NC DPI

As a state agency, NC DPI must balance supporting the implementation of key instructional priorities along with more traditional SEA responsibilities (e.g., monitoring)

Sample of NC DPI Priority Areas

Personalized Learning

Early Learning

Literacy

College and Career Readiness

Support for Low Performing Schools and Districts



Typical SEA Responsibilities

Policy and Academics

- ▶ Develop state standards for K12 education
- ▶ Select and administer statewide assessment
- ▶ Report on progress of students, schools and other statewide education initiatives
- ▶ Develop and monitor policies related to K12 education
- ▶ Support districts, as appropriate, with issues of curriculum and instruction
- ▶ Take appropriate actions to address low-performing schools and districts

Operations and Administration

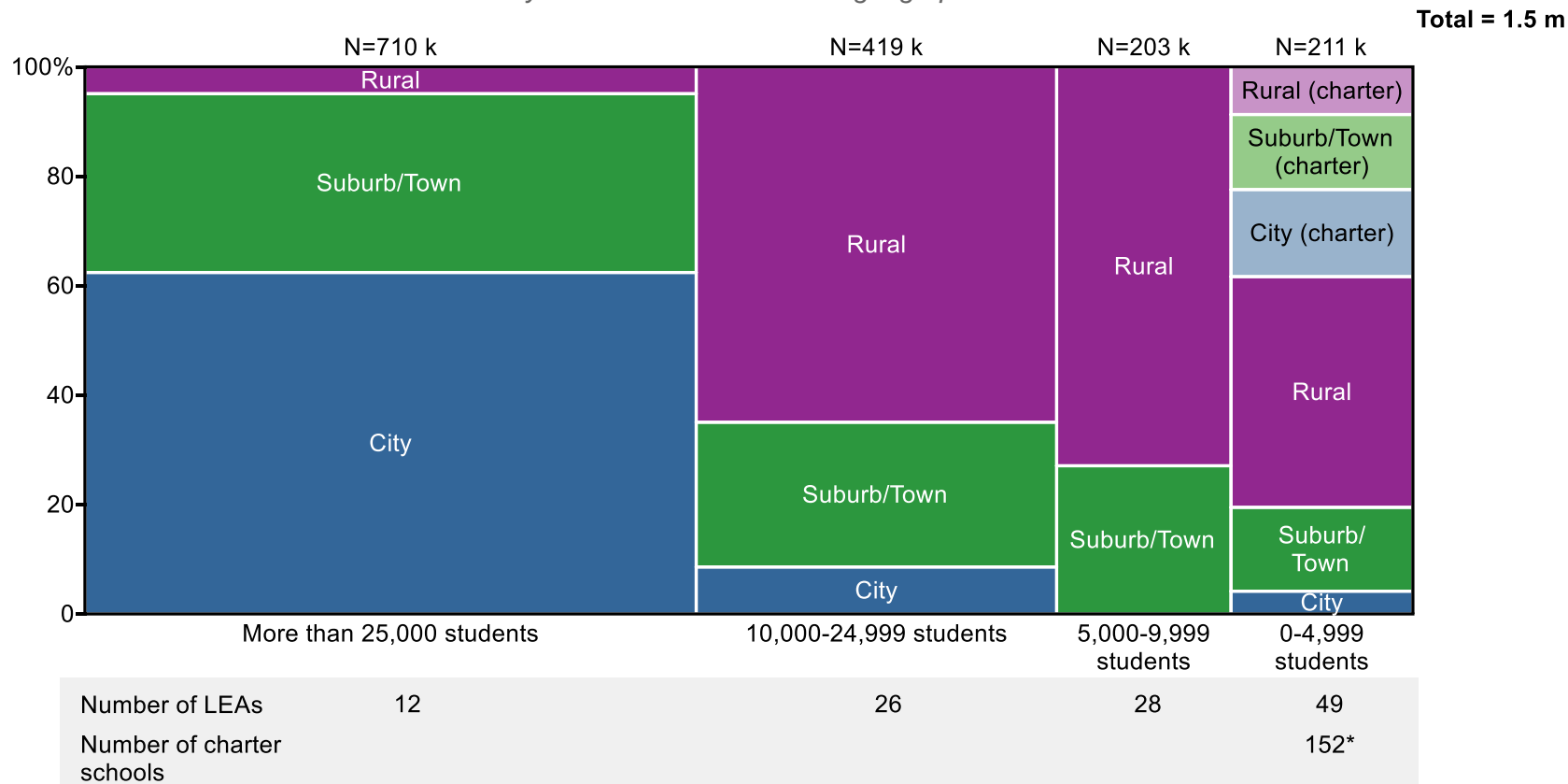
- ▶ Monitor compliance associated with federal and state funding and regulations
- ▶ Administer state and federal funds
- ▶ Maintain data and reporting systems
- ▶ Communicate policies and priorities for K12 education in the state

Note: Priority areas identified through NC ESSA plan as well as interviews with leadership

Context on NC DPI

The diversity of LEAs in North Carolina creates wide variability in need for support and services from NC DPI

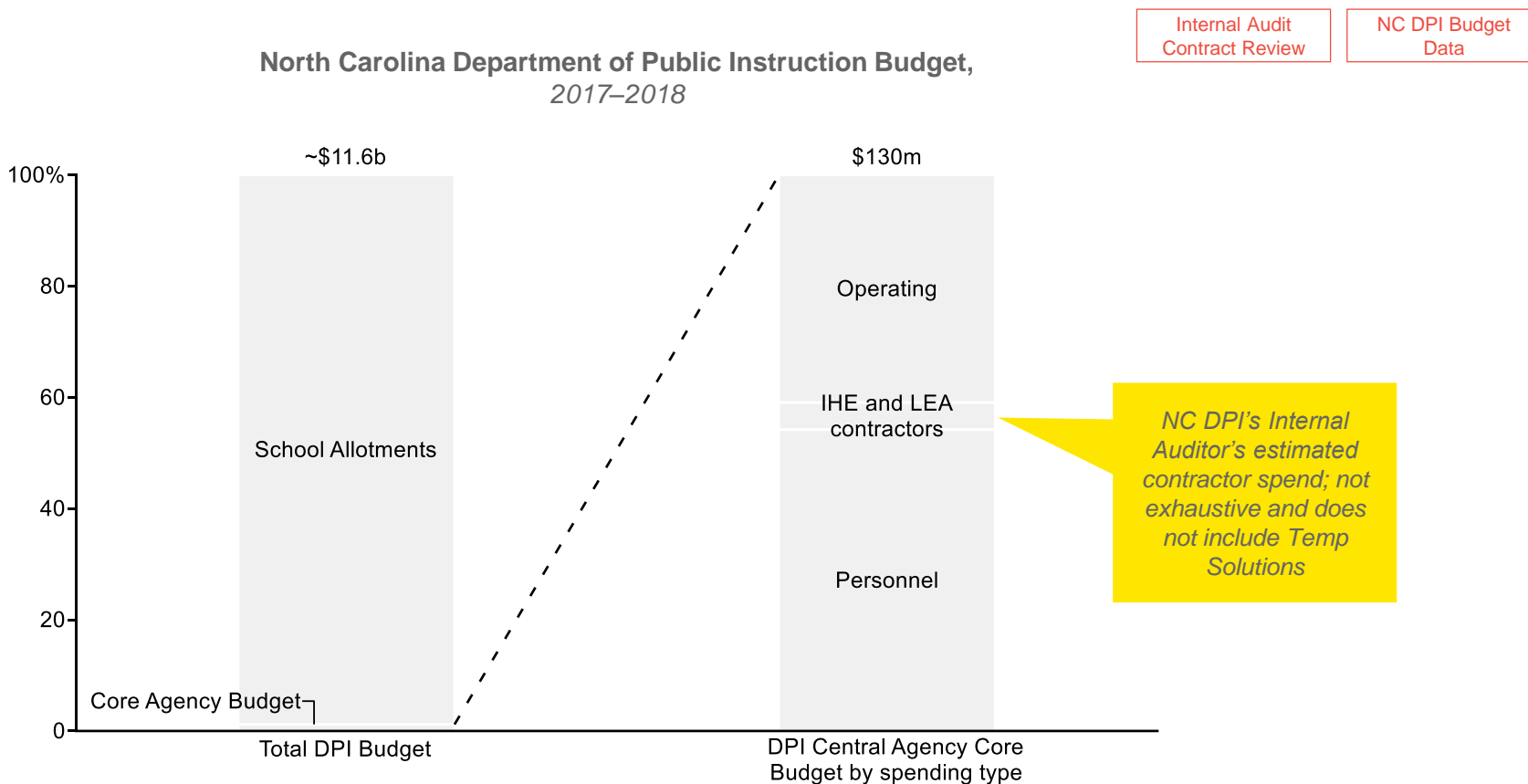
North Carolina Student Enrollment in K-12 LEAs,
by total LEA enrollment and geographical classification



Note: *Data do not reflect 21 of the 173 charter schools in North Carolina due to school openings and missing data
Source: NC DPI website; NCES

Context on NC DPI

The core agency budget for NC DPI represents ~1% of total school allotments



Note: Special Fund sources include: Licensure fees, Private Grants, LEA HMRS, etc.;

Receipt sources include: Indirect costs, Lottery distributions, Publication sales, etc.

Note: Business Modernization reserve funds for future years are excluded from the total NC DPI 2017-18 budget; Special Funds are those that are earmarked for a specific purpose

Source: Internal NC DPI Data

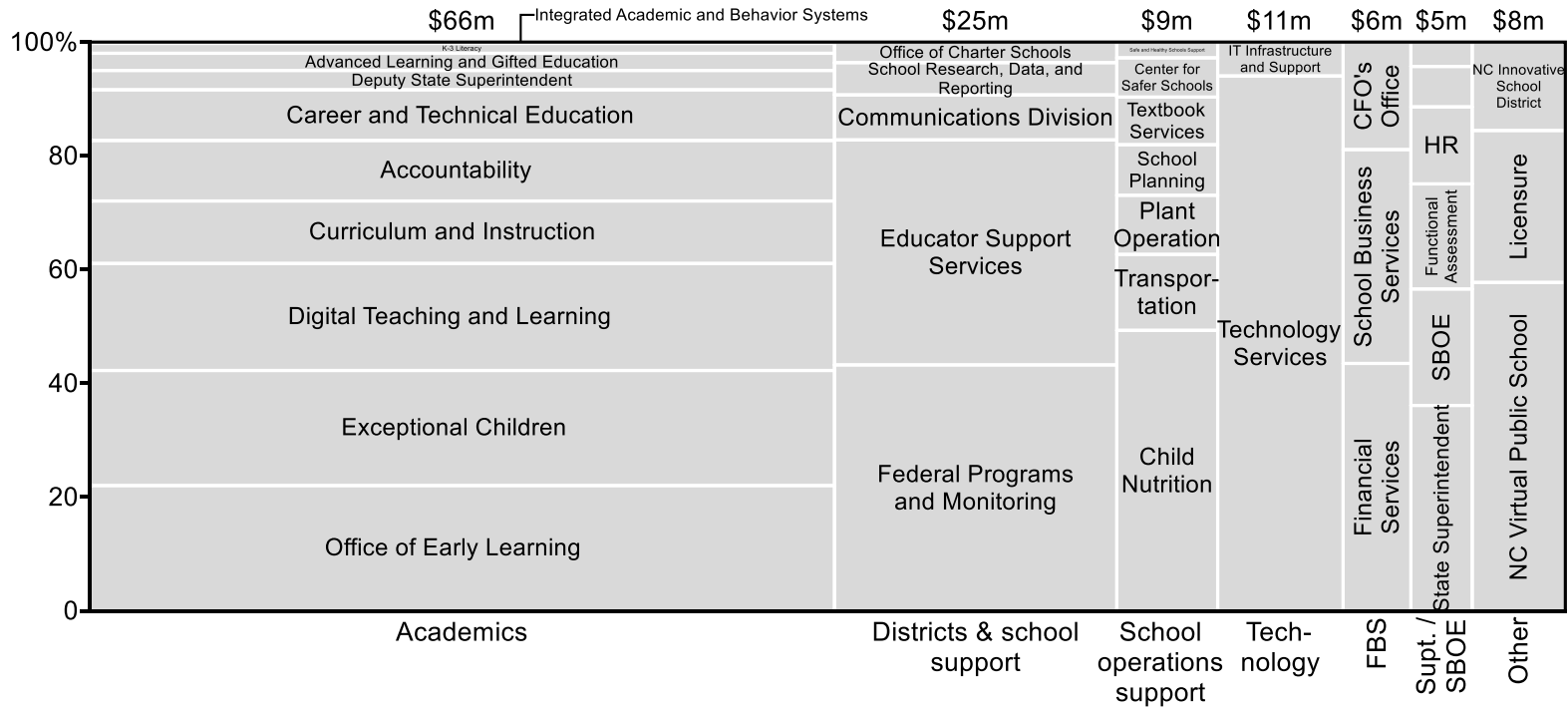
Context on NC DPI

More than \$100m of NC DPI's core agency budget is spent on academics, district and school supports, and school operations support

NC DPI Budget Data

NC DPI Core Agency Budget by Division and Section, 2017-18

Total= \$130m



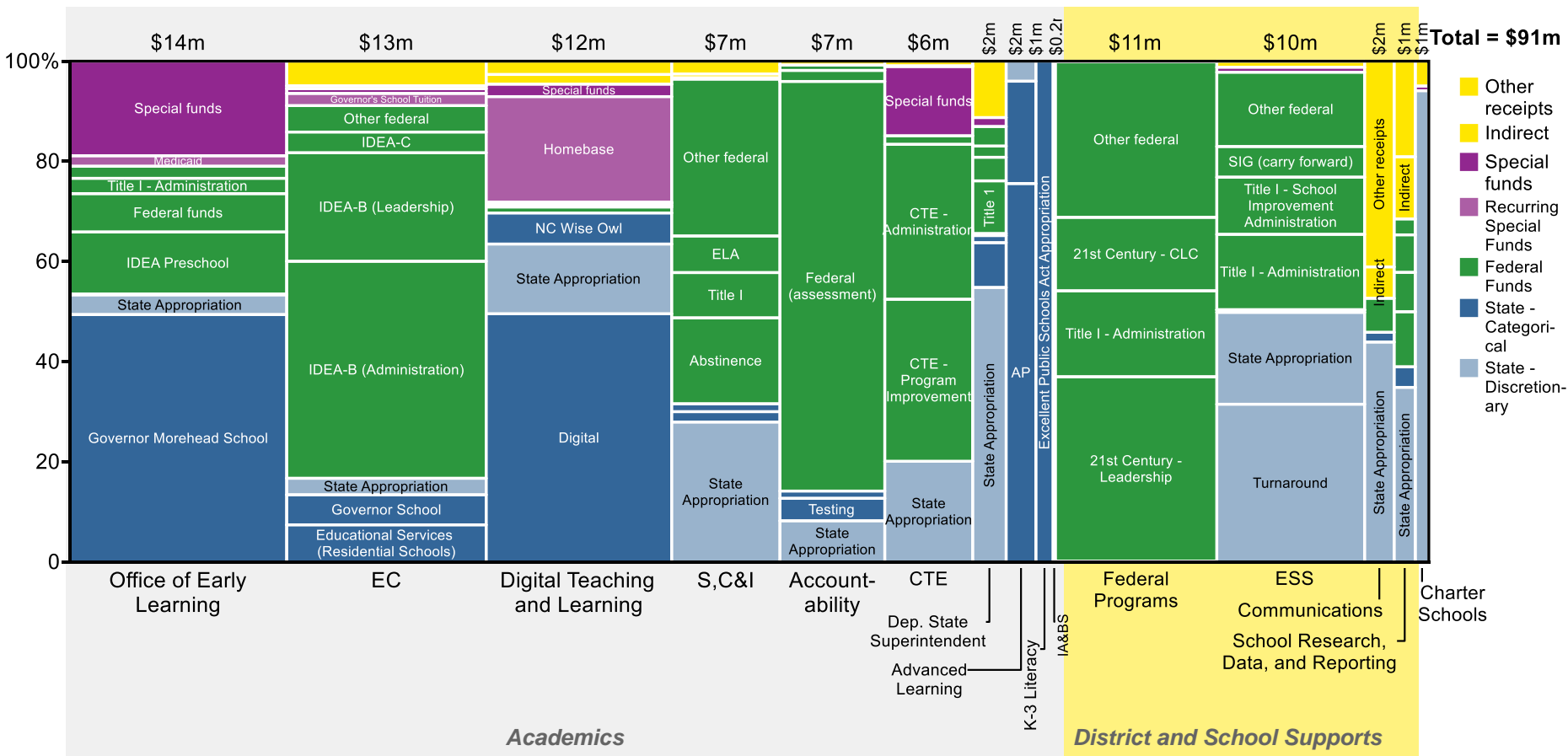
Note: Data reflects DPI's budget as of February 2018; funds that are largely pass-throughs (e.g., E-RATE funds, Education and Workforce Commission, SBSM) are excluded from NC DPI budget
 Source: Internal NC DPI Data

Context on NC DPI

The vast majority of academic and support resources are supported by specific categorical state or federal funding streams

NC DPI Academics and District Support Divisions by Funding Source, 2017-18

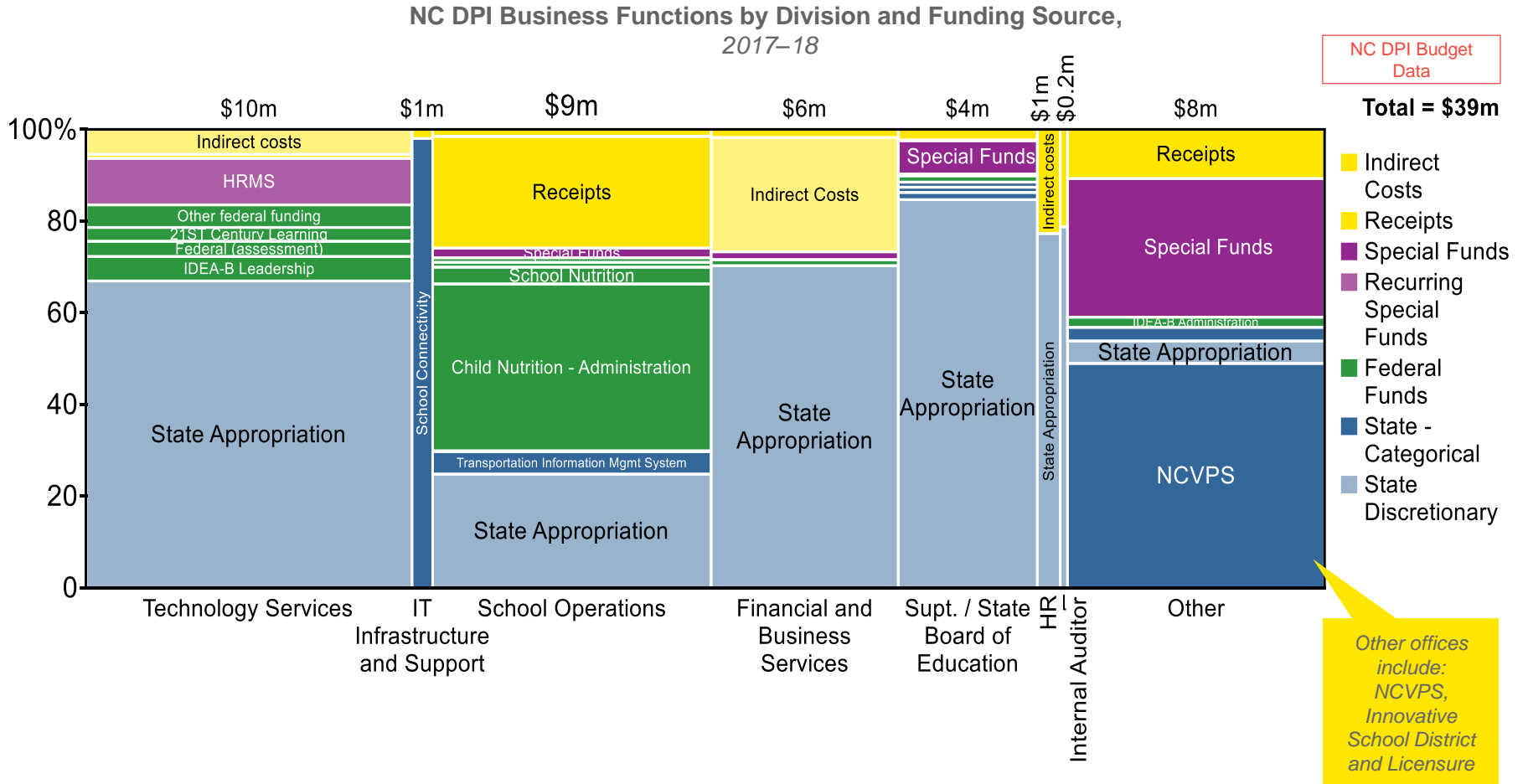
NC DPI Budget Data



Note: Special Fund sources include: Licensure fees, Private Grants, LEA HMRS, etc.; Receipt sources include: Indirect costs, Lottery distributions, Publication sales, etc. SBSM is not included in core agency budget
Source: Internal NC DPI Data

Context on DPI


...While state funding is the key source to support business operations



Note: Special Fund sources include: Licensure fees, Private Grants, LEA HMRS, etc.; Receipt sources include: Indirect costs, Lottery distributions, Publication sales, etc. SBSM is not included in core agency budget
 Source: Internal NC DPI Data

Summary of recommendations

Our interviews and experience surfaced several strengths and positive themes for NC DPI

- ▶ High performing teachers see **NC DPI as being responsive to their needs and offering a breadth of professional development** services and resources
 - ▶ NC DPI staff **are knowledgeable and have experience in their areas of work**, and try to coordinate efforts across divisions even when formal structures to do so don't exist
 - ▶ NC DPI IT, and many other divisions in NC DPI, exhibit a strong **service orientation and support LEAs even when that goes beyond what is mandated**
 - ▶ Employees across the agency indicate that they have **assumed additional responsibilities** in many areas as there have been cuts and delays in filling vacancies
- 

NC DPI strengths, including a dedicated and knowledgeable staff, suggest that the organization could be well-positioned to address some of the more constructive observations that surfaced during interviews, and their implications

Summary of recommendations

Interviews with staff and the field also identified some challenging observations in four key areas

Overall observations

Impact

- ▶ DPI's effectiveness is limited by its tendency to work in siloes – an observation that extends to many functions, including how data is used, how policy is developed, how budgets are created, and others
- ▶ In addition, delays in the contracting process have become a critical issue for NC DPI management

Support

- ▶ NC DPI appears to lack an overriding theory for how to support LEAs and educators to drive student outcomes; individual offices develop their own support structures, professional development plans and assessments
- ▶ Multiple offices have aligned staff to regions, but those regional support providers do not coordinate or prioritize their work within each region

Technology

- ▶ Increasing demand for IT services from different business units, and IT's challenges in responding to these specific needs, has resulted in a fragmented IT organization
- ▶ At the same time, IT is dedicating time and resources towards administrative activities such as supporting desktops and server infrastructure hosted on-premises

People

- ▶ NC DPI is not succeeding in hiring and onboarding staff in a timely manner, resulting in skill and capacity gaps and hindering the operations of many teams
- ▶ In addition, employee morale is widely perceived to be struggling amidst higher levels of turnover, fragmented communication, and uncertainty about the vision and future funding of the organization

All these observations tie into a feeling amongst staff that NC DPI articulating an overarching vision of its priorities is key to improving employee engagement and enabling implementation of the recommendations

Summary of recommendations

Within each of the themes, there are specific recommendations that can support the transformation of NC DPI



A transformation management office should be created to support the effective implementation of these recommendations (Recommendation #18)

Summary of recommendations

In sum, our recommendations relate to two overarching themes for transformation



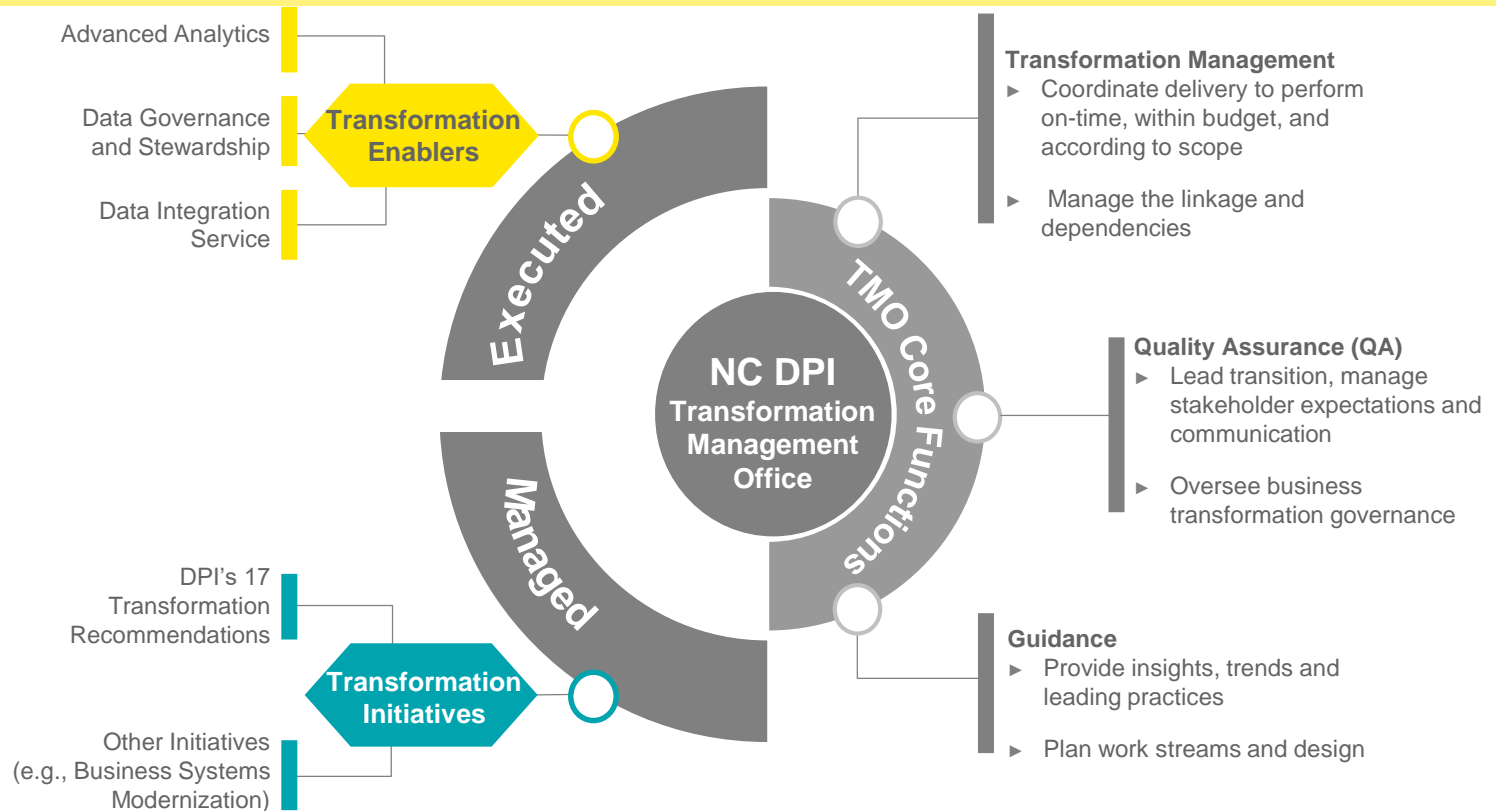
- ▶ **Increase impact on the quality of public education by reducing internal silos and delivering a more consistent vision for improvement in teaching and learning**

- ▶ **Enable improved support by better focusing resources on the core mission of the Department, and modernizing critical systems and processes**

Summary of recommendations

Potential role of a transformation management office

EY recommends setting up a Transformation Management Office (TMO) to manage organizational change and communication, provide program transparency, mitigate risk, track and enable initiatives to deliver the planned value and benefits of NC DPI's transformation and business modernization programs



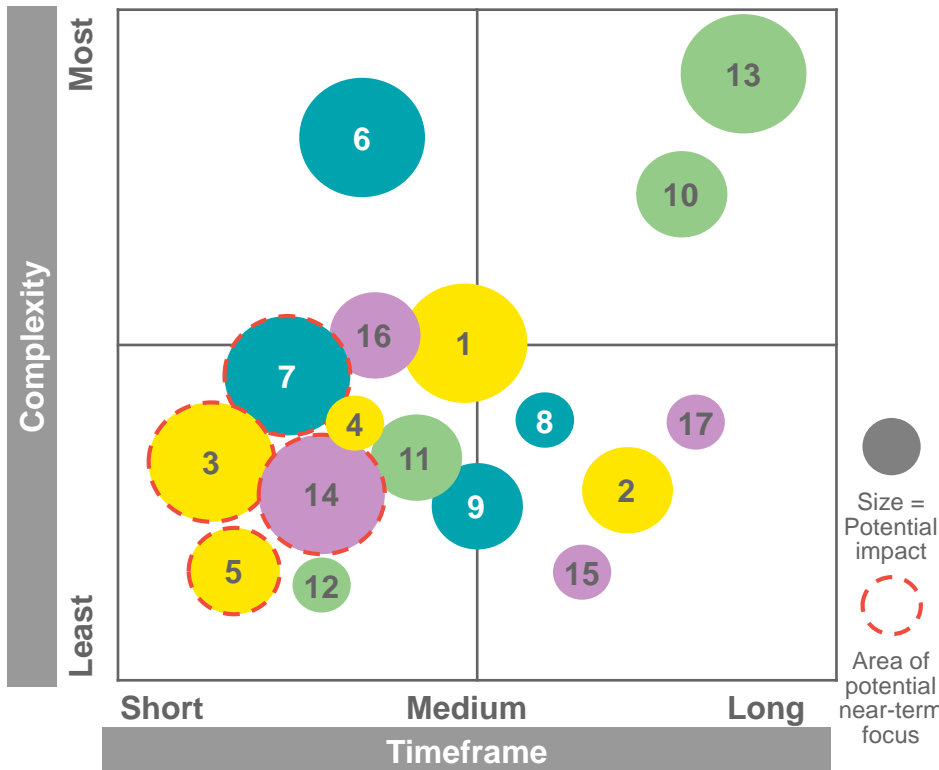
Note: Some aspects of the transformation enablers (e.g., advanced, analytics) are also included in the School Business State Modernization (SBSM)

Potential implications

NC DPI leaders have assessed all the recommendations on the basis of timeframe, complexity, and potential impact

Recommendation assessment by steering committee and NC DPI directors

- Key:
- Transform NC DPI for **impact**
 - **Technology** systems change
 - **Support** to LEAs
 - Focus on recruiting and retaining the right **people**



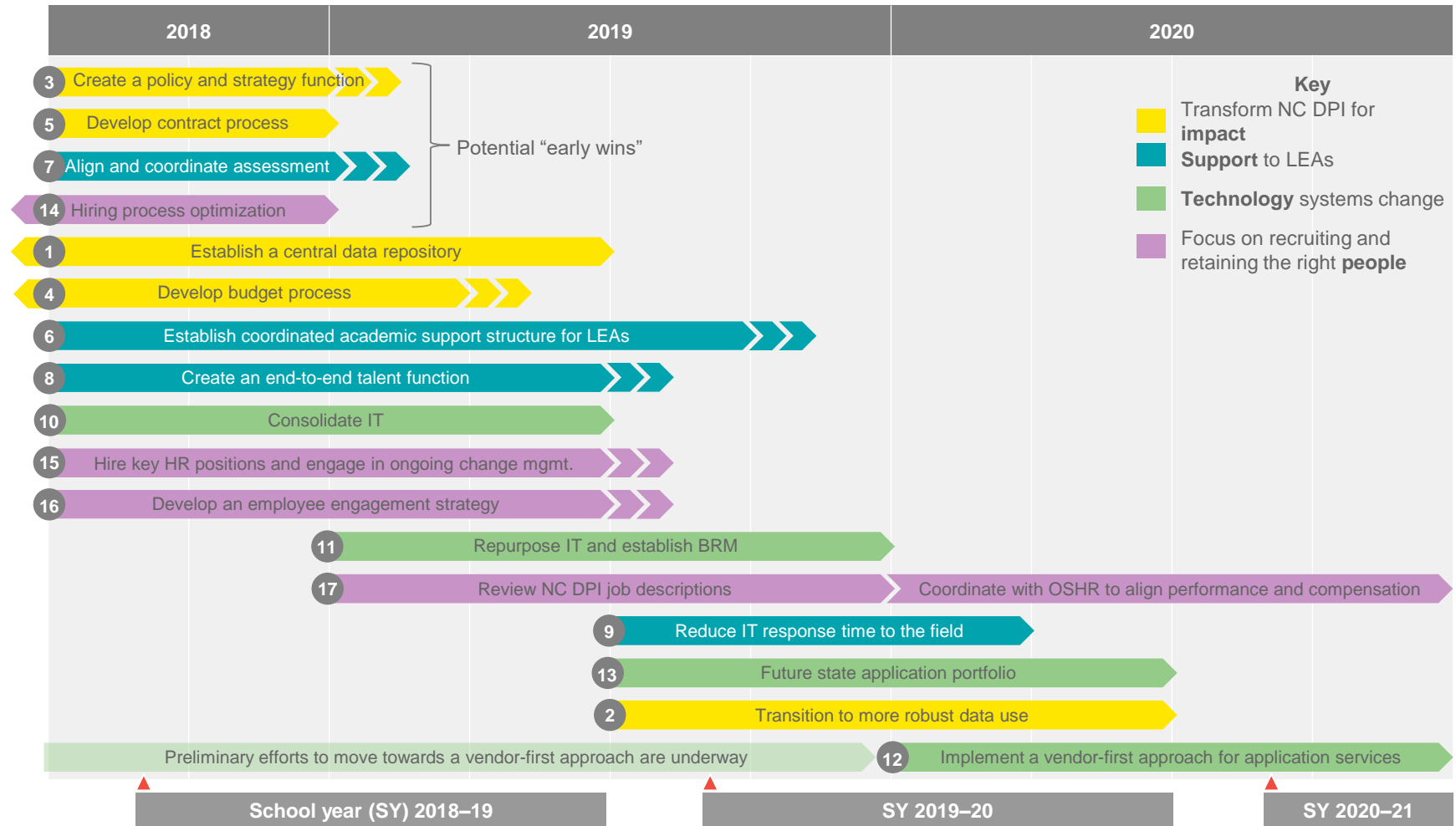
Commentary on assessment of recommendations

- ▶ The project steering committee and a group of NC DPI directors met to review recommendations and initiate preliminary planning for implementation
- ▶ During this session, participants were asked to assess the recommendations **as written** in terms of timeframe potentially required to execute, complexity of the effort, and potential impact
- ▶ This type of analysis suggests an opportunity for NC DPI to build momentum in its transformation efforts by starting with “quick wins” in areas that involve **low complexity, little time and high impact**
- ▶ In this vein, four recommendations emerge as candidates to help build momentum:
 - ▶ **3. Policy and strategy**
 - ▶ First step: Review existing policy process and identify areas for improvement and efficiency
 - ▶ **5. Contracting**
 - ▶ First step: Create initial contract tracking process
 - ▶ **7. Assessments**
 - ▶ First step: Begin coordination across various assessment program area owners
 - ▶ **14. Talent acquisition**
 - ▶ First step: identify existing technologies capable of increasing process efficiency
- ▶ Other efforts may still be important to start quickly, though they may be more complex to implement

Note: Steering Committee consists of a group of DPI leadership selected by the Superintendent

Potential implications

Considering NC DPI feedback and inter-dependencies between recommendations, there may be a logical sequencing of implementation



Potential implications

The recommendations indicate opportunity for potential efficiencies at NC DPI, with most implied investment supported by the Business Systems Modernization effort

Theme	Potential implied investment (One-time)	Potential ongoing efficiencies/ expenditures	Commentary
<i>Transform NC DPI into a collaborative, data-driven, student outcomes focused organization</i>	\$3m**	\$350k	<ul style="list-style-type: none"> ▶ Recommendation #1:** \$3m investment has been set aside within the SBSM plan and any additional costs will be covered by SBSM. ▶ Recommendation #3: Based on assumptions described on slide 40, \$350k in ongoing costs is estimated to support the development of a policy and strategy function; would be state funded. ▶ No direct potential financial implications have been identified for recommendations 2, 4, 5
<i>Create a more integrated and streamlined system of support to LEAs</i>	~\$0k	(\$1.9m)	<ul style="list-style-type: none"> ▶ Recommendation #6: Based on assumptions that can be found on slide 46, there are potential savings of ~\$700k would be a mix of federal and state funding; represent 5% decrease in field positions. However, these funds could be repurposed and reinvested to <i>increase</i> support to the field ▶ Recommendation #9: Based on assumptions that can be found on slide 52, potential nominal investment required to set up self-service IT functionality to better support LEAs. As IT systems are improved and processes are automated, there are potential savings due to reduction in tech support resources (potential savings of ~\$1.1m) ▶ No direct potential financial implications have been identified for recommendations 7, 8
<i>Redefine and restructure IT as a lean and agile organization designed to provide value-driven support</i>	\$1.1m**	(\$4.1m) \$1.4m**	<ul style="list-style-type: none"> ▶ Recommendations #10–13 are interrelated and have the following potential financial implications <ul style="list-style-type: none"> ▶ Based on assumptions that can be found on slide 53-60, an estimate potential net savings of \$4.1m could be achieved by shifting resources to DIT, modernizing infrastructure and application rationalization ▶ \$1.1m estimated potential one-time investment needed for application rationalization ▶ **\$1.4M investment has been set aside within the SBSM budget for modernizing applications and business systems based
<i>Recruit, retain, and develop the right team</i>	–	\$100k	<ul style="list-style-type: none"> ▶ Recommendation #16: Based on assumptions that can be found on slide 66, there is a potential investment in the creation of a position to support learning and development
Total	~\$4.1m in total [~\$0 for NC DPI]	(\$5.5m) in total [(~\$4.1m) for NC DPI]	<ul style="list-style-type: none"> ▶ Total potential investment or savings <i>including SBSM investment</i> ▶ [Potential investment/savings for NC DPI <i>excludes</i> costs associated with SBSM-sponsored initiatives]

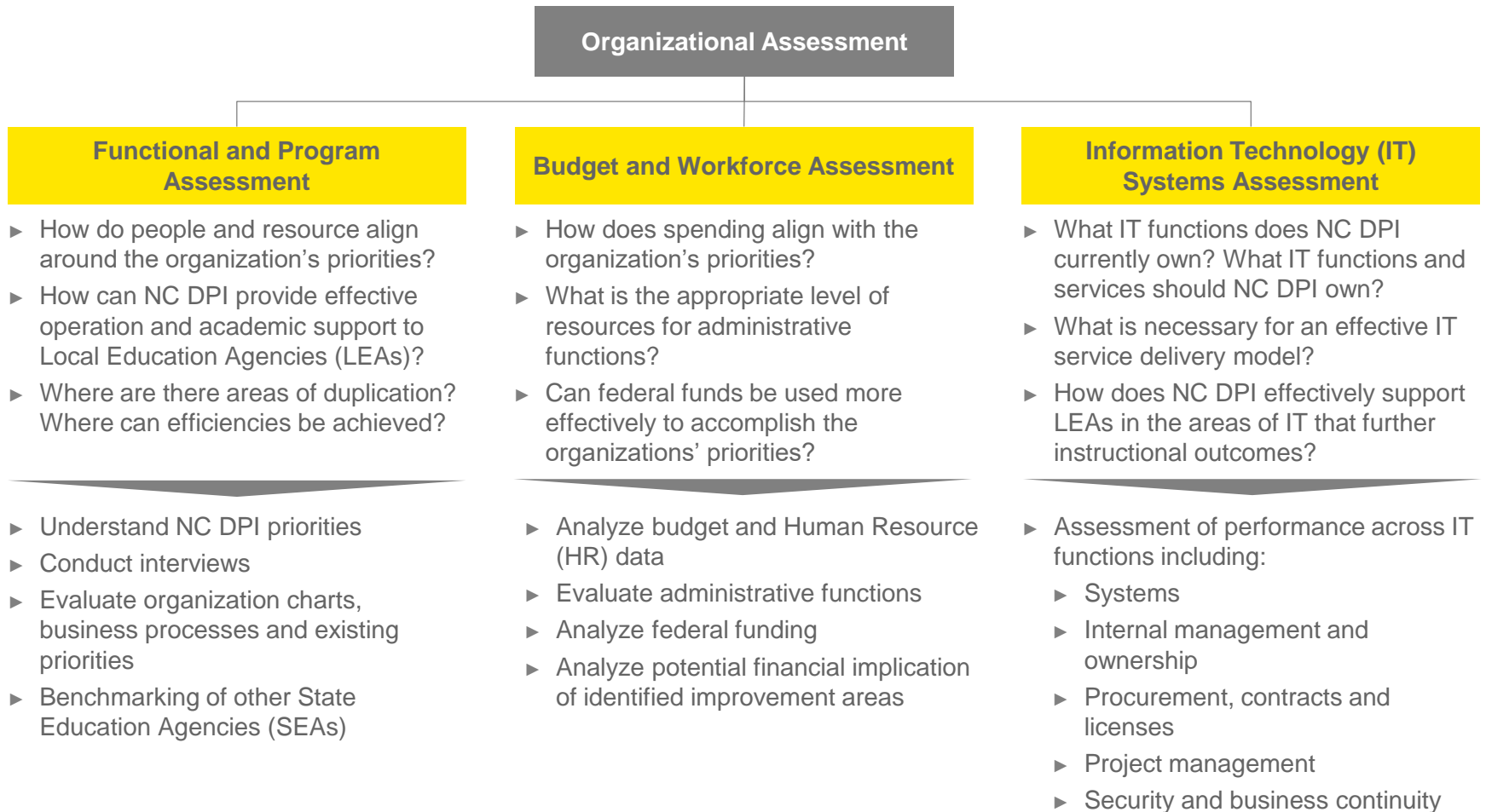
Note: ** Indicates investments accounted for in SBSM plan; More detail provided on the potential financial implications in each recommendation, including references to areas which may require TMO support; All data on DPI current budget and organization was provided and confirmed by DPI. Some assumptions regarding potential financial implications are based on EY's interviews and analysis, and all assumptions were reviewed and confirmed/determined by DPI management

Appendix



Project overview

Our scope included an assessment of key questions determined by NC DPI across three categories



Note: All data and material for analysis and assessment during the project were provided by NC DPI

Context on NC DPI

North Carolina's Every Student Succeeds Act (ESSA) plan lays out a theory of action that prioritizes a set of programs

Theory of Action (per NC DPI ESSA plan)

North Carolina commits to continue to transform its education system to allow every student to follow the path to success that they decide best fits them.



Proven Programs

NC Pre-K, Smart Start, Career and College Promise, Home Base, NC Virtual Public Schools

Promising Practices

English Language Support Teams, NC Read to Achieve, NCStar, Multi-tiered System of Support (MTSS), Positive Behavioral Interventions and Supports (PBIS), Data Systems

Emerging Initiatives

B-3 Interagency Council, NC Reads, Whole Child NC, Global Ready Initiatives, Digital-Age Learning, Innovative School District, Lab Schools

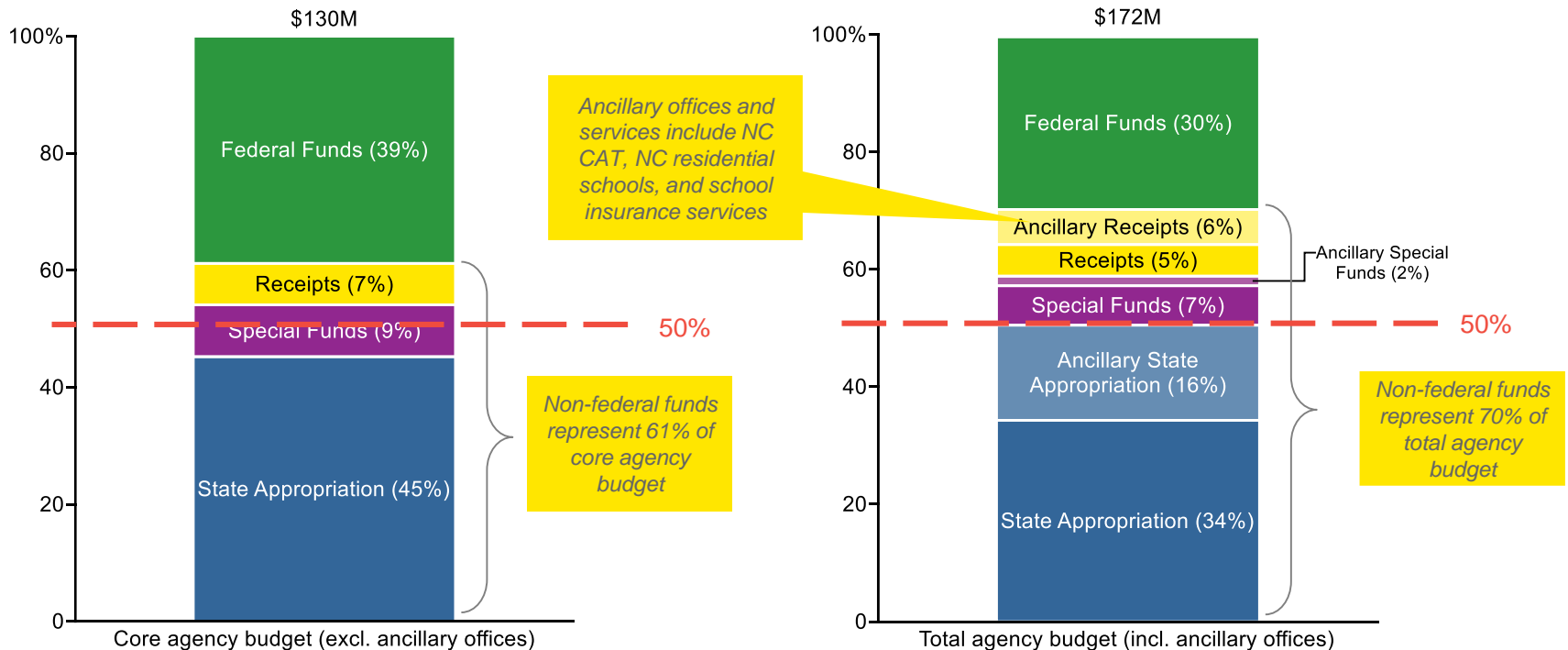
Source: NC ESSA Plan

Context on NC DPI

Federal funds account for ~30% of NC DPI's total spend when including all areas of the agency budget, including spend on ancillary offices and services

NC DPI Budget Data

North Carolina Department of Public Instruction Budget, 2017-18



Note: Ancillary offices and services include NC CAT, Residential Schools and School Insurance

Note: Special Fund sources include: Licensure fees, Private Grants, LEA HMRS, etc.; Receipt sources include: Indirect costs, Lottery distributions, Publication sales, etc.

Note: Business Modernization reserve funds for future years are excluded from the total NC DPI 2017-18 budget; Special Funds are those that are earmarked for a specific purpose

Source: Internal NC DPI Data

Summary of recommendations

There are two areas that we did assess but did not observe any significant recommendations for improvement

Observations

School operations

- ▶ NC DPI provides a range of operational support services to districts, including property insurance and facilities plan review
- ▶ Providing direct operational support services does not always fall within SEA responsibilities in other states, but NC DPI earns revenue from these services that helps to offset costs

Monitoring related to federal funds

- ▶ NC DPI provides a consolidated grant application and monitoring for Title funding
- ▶ The Federal Program Division has created a strong working relationship with Educator Support Services to create alignment in addressing LEA needs

Implications

- ▶ Based on interviews it is recommended that NC DPI continue providing these services even if it is unusual for a SEA to do so, given that:
 - ▶ Small and rural LEAs are limited in the resources or content knowledge to provide or purchase these services on their own
 - ▶ LEAs report that they value these services and generally view them as high quality

- ▶ While there may be opportunities for further consolidation of monitoring and ongoing continuous improvement, interviews with NC DPI staff indicate that there have been meaningful efforts to streamline monitoring and adopt leading practices seen in other states including:
 - ▶ Online grant system
 - ▶ Consolidated grant application for LEAs
 - ▶ Coordinated monitoring and support to LEAs

Impact: recommendations overview

More coordination and alignment around data, policy and budget could help NC DPI become a more outcomes-driven agency

Transform NC DPI into a collaborative, data-driven, student outcomes focused organization

Context and rationale observations

- ▶ Different teams and applications across NC DPI source data independently using unique methods; this results in data inconsistency and inefficient efforts
- ▶ The agency's policy work (Board and legislative) does not always reflect a robust feedback loop from staff or stakeholders, or consistent application of agency priorities
- ▶ The budget process has historically been managed by Finance, with program owners not deeply involved with the development and management of their budgets, and not always a strategic discussion of priorities and tradeoffs
- ▶ The contract process is very slow, there is little oversight of contract management and renewal

Preliminary recommendations

- 1 **Establish a central repository that sources, validates and maintains data**
- 2 **Bolster and embed analytics capability across key program offices**
- 3 **Develop a policy and strategy function to facilitate collaboration and feedback around agency priorities**
- 4 **Engage division leaders as business owners of their budgets**
- 5 **Improve the efficiency, governance and transparency of contracting**

Objectives and desired outcomes

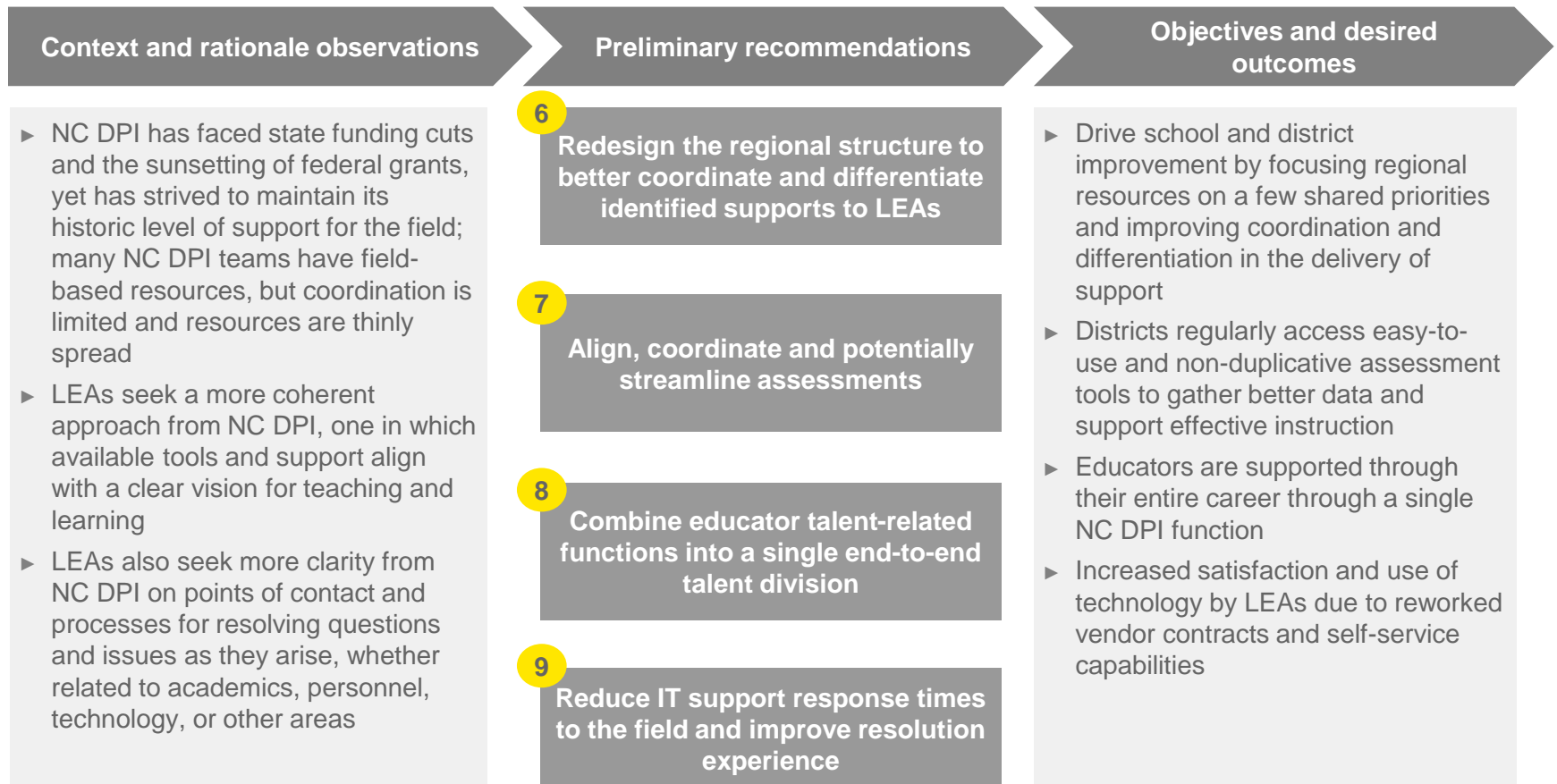
- ▶ Enable teams across NC DPI to access consistent and reliable data to drive more informed decision making
- ▶ Drive better and more frequent data use by building analytical capacity of program areas and prioritizing key analyses and reports required to drive program and policy decisions
- ▶ Improve coordination across offices, and achieve clear alignment of policies and priorities with the creation of a policy and strategy function
- ▶ Shift to a priorities-driven budget process with increased ownership and accountability by program areas
- ▶ Create clarity around contracting decisions and improve efficiency by redesigning the contracting process

Note: Context and rationale observations are based on discussions with management, primary research and data analysis.

Support: recommendations overview

Moving towards a more integrated system of LEA support involves more field coordination, and a clearer prioritization of NC DPI efforts

Create a more integrated and streamlined system of support to LEAs

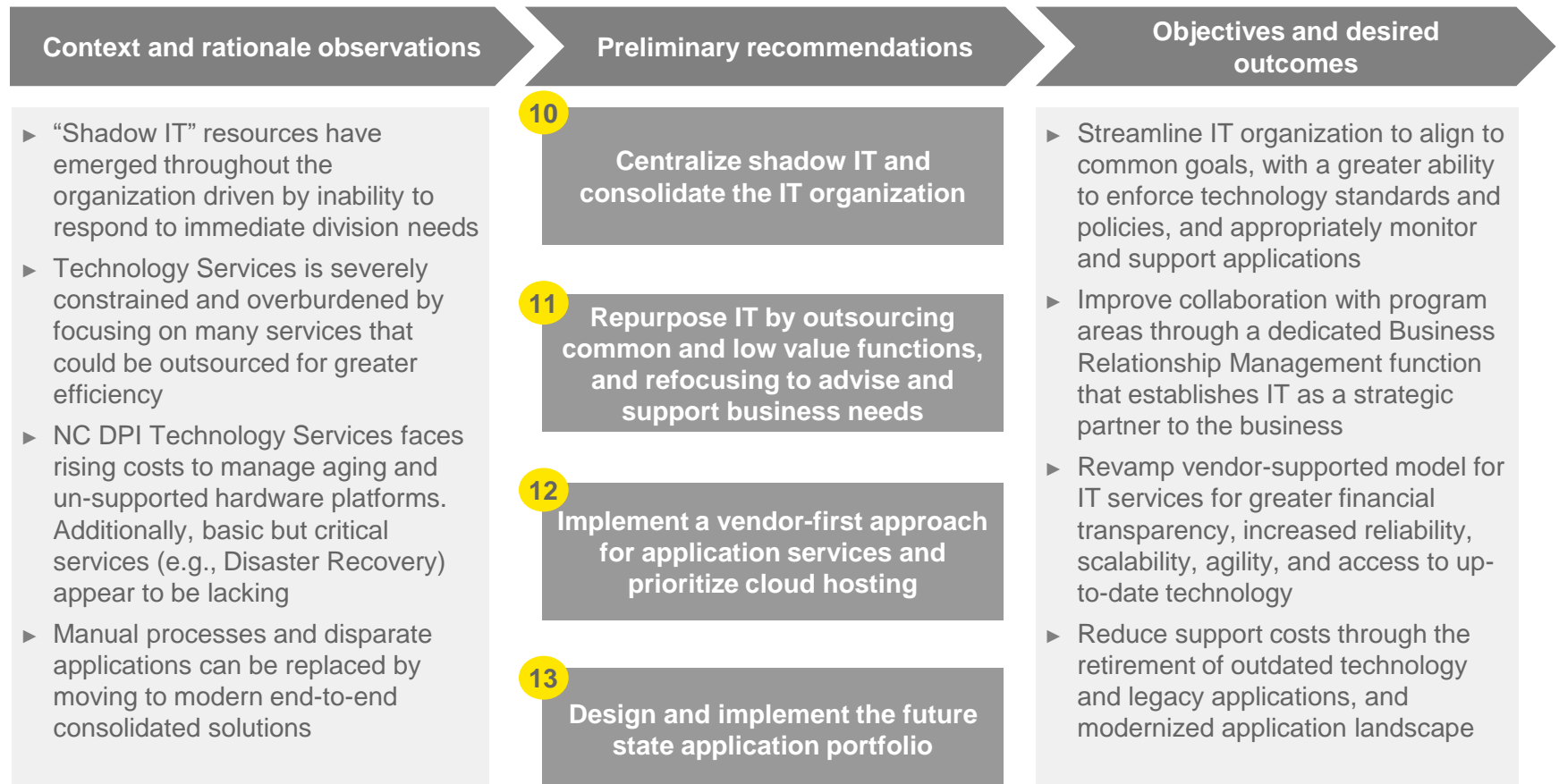


Note: Context and rationale observations are based on discussions with management, primary research and data analysis.

Technology: recommendations overview

Realigning and restructuring the IT services and organization could drive better coordination and efficiencies for NC DPI

Redefine and restructure Technology Services as a lean and agile organization designed to provide value-driven support

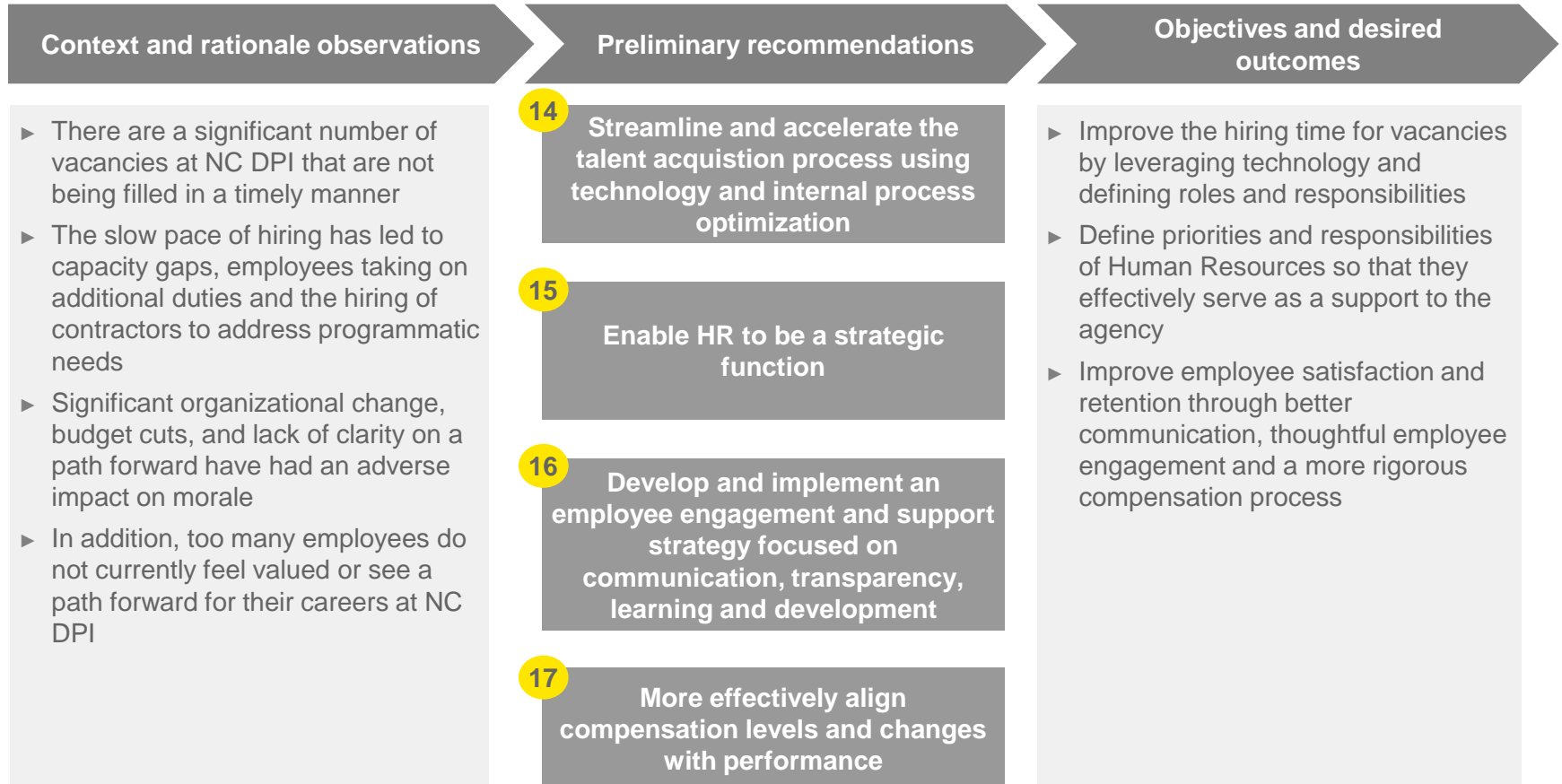


Note: Context and rationale observations are based on discussions with management, primary research and data analysis; Shadow IT refers to resources performing IT related functions that resides in divisions outside of the IT organization

People: recommendations overview

Improve recruitment, employee retention and satisfaction through the creation of efficiencies and strategic priorities around Human Resources

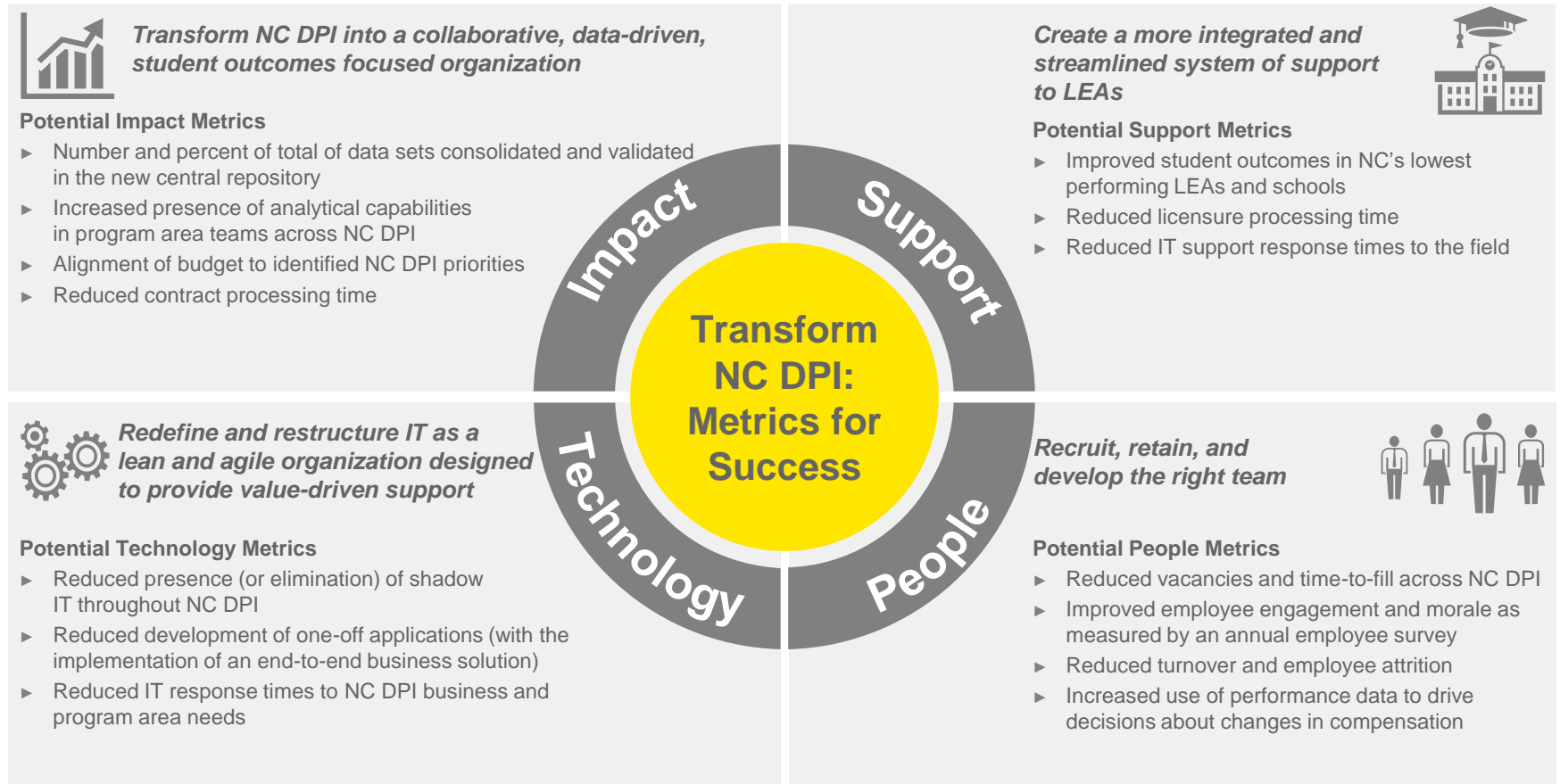
Recruit, retain, and develop the right team



Note: Context and rationale observations are based on discussions with management, primary research and data analysis.

Potential implications

As NC DPI executes on these recommendations, there are a variety of metrics that could be used to track progress



Recommendations detail



Impact: recommendation #1

More detail can be found on Appendix page 4

Establish a central repository that sources, validates, and maintains data

Detailed description

- ▶ Eliminate duplicative efforts to source data from various places through a central repository managed by a Data Management and Reporting group (DMR) within IT Division
- ▶ The DMR could:
 - ▶ Establish data governance and stewardship, and provide reporting services to the agency
 - ▶ Include representatives from different offices (Finance, HR, Academic areas, etc.) as well as data architects, database developers, reporting developers, data managers, etc.
 - ▶ Become the fundamental enabler for the sharing of data across functional areas and consistent reporting across the agency and the building block to developing future analytics capabilities. Functional and program areas would transmit and share data with the DMR so that other functions can quickly access data

Context and rationale

- ▶ Different teams and applications across NC DPI obtain data from multiple sources independently and using inconsistent methods
- ▶ Additionally, the applications do not easily share data amongst themselves leading to diffuse data management responsibilities, data inconsistencies, and wasteful efforts to source data
- ▶ There doesn't exist a single group across NC DPI that is primarily responsible for consistently defining and managing data across the agency, and providing a single point of reference for where data lives at NC DPI
- ▶ There's a critical need to standardize data across NC DPI by removing duplicates, and validating to eliminate incorrect data from entering systems

Desired outcome

- ▶ Significant improvement in efficiency driven by an established central source for all data at NC DPI to eliminate duplicative efforts of drawing data from multiple sources
- ▶ A well-defined data management framework that addresses data governance, data quality, and data management and stewardship is established
- ▶ Centralized function that provides basic reporting services (scheduled reports) to the academic and administrative areas of the agency
- ▶ Closer collaboration between Technology Services (DMR group) and the other areas at NC DPI to establish data governance, set business rules for scheduled reporting, and help NC DPI draw insights from managed data

Key stakeholders impacted

Owner(s)

- ▶ School Business Systems Modernization (SBSM) Team

Impacted stakeholders

- ▶ Enterprise Data Reporting group
- ▶ NC DPI Technology Services
- ▶ Academic program areas
- ▶ Finance
- ▶ HR

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #1

More detail can be found on Appendix page 4

Improved sharing of consistent, validated data through a central repository, may require initial investment to set up, but may drive significant operational efficiency

1

Potential financial implication for NC DPI



Near-term impact (First Fiscal Year (FY) of implementation)

- ▶ **Potential investment:** An initial \$3m investment has been set aside to setup a single source of data and Data Management and Reporting Group (DMR); additional future costs will be covered by SBSM.

**Note: SBSM has included this investment in the School Business Systems Modernization planned scope and has included these expenses in the plan under "implementation of data integration"*

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Design technical integration architecture
- ▶ Design data management framework and DMR organization structure
- ▶ Develop data and analytics strategy and roadmap
- ▶ Identify central repository to expand (e.g., SODS) or stand-up central repository through vendor

Medium term (12–24 months):

- ▶ Implement and run Extract, Transform and Load (ETL) processes from source systems to central repository or Operational Data Stores (ODS)

3

External dependencies



- ▶ **School Board of Education (SBE) policy:** The recommendation may require new policy to standardize the data formats for HR, finance and SIS data that is mandated to be sent to NC DPI by LEAs
- ▶ **General Assembly (GA) legislative mandate:** N/A
- ▶ **Other state agency:** This may also require coordination between NC DPI, Department of Information Technology, and the Friday Institute to sustainably plan, implement, and maintain central data repository
- ▶ **Change in LEAs:** N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #2

Bolster and embed analytics capability across key program offices

More detail can be found on Appendix page 5

Detailed description

- ▶ Build capacity and leverage reporting and visualization tools to improve the use of data to drive decisions within the department. To build capacity NC DPI could:
 - ▶ Align across academic areas on the most important outcomes and use that data to prioritize programmatic decisions and support to the field – including deprioritizing support to programs that are not driving intended outcomes (e.g., a common needs assessment across all program areas.)
 - ▶ Leverage data to understand the effectiveness of programs and use data to drive programmatic and policy decisions in the academic program areas (e.g., through a common needs assessment)
- ▶ Include data analysis skills (e.g., familiarity with Excel) as desired skills for new hires in academic areas
- ▶ Over the long term, NC DPI could consider ways to leverage external analytics services (e.g., NC Government Data Analytics Center (GDAC)) to enable further efficiencies

Context and rationale

- ▶ NC DPI currently collects a significant amount of student, educator and finance data from LEAs
- ▶ Individual offices such as Finance, School Research, Data and Reporting, Accountability, Integrated Academic and Behavioural Systems (IA&BS), and Digital Teaching and Learning leverage this data to respond to requests from the General Assembly, provide regular reporting and shape their supports to the field
- ▶ Academic areas collect data from LEAs but do not always prioritize the data that is most important or use the data to drive program and policy decisions
- ▶ NC DPI does not have a consistent data-driven understanding if their programmatic work is driving towards outcomes
- ▶ Creating a more deliberate focus on using data to drive decisions could help NC DPI identify opportunities for improvement and drive towards better outcomes

Desired outcome

- ▶ NC DPI has an established culture of data-driven decision-making
 - ▶ Every academic office is able to identify the most important outcomes of their work and the data required to track outcomes
 - ▶ Common needs assessment across program areas focuses on the highest-priority outcomes
 - ▶ NC DPI focuses investment in programs that have data-driven evidence of success
 - ▶ Staff with analytical skills embedded within program areas
- ▶ Better tiering and usage of analytic tools and resources would free time of analysts within NC DPI to focus on the most strategic questions
 - ▶ Programmatic and support teams within Academics would leverage DMR for basic reporting
 - ▶ Increased availability and use of analytical tools (e.g., GDAC) would reduce the amount of time spent developing reports and visualizing data

Key stakeholders

- Owner(s)**
- ▶ Academic program areas (identifying key outcomes and programmatic decisions)
 - ▶ Technology Services (DMR)
 - ▶ School Business Systems Modernization (SBSM)
- Impacted stakeholders**
- ▶ Human Resources (job descriptions/screening for analytic skills)
 - ▶ LEAs and schools

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #2

Embedding analytics functionality across teams, and creating a small team focused on academic data, can support a more data-driven culture at NC DPI

1

Potential financial implication for NC DPI



Near-term impact (First FY of implementation)

- ▶ **Potential cost-neutral:** This recommendation could be implemented without new resources; NC DPI may choose to invest in developing additional analytical capability or analytics tools in the future.

Long-term impact

- ▶ **Potential investment:** Implementation could require investment in order to realize the long-term financial implication or full benefit; ongoing investment in training and analytics tools involves a potential investment of ~\$25–30k annually.

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Identify current employees with strong analytical capabilities; screen for analytical capabilities in the hiring process
- ▶ Identify common set of outcomes and data to use to drive program decisions and create common needs assessment to drive decisions around LEA support (note: data would be centralized under new data repository created by SBSM)

Medium term (12–24 months):

- ▶ Provide access to ongoing training and professional development to bolster analytical capacity where it currently exists
- ▶ Focus on developing a culture where all decision-making is grounded in data use
- ▶ Program decisions are being driven by data and outcomes

Longer term (24+ months):

- ▶ All teams have at least one member with strong analytical capacity; teams have access to more robust analytical and data visualization tools as appropriate

3

External dependencies



- ▶ **SBE policy:** N/A
- ▶ **GA legislative mandate:** N/A
- ▶ **Other state agency:** Office of State Human Resources (OSHR) approval may be required to include new analytical skill requirements in job qualifications
- ▶ **LEA impact:** N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #3

More detail can be found on Appendix page 6

Develop a policy and strategy function to facilitate collaboration and feedback on policy priorities

Detailed description

- ▶ Create a strategy and policy function in the department. The role of this group could be to:
 - ▶ Articulate NC DPI strategic priorities and related policy implications based on NC DPI leadership and stakeholder feedback
 - ▶ Drive collaboration and coordination around NC DPI priorities
 - ▶ Identify the areas where new policies are necessary and coordinate the policy development process
- ▶ This office would be responsible for facilitating the policy development process all NC DPI policies that impact the field including State Board of Education policies as well as internal policies
 - ▶ The office would work across the department to identify when new policy is necessary, facilitate the development of policy, and help to drive the stakeholder engagement process with more clear channels for two-way feedback with LEAs around policy development
 - ▶ Program areas would continue to be responsible for working with the office to identify when new policy is necessary, drafting the policy, providing content expertise, and supporting the stakeholder engagement

Context and rationale

- ▶ Currently, interviews conducted suggest that NC DPI does not have a strong formal coordinating function across the department to develop policy or examine the impact of potential policies on the field
- ▶ As a result, there are silos that have the potential to develop duplicative work or develop policies without input from all the necessary internal and external stakeholders
- ▶ In addition, NC DPI staff expressed frustration with the fact that they do not know what NC DPI policies or programs are being communicated to districts
- ▶ The local superintendents also expressed a desire to provide input into the development of policies and better understand DPI's priorities and how they relate to implemented policies

Desired outcome

- ▶ Stronger coordination between program areas, administrative offices, SBE and Superintendent's office on policy and legislative issues
- ▶ The field (e.g., superintendents) would have had opportunities to provide input into the development of policies
- ▶ Shared understanding of priorities across NC DPI and the field
- ▶ Development of a clear policy creation process, including timeline, key stakeholders and gating approvals
- ▶ A new office that could include:
 - ▶ Director of Policy and Strategy
 - ▶ Analysts (1–3) to coordinate engagement and communication (working closely with Communications Office), track policy development and analyze data to drive strategy

Key stakeholders

Owner(s)

- ▶ Superintendent's Office
- ▶ SBE members, staff and attorneys

Impacted stakeholders

- ▶ NC DPI program and business areas




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #3

More detail can be found on Appendix page 6

Developing a policy and strategy function requires investment in new positions, but a more formal structure should facilitate improved collaboration on policy priorities

1 Potential financial implication for NC DPI 	2 Potential milestones and estimated timeframe 	3 External dependencies 
<p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential investment: If implemented, this recommendation could result in net annual investment of ~\$350k to create 3 new positions and cover operating costs for the office. The impacted funding source would be the state appropriation/general fund.	<p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Develop job descriptions for new policy team positions, and post/hire for these positions▶ Develop updated policy creation process and communicate it to the agency <p>Medium term (12–24 months):</p> <ul style="list-style-type: none">▶ All policies have been inventoried and overlapping policies have been clarified or revised▶ NC DPI evolves towards an increasingly strategic approach to policy, external affairs and government relations <p>Long term (24 months+):</p> <ul style="list-style-type: none">▶ Ongoing work to engage with LEAs and other stakeholders for input on new policies▶ Ongoing tracking and development of policies	<ul style="list-style-type: none">▶ SBE policy: The SBE would still be responsible for approving new policies, but could have greater visibility into policies that are upcoming or in development▶ GA legislative mandate: N/A▶ Other state agency: N/A▶ LEA impact: N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #4

Engage division leaders as owners of their budgets

More detail can be found on Appendix page 7

Detailed description

- ▶ Drive program area budget ownership for central agency budget by redesigning the annual budget process with an increased focus on planning, goal setting, prioritization, program implementation, and sustainability. Redesigned approach could:
 - ▶ Launch more robust strategic budget planning process with increased awareness and involvement from the Divisional Heads
 - ▶ Drive the creation of budgets that support DPI's highest priorities and are aligned to the Division's priorities
 - ▶ Communicate a clear process and deadlines for budget development to budget owners
 - ▶ Align budget analysts with programs areas to support the development process and track ongoing spending
 - ▶ Enable an annual review of spending against priorities to identify areas of over- or under-spending, as well as any areas where funds are underutilized relative to their impact

Context and rationale

- ▶ Interviews with Program areas suggest they do not have a full understanding of their entire budget and how they are spending their resources
- ▶ In addition, interviews with Division Heads and Section Chiefs suggest they do not currently have a clear understanding of the end-to-end budgeting process employed by the Financial and Business Services (FBS) team; budget allocation process is viewed as neither transparent nor well-communicated
- ▶ Currently, the budget process involves the FBS Office rolling forward each office's prior year budget; offices then request expansionary funds (though in recent years, such requests have rarely been granted, given budget constraints)
 - ▶ The current approach described by interviewees does not include a clear process for reviewing impact of spending on outcomes or priorities, nor for considering the reduction or elimination of spending areas where impact or priorities are not being achieved

Desired outcome

- ▶ Division leaders can speak with clarity and confidence on the contents of their budget and the trade-offs that were made to arrive at those choices
- ▶ Division-level budgets should clearly reflect the priorities of each division and of the agency overall
- ▶ The finance team has developed a process to allow each division to drive its priorities, while adhering to overall fiscal constraints and guiding principles
- ▶ Shared understanding of prior year's budget and actual spend data would yield better planning of budgeting for state and federal funds
- ▶ External stakeholders may be in a better position to understand how resources are being allocated at NC DPI
- ▶ NC DPI overall budget would reflect a more rigorous process of prioritization, including paring back investments that are not showing results

Key stakeholders impacted

Owner(s)

- ▶ Finance

Impacted stakeholders

- ▶ Division Heads
- ▶ Superintendent's Office

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #4

More detail can be found on Appendix page 7

Redesigning the budget process may drive towards improved financial stewardship

1

Potential financial implication for NC DPI



Near-term impact (First FY of implementation)

- ▶ **Potential cost neutral:** This recommendation could be implemented without new resources.

Long-term impact

- ▶ **Potential savings:** An improved budget process may drive financial stewardship of both federal and state funds (e.g., understand how your budget is being formulated, if your budget is being executed as prescribed, and if expenditures are occurring accurately and efficiently). In the medium to long run, leading practice indicates that this could result in efficiencies or cost savings

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Documentation of the budgeting process and procedure
- ▶ Launch more robust strategic budget planning process with increased awareness and involvement from the Divisional Heads and Section Chiefs
- ▶ Pilot the budgeting process with the transfer of ownership to the Divisional Heads

Medium term (12–24 months):

- ▶ Program areas own budget development process for FY20

Long term (24 months+):

- ▶ Continuous improvement of budget process

3

External dependencies



- ▶ **SBE policy:** N/A
- ▶ **GA legislative mandate:** N/A
- ▶ **Other state agency:** N/A
- ▶ **LEA impact:** N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #5

Improve the efficiency, governance and transparency of contracting

More detail can be found on Appendix pages 8-9

Detailed description

- ▶ NC DPI could establish a streamlined governance framework to efficiently manage and simplify its contract management processes:
 - ▶ Redesign the contract creation, review/approval, and execution processes:
 - ▶ Contract creation: Collaborate with state agencies to develop standard templates (e.g., RFPs) to expedite the contracting creation process
 - ▶ Contract approvals: Simplify and accelerate review and approval processes by reducing multiple handoffs and setting up a governance structure to approve contracts above established thresholds. This governance structure can identify optimal communication channels and cadences to expedite approvals
 - ▶ Fill vacancies within the Procurement and Contracts Section with candidates that have the necessary skills and knowledge in order to support the process redesign
 - ▶ Establish contract monitoring and enforcement processes
 - ▶ NC DPI can proactively plan to renew or renegotiate contracts prior to their expiration resulting in operational efficiency
 - ▶ NC DPI can monitor the inventory of active contracts, and manage vendors more effectively to enforce adherence to established Key Performance Indicators (KPIs), metrics, and Service Level Agreements (SLAs)
 - ▶ After the establishment of the governance framework and redesigned contract processes, identify and procure an end-to-end contract management solution that aligns with NC DPI application modernization and rationalization efforts. The process must be rationalized and properly designed prior to the implementation of a new system in order to enable a new system to support an effective business process

Context and rationale

- ▶ Interviews suggest the lack of a centralized contract management system has likely contributed to contract mismanagement (tracking, storage, etc.), confusion of contract ownership, and delays in contract approval
- ▶ Contractors employed through task orders with Institutes of Higher Education (IHEs) and LEAs are inconsistently tracked or monitored
- ▶ NC DPI interviewees mentioned they are unable to monitor contracts that are reaching the end of their terms because there is not a formal tracking system
- ▶ NC DPI respondents expressed having experienced process delays due to multiple handoffs between the originator and approver

Desired outcome

- ▶ Drastically reduce time from contract initiation to approval
- ▶ Proactive monitoring and mitigation of risks related to expiration of contracts
- ▶ Significantly improved process efficiency resulting from a shift to automated contract management

Key stakeholders impacted

Owner(s)

- ▶ Finance- Procurement and Contracts Section
- ▶ Technology Services
- ▶ School Business Systems Modernization (SBSM) team

Impacted Stakeholders

- ▶ All divisions
- ▶ Department of Information Technology (DIT)




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Impact: recommendation #5

More detail can be found on Appendix pages 8-9

Redesigning the contract process can drive transparency and agility, but will require close collaboration with other state agencies to implement successfully

<p>1</p> <p>Potential financial implication for NC DPI </p> <p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential cost neutral: This recommendation could be implemented without new resources. The Transformation Management Office may be able to support implementation of technology and new processes in the near term. <p>Long-term impact</p> <ul style="list-style-type: none">▶ Potential investment: After the redesign of the Purchasing and Contracting (P&C) process and the establishment of the governance framework, NC DPI may need to invest in implementing an end-to-end contracts management solution as part of the application rationalization exercise.	<p>2</p> <p>Potential milestones and estimated timeframe </p> <p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Redesign the contract creation, review/approval, and execution processes and formalize processes to monitor, enforce, and manage contracts▶ Develop standard RFP templates in collaboration with state-level agencies▶ Redefine the contract approval mechanisms (e.g., governance body, meeting cadence, purchasing thresholds, escalation processes) <p>Medium term (12–24 months):</p> <ul style="list-style-type: none">▶ Align with the future state application portfolio for NC DPI to implement an end-to-end contract management solution	<p>3</p> <p>External dependencies </p> <ul style="list-style-type: none">▶ SBE policy: May need to develop or update current procurement and contracts policy to reflect the new process▶ GA legislative mandate: N/A▶ Other state agency:<ul style="list-style-type: none">▶ May require the development of a new process to collaborative effectively with the Department of Information Technology (DIT)▶ May require collaboration with state agencies to develop standard templates (e.g., RFPs) to expedite the contracting creation process▶ LEA impact: N/A
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Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #6

More detail can be found on Appendix pages 10-14

Redesign the regional structure to better coordinate and differentiate identified supports to LEAs

Detailed description

- ▶ NC DPI could establish a redesigned regional structure responsible for coordinating academic supports to the field, including intensive support for low-performing LEAs/schools and more targeted, programmatic support for the remaining LEAs/schools
- ▶ Each region would be led by a Regional Academic Lead, who oversees a team responsible for:
 - ▶ Coordinating the provision of identified academic supports across existing field staff and centrally located NC DPI staff teams
 - ▶ Coordinating academic-related communication and supporting high-quality implementation of new initiatives, programs, or policies in the field
- ▶ Centrally, regional teams could be supported by a small team to support the use of data and analytics to drive the identification of necessary supports, manage communication, and coordinate any implementation/roll-out of new initiatives by academic teams

Context and rationale

- ▶ NC DPI has faced significant budget cuts and seen the sunset of Race to the Top (RttT) in recent years, but interviews indicate that staff has strived to maintain a high level of service and support to districts through field-based resources; however, they are thinly stretched and coordination is ad hoc
- ▶ Existing efforts across DPI's Academic offices to coordinate support to a focused subset of schools represents a strong starting point for the expansion of this effort state-wide
- ▶ However, given current limitations, increased coordination and clear prioritization of time and resources could be critical drivers if NC DPI is to continue or enhance its support of the field going forward
 - ▶ Specifically, NC DPI may need to more clearly define the supports it is able to provide (and those it cannot) based on the diverse needs of each region, DPI's priorities, and the evidence-based programs that are already in existence

Desired outcome

- ▶ Increased coordination across the academic supports in the field available to LEAs
- ▶ Reduced siloing within NC DPI as cross-functional field teams coordinate to design support and implementation initiatives
- ▶ More efficient deployment of agency resources as duplication of effort is reduced
- ▶ Clear articulation of DPI's priorities as they relate to programs and associated supports
- ▶ Access to high-quality, targeted support for LEAs to drive improved outcomes
- ▶ Increased use of data to drive decision-making
- ▶ Improved field perceptions on the consistency and quality of supports provided by NC DPI

Key stakeholders

Owner(s)

- ▶ CAO and academic program areas
- ▶ Educator Support Services

Impacted stakeholders

- ▶ Federal Programs Monitoring
- ▶ School Operations
- ▶ LEAs and schools

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #6

More detail can be found on Appendix pages 10-14

Providing more targeted LEA support could be accomplished with more streamlined teams than exist today, enabling the difference to be re-allocated, strategically reinvested or saved

1

Potential financial implication for NC DPI



Near-term impact (First FY of implementation)

- ▶ **Potential savings:** If implemented, this recommendation could result in net annual savings of as much as ~\$0.7m on a baseline of \$12.2m current related spending. The current baseline budget reflects the field-based regional staff in the following offices: ESS, IA&BS, Digital Teaching and Learning, Foundations of Reading and Math, K-3 literacy, Early Learning (formative assessment), and CTE. The baseline budget, and potential savings, reflect assumptions about a potential new structure which is described in the appendix. The impacted funding would be ~50% federal and ~50% state funds

Note on these financial implications: NC DPI acknowledges redesigning support to the field should be driven by the department's long term priorities and needs of LEAs. The potential financial implications above represent one illustrative scenario.

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Establish regional teams by pulling together existing staff in each region and moving staff or positions as necessary
- ▶ Establish the Academic Support Office at the NC DPI central office
- ▶ Develop and implement single comprehensive needs assessment

Medium term (12–24 months):

- ▶ Use data to drive instructional, academic and support-related decision-making by LEAs in each region
- ▶ Enable low-performing schools and districts have a clear understanding of what a high-quality schools look like and do

Longer term (24+ months):

- ▶ Increase level of coordination or even consolidation across all field-based resources so that the field experiences a singular, cohesive approach to support from NC DPI (incl. Exceptional Children, etc.)

3

External dependencies



- ▶ **SBE policy:** N/A
- ▶ **GA legislative mandate:** N/A
- ▶ **Other state agency:** N/A
- ▶ **LEA impact:** LEAs may need to embrace a different, more targeted form of support from NC DPI in order to allow for effective implementation of the regional teams. This new approach to support should be more streamlined and responsive to their needs, but may involve less flexible, as-needed support than LEAs are accustomed to today

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #7

Align, coordinate and potentially streamline assessments

More detail can be found on Appendix page 15

Detailed description

- ▶ NC DPI could establish a cross-functional team comprised of academic, implementation, data, and assessment experts within NC DPI to:
 - ▶ Assess the current portfolio of assessments with a strong focus on the currently-available diagnostic and formative tools
 - ▶ Create and clearly communicate guidance on the use of assessment tools in the context of NC DPI's priorities for teaching and learning
 - ▶ Establish clear guidance/policy about the development, release, and support of diagnostic and formative tools in the future
 - ▶ Serve in an ongoing capacity as an assessment review panel to confirm that new diagnostic and formative assessment tools meet NC DPI's standards of rigor and quality, are aligned to curriculum or standards (as appropriate), are not duplicative of existing tools, and reflect NC DPI priorities
- ▶ *Note: review and consolidation of the various self assessments and needs assessments that LEAs are asked to submit is included in recommendation #2*

Context and rationale

- ▶ Today, NC DPI provides a range of assessments to the field including summative assessments, as well as variety of formative assessments, diagnostics and benchmarks
- ▶ While summative assessments are managed by a single team (Accountability), diagnostic and formative tools are "owned" by different teams depending on their origination and intention
- ▶ Therefore, interviews suggest NC DPI is seen to not have a consistent position on the value or use of these diagnostics and assessments; LEAs and schools perceive that there are many tools available but are not clear on which tools to use when
- ▶ By establishing a formal process to review the current portfolio of diagnostic and formative assessment tools and gather feedback from the field, NC DPI may then have the opportunity to develop the appropriate policies and structures to provide a more coherent spectrum of assessments– and clearly communicate them to the field

Desired outcome

- ▶ Rationalizing NC DPI's portfolio of diagnostics and formative assessments should:
 - ▶ Create increased clarity and consistency for the field and may drive greater usage/adoption of NC DPI's tools
 - ▶ Identify opportunities for NC DPI teams to collaborate on the creation or implementation of "double-duty" tools (those that provide data for more than one purpose)
- ▶ Redundancies across tools are eliminated, and/or diagnostic and formative assessment tools have been consolidated where possible
- ▶ LEAs and schools experience NC DPI's portfolio of diagnostics and formative assessments as a coherent and useful set of tools to gather ongoing data about student performance and progress

Key stakeholders

Owner(s)

- ▶ Academic program areas
- ▶ Office of Accountability

Impacted stakeholders

- ▶ LEAs and schools
- ▶ Teachers and administrators




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #7

More detail can be found on Appendix page 15

Improving coordination across assessments is a no-cost change that may result in significant improvements in clarity and usage in the field

1 Potential financial implication for NC DPI 	2 Potential milestones and estimated timeframe 	3 External dependencies 
<p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential cost-neutral: This recommendation could be implemented without new resources. <p>Long-term impact</p> <ul style="list-style-type: none">▶ Potential savings: Implementation of this recommendation could result in savings if NC DPI were to determine it would support or administer fewer assessments in the future	<p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Establish a cross-functional assessment review committee▶ Perform initial cataloguing and review of all diagnostics and formative assessments supported by NC DPI▶ Recommend necessary changes to NC DPI's diagnostic and assessment portfolio to streamline, reduce redundancy and align tools with NC DPI priorities <p>Medium term (12–24 months):</p> <ul style="list-style-type: none">▶ Advocate for legislative changes intended to streamline required diagnostics and formative assessments [as needed, based on DPI's assessment review findings]▶ Establish policies for ongoing review of NC DPI's assessment portfolio by cross-functional committee <p>Longer term (24+ months):</p> <ul style="list-style-type: none">▶ Ongoing review of assessment portfolio to maintain an assessment portfolio that is up-to-date, standards- and priorities-aligned, and without unnecessary redundancies	<ul style="list-style-type: none">▶ SBE policy: As NC DPI moves towards a more streamlined approach to diagnostics and formative assessment, these changes may require change to SBE policy if the review of NC DPI's current portfolio recommends changes to DPI-required assessment(s)▶ GA legislative mandate: Similarly, these changes could require change to a GA mandate if the review of NC DPI's current portfolio recommends changes to legislated assessment(s)▶ Other state agency: N/A▶ LEA impact: N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #8

More detail can be found on Appendix pages 16-18

Combine educator talent-related functions into a single end-to-end talent division

Detailed description

- ▶ NC DPI could create an educator talent division to support teachers and educators at any point along their experience continuum by consolidating functions that currently exist in disparate offices or do not exist at all under a single supervisor. The creation of a single office would:
 - ▶ Evaluate the current educator support services and rationalize the supports NC DPI provides to educators
 - ▶ Bring together functions ranging from Licensure to Education Value-Added Assessment System (EVAAS) to create a single point of contact for educators throughout their career
 - ▶ Have the context and breadth of experience to own existing policies related to teachers and educators, and develop new ones as necessitated by the field or required by new mandates

Context and rationale

- ▶ Today, teacher support functions within NC DPI are spread out across at least three teams, and interviews suggest this has created unnecessary confusion and frustration among teachers when they require support
- ▶ Therefore, creating a single educator talent function that draws together all of the existing teacher supports to increase their coordination and bolster educator support can provide significant value to the field; in the near term, these functions could include:
 - ▶ Educator Prep program approvals, educator effectiveness, talent monitoring and analytics, all basic retirement-related information and educators policies (all part of School Research, Data and Reporting)
 - ▶ Statewide System of Support for Educators including Beginning Teacher Support, National Board Certification, etc. (currently part of Educator Support Service)
 - ▶ Licensure (currently a standalone office)

Desired outcome

- ▶ Consolidating educator talent functions should support:
 - ▶ Increased teacher satisfaction and retention
 - ▶ Improved communication and service to LEAs and schools around educator-related policies and supports
 - ▶ Better alignment of NC DPI and LEA efforts and incentives when it comes to recruiting and retaining high quality educators for NC schools
 - ▶ Increased use of data to drive policy due to reduction in silos
 - ▶ Development of policies that reflect the full continuum of needs for teachers

Key stakeholders

Impacted stakeholders

- ▶ Educator Support Services (System of Statewide Support)
- ▶ School Research, Data and Reporting
- ▶ Licensure
- ▶ Finance and Business Services




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #8

More detail can be found on Appendix pages 16-18

Combining educator talent-related functions can result in a significantly improved service experience for educators

1 Potential financial implication for NC DPI 	2 Potential milestones and estimated timeframe 	3 External dependencies 
<p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential cost-neutral: This recommendation could be implemented without new resources.	<p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Existing educator-related functions are consolidated into a single office (both staff and funding consolidated)▶ Vacancies in educator talent-related functions are filled▶ Conduct evaluation of current supports and services and identify areas where training and improved processes are necessary▶ Develop new processes and cross-train staff as necessary to be able to respond to educators questions and needs <p>Medium term (12–24 months):</p> <ul style="list-style-type: none">▶ Educators in the field report a significantly improved level of service, communication and responsiveness from DPI's educator-talent related function <p>Longer term (24+ months):</p> <ul style="list-style-type: none">▶ Support for educators in the field is strategically and proactively designed and the spectrum of supports is dynamically responsive to the needs of the field	<ul style="list-style-type: none">▶ SBE policy: N/A▶ GA legislative mandate: N/A▶ Other state agency: N/A▶ LEA impact: Educators and administrators in the field would be asked to contact this “one stop” shop for all educator talent-related questions; in return, they should experience more consistent and reliable support from this function

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #9

More detail can be found on Appendix page 19

Reduce IT support response times to the field and improve resolution experience

Detailed description

- ▶ Reduce field dependence on NC DPI Technology Services and improve issue resolution experience to the field:
 - ▶ Build enhanced self-service troubleshooting capabilities for LEA support staff and vendors to create a more low-touch, technology enabled, and less people intensive model to support the field
 - ▶ Rework all future IT contracts with vendors to enable LEAs to file issue tickets directly with the vendor rather than having to work through NC DPI IT
- ▶ *Note: Building self service capabilities refers to creating automated basic troubleshooting capabilities, a knowledge-base of known fixes and a self-service portal for password resets, how-to requests, access provisioning or regaining privileges*

Context and rationale

- ▶ Although interviewees indicate efforts are consistently made to reduce resolution times, technology support to the LEAs continues to have relatively long resolution times due to limited bandwidth in the Technology Support group (constrained by inability to fill vacancies and inadequate staffing)
- ▶ Interviews suggest NC DPI today creates a bottleneck for issue resolution for technology-related matters due to the way contracts were historically established with vendors which drives multiple escalations and handoffs for the LEAs to get to the appropriate point of contact with vendors
- ▶ Analysis indicates almost all the functions performed by DPI's support personnel to troubleshoot issues for LEAs can be automated, facilitating self-service (and more rapid resolution) for LEAs

Desired outcome

- ▶ Reduced workloads and issue tickets for the technology support staff at NC DPI
- ▶ Long-term savings in operating costs from reduced tech support footprint
- ▶ Increased LEA and district staff satisfaction due to significantly reduced time to resolution of technology issues
- ▶ Clearly defined Technology Support process documentation that includes the owners, the timeframes, and key metrics of processes
- ▶ Prioritized list of processes based on self-service and automation potential for processes that can replace human touchpoints with tools

Key stakeholders impacted

Owner(s)

- ▶ NC DPI Technology Services (Technology Support Center)
- ▶ LEA Technology Support Staff




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Support: recommendation #9

More detail can be found on Appendix page 19

Reworking support contracts and enabling self-service capabilities could lead to significant cost savings and improved issue resolution experience for the LEAs

1 Potential financial implication for NC DPI 	2 Potential milestones and estimated timeframe 	3 External dependencies 
<p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential cost-neutral: This recommendation could be carried out internally without new resources in the near term; minimal development efforts will be required to build basic self service capabilities▶ Potential savings: Recommendation may result in \$1.1m ongoing savings on a baseline of \$1.3m currently related spending for 15 FTEs in Technology Support. The savings are based on the assumptions that reworked vendor contracts and enabled self-service will allow a substantial reduction in Tech Support resources (from 15 FTEs to 2 FTEs) as NC DPI staff workloads are reduced and LEAs decrease their dependence on NC DPI for issue resolution.	<p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Conduct process mapping to identify pain points and perform an assessment of automation/self service potential for Tech Support Processes▶ Develop standard procurement templates with standard Tech Support terms for LEAs to use when engaging new vendors and reworking contracts▶ Develop user experience journeys and identify ways to implement self-service and automation to improve timeliness and the issue resolution experience for LEAs▶ Define and setup the technical requirements for self-service capabilities▶ Develop, test and validate performance of self-service capabilities with local LEA staff	<ul style="list-style-type: none">▶ SBE policy: N/A▶ GA legislative mandate: N/A▶ Other state agency: N/A▶ Change in LEAs: This recommendation implies LEAs may need to rework future contracts with vendors. NC DPI can provide support to assist LEAs to rework contracts so that technology support responsibilities shift from the agency to the vendors

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: recommendation #10

Centralize shadow IT and consolidate the IT organization

More detail can be found on Appendix page 20

Detailed description

- ▶ In advance of reorganizing Technology Services, NC DPI could align embedded IT personnel and IT skillsets currently distributed across the business units under a single point of IT leadership (e.g., Data Managers in School Research, Tech Support analysts in NC Virtual Public School, Systems Specialists in Finance, and IT managers in Digital Teaching and Learning)
- ▶ Within NC DPI Technology Services, management could consolidate common skillsets and similar roles within the same function to eliminate redundancies (e.g.: Data Managers, Infrastructure and Systems Support)

Note: Shadow IT excludes technology-related strategic initiatives that leverage already existing IT resources (e.g., SBSM)

Context and rationale

- ▶ Currently, discussions with NC DPI and analysis of internal data suggest shadow IT (embedded personnel in program areas that do not report to IT) accounts for approximately 44 FTEs that represent approximately \$3.8m annually. Interviews indicate this practice is creating redundancies in roles that already exist in IT today, but may not be effectively deployed in the current model, and leads to silos of business knowledge
- ▶ These embedded resources have stepped in to perform key IT activities such as managing data, and interviews suggest they are developing applications using a low-code rapid development tool (APEX), and providing technology support, due to IT's inability to respond quickly and effectively to the agency's needs
- ▶ However, interviews indicate decentralized IT has resulted in a proliferation of applications developed by individual areas, redundancy of capabilities, and ungoverned IT:
 - ▶ Technology Services is often tasked to solve issues for solutions they did not build

Desired outcome

- ▶ Streamlined and empowered IT organization aligned to common goals, with a greater ability to enforce technology standards and appropriately monitor and support applications
- ▶ Redefined and formalized IT processes and policies
- ▶ Greater transparency of IT spending across NC DPI and reduction of duplicative work performed by multiple groups
- ▶ Improved business knowledge sharing to mitigate the risks of turnover by critically skilled resources
- ▶ Established base-line and foundation for the transformation of the IT organization

Key stakeholders impacted

Owner(s)

- ▶ NC DPI Technology Services

Impacted stakeholders

- ▶ School Research, Data and Reporting
- ▶ Academic program areas
- ▶ Finance




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: recommendation #10

More detail can be found on Appendix page 20

A streamlined IT organization may result in significant savings for the agency if duplicative roles are reduced and repurposed

1 Potential financial implication for NC DPI 	2 Potential milestones and estimated timeframe 	3 External dependencies 
<p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential savings: Implementation may result in a potential \$1.75m worth of savings per year through a repurposing or reduction of duplicative shadow IT roles that NC DPI can now shift to other value-adding activities. These savings are based on \$3.8m of current related spending on duplicative positions outside of IT. The savings reflect the assumption that 17 duplicative roles would be repurposed. <p>Note on these financial implications: <i>Shadow IT was defined as individuals who do not report to Technology Services but were identified in NCAS as pertaining to an Information Technology Job family or to an IT Job description (e.g., Tech Support Analyst, IT Manager, etc.). The following Shadow IT positions were considered to be duplicative roles as they already exist in Tech Services today: Tech Support Analysts, Business Technology Analysts, Data Managers, Networking Analysts, and Systems Specialists</i></p>	<p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Evaluate the agency for IT activities supported by Shadow IT and map them to current IT operation▶ Identify redundancies and scope for integration of resources▶ Modify the IT organization model according to resource rationalizations and repurposing▶ Evaluate financial and process impact	<ul style="list-style-type: none">▶ SBE policy: N/A▶ GA legislative mandate: N/A▶ Other state agency: N/A▶ LEA impact: N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: Recommendation #11

More detail can be found on Appendix pages 21-23

Repurpose IT by outsourcing common and low value functions and refocusing to advise and support business needs

Detailed description

- ▶ NC DPI IT can shift common, low value functions (e.g., Infrastructure support, tech support, desktop support, architecture, etc.) by prioritizing moving functions to vendors (through the exception process, if costs are lower than Department of Information Technology), or centralizing at Department of Informational Technology (DIT)
- ▶ NC DPI could repurpose the Business Technology Division and establish an IT Business Relationship Management (BRM) function to advise the business on technology matters and provide timely support for technology needs from the business by acting as the liaison with Technology Services. The recommended new Business Technology Division would be solely responsible for:
 - ▶ Business relationship management
 - ▶ Business analysis (translating business requirements into IT specifications)
 - ▶ RFP development and vendor support

Context and rationale

- ▶ The current IT service model cannot be easily scaled and interviews suggest it would not sustainably address the needs of the agency going forward
- ▶ As NC DPI looks to add more capabilities and require additional IT support, it may become increasingly challenging for Technology Services to support those requests, as they are already constrained by a lack of resources and challenged to retain and upskill IT talent
- ▶ Interviews indicate there are critical capabilities that do not exist in Technology Services that must be added (e.g., Disaster Recovery) and capabilities that must be enhanced and optimized for greater efficiency (e.g., cybersecurity)
- ▶ In North Carolina, many IT functions today are centralized at DIT, utilized across multiple agencies, and can be uniformly applied to NC DPI. Interviews indicate that DIT may not offer the most competitive market rates or most efficient IT services, and when that is the case, NC DPI should look to utilize the exception process to leverage suppliers or negotiate competitive rates with DIT

Desired outcome

- ▶ Revamped, lean and agile IT organization that can focus on supporting and adding value to NC DPI and schools (and which is not focused on supporting common, low value functions)
- ▶ Vendor-supported model for common IT services with greater financial transparency, increased reliability, agility, and scalability
- ▶ Clear policies and pricing models to guide outsourcing decisions and vendor evaluation/management
- ▶ Instant ability to ramp up or down IT services
- ▶ Easy access to technical support and up-to-date technology
- ▶ Strong agency-IT alignment through a dedicated BRM in the Business Tech Division that establishes Technology Services as a strategic partner to the business (implies new role)
- ▶ Established prioritization processes to handle agency technology demands in a timely manner

Key stakeholders impacted

Owner(s)

- ▶ NC DPI Technology Services
- ▶ Department of Information Technology (DIT)
- ▶ School Business Systems Modernization (SBSM)

Impacted stakeholders

- ▶ Academic program areas
- ▶ Finance
- ▶ HR




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: recommendation #11

More detail can be found on Appendix pages 21-23

The new model for IT which emphasizes outsourced functions and the BRM could require minimal investment but may lead to significant net savings

1 Potential financial implication for NC DPI 	2 Potential milestones and estimated timeframe 	3 External dependencies 
<p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential investment: To implement an IT Business Relationship Management function at NC DPI, an investment of up to \$800k annually may be required to staff. This assumes 5 new Business Relationship Manager positions dedicated to each functional and program area. The Business Relationship Management function could also comprise of Business Technology Analysts and Quality Assurance analysts, which may not require an investment as existing positions could be repurposed.▶ Potential savings: Implementation may result in over \$1.5m worth of savings per year after shifting resources performing non-core IT functions to DIT or to vendors (if more cost effective). This is based on the assumption that 45 FTEs could be shifted to DIT and 18 FTEs would remain at NC DPI to perform necessary functions. These savings assume that NC DPI could leverage resources at DIT. A premium of 15% additional costs for the 18 FTEs were included in this estimate, to account for higher costs NC DPI may incur once resources are transitioned to DIT or vendors	<p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Decompose current IT operations into component functions and specify sourcing drivers▶ Develop vendor sourcing strategy and define pricing models, business cases (incentives and risks), and operating model to engage vendors▶ Perform market analysis and develop detailed service descriptions and requirement specifications▶ Develop vendor and supplier portfolio for IT Functions (includes DIT and vendors) and develop roadmap for transition <p>Medium term (12–24 months):</p> <ul style="list-style-type: none">▶ Define interactions, activities, roles and responsibilities, decision rights, of the new BRM function▶ Communicate new BRM function and process to rest of DPI▶ Execute on phased roadmap to transition functions to vendors or DIT	<ul style="list-style-type: none">▶ SBE policy: N/A▶ GA legislative mandate: The recommendation may require legislation that allows DPI to prioritize moving functions over to vendors for higher quality or more cost-effective services during transition period▶ Other state agency: This may require DIT to establish a transition and readiness plan to smoothly transition functions to the agency without disrupting services. Pricing models, and exception approval processes at DIT should be clearly defined▶ Change in LEAs: N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: Recommendation #12

More detail can be found on Appendix page 24

Implement a vendor-first approach for application services and prioritize cloud hosting

Detailed description

- ▶ NC DPI could pursue a vendor-first approach for the development, hosting, and maintenance of all applications and hardware. The shift to a vendor-first approach, focusing on Commercial Off The Shelf (COTS) solutions, rather than developing custom applications or maintaining hardware in-house, would require the IT Business Relationship Managers to work closely with the functional and program areas to identify commercially available solutions and services
 - ▶ Going forward, a vendor-first approach would seek to eliminate the development of APEX applications, and any other applications developed in-house
- ▶ NC DPI could migrate to the cloud those applications and hardware that cannot be hosted at vendor sites by filing an exception request with DIT for permission to host on the cloud if competitive rates are not offered at Department of Information Technology (DIT)

Context and rationale

- ▶ NC DPI IT faces rising costs to manage continuously ageing and unsupported hardware platforms (e.g., mainframes) every year
- ▶ Interviews indicate basic but critical services like Disaster Recovery for applications in production do not currently exist
- ▶ IT and the various embedded IT groups across NC DPI have created an expansive footprint of applications over the years that interviews suggest have led to challenges to deploy and support in production
- ▶ NC DPI acknowledges outdated technology presents significant resource availability challenges, which in turn severely impacts timely response to critical production outages or issues, and presents an unscalable model for NC DPI IT
- ▶ Interviews indicate that NC DPI understands the benefit of getting out of the business of hosting infrastructure and developing applications

Desired outcome

- ▶ Upgrading, patching, monitoring and supporting servers are outsourced to vendors with specialized expertise and access to modern technology
- ▶ Critical capabilities (e.g., Disaster Recovery) are covered by vendors
- ▶ Vendor-first approach to leverage technical expertise, reliability, and efficiency of suppliers and commercially available products
- ▶ Established roadmap for ongoing modernization as well as scheduled retirement of old or unsupported systems and applications
- ▶ NC DPI resources able to shift focus to advising and supporting LEAs
- ▶ Access to up-to-date technology the field and NC DPI employees

Key stakeholders impacted

Owner(s)

- ▶ NC DPI Technology Services (Business Technology Division)
- ▶ School Business Systems Modernization (SBSM)

Impacted stakeholders

- ▶ Academic program areas
- ▶ Finance
- ▶ HR

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: recommendation #12

More detail can be found on Appendix page 24

Eliminating the need to manage aging infrastructure and systems may yield savings long term, yet efforts to modernize and shift to vendors may cost NC DPI

1

Potential financial implication for NC DPI



Near-term impact (First FY of implementation)

- ▶ **Potential savings:** Implementation may result in ~\$200k per year worth of savings through the use of commercial off-the-shelf solutions which limits customizations and saves on infrastructure operating costs. This is based on the assumption that commercial organizations typically save up to 30% of total IT infrastructure and support costs through infrastructure modernization and a cloud model. Using an estimate, NC DPI could achieve savings of at least 20% of total IT infrastructure and support costs a year. Implementation of this recommendation may result in greater long-term savings as NC DPI reduces the need for resources to develop, maintain and support technology
- ▶ **Potential investment:** An investment of approximately \$1.4m per year annually over 3–4 years may be needed to modernize and move infrastructure to the cloud. This is based on the current SBSM planned budget

Note: SBSM has included this investment in the SBSM planned scope and has included these expenses under “Legacy NC DPI Systems Investment”

Long-term impact

- ▶ **Potential savings:** Implementation may result in significant long-term savings as NC DPI reduces need for resources

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Create development and hosting strategy and plan for NC DPI going forward; establish policies, standards and governance protocols for vendor engagement and procurement
- ▶ Identify and evaluate vendors to take on development and hosting services for NC DPI
- ▶ Develop transition plan and execute

Medium term (12–24 months):

- ▶ Execute transition plan

3

External dependencies



- ▶ **SBE policy:** N/A
- ▶ **GA legislative mandate:** The recommendation may require legislation that allows NC DPI to prioritize moving specific services over to vendors for higher quality, more robust or cost-effective services
- ▶ **Other state agency:** This may require Department of Information Technology to grant NC DPI approvals in the exception process
- ▶ **Change in LEAs:** N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: Recommendation #13

More detail can be found on Appendix pages 25-26

Design and implement the future state application portfolio

Detailed description

- ▶ NC DPI could perform an application rationalization effort to retire and decommission applications that are rarely used by NC DPI or the LEAs, share similar functionality, or are currently running on outdated technology (e.g., mainframes). An application rationalization exercise includes the following activities:
 - ▶ Gather a holistic view of functional and technical information applications, aligning them to NC DPI program and functional areas to understand how applications enable business functions and processes
 - ▶ Develop assessment criteria and weightage to assess and classify applications
 - ▶ Collaborate with DIT and establish target state business capability model in alignment with DIT's business architecture framework
 - ▶ Develop an application roadmap to keep, tolerate, freeze, replace, or retire an application
- ▶ NC DPI could replace/consolidate related but disparate applications with modern end-to-end consolidated equivalents (e.g., Finance suite that includes GL, AP/AR, Contract Management solution, etc.)

Context and rationale

- ▶ Interviews suggest limited management of IT assets, strategic planning and road-mapping of asset lifecycles over the years has led to a proliferation of disparate applications and platforms across the agency
- ▶ NC DPI continues to support mainframe applications increasing the costs and the resource intensity to support
- ▶ Multiple areas at NC DPI (e.g., Finance teams) indicate they are currently not supported by modern end-to-end consolidated solutions resulting in the need for numerous siloed systems and manual processes to operate the agency
- ▶ By rationalizing the existing set of applications and designing a future state application portfolio NC DPI could reduce the number of applications used to support the agency and the LEAs, free up resources to perform value adding functions through modern solutions, and identify areas that need to be enabled by technology (e.g., Contract Management)

Desired outcome

- ▶ Maximize DPI's investment in technology and applications
- ▶ Eliminate or consolidate unnecessary or redundant applications
- ▶ Significantly reduce manual tasks and processes
- ▶ Reduce support costs through the retirement of outdated technology and legacy applications
- ▶ Move towards more modern end-to-end solutions
- ▶ Formalize application strategy and roadmap to manage IT assets going forward

Key stakeholders impacted

Owner(s)

- ▶ NC DPI Technology Services (Business Technology Division)
- ▶ School Business Systems Modernization (SBSM)

Impacted stakeholders

- ▶ Academic program areas
- ▶ Finance
- ▶ HR
- ▶ Department of Information Technology (DIT)

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Technology: recommendation #13

More detail can be found on Appendix pages 25-26

Conducting application rationalization could drastically reduce applications supported by NC DPI and replace aging systems, leading to potential cost savings

1

Potential financial implication for NC DPI



Near-term impact (First FY of implementation)

- ▶ **Potential savings:** Implementation may result in a net \$1.5m of potential cost savings that includes the costs to consolidate and modernize as well as the savings from retiring outdated technology. The savings is based on achieving 8% savings on the current \$20.1m in spending on IT applications (Note: SIS and educator LMS are not included). The 8% savings is an estimate using the commercial industry average of realizing a 25% cost savings, within 12 months of implementation.
- ▶ **Potential investment:** An investment of approximately \$1.1m may be required for consultant services to perform the application rationalization exercise over 6 months based on an assessment of current market rates. There is potential to reduce the investment, if existing resources in IT are leveraged.

Note: SBSM has included this investment in the SBSM planned scope and has included these expenses under “modernize legacy systems”

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Conduct holistic application inventory
- ▶ Perform application assessment via established criteria and dimensions
- ▶ Establish target state application portfolio identifying
- ▶ Define application roadmap to keep, tolerate, freeze, replace, or retire applications
- ▶ Identify and procure vendors to replace or consolidate applications with modern end-to-end equivalents

Medium term (12–24 months):

- ▶ Implementation of end-to-end solutions will be ongoing

3

External dependencies



- ▶ **SBE policy:** N/A
- ▶ **GA legislative mandate:** N/A
- ▶ **Other state agency:** NC DPI may need to collaborate with DIT to share future state application portfolio and capability model to align with business architecture
- ▶ **Change in LEAs:** This recommendation may require coordination with the LEAs to determine the truly business-critical applications and those that are not consistently used or can be retired

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #14

More detail can be found on Appendix pages 27-29

Streamline and accelerate the talent acquisition process through technology and internal process optimization

Detailed description

- ▶ NC DPI could transform HR into a proactive talent acquisition organization by optimizing end-to-end business processes
 - ▶ Drive the talent acquisition process and become more responsible and accountable for key hiring activities and provide resources and support to hiring managers throughout the process (e.g., hiring manager toolkit)
 - ▶ Have a clear understanding of talent needs and drive a strategic efficient plan around talent acquisition using data. (e.g., a frequent review of vacancy reports with the State Superintendent, CFO, HR leadership, and other key stakeholders)
 - ▶ Leverage technology to increase transparency, reduce cycle time, and improve efficiency and capacity
 - ▶ Optimize existing technologies to automate and streamline the end-to-end talent acquisition to increase the agility and transparency of the talent acquisition process

Context and rationale

- ▶ Due to current vacancies within the HR division, interviews suggest all employees, including HR Director, are expanding their roles to back fill the vacant positions
- ▶ The vacancy to fill cycle is inordinately long, according to interviews, taking about 3 to 4 months to fill a vacant position within the organization, sometimes exacerbated by external factors
- ▶ The existing hiring process is not clearly documented and hiring managers may not have clarity on the workflow, forms required and responsibilities
- ▶ Both initial application review processes are conducted by Recruiter and Hiring Manager, which are manual and labor-intensive, leading to delays in acquiring right talent
- ▶ There is currently limited onboarding support for new hires

Desired outcome

- ▶ Transform HR into a proactive organization that maximizes the use of technology
- ▶ Hiring managers should have clear understanding of their role in hiring process, as well as more visibility into the process overall
- ▶ Hiring managers should be allowed to focus on key business operations
- ▶ HR team should have additional capacity to focus on strategic functions
- ▶ Efficient talent acquisition process reduces the risk of losing top candidates to competitors (thereby enhancing new hire quality and satisfaction), and reduces average vacancy duration

Key stakeholders impacted

Owner(s)

- ▶ Human Resources

Impacted stakeholders

- ▶ Hiring Managers
- ▶ Finance
- ▶ Superintendent's Office

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #14

More detail can be found on Appendix pages 27-29

Improving the talent acquisition process may require collaboration with OSHR

1

Potential financial implication for NC DPI



Near-term impact (First FY of implementation)

- ▶ **Potential cost-neutral:** This recommendation could be implemented without new resources. The Transformation Management Office can help to support implementation of technology and new processes.

Long-term impact

- ▶ **Potential savings:** According to analysis and discussions with NC DPI, implementation of this recommendation could allow NC DPI to decrease cost per hire by 30%–40% over time

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Fill key HR vacancies
- ▶ Talent acquisition process redesign (includes documenting process, leveraging technology and defining roles and responsibilities)
- ▶ Identification and implementation of areas of enhancement of existing technologies as well as of building additional automation

Medium term (12–24 months):

- ▶ Change management to oversee the implications of the process/technology changes, doing the right communications and training and providing sustainability of the change.

3

External dependencies



- ▶ **SBE policy:** N/A
- ▶ **GA legislative mandate:** N/A
- ▶ **Other state agency:**
 - ▶ The effort to fully utilize the usage of the current technologies available may need NC DPI HR to coordinate with Office of State Controller (OSC) as well as Office of State Human Resources (OSHR). This may call for OSC/OSHR to review the existing contract with the vendor to enable the additional functionality of the systems for NC DPI to use.
 - ▶ Additional investments towards automations (e.g., use robotic process automations to automate manual repeated labor intensive tasks) would require HR to coordinate with OSHR/OSC
- ▶ **LEA impact:** N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #15

Enable HR to be a strategic function

More detail can be found on Appendix pages 30-32

Detailed description

- ▶ NC DPI should consider filling the key vacant positions within HR to allow staff to fulfill individual responsibilities, including allowing HR leadership be strategic business leaders focused on building human capital strategies, workforce planning and initiatives and move away from their current transactional role
 - ▶ In the long term, NC DPI may need to develop a target operating model mapped with the right talent so HR can operate at the right capacity
- ▶ NC DPI could build a robust succession plan to help HR identify strong candidates, from both within NC DPI or outside the organization, to fill key positions
 - ▶ HR works with the Division Heads to strategically implement a succession planning process for the respective divisions across the agency
 - ▶ Conduct readiness assessments to identify strong NC DPI candidates as potential successors for integral organizational positions, especially where those existing staff may soon retire
 - ▶ Conduct skills and competencies assessments to enable career planning, career mapping and illuminate opportunities for professional development
- ▶ NC DPI could implement HR staffing within the Residential Schools to reduce transactional responsibilities of NC DPI

Context and rationale

- ▶ Due to inadequate HR staffing capacity, interviews indicate employees, including HR Director, are expanding their roles to back fill vacancies, which interviewees suggest restricts leadership's ability to be strategically minded
- ▶ Currently, NC DPI has no formal succession planning process in place. Interviews suggest there is no tool or process used to identify the right fit candidate to fill a position
- ▶ NC DPI HR support to the Residential Schools has extended beyond its capacity into backfilling the vacant roles which requires significantly more work for the division
 - ▶ NC DPI HR could continue to serve in an oversight role for the Residential Schools

Desired outcome

- ▶ When adequately staffed, HR can focus on more strategic activities for NC DPI human capital
- ▶ Succession plans and readiness assessments could help the HR division to identify internal skill gaps and recognize the need for external recruiting, while reducing turnover and supporting improved culture and employee morale
- ▶ NC DPI would have the capacity to align key positions with adequate talent capable of filling vacant roles in a timely manner
- ▶ Fully staffing HR within the Residential Schools would allow transfer of transactional responsibilities to the Residential Schools, and limiting reliance on NC DPI for guidance

Key stakeholders impacted

Owner(s)

- ▶ Human Resources

Impacted stakeholders

- ▶ Section Chiefs/Directors/Division Heads
- ▶ Superintendent's Office
- ▶ All NC DPI employees
- ▶ Residential Schools

Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #15

More detail can be found on Appendix pages 30-32

Succession planning could help NCDPI reduce recruiting costs over the longer term

1

Potential financial implication for NC DPI



Near-term impact (First FY of implementation)

- ▶ **Potential cost-neutral:** This recommendation could be implemented without new resources.

Long-term impact

- ▶ **Potential savings:** Succession planning can help significantly reduce recruiting costs; developing a target operating model of HR mapped with the right talent and skill could help NC DPI operate with a smaller HR team, leading to cost savings

2

Potential milestones and estimated timeframe



Short term (0–12 months):

- ▶ Fill vacancies in HR
- ▶ Fill HR vacancies within the Residential Schools
- ▶ Develop and implement a robust succession plan by collaborating with Division Heads
 - ▶ Conduct readiness assessments
 - ▶ Conduct skills and competencies assessments.

Medium term (12–24 months):

- ▶ Change management to address HR strategic initiatives and their impacts on the organization

3

External dependencies



- ▶ **SBE policy:** N/A
- ▶ **GA legislative mandate:** N/A
- ▶ **Other state agency:** HR Leadership may need to work with OSHR to create well documented processes and policies to better define roles and responsibilities in the various HR functions
- ▶ **LEA impact:** N/A

Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #16

More detail can be found on Appendix pages 33-36

Develop an employee engagement and support strategy focused on communication, transparency, learning and development

Detailed description

- ▶ NC DPI could establish internal structures at NC DPI to foster clear and consistent communication, increase cross-functional collaboration and transparency, and focus on improving team morale. This includes consistent division and agency communication and communication priorities
 - ▶ Develop consistent internal communication procedures
 - ▶ Conduct regular employee engagement surveys to better understand employee morale and expectations
- ▶ NC DPI could create a dedicated learning and development function that leads training and professional development initiatives for NC DPI employees
 - ▶ Drive formal trainings and professional development initiatives for NC DPI employees by identifying competency gaps, training needs, planning and management

Context and rationale

- ▶ Employees expressed concern that they do not learn about new policies or information that may impact their work until it is released to the field
- ▶ Employees expressed concern that they do not receive information about priorities and initiatives which can impact their ability to collaborate
- ▶ There is no internally driven employee training function within NC DPI
 - ▶ Few divisions fund staff to attend professional learning opportunities
 - ▶ The only training available to the majority of NC DPI employees is offered by the state
- ▶ There is no observed process for the communication or documentation of organization-wide processes
- ▶ Interviews suggest that only a small group of individuals are privy to business policy or process changes

Desired outcome

- ▶ Annual employee survey conducted to assess level of employee engagement
- ▶ Increased employee engagement, productivity, and morale by creating a culture focused on learning and development led by a learning and development function
- ▶ Increased employee understanding of NC DPI priorities and initiatives
- ▶ Increased organizational transparency by creating an updated organization repository for business processes and policies
- ▶ Standardizing organizational and communication procedures may increase the cross-functional collaboration and further build a cohesive organization
- ▶ NC DPI culture reflects a developmental mindset where managers regularly provide constructive feedback to employees, and employees can access learning and development opportunities

Key stakeholders impacted

Owner(s)

- ▶ Superintendents Office
- ▶ Human Resources

Impacted stakeholders

- ▶ All employees of NC DPI for internal communications
- ▶ Division Heads/Section Chiefs




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #16

More detail can be found on Appendix pages 33-36

With a new position dedicated to learning and development, NC DPI can increase its focus on employee growth and retention

<p>1</p> <p>Potential financial implication for NC DPI </p> <p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential investment: While the efforts around communication and transparency across the department can potentially be implemented without new resources, this recommendation may require an investment of ~\$100k to fund a new position focused on supporting increased learning and development across NCDPI. <p>Long-term impact</p> <ul style="list-style-type: none">▶ Potential investment: Over the long term, NC DPI may choose to make further investments to support increase learning and development opportunities for staff	<p>2</p> <p>Potential milestones and estimated timeframe </p> <p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Establish internal structures at NC DPI to foster clear and consistent communication▶ Develop and conduct employee engagement survey (to be repeated annually)▶ Create a dedicated learning and development function to drive formal trainings and professional development initiatives <p>Medium term (12–24 months):</p> <ul style="list-style-type: none">▶ Implement changes based on the employee survey results	<p>3</p> <p>External dependencies </p> <ul style="list-style-type: none">▶ SBE policy: N/A▶ GA legislative mandate: N/A▶ Other state agency:<ul style="list-style-type: none">▶ Work with OSHR to provide any available trainings (e.g., equal employment opportunity, financial training, etc.).▶ LEA impact: N/A
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Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #17

More detail can be found on Appendix pages 37-38

More effectively align compensation levels and changes with performance

Detailed description

- ▶ NC DPI could create a performance-driven culture by tying compensation, salary adjustments and bonuses to performance
 - ▶ After the state rolls out the new job classification system NC DPI could conduct a job classification assessment by: (1) Identifying each employee's classification, (2) Evaluating job descriptions against actual responsibilities and activities performed, and (3) Determine whether individual job classifications are appropriately aligned with actual job responsibilities and competencies
 - ▶ Utilize the North Carolina Valuing Individual Performance (NCVIP) system to effectively align salary adjustments and bonuses with performance, and award fairly across the organization
 - ▶ Conduct internal and external pay equity analysis to identify whether NC DPI employees are compensated competitively and equitably across state agencies

Context and rationale

- ▶ Interviews indicate NC DPI has challenges attracting and retaining talent due to salary disparities with private sector as well as other state agencies
 - ▶ Opportunities for better employment or transfers to another state agency are among the most common reasons for employee separation in the last 5 years, according to NC DPI
- ▶ Analysis of past salary increases suggest that they are not always tied to performance and there is a perceived lack of transparency around why salary increases are given
- ▶ NCVIP, which was implemented to drive an outcome-based culture, is viewed by many interviewees as having failed to serve its function. Decrease in NCVIP performance planning completion rate is an obstacle to DPI's goal to transform into an outcome-based culture

Desired outcome

- ▶ NC DPI can better attract and retain talent by providing transparent, performance-based compensation and aligning roles with job descriptions and classification
- ▶ By reviewing job classifications and utilizing NCVIP, NC DPI would reorient to an outcomes-based culture focused on rewarding high performing individuals, which may:
 - ▶ Increase employee retention and talent acquisition
 - ▶ Drive the transition towards a more equitable, outcomes-based culture with high employee morale
- ▶ Proactively prevent employee relations issues by assessing the current job with the classification and job description
- ▶ Employees express improved satisfaction levels/perceived fairness of performance-related pay awards as well as motivation to perform to higher standards

Key stakeholders impacted

Owner(s)

- ▶ NC DPI Human Resources

Impacted stakeholders

- ▶ All NC DPI employees
- ▶ Supervisors/Section Chiefs/Division Heads
- ▶ OSHR (*DPI-HR needs to collaborate with OSHR to align NC DPI employees with the new classification once the new system is implemented to support DPI's ability to hire.*)




Note: Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

People: recommendation #17

More detail can be found on Appendix pages 37-38

DPI may need to work closely with OSHR to ensure employees are classified correctly

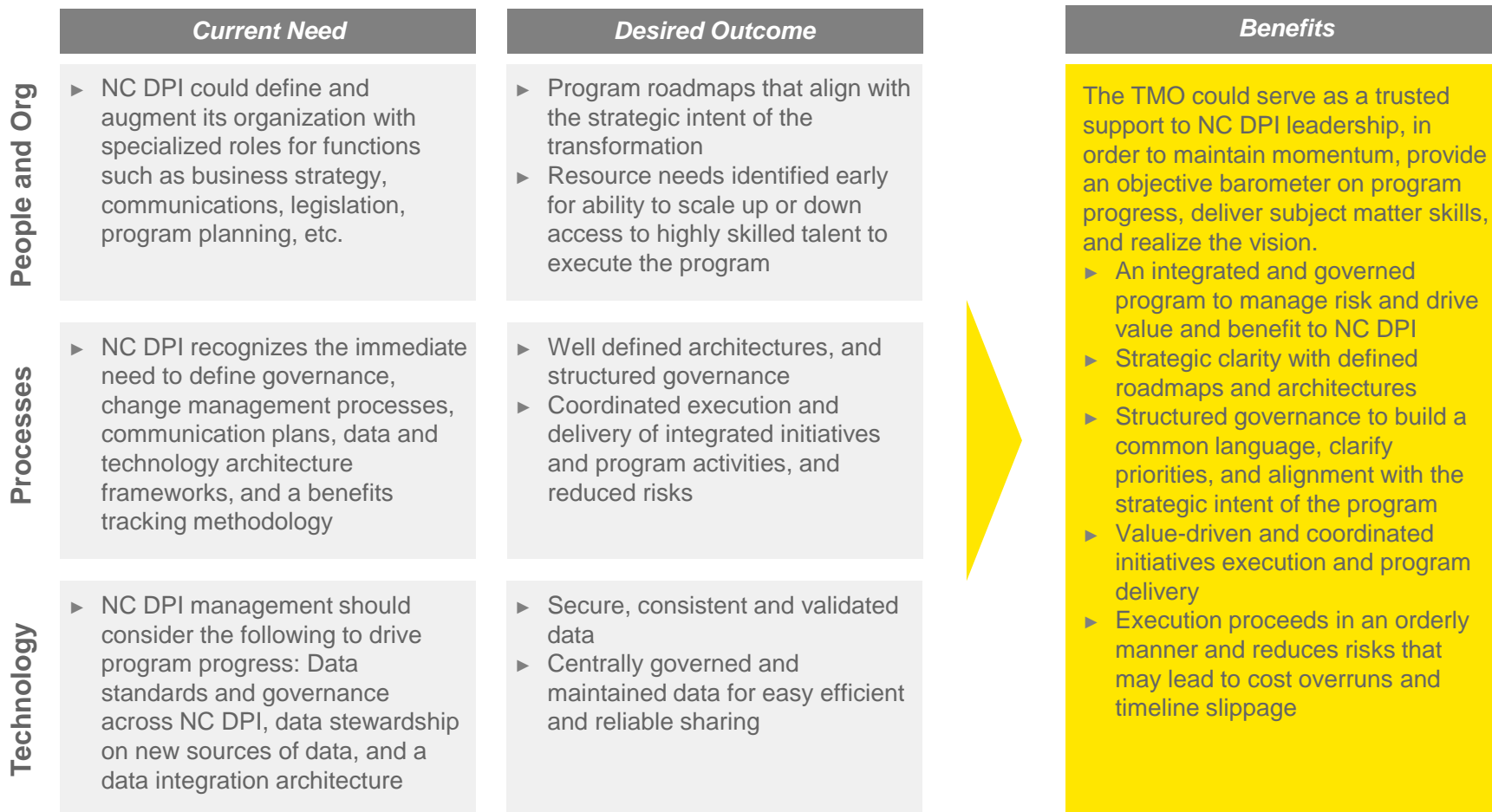
<p>1</p> <p>Potential financial implication for NC DPI </p> <p>Near-term impact (First FY of implementation)</p> <ul style="list-style-type: none">▶ Potential cost-neutral: This recommendation could be implemented without new resources, though the Transformation Management Office may be able to support the job description review and analysis. The salary/classification analyst should have knowledge around what responsibilities and roles each classification entails, and be able to readjust NC DPI employees' classification to the right level if needed	<p>2</p> <p>Potential milestones and estimated timeframe </p> <p>Short term (0–12 months):</p> <ul style="list-style-type: none">▶ Conduct job classification assessments once new system is system in place▶ Drive towards achieving a minimum 90% performance planning completion across the agency using NCVIP as well as conducting a comprehensive calibration process <p>Medium term (12–24 months):</p> <ul style="list-style-type: none">▶ Reward bonuses and salary adjustments based on NCVIP▶ Readjust employee classifications based on the results of job classification assessments <p>Longer term (24+ months)</p> <ul style="list-style-type: none">▶ Sustain the outcome-based culture by tying NCVIP results and compensation with proper professional development opportunities	<p>3</p> <p>External dependencies </p> <ul style="list-style-type: none">▶ SBE policy: N/A▶ GA legislative mandate: May require legislative to implement performance based compensation system▶ Other state agency: DPI-HR to collaborate with OSHR to effectively conduct internal job assessments and align NC DPI employees with the new classification once the new system is implemented to support DPIs ability to hire▶ NC DPI will also need to work closely with OSHR to implement a performance based compensation system▶ LEA impact: N/A
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Note: The potential financial implications (including estimates) associated with the recommendations are based on analysis where all the assumptions and parameters were confirmed/determined by DPI; Key stakeholders impacted and external dependencies noted were all confirmed by NC DPI management

Source: EY interviews, internal documents, EY analysis and discussions with management

Recommendation #18

Rationale and benefits of a Transformation Management Office (TMO)



Source: EY interviews, internal documents, EY analysis and discussions with management

Supporting analysis for individual recommendations

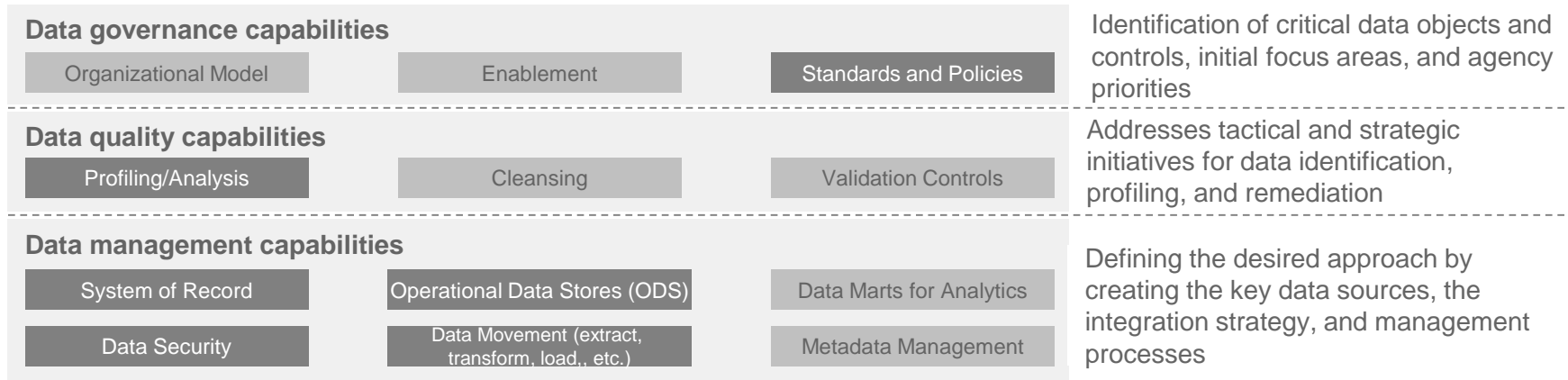


Supporting analysis recommendation #1

Better integrated, validated, and managed data could help NC DPI transform its use of data to provide better support to schools and districts

Information Management Capabilities for a State Education Agency (SEA)

(based on leading practice, illustrative framework)



Key (assessment based on EY interviews, analysis of NC DPI data)

Capability doesn't exist

Capability partially exists

Supporting Analysis

- ▶ As more sources of data emerge, research indicates **it becomes more burdensome** to keep up with the current model of **sourcing and validating data independently**
- ▶ Without a consistent way of validating data across the agency, it is **challenging to establish a clear relationship** between the data teams pull from various systems (both internal and external to the department) and the data teams have internally
- ▶ Drivers for consolidation of data:
 - ▶ Functions that use data (analytics, reporting, etc.) require a **central source or data repository** that consolidates information from disparate systems
 - ▶ When siloed data is integrated and **shared cross-functionally**, it may lead to better analysis and insights
- ▶ In order to govern and manage data effectively, NC DPI could develop a formal data management framework that defines the key capability components for sourcing, validating, and sharing data

Source: EY's analysis of NC DPI documents; Interviews with NC DPI staff

Supporting analysis recommendation #2

There are at least 4 needs- or self-assessments that NC DPI teams employ to gather LEA data; these could be streamlined as part of the effort to improve analytics

1	2	3	4	1
Comprehensive Needs Assessment	LEA Self-Assessment	District Capacity Assessment	Self-assessment of Multi-Tiered System of Support	Potential New Single Needs Assessment
Business owner				
<ul style="list-style-type: none"> Federal Programs Monitoring Educator Support Services 	<ul style="list-style-type: none"> Exceptional Children (EC) 	<ul style="list-style-type: none"> Office of Early Learning 	<ul style="list-style-type: none"> Integrated Academic and Behavior Systems 	<ul style="list-style-type: none"> Regional Support Team (refer to recommendation 6) Supports data needs / data use of multiple teams at NC DPI
Audience and Purpose				
<ul style="list-style-type: none"> School leadership Analyze data trends Identify areas for growth 	<ul style="list-style-type: none"> District leadership, EC administrators Analyze data for selection of local leading practices Align state support of EC infrastructure 	<ul style="list-style-type: none"> District and regional implementation teams Align resources and develop action plans to support instructional staff 	<ul style="list-style-type: none"> School leadership Assess school Multi-Tiered System of Support (MTSS) structures 	<ul style="list-style-type: none"> Currently, a cross-functional NC DPI team is reviewing existing assessments to reduce redundancy, develop common scales and planning tools In the future, the regional team would work with LEA leaders to complete a consolidated assessment, collecting data points for multiple program areas
Reporting				
<ul style="list-style-type: none"> NC STAR 	<ul style="list-style-type: none"> Excel spreadsheet; State Systemic Improvement Plan (SSIP) used for discussion with LEA 	<ul style="list-style-type: none"> Excel spreadsheet used to facilitate discussion with the district 	<ul style="list-style-type: none"> MTSS application used to facilitate discussion with school leaders 	<ul style="list-style-type: none"> A new NC DPI group with strong analytical capabilities would provide Regional Support Teams, LEAs and schools with data to drive decision-making in the field (refer to recommendation 6)

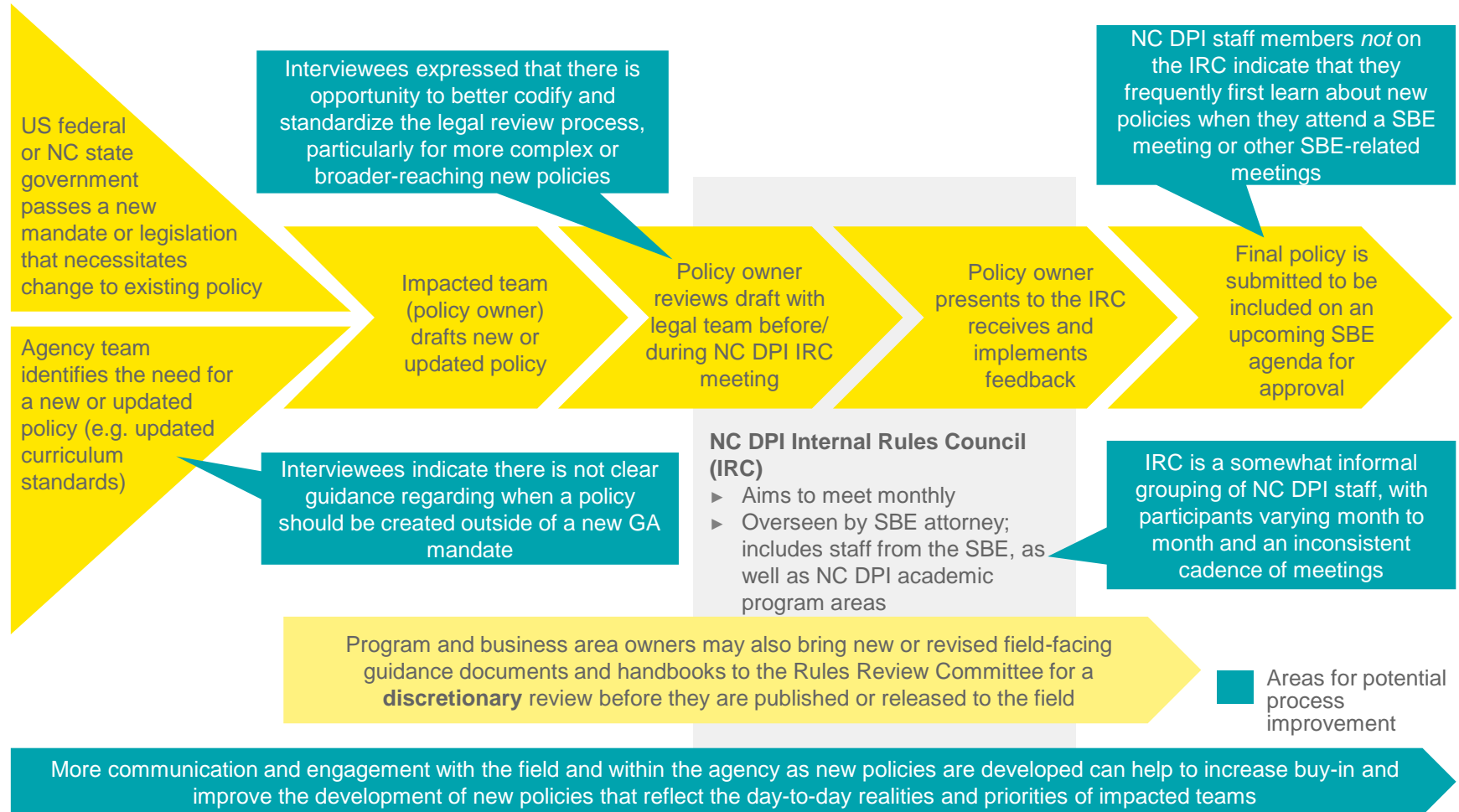
Consolidating district and school needs assessments into **one comprehensive needs assessment** can help reduce redundancy for LEAs and schools, enable more strategic data use in shaping district plans, and improve prioritization of programmatic supports to the field

Source: NC DPI internal documents, EY interviews

Supporting analysis recommendation #3

While there is a process for policy creation at NC DPI today, there are opportunities to clarify the process and increase transparency for the organization broadly

Illustration of Current NC DPI Policy Creation and Review Process



Source: NC DPI internal documents, EY interviews,

Supporting analysis recommendation #4

NC DPI has an opportunity to build a strategic and collaborative budget process with an increased awareness amongst the Divisional Heads

	1 Planning	2 Budget Development	3 Allocation	4 Execution	5 Reporting
Current process narrative (2018-2019 agency budget development)	<ul style="list-style-type: none"> ▶ Finance provides division heads with previous year budget ▶ Division heads review proposed budget and provide feedback on areas of expansion to Deputy Superintendent and/or appropriate leadership team members ▶ Finance collects budget expansion feedback from leadership 	<ul style="list-style-type: none"> ▶ Budget Section creates a full first draft of the budget for the upcoming fiscal year based on the previous year and select expansion items identified by leadership ▶ Expansion items are submitted to the State Board of Education (SBE) for approval ▶ SBE-approved expansion budget submitted for consideration by Governor and General Assembly in advance of legislative session ▶ Federal planning process is separate process done in collaboration with EC, Career and Technical Education (CTE) and Federal Programs 	<ul style="list-style-type: none"> ▶ Budget Section works with NC Office of State Budget and Management (OSBM) to certify the budget (including approved legislative adjustments) in state accounting system ▶ Once the budget is certified, Budget section allocates funds to each division according to the approved budget ▶ As allocations are released, Division Heads to work with budget analysts to make minor adjustments within their state budget lines based on how needs of their organization have changed since the budget was initially drafted several months earlier 	<ul style="list-style-type: none"> ▶ Division Heads are expected to own their budget and monitor spending but it is done with varying level of consistency ▶ Division Heads have the ability to request shifts in funding between line items as needed ▶ Budget section monitors the budget to ensure funding is expended in a timely manner to avoid overspending and/or a loss of state funding ▶ If questions arise, each budget analyst works with the Division Head(s) they support to reach a resolution 	<ul style="list-style-type: none"> ▶ Finance provides reports to OSBM and General Assembly, on an as requested basis ▶ Budget Section is expected to provide monthly status reports to budget owners, but it is done with varying levels of consistency ▶ Additional reporting requests are made ad hoc by program areas ▶ Finance is responsible for annual creation of Consolidated Annual Financial Report
Potential opportunities for improvement	<ul style="list-style-type: none"> ▶ NC DPI could develop strategic finance plan that incorporates return on investment (ROI) and cost savings to allow for more effective long-term planning ▶ Leadership could develop annual priorities for Division Heads to review budget and identify expansion areas 	<ul style="list-style-type: none"> ▶ NC DPI could develop and communicate an annual budget planning process, including clear division of roles and responsibilities ▶ The process could be designed to result in a budget aligned to DPI's high priority programs to focus investment in the evidence-based areas ▶ NC DPI could create regular contact points between Finance and program areas to track spending against priorities and budget 	<ul style="list-style-type: none"> ▶ Perform training and webinars for each employee around budget development ▶ Educate employees on the funding process to identify shortages or gaps in funding so they can elevate concerns during the budget process to reduce budget requests throughout the year ▶ NC DPI could set clear deadlines beyond which major budget requests will not be considered 	<ul style="list-style-type: none"> ▶ NC DPI could engage with program areas to assist in the budget planning process in order to allow each stakeholder to monitor funding and spending during the budget cycle and make budget and business decisions as needed ▶ NC DPI could set clearer processes around budget change requests from program areas to allow them to proactively plan spending 	<ul style="list-style-type: none"> ▶ NC DPI could assess spending on an annual basis to seek savings opportunities in areas that don't align with priorities or are not achieving outcomes. Doing so will allow funds to support high impact initiatives ▶ Finance could provide bi-weekly or monthly updates on spending to program area budget owners

Source: EY Interviews with Finance Business Services and Budget Section, EY analysis

Supporting analysis recommendation #5

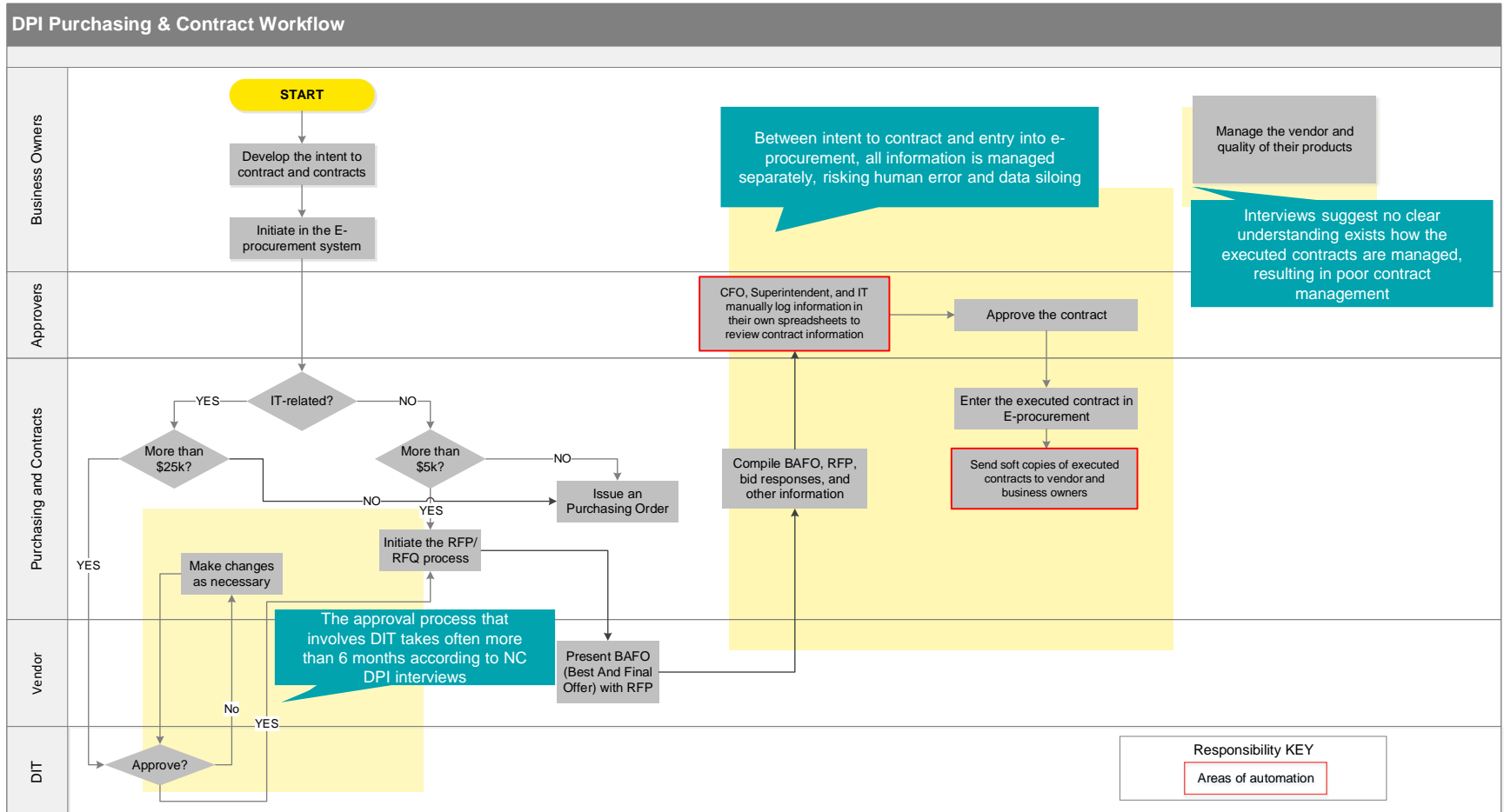
Interviews and analysis of NC DPI data highlight significant challenges, limitations and pain points in the contracting process

Initiation	The RFP process is limited by long lead times (e.g., 2-4 weeks for DIT counterpart to review the intent to contract documents). The process can be accelerated through standardized RFP formats which will limit back and forth between state level agencies
Proposal / Approval	All information in the approval processes is manually logged into separate spreadsheets. This introduces the chances of human error, delays, and challenges in tracking the progress. The approval time varies between 6 months and sometimes even up to 1.5 years , according to NC DPI interviews
Execution	Generally most contract information is entered into e-procurement only after signing. In other cases, such as personnel contracts with other government agencies (e.g. state universities), the information is entered inconsistently into e-Procurement
Contract Management	A comprehensive list of contracts and their expiration dates does not exist , which interviewees indicate severely constrains effective contract management
Payment	The current procurement process involves multiple manual steps and controls executed by Accounts Payable prior to release of payments to the vendors

Source: EY Interviews, internal documents, EY analysis

Supporting analysis recommendation #5

The current system for tracking contracts involves many approvals and takes a significant amount of time (according to NC DPI interviews)



Source: EY Interviews, internal documents, EY analysis

Supporting analysis recommendation #6

A significant number of NC DPI FTEs and contractors are in the field directly supporting LEAs

According to internal data and interviews, 88 staff and contractors in the field are associated with functions that could be embedded into a coordinated regional support structure

Internal Audit Contract Review

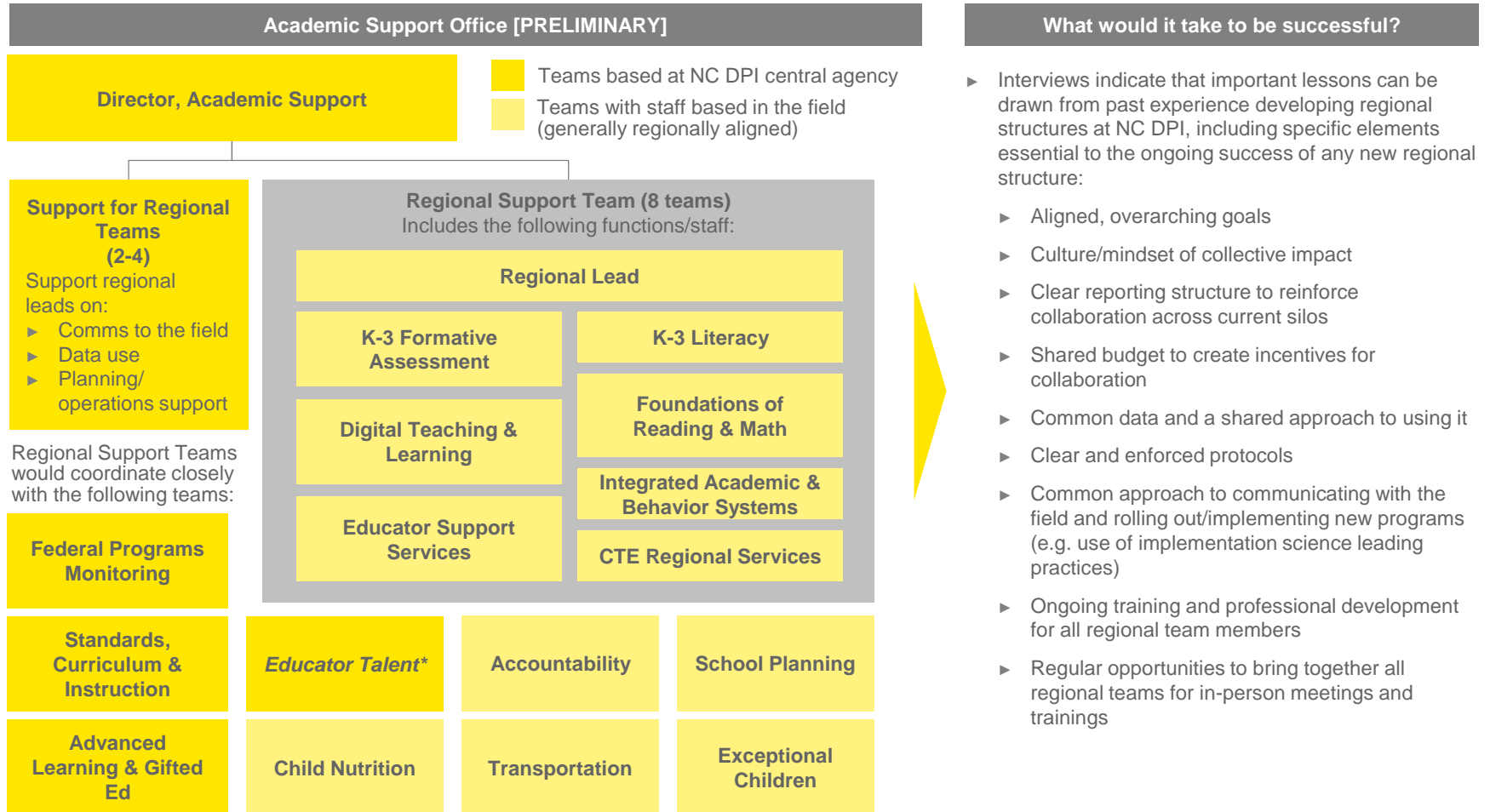
Beacon HR Data (excluding contractors)

Type of Support	Division	Section	DPI Field Staff	Type of Support	Division	Section	DPI Field Staff	
Academic Field Support	Digital Teaching and Learning	Digital Learning Initiative Consultants	5	Operations Field Support	School Operations	Transportation Services	3	
		Statewide Educators on loan	2			School Nutrition Services	23	
		DTL Area Consultants	4			School Planning	7	
	Office of Early Learning	K-3 Literacy	9		Monitoring and Compliance	Exceptional Children	Policy, Monitoring and Audit	8
		K-3 Formative Assessment Consultants	8					
	Educator Support Services	School Portfolio Support Teams	15			Accountability	Regional Offices	13
		Professional Development Coordinator	2					
		Service Support Teams	17	Total NC DPI staff in the field providing operational support and compliance monitoring		54		
		Regional Education Facilitators	8					
		Regional Administrative Support	6					
	Exceptional Children	Program Improvement and Professional Development (Reading/Math Foundations)	8					
		Special Programs and Data	3					
		Behavior Support Section	2					
		Sensory Support and Assistive Tech	5					
		Supporting Teaching and Related Services	6					
	Integrated Academic and Behavior Systems	EC Delivery Team	4					
		Systems and Practices Sections (MTSS Consultants)	12					
	Career and Technical Education	CTE Regional Services	6					
Agricultural Regional Services		3						
Total NC DPI Staff in the field providing academic support			125					

Note: NC DPI Field Staff includes Internal Auditor's estimated LEA and IHE contractors; Data do not include Advanced Learning Volunteer Teachers or Early Learning Sensory Support Teachers
Source: EY analysis of internal NC DPI Data; EY Interviews

Supporting analysis recommendation #6

Recommended Regional Support Teams (RSTs) could include or directly support DPI's Academics functions; they would coordinate with other agency and field-based supports



Note: *Educator Talent is a new office comprised of several existing educator support functions which currently reside in disparate offices across NC DPI
Source: EY interviews, EY analysis

Supporting analysis recommendation #6

Recommended Regional Support Teams could aim to improve the coordination of academic support to LEAs

All LEAs/Schools	Strategic data use	<ul style="list-style-type: none"> ▶ Annually, Regional Leaders could work with LEAs in their region to perform a single streamlined needs assessment, involving the review of school performance and progress data to support district and school planning, and to identify areas of need ▶ Regional Leaders could improve ongoing use of data for strategic planning and decision making at the LEA and school level
	Structured communication and coordination	<ul style="list-style-type: none"> ▶ Regional Support Teams could coordinate all academics-related communication to LEAs and schools in their region, and employ a consistent approach to sharing information and rolling out new mandates, policies and initiatives ▶ Conversely, Regional Support Teams could serve as a single point of contact for LEAs and schools to streamline support and reduce confusion for the field ▶ Regional team members could coordinate closely with centrally-based program area leads, and would support central agency staff awareness of field-based efforts
Potential approach for specific LEAs/Schools	Statewide support LEAs and schools above bottom 5%	<ul style="list-style-type: none"> ▶ For LEAs and schools above the bottom 5%, Regional Support Teams could maintain a “menu” of support and professional development that would be provided based on needs identified in the region’s needs assessments ▶ Supports and professional development provided by the state to these LEAs would align to programs and initiatives that are (a) evidence-based and (b) highest priority for NC DPI ▶ Regional Leads could use each LEA’s needs assessment to help match LEA needs to appropriate NC DPI supports ▶ LEAs would use local resources to meet needs identified outside of DPI’s highest priority area
	Support for low-performing districts and schools Bottom 5% of LEAs and schools	<ul style="list-style-type: none"> ▶ Like their higher-performing peers, these LEAs and schools participate in the annual needs assessment process to identify high need areas and to reflect these needs in Regional Support Teams’ “menu” of support (reviewed and updated annually) ▶ Where needs are aligned with the rest of the region and NC DPI priority areas, low-performing LEAs and schools receive support alongside others in their region to reduce duplication and support sharing of leading practices ▶ Where additional needs are identified, Regional Support Teams can partner to support identification of appropriate supplemental supports, and/or the appropriate NC reform model to drive school improvement and student outcomes

Source: EY Interviews and discussion with management

Supporting analysis recommendation #6

Regional Support Teams' roles and responsibilities would need to strike a balance between providing direct support to LEAs and empowering LEAs to make locally-appropriate decisions

Regional Lead	Program Area Supports	Low-Performing School/District Supports
<ul style="list-style-type: none">▶ Regional Leads could be charged with:<ul style="list-style-type: none">▶ Driving the use of data in LEAs and schools across their region▶ Overseeing the annual needs assessment including a review of data and identification of needs▶ Ensuring that available program area supports reflect regional needs▶ Ensuring that low-performing schools and districts are accessing high-quality, evidence-based external supports to address their identified needs▶ Ensuring that communication to the field is clear, regular and consistent, and that DPI's "brand promise" resonates and is seen as reliable by the field	<ul style="list-style-type: none">▶ Recommended program areas include: Foundations of Reading and Math, K-3 Literacy, K-3 Formative Assessment, IA&BS, and Digital Teaching & Learning▶ RST program area staff could support schools and districts in the region by coordinating and delivering professional development based on the needs identified in that region; this professional development would be available to all schools and LEAs in a region▶ RST program area staff could also serve a liaison function, supporting communication and roll-out to the field, and providing central teams with field-level feedback	<ul style="list-style-type: none">▶ Low-performing school/district supports are comprised of Educator Support Services (ESS) staff in these roles today▶ However, rather than providing direct support to low-performing (LP) schools or districts, within the RST structure, these support staff could serve as an enabler :<ul style="list-style-type: none">▶ Regularly reviewing performance data▶ Driving awareness and use of supports already being provided by the RST program area staff in a region▶ [Where needed supports are <i>not</i> provided by the program area staff] Defining what high-quality support looks like, and supporting LP schools/districts to identify quality external supports▶ Providing guidance for continually low-performing schools on NC reform model selection and reviewing reform plans▶ In this future structure, support staff could be assigned to regional teams as follows:<ul style="list-style-type: none">▶ 1 per LP district▶ 1 per 5 LP schools▶ LP support staff are not expected to work alone, but rather could create professional learning communities (PLCs) or groups based on need in each region

Source: EY Interviews and discussion with management

Supporting analysis recommendation #6

Regional structures exist in other states and provide varying levels of direct support to districts



Louisiana

Light-touch execution support from a trusted advisor



Kentucky

Cooperatives focus on developing regionally-beneficial partnerships

Structure

- ▶ Louisiana's "network" structure envisioned 5 regionally-based teams of ~10 members each whose primary focus was on building capacity at the school and district level
- ▶ Over time, the regional structure has been streamlined to 3 network teams of 7-8 members each
- ▶ Support for low performing schools sits within the Portfolio office

Support to districts

- ▶ Today, these teams continue to serve as trusted advisors in the field
- ▶ However, these teams operate with a narrower scope, focused on ensuring the districts have purchased a high quality curriculum and are identifying the right professional development supports
- ▶ Louisiana has identified a menu of approved curriculum and professional development, and networks work with their districts to procure high quality resources in lieu of providing them directly to districts

- ▶ In Kentucky, low performing schools receive direct support from the Department of Education while all other schools can opt into an educational cooperative in their region
- ▶ Across the 3 low performing schools regions:
 - ▶ Educational Recovery Directors support the creation of partnerships with universities, educational agencies, and external stakeholders in each region
 - ▶ Additionally, Educational Recovery Leaders and Specialists provide direct support to teachers in schools
- ▶ Kentucky has 9 "educational cooperative" offices which offer opt-in services for schools in their region
- ▶ Educational Recovery staff in low performing schools focus on supporting literacy and math; they aim to align their support with the mission / vision of the school leader
- ▶ Meanwhile, cooperative offices are very involved in providing professional development, hosting regional meetings, and offering training sessions for member districts
- ▶ Cooperatives also work to enable districts to maximize their purchasing power through cooperative purchasing / bids

Note: States were selected in accordance with NC DPI criteria (e.g south-eastern location and focus on reform within the state education agency)

Source: States Department of Education websites, EY Interviews

Supporting analysis recommendation #7

NC DPI offers a range of diagnostics and formative assessments today, but educators note that it is not clear which assessments are required, and how optional ones should be used

NC K12 Assessment Landscape

Grade span	Summative assessment	Diagnostic tools & formative assessment	Formative assessment owners/ involved offices
PK – Grade 3	<ul style="list-style-type: none"> ▶ End of Grade Assessments (grade 3 only) <p>With multiple formative assessments offered in grades K-3, educators note that there is a lack of clarity regarding those which are optional versus those which are required</p>	<ul style="list-style-type: none"> ▶ Kindergarten Entry Assessment ▶ K-3 Formative Assessment ▶ mClass ▶ Beginning of Grade 3 Test ▶ End of Grade 3 Reading Retest ▶ Read to Achieve Test (alternative) ▶ NC Early Numeracy Skill Indicators ▶ MTSS Diagnostics (grade span TBD; in development) ▶ NC Check Ins (TBD) 	<ul style="list-style-type: none"> ▶ Office of Early Learning ▶ Office of Early Learning ▶ K-3 Literacy ▶ K-3 Literacy ▶ K-3 Literacy ▶ K-3 Literacy ▶ Office of Early Learning ▶ Integrated Academic and Behavior Systems ▶ Accountability
Grades 4–8	<ul style="list-style-type: none"> ▶ End of Grade Assessments ▶ NC Final Exams (subject specific) 	<ul style="list-style-type: none"> ▶ ELA/Reading NC Check Ins (grades 5-7 only) ▶ Math NC Check Ins (grades 4-6 only) ▶ MTSS Diagnostics (grade span TBD; in development) 	<ul style="list-style-type: none"> ▶ Accountability ▶ Accountability ▶ Integrated Academic and Behavior Systems
Grades 9–12	<ul style="list-style-type: none"> ▶ End of Course Assessments ▶ NC Final Exams (subject specific) ▶ ACT OR College and Career Readiness Alternate Assessment (grade 11 only, alternative to ACT) ▶ CTE Assessments (CTE concentrators) ▶ ACT WorkKeys (CTE concentrators) 	<ul style="list-style-type: none"> ▶ PreACT OR College and Career Readiness Alternate Assessment (grade 10 only, alternative to PreACT) 	<ul style="list-style-type: none"> ▶ Accountability

DPI's Office of Accountability is responsible for the development (in partnership with Institutes of Higher Education) and administration of all summative assessments in NC

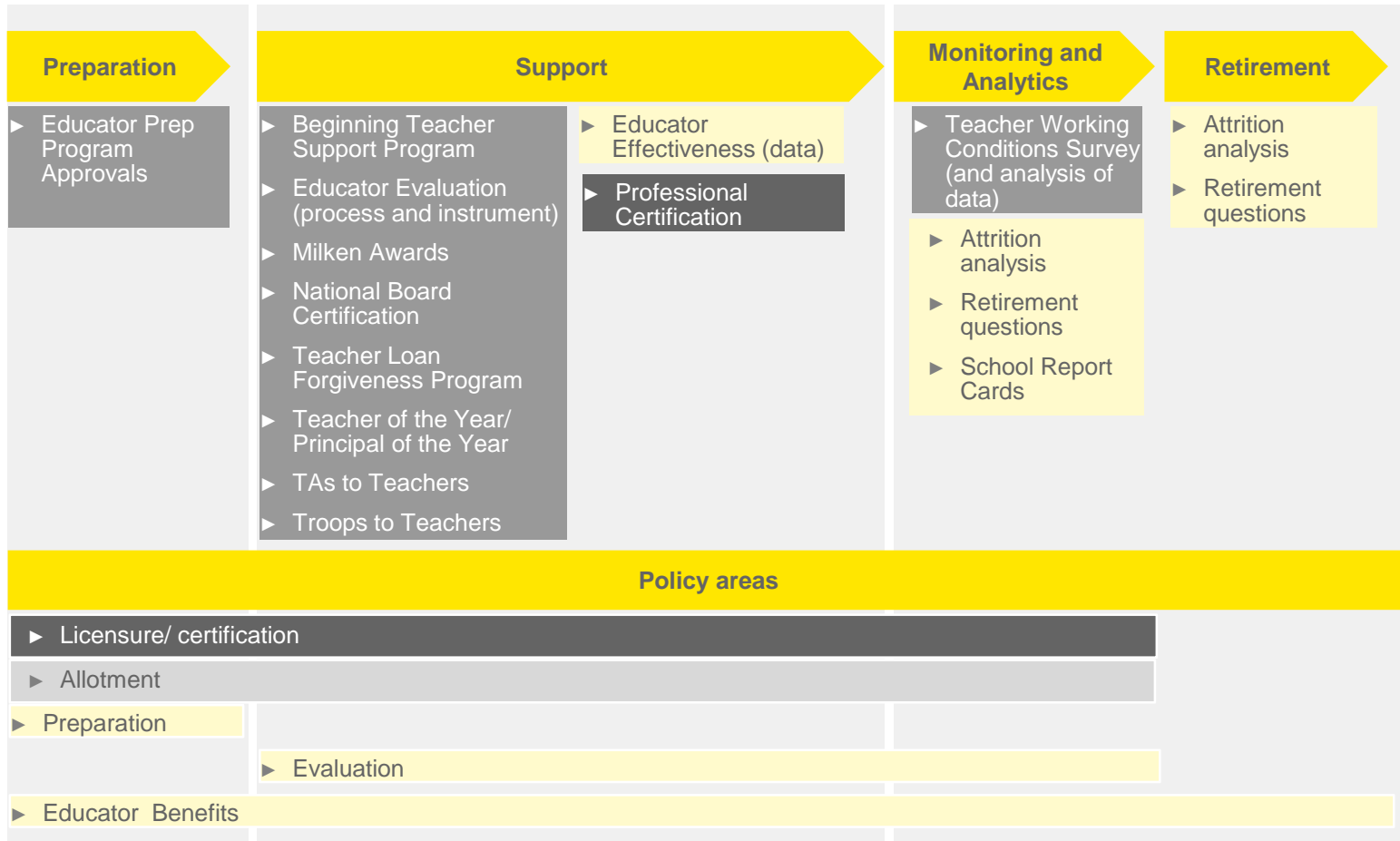
Legend (based on interviews and research)
 Required assessments
 Optional assessments
 Assessments in development

Note: Excludes federally-mandated ELL assessments and screeners
 Source: NC legislation, NC DPI website, EY interviews

Supporting analysis recommendation #8

Currently, educator support functions exist in at least three offices, with additional offices (such as Finance) seen as holders of educator-related policy

Educator Support Functions Provided by NC DPI Today



NC DPI Division:	Educator Support Services	School Research, Data and Reporting	Licensure	Finance
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Source: EY Interviews

Supporting analysis recommendation #8

Primary research with LEAs identifies several challenges to working with NC DPI, but also shows that LEAs appreciate pockets of strong educator support

Educators report several pockets within NC DPI provide strong support

- ▶ *“We are very satisfied with the level of support and quality of support that DPI provides to our teachers. They are supporting thousands of teachers across state effectively” – Regional Teacher of the Year*
- ▶ *“The beginner teacher professional development trainings and webinars are extremely valuable for our teachers. Our LEA depends on the DPI-trained Beginner Teacher leads to disseminate best practices and guide our new teachers. DPI does a great job with this program” – Regional Teacher of the Year*

However, educators also find that there are challenges to working with NC DPI

- ▶ *“DPI’s organizational structure creates confusion; its silos are evident. We don’t know who to call for help. We would love to have one go-to resource or representative to assist in navigating DPI’s support structure” – Current Superintendent*
- ▶ *“We need more consistent communication to our teachers - in the format and timing. Right now, I don’t know which team to at DPI to contact regarding educator support. I often worry about what am I missing” – Chief Academic Officer*
- ▶ *“Often times I find the answers we receive from DPI vary depending on the person you talk with. If I call in the morning, and then call back later that afternoon, I likely will receive different answers [depending on who I talk to]” – Current Teacher*
- ▶ *“One of the biggest challenges of working with DPI is the Licensure department. We need both more clarity into the Licensure approval process and more communication on who the ‘go-to’ folks are within the division that support our district schools” – Current Superintendent*
- ▶ *“Licensure is one of the few aspects of DPI that all districts must interact with. The process is entirely broken and we are losing teachers because of it” – Former Superintendent*

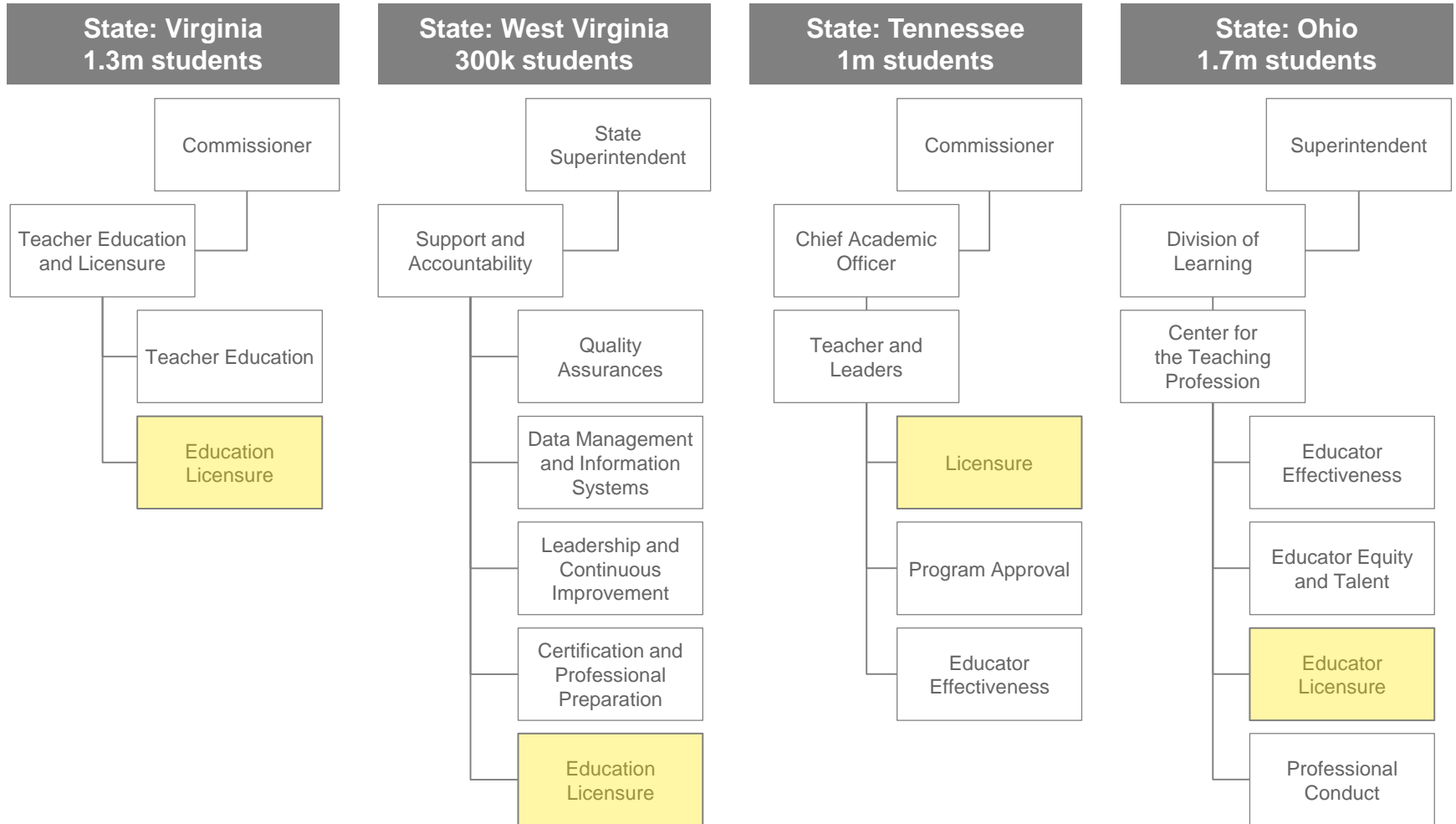
The recommendation to create an Educator Talent Division can help to address current pain points

- ▶ An Educator Talent Division could support educators along the full teaching continuum by consolidating functions that currently exist in disparate offices or do not exist at all
- ▶ Combining all functions related to teacher and educator talent into a single office could support improved service delivery by creating a single point of contact at NC DPI for educators and administrators, and by supporting clear and consistent messaging to the field

Source: NC DPI field feedback survey (n=87); District CAO Focus Group (n=4); District Superintendent and RESA Director Focus Group (n=9); Regional Teachers of the Year Focus Group (n=9)

Supporting analysis recommendation #8

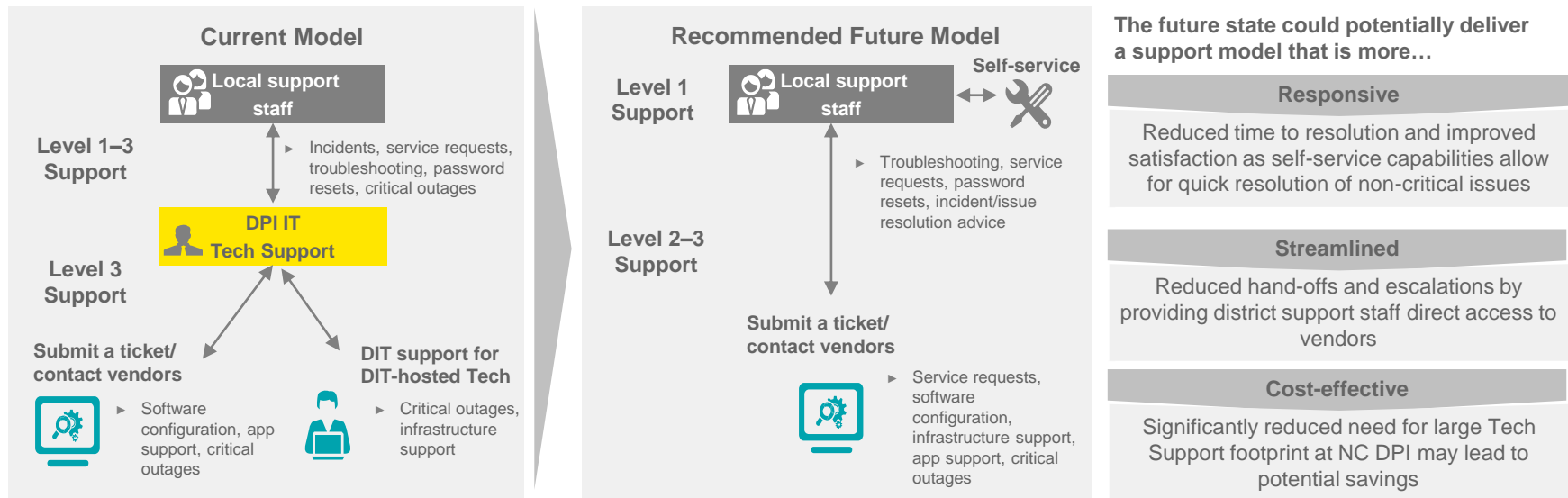
Virginia, West Virginia, Ohio and Tennessee have licensure in the same office with educator effectiveness and support



Note: States were selected in accordance with NC DPI criteria (e.g south-eastern location or leading practice in educator support)
 Source: NCES; EY Analysis, State websites

Supporting analysis recommendation #9

There is an opportunity to improve the model for IT support to the field



Supporting Analysis

- Interviews identified efforts by the NC DPI Tech Support Group to reduce resolution times to the field, but analysis of internal data suggests issue resolution time remains high:
 - Currently, ticket resolution time is **12 days on average** for any type of issue (from password resets to more critical issues)
 - Commercial organizations take an average of **7 days** to resolve **the highest priority incidents**
- Interviews indicate that long resolution times are primarily due to:
 - Bottlenecks created** by requiring support calls to go through NC DPI Technology Services
 - Multiple escalations and handoffs** to get to the appropriate point of contact for resolution
 - Limited bandwidth** and inadequate staffing at NC DPI Technology Services to effectively support volumes
- Interviews suggest that the current model of augmenting staff to support increasing requests is very difficult to scale as new and updated applications are added to NC DPI's portfolio

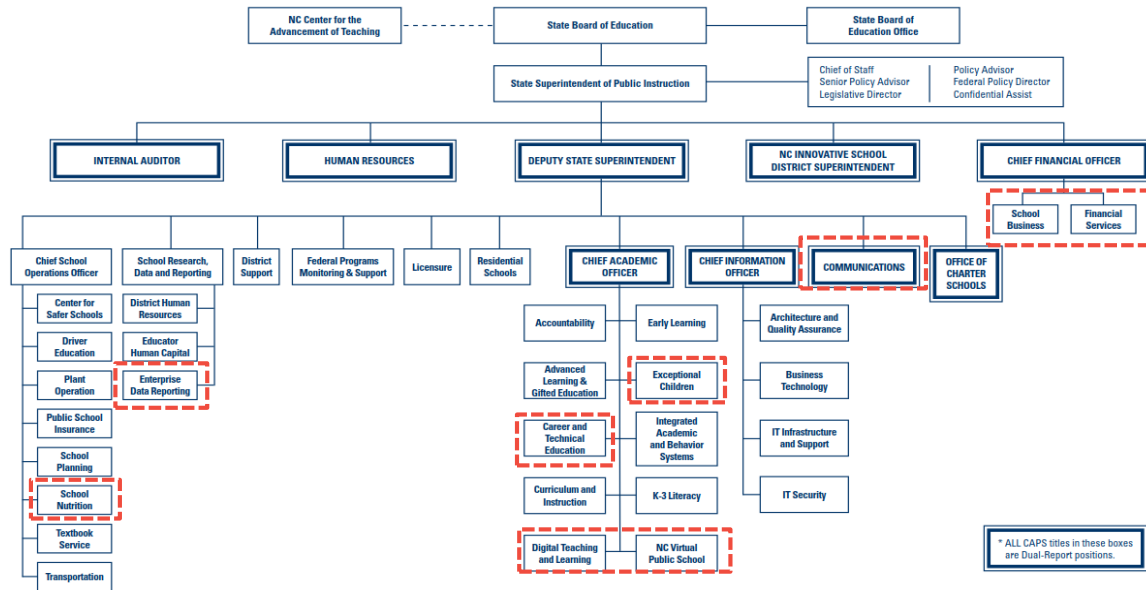
Note: Future state model based on recommendation to move support to vendors; reflect industry leading practices

Source: EY analysis of internal documents; interviews with NC DPI staff

Supporting analysis recommendation #10

There is an opportunity to rethink the IT model, structure and roles across NC DPI and consolidate IT-related functions

Current NCDPI Organization Structure



 “Shadow IT” groups embedded in the business

- ▶ Potentially redundant shadow IT roles include:
 - ▶ Tech Support Analysts
 - ▶ Business Technology Analysts
 - ▶ Data Managers
- ▶ Networking Analysts
- ▶ Systems Specialists

Note: “Shadow IT” refers to resources performing IT related functions that reside in divisions outside of the IT organization
Source: EY analysis of internal documents; interviews with NC DPI staff

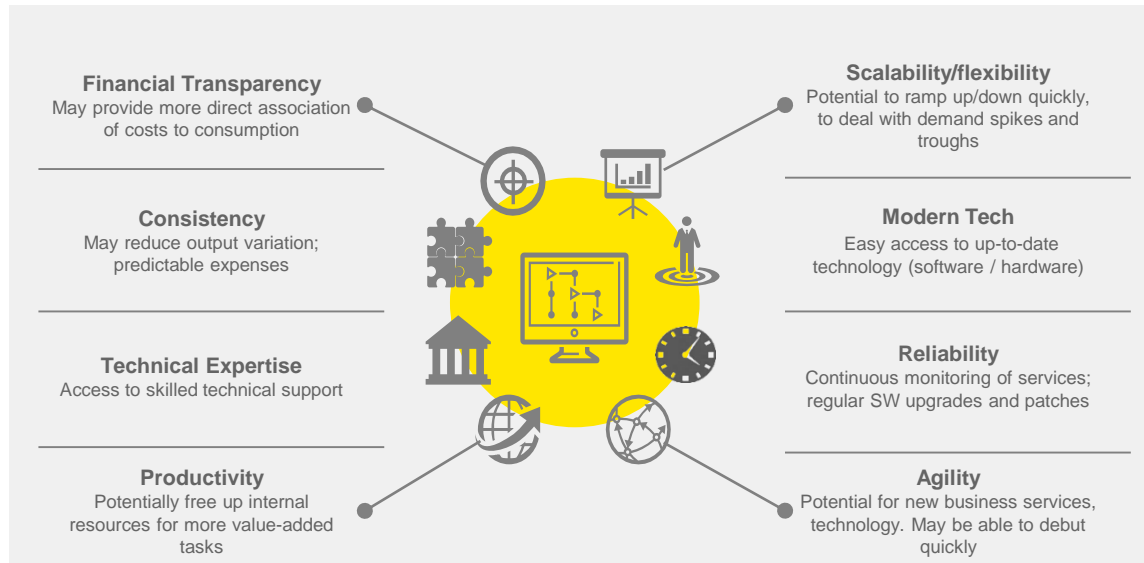
Supporting Analysis

- ▶ Approximately **44 FTEs** are **dispersed** across the agency performing IT activities
- ▶ Analysis of internal data indicates these FTEs support specific business units, yet interviews suggest Technology Services still feels short staffed and unable to support the business
- ▶ Based on analysis of current personnel data, **over 57%** of the decentralized FTEs appear to be **redundant** roles
- ▶ Demand for additional technology support by program areas may make it **challenging to scale the current model**
- ▶ Centralizing shadow IT under a single point of leadership may lead to potential financial savings and an improved ability to **enforce technology standards** and **appropriately monitor** and support applications

Supporting analysis recommendation #11

By outsourcing IT functions not related to its core educational mission, NC DPI could devote its resources to better support agency priorities

Potential advantages to an outsourced model



IT function staffing as a % of total IT personnel

IT Function	NC DPI Technology Services	Government Agencies Average
Database Administration	7%	3.8%
Tech Support/Help Desk	12%	7.2%
Quality Assurance/Testing	7%	2%
Project Management Office	7%	4%
Desktop Support	4.5%	4%

**Benchmark: Computer Economics, 2017

Supporting Analysis

- ▶ **IT is people-intensive:** NC DPI IT's allocation of staff to common IT support functions is analyzed as **well above the benchmarks**
- ▶ **More than 75%** of government agencies are **increasing their budgets for IT outsourcing** to reduce their reliance on personnel – *Computer Economics, 2017*
- ▶ Interviews suggest NC DPI Technology Services should do more to keep up and **evolve** with the industry, and aggressively push to **do more with less** through outsourcing
- ▶ The remaining IT functions at NC DPI can focus on:
 - ▶ **Accelerating IT's response** to the technology needs of the agency (Business Relationship Manager function)
 - ▶ Providing **valuable support** to the LEAs (Security services, Data, etc.)

Source: EY analysis of internal documents, interviews and secondary research; recommendation is based on discussion with management and acknowledgement of need to evolve

Supporting analysis recommendation #11

Potential benefits of a Business Relationship Management (BRM) Function

To shift the way Technology Services serves NC DPI, Technology Services could establish a BRM who serves as a strategic partner to business owners, assists them with identifying solutions, and advocates for the business within Technology Services

Potential Responsibilities

- ▶ Liaison between the NC DPI academic areas, administrative functions, and Technology Services to **create a shared understanding** of technology priorities and needs
- ▶ Understands business issues and **partners with the business** to ideate/innovate/problem solve
- ▶ Owns the technology intake function to shape, **capture, and prioritize demand** from/for the business
- ▶ Holds **IT vendors accountable** to agreed timelines, outputs and reliable service measures
- ▶ Follows up and **drives closure** on IT operational issues on behalf of the business
- ▶ Shares insights on IT solutions and emerging technologies that are relevant to business issues
- ▶ Assists the agency and functional teams in **exploiting existing data** and IT capabilities to drive business decisions

Description of Potential Role

Business Relationship Manager- Role Description

Organization: Business Technology Division, IT



DPI is seeking a highly motivated professional to act as the primary liaison between DPI business units (Academic and Administrative functions), and IT. This is a senior level role responsible for understanding business needs and priorities, driving business / IT alignment, facilitating delivery of reliable IT services to the business and ensuring a continuous improvement focus on IT services on behalf of the business.

As a leader of a small team of new and experienced business analysts, you will be expected to manage alignment, coverage and development of your team across the different business areas and functions

You will also work closely with external agencies such as DIT, and vendors to help facilitate the successful delivery of business technology for the agency

Primary responsibilities:

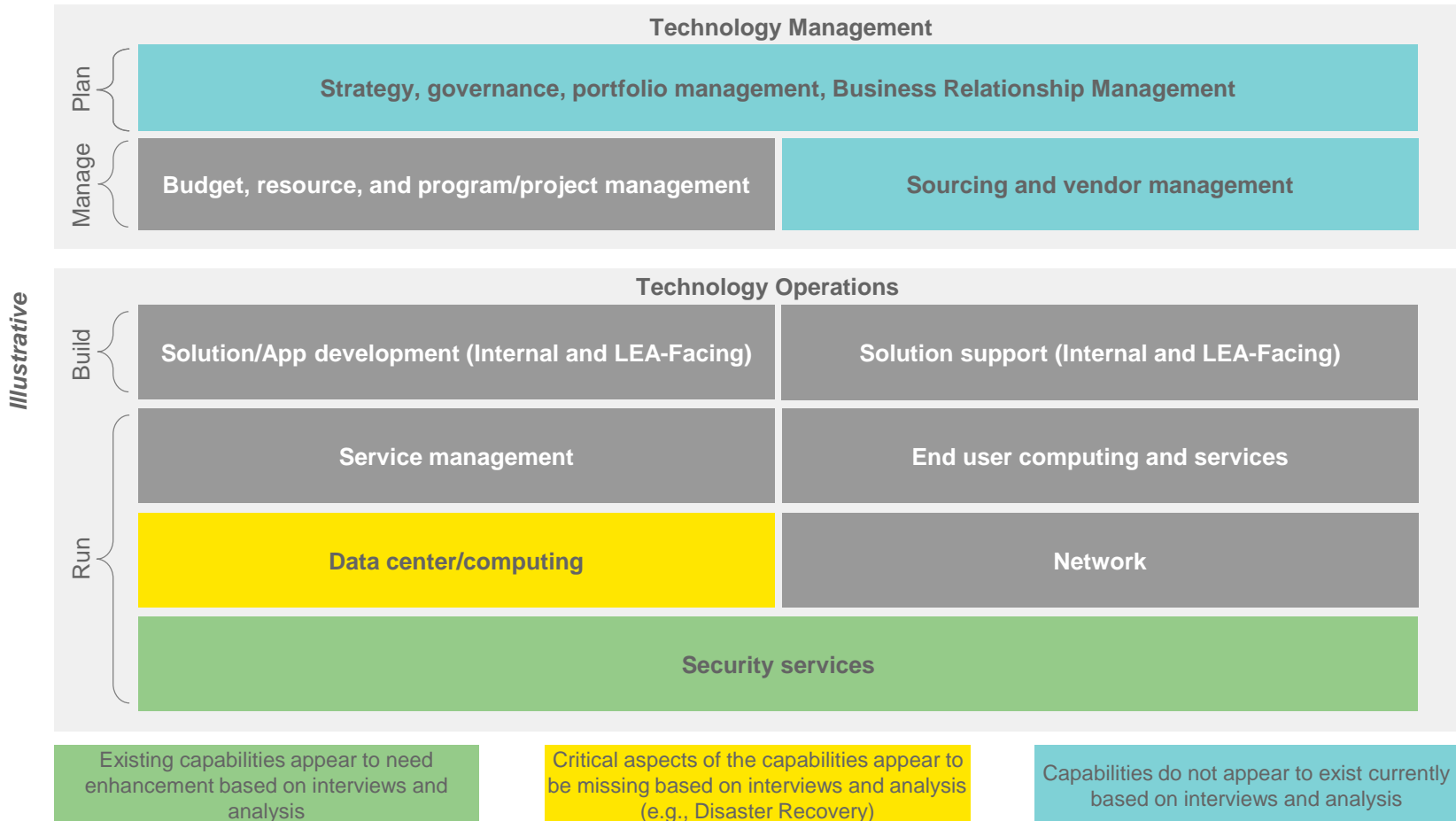
- Be proactive and work with the business partners in **defining the issue and shaping the demand** for technology products as well as annual plan (not an order taker)
- Leverage **knowledge of emerging technologies** and existing applications to bring new ideas / innovative solutions for DPI
- Advise the business on value and **strategic implications of technology decisions** in support of the agency's goals
- Analyze IT cost and performance measures to **identify optimization opportunities** for the business
- Facilitate risk escalation / issue mitigation between business and IT teams
- Act as the **primary point of contact** for all IT services and ensure reliable delivery in line with agreed performance measures (Own the IT experience to the business)
- Follow up / drive closures on IT operational issues on behalf of the business

Source: EY client leading practices

Supporting analysis recommendation #11

Our recommendations address areas of a capability model that appear to be lacking within NC DPI today

IT capability model (level 1 view)

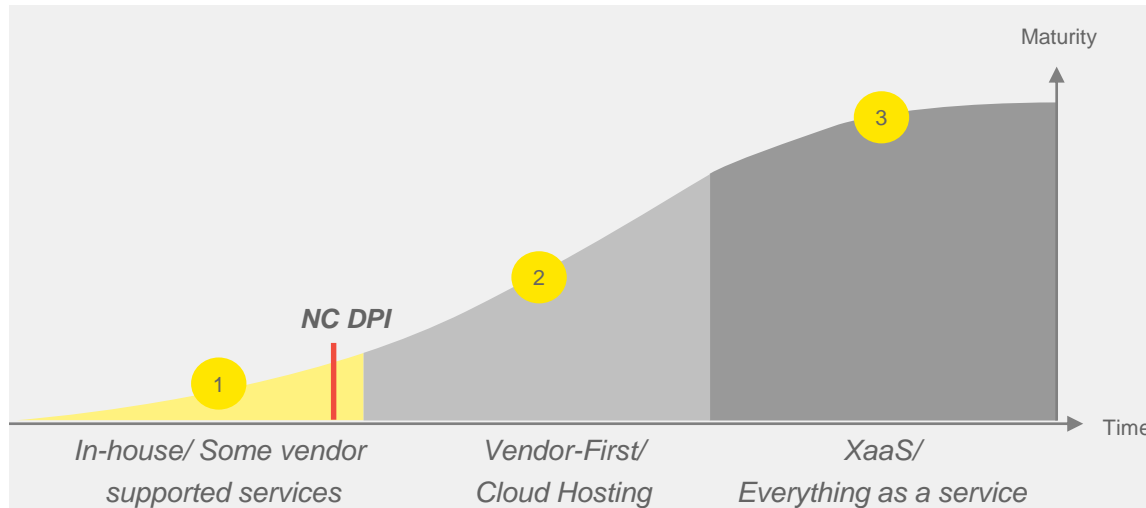


Source: EY analysis of internal documents, interviews with NC DPI staff and secondary research

Supporting analysis recommendation #12

The combined need to improve support to NC DPI, innovate, and deliver reliable and secure technology could potentially drive IT further to a vendor-cloud model

Hosting maturity model



- 1 While many applications and infrastructure are developed, hosted and supported by Technology Services at NC DPI, the larger more costly applications are developed, deployed and supported by vendors and are highly customized for NC DPI. NC DPI has recognized the need for vendor and cloud services but has not formalized an approach
- 2 By hosting with vendors, NC DPI controls ownership and deep customization of applications, but avoids efforts to maintain, develop and backup hardware and software platforms, and upgrade applications
- 3 In this hosting model, NC DPI could look to consume leading applications directly with potentially minimal customization in order to reduce ownership and overhead, while benefitting from the latest emerging technologies the industry has to offer

Supporting Analysis

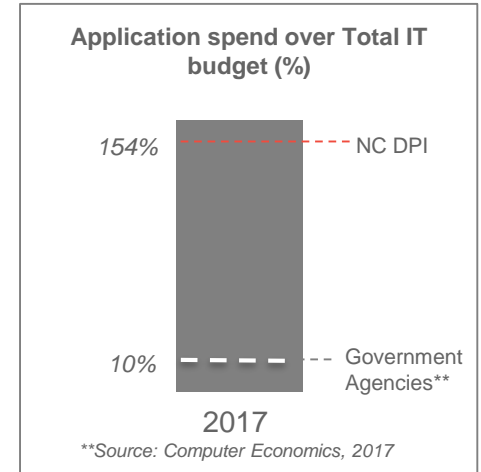
- ▶ Based on NC DPI interviews, **30-40%** of the total application landscape is **developed in-house** at NC DPI through APEX tools (many by non-IT resources)
- ▶ Analysis of internal budget data suggest current spending is allocated to **supporting aging infrastructure** (e.g., mainframes, Windows 2000 servers)
- ▶ **Basic but critical services**, such as Disaster Recovery, appear to be lacking
- ▶ External vendor development and hosting **covers many of the highly resource-intensive services** that otherwise NC DPI would have to support (e.g., application support, patching, upgrading, monitoring, backups, restoring during disasters)
- ▶ Through a vendor first/cloud next approach, NC DPI Technology Services resources could be freed up to fulfill the urgent needs of the agency:
 - ▶ **Advise on IT** procurement and RFPs
 - ▶ **Insights on IT solutions and emerging technologies**

Source: Figures and analysis sourced from interviews with NC DPI staff and internal documents

Supporting analysis recommendation #13

Rationalizing and modernizing NC DPI's application landscape could create more optimal investments in technology

Rationalizing and modernizing the application portfolio



Supporting Analysis

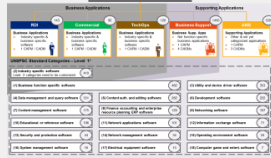
- ▶ **Interviews suggest over 90 applications** are dispersed across the agency, many of which:
 - ▶ Run on outdated platforms and are disparate
 - ▶ Provide redundant functionality
 - ▶ Require high costs to maintain
- ▶ NC DPI operates numerous siloed systems resulting in **higher application spend** than the industry benchmark (according analysis of internal data and market research)
- ▶ By rationalizing and modernizing the existing set of applications, and designing a future state application portfolio NC DPI could:
 - ▶ **Drastically reduce** the number of **applications** used to support NC DPI and the LEAs
 - ▶ **Replace aging disparate systems** with up-to-date end-to-end solutions
 - ▶ **Eliminate manual processes** through the use of modern technology (e.g., contract management)

Note: Application spend includes resources allocated to application development outside of IT
Source: EY's analysis, internal documents, interviews with NC DPI staff, secondary research

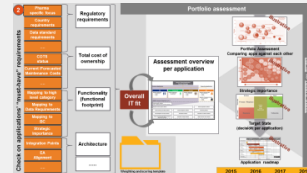
Supporting analysis recommendation #13

Potential portfolio assessment methodology based on leading practices

Application assessment based on clustering

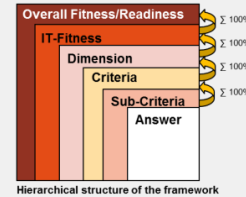


Analyze clusters of redundancies and overlaps



High level decision Tree

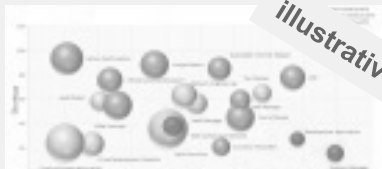
Assess each application via dimensions and criteria



Execute and realize “quick wins”

- ▶ Application assessment using the defined evaluation dimensions and associated set of criteria
- ▶ Weight and score applications based on cluster importance
- ▶ Document results per cluster

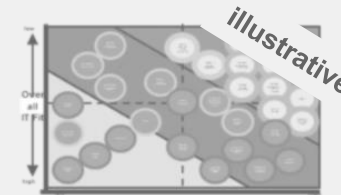
Portfolio assessment



Portfolio Assessment

- ▶ What is the compliance of my application compared to my strategy?
- ▶ What is my architectural conformity?
- ▶ What are my costs/costs efficiency?

Validate the strategic importance of each application



Strategic importance

- ▶ Requirements from IT-strategy
- ▶ Derive IT investment strategy from the overall fit of an application for strategic areas of action
- ▶ Combine with strategic importance of the business functions/ processes it supports

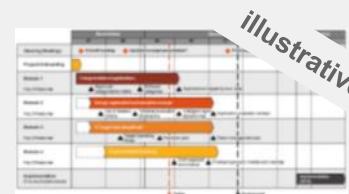
Target state



Application target state mapping

- ▶ Target: Identification of applications which can be expanded strategically and group-wide, or used long-term locally
- ▶ Identify application to use with regard to agency requirements and local needs

Application roadmap



Application roadmap

- ▶ Define the roadmap to
 - ▶ Keep
 - ▶ Tolerate
 - ▶ Freeze
 - ▶ Replace
 - ▶ Retire
- ▶ an application

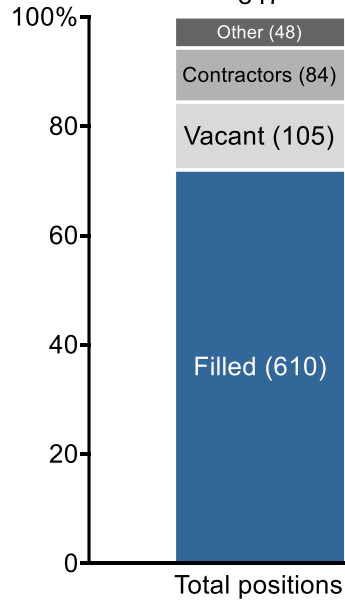
Source: EY's analysis, internal documents, interviews with NC DPI staff, secondary research

Supporting analysis recommendation #14

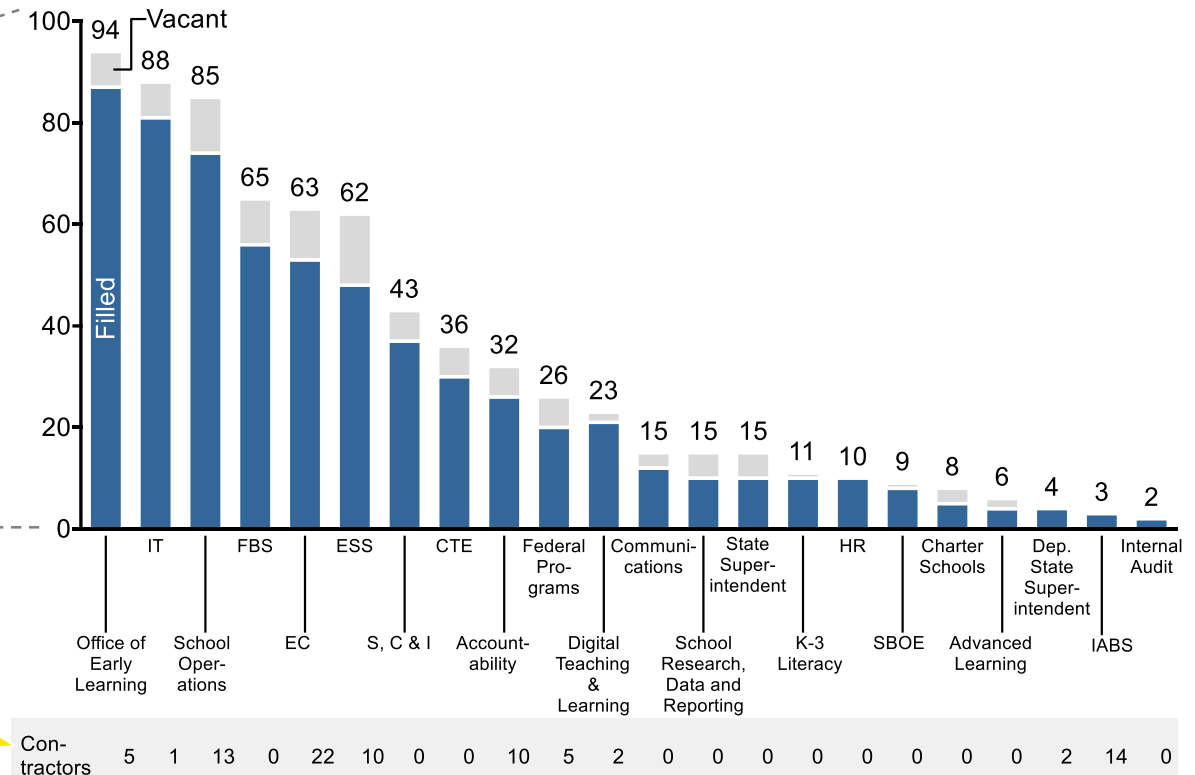
NC DPI internal data indicates that there are 113 vacancies within the organization and an additional 84 contractors, some of whom may be filling vacancies

Beacon HR Data
(excluding contractors)

NC DPI Positions and Contractors,
2017-2018
847



NC DPI Positions by Division,
2017-2018



DPI's Internal Auditor's estimated contractor headcount; not exhaustive and does not include Temp Solutions

Note: Excluded or out of scope includes Licensure, NCVPS, residential schools, State Board of Education, Office of the State Superintendent and NCCAT; Number of contractors is derived from Internal Auditor's estimated LEA and IHE contractor list; data reflects full-time contractors determined by EY Analysis, is not exhaustive and does not include Temp Solutions; School Operations vacancies may be understated due availability for the function

Source: Internal NC DPI Data; EY Analysis

Supporting analysis recommendation #14

The inefficient hiring process to fill vacancies at NCDPI has impeded effective operations

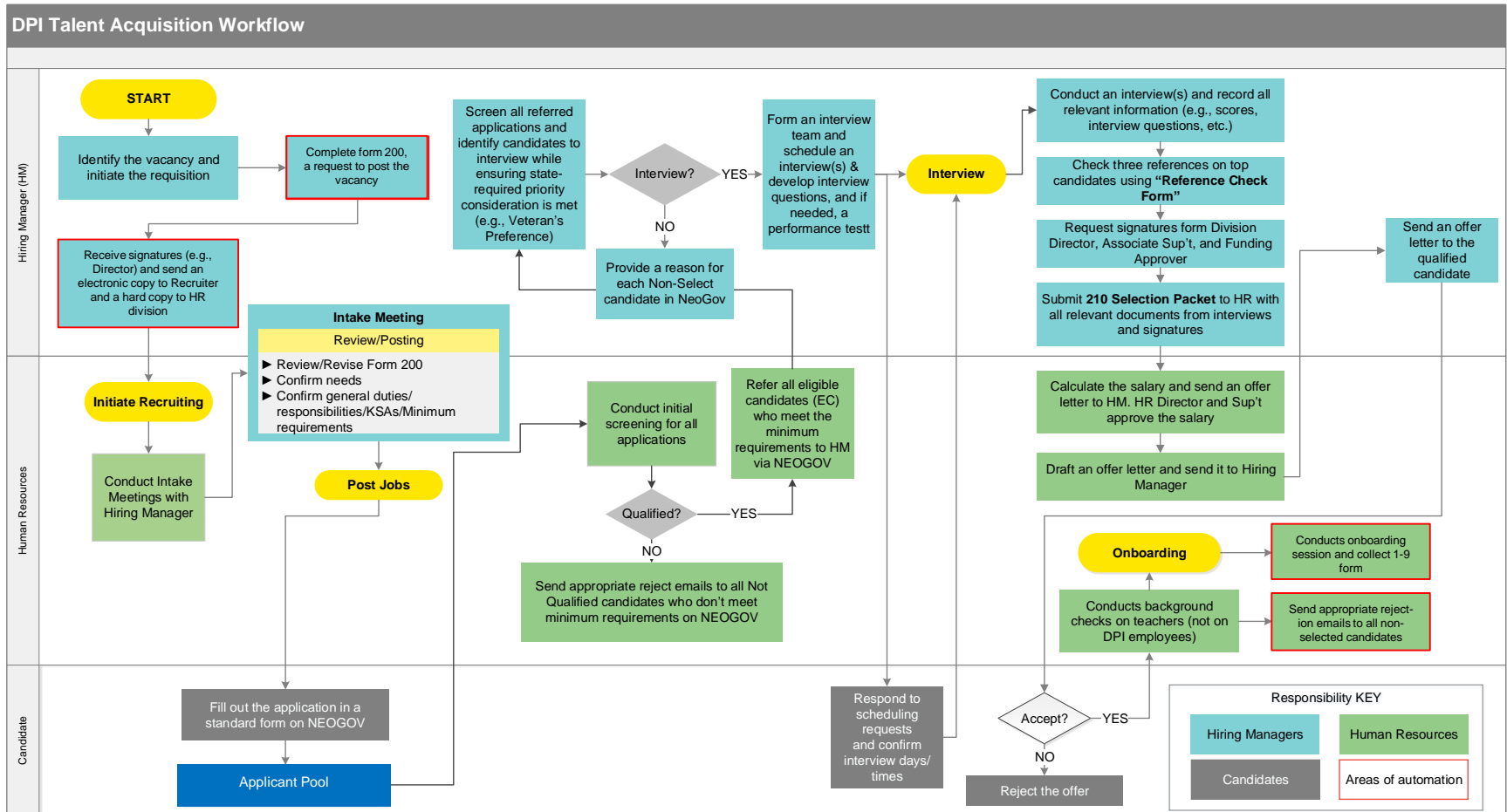
	1 Requisition	2 Recruiting/Pre-Screening	3 Screening/Interview	4 Post-Interview	5 On-boarding
Current Process Narrative	<ul style="list-style-type: none"> (HM) Identify the vacancy and initiate the requisition process (HM) Complete Form 200, a request to post the vacancy (HM) Receive signatures (e.g., Director) and send an electronic copy to Recruiter and a hard copy to HR division 	<ul style="list-style-type: none"> (RE) Recruiter posts the job in the NEOGOV system (CA) Fill out the application in a standard form on NEOGOV (RE) Screens not qualified candidates who don't meet minimum requirements on NEOGOV and refer all eligible candidates (EC) who meet the minimum requirements to HM via NEOGOV (RE) Notifies not qualified candidates 	<ul style="list-style-type: none"> (HM) Review all referred applications and identify candidates to interview. HM is responsible for ensuring state-required priority consideration (e.g., Veteran's Preference) (HM) Provide a reason for each non-select candidate in NEOGOV (HM) Form an interview team and schedule an interview(s) (HM) Develop interview questions, and if needed, a performance test (HM) Conduct an interview(s) and record all relevant information (e.g., scores, interview questions, etc.) 	<ul style="list-style-type: none"> (HM) Check three references on top candidates using "Reference Check Form" (HM) Submit 210 Selection Packet to HR with all relevant documents from interviews and signatures from Division Director, Associate Superintendent, and Funding Approver (HR) Calculate the salary and send an offer letter to HM. HR Director and Superintendent approve the salary (HM) Send an offer letter to the candidate 	<ul style="list-style-type: none"> (RE) Send the onboarding package to HR Technician (HR) Conducts onboarding session with a new hire and collect I-9 form (HR) Conduct background checks (only on teachers)
Potential Opportunities for Improvement	<p>NC DPI interviews suggest:</p> <ul style="list-style-type: none"> Form 200 is not self-evident and allows HM to write job duties, skills, and preferences in an open-essay format There are frequent, iterative communications between HM and HR in the process of completing Form 200, which often leads to much delay in job posting Building automation around this process would help reduce the cycle time significantly 	<ul style="list-style-type: none"> Recruiter refers all minimally qualified candidates who meet minimum requirements (e.g., education, certificates, etc.) to HM, which may total over 20-30 candidates With the optimization of the hiring process and leveraging more automations, RE could improve the screening process, lessening the burden on the HM 	<ul style="list-style-type: none"> HR could take responsibility for ensuring compliance with hiring processes and procedures Clearly documenting the responsibilities of the HM and providing tools could help to ensure there is clarity around roles Process optimization could help redesign the segregation of duties between the HR, RE and HM, potentially resulting in the HM being less involved in the hiring process 	<ul style="list-style-type: none"> Interviews indicate applications are not transparently tracked, creating a bottleneck in the hiring process and making it challenging to identify where the delays are; NC DPI could leverage technology to improve this process HR could perform tasks such as issuing offer letters 	<ul style="list-style-type: none"> Onboarding process is compliance-focused and (interviews suggest) lacking enough focus on new hire experience, including assistance on organizational navigation NC DPI could leverage technology to improve employee onboarding process

Key		
HM: Hiring Manager	HR: HR Employee	Automation/Modernization area
RE: Recruiter	CA: Candidate	

Source: EY Interviews, internal documents, EY analysis

Supporting analysis recommendation #14

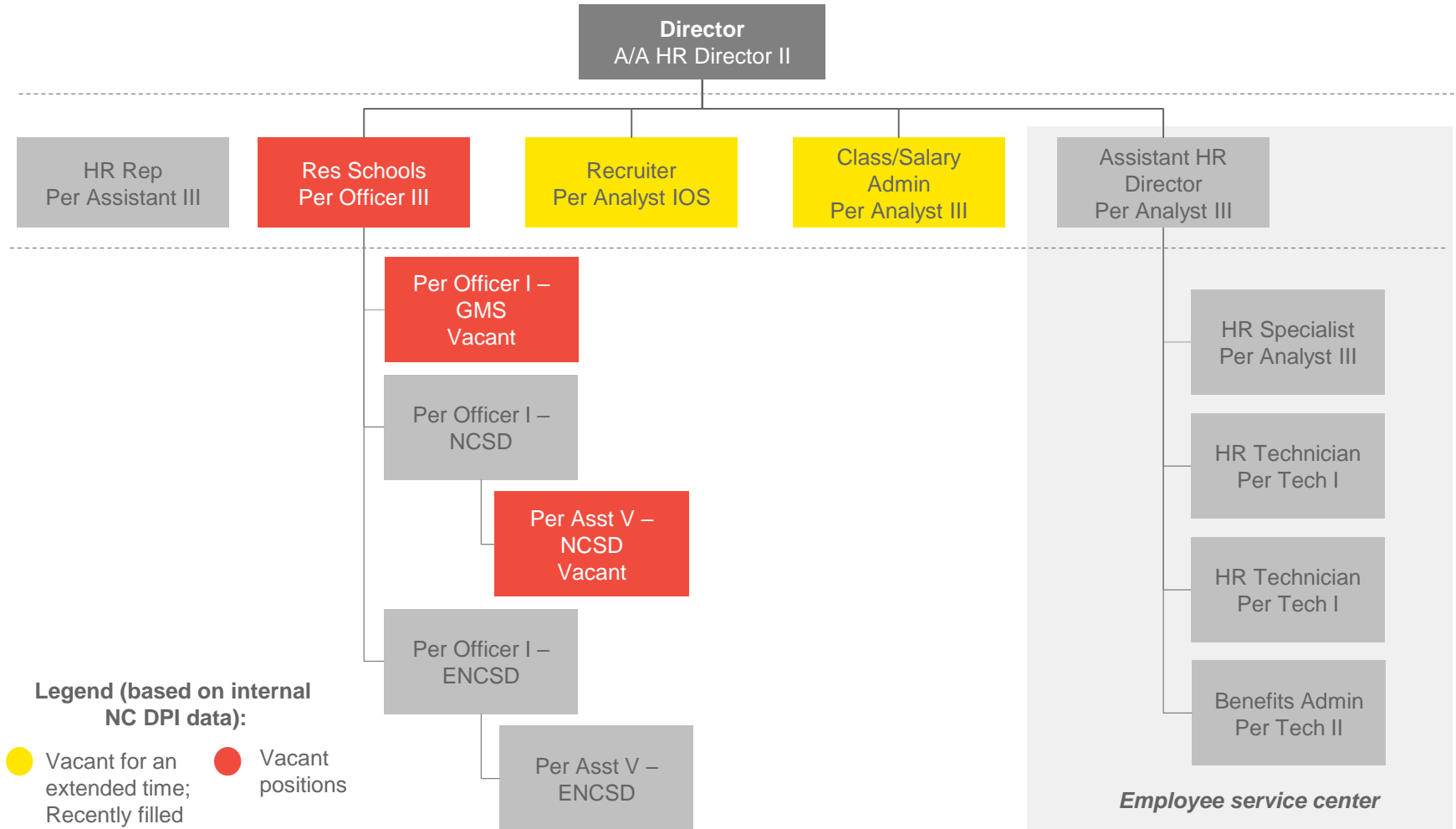
There is an opportunity to use existing technologies & leverage automation to expedite the Talent Acquisition process based on assessment of DPI's existing workflow



Source: EY interviews, internal documents, EY analysis

Supporting analysis recommendation #15

NC DPI interviews highlight some key HR roles have been vacant for an extended period, aggravating challenges to complete HR transactions in a timely manner



Source: EY Interviews, internal documents, EY analysis

Supporting analysis recommendation #15

Interviews suggest that the HR office spends a significant amount of time backfilling roles at the residential schools and does not have sufficient capacity to focus on strategic functions

Functional areas	HR director	Assistant director	HR FTE 1	HR FTE 2	HR FTE 3	Benefits specialist	Recruiter
Onboarding/Off-boarding			X	X			
Residential School Support	X	X	X	X	X	X	
Recruiting	X	X	X	X	X		X
Salary/Classification	X						
Record Keeping (including time and attendance)				X	X		
Benefits/Leave						X	
Performance Management			X	X			
Data Management			X	X			
Equal Employment Opportunity/Employee Relations	X	X	X				
Succession Planning							
Learning & Development							

Source: EY Interviews, internal documents, EY analysis

Supporting analysis recommendation #15

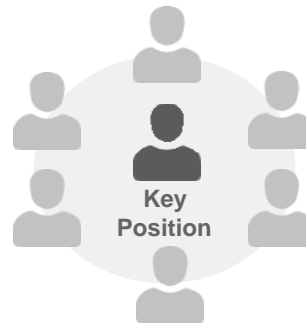
Leading practices indicate that succession planning can drive the smooth transfer of knowledge and responsibilities

Costs of not planning (illustrative)

- ▶ Lack of clarity on talent gaps and needs
- ▶ Positions filled without a strategic vision: misplaced talent capabilities
- ▶ Potentially poor pipeline to support talent needs
- ▶ Uncertainty for employees
- ▶ Unprepared for significant organizational events
- ▶ High recruitment costs and extended lead times
- ▶ Prolonged and inefficient transfer of responsibilities and knowledge – lengthier time for new incumbents to achieve full capacity

40%

An executive talent search can range from 20-40% of annual compensation.¹



Potential benefits of planning

- ▶ Specifies the expertise needed to meet requirements for the future
- ▶ Identifies critical positions
- ▶ Generates pipeline of potential leaders
- ▶ Promotes and retains high performers
- ▶ Reduces uncertainty and strengthens employee confidence
- ▶ Enhances readiness for major events
- ▶ Reduces recruitment costs and shortens lead times
- ▶ Reduces time to achieve capacity in position: allows for smooth transfer of knowledge and responsibilities



Robust team dynamics and inclusive culture



Critical capabilities defined



Pipeline of potential leaders identified



Targeted development to accelerate successor grooming



Top talent is retained

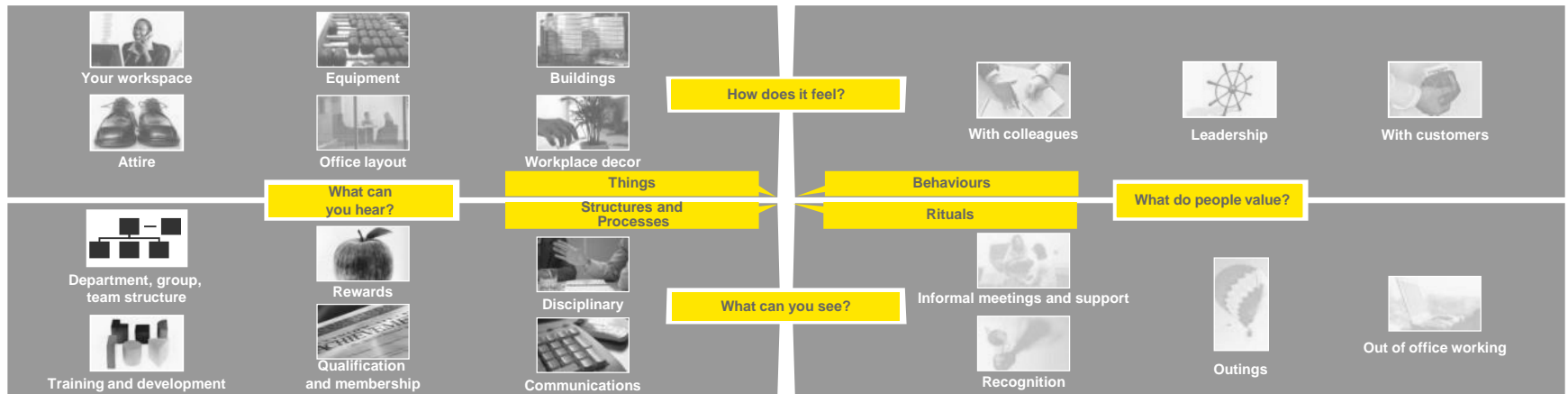
Source: Corporate Leadership Council research: Succession Management Survey

Supporting analysis recommendation #16

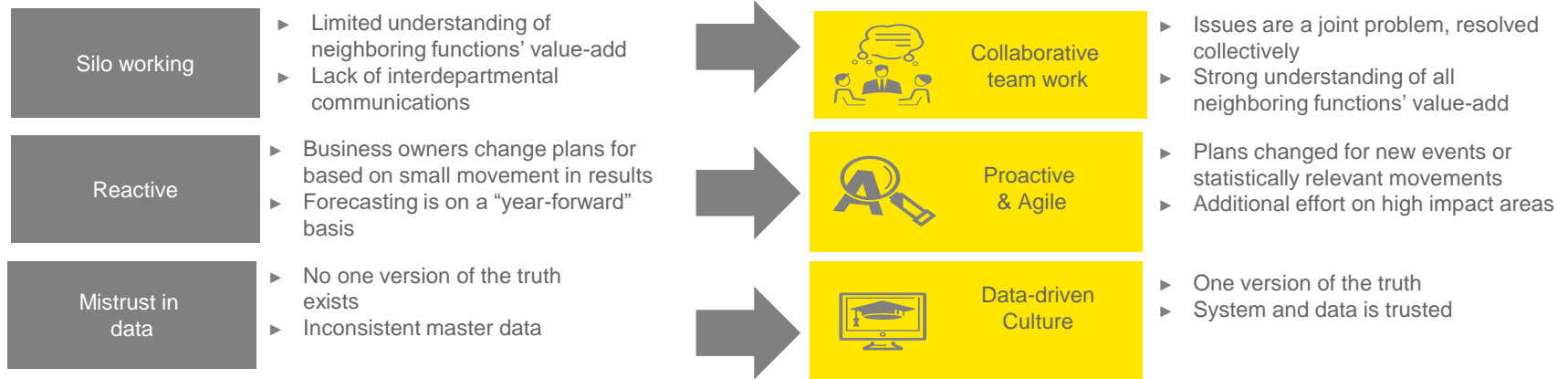
Leading practices demonstrate how aligning purpose and mission could transform an entity like NC DPI into a collaborative and innovation-driven organization

Illustrative

By defining your desired culture



Transition into collaborative, proactive, and data-driven organization



Source: Secondary research

Supporting analysis recommendation #16

An employee survey could help identify needs, while improved communication tools and processes could contribute to reducing current silos

Interviews indicate NC DPI staff feel as though there isn't consistent communication which can impact their ability to do their job effectively

- ▶ “[We need more] collaboration and communication between Divisions and Sections, along with consistency of procedures across the board. A lot of times we feel so siloed even within the Sections of our Division and do not know what is going on with one another”
– NC DPI Central Office Staff
- ▶ “DPI is organizationally structured based on legislative mandates/funding as opposed to being organized around specific outcomes. This has led to multiple areas working toward similar goals and impacting the same end users, but rolling out their services in silos. This then causes efforts to be duplicated, inconsistent and contradictory communications, and lack of accountability for results/performance.” – NC DPI Central Office Staff

An employee engagement survey could help identify and track employee satisfaction and needs

- ▶ Survey employees annual to understand level of satisfaction with job, understanding of agency priorities and assessment of employee needs
- ▶ Surveying employees annually can help to provide data around progress that is made to improve the communication and culture within the department
- ▶ When used effectively and shared back with employees, surveys can greatly increase organizational transparency and contribute to employees' sense of trust and morale

Consistent internal communication can help to break down silos

- ▶ A set of consistent communication structures can help to support broader awareness among employees of the work at NC DPI and foster more collaboration
- ▶ These could include structures such as:
 - ▶ Regular leadership team meetings
 - ▶ Monthly newsletters
 - ▶ Quarterly “all hands” or town hall-style meetings

Supporting analysis recommendation #16

By making learning and development a priority, NC DPI can improve its ability to attract and retain the right talent

By elevating a learning culture ...

NC DPI could build a **roadmap designed to achieve change** through enhanced strategic governance, improved discipline, and a focus on developing the infrastructure for innovation in learning



- ▶ Grow learning and development (L&D) to be an enabling and strategic partner to business owners so that together NC DPI can meet transformation needs
- ▶ Elevate learning culture for everyone, in every part of the business – everybody leads, everyone can learn, transform the people to transform the organization
- ▶ Create an enriched learner experience which is personalized and meets the needs of the workforce

Leading learning trends

Centralized function: Many leading learning organizations have a central learning team to consult with business units (BUs)⁴ and **74.8%** of organizations make learning technology decisions centrally²



Emerging Skills: On average 8% of learning offerings are allocated to the latest professional or industry skills²

Personalization: 39% of organizations focus on developing learning pathways to address skill gaps in the next 12 months²



Governance: 81% of organizations focus on their learning organizational structure and governance in the next 12 months²

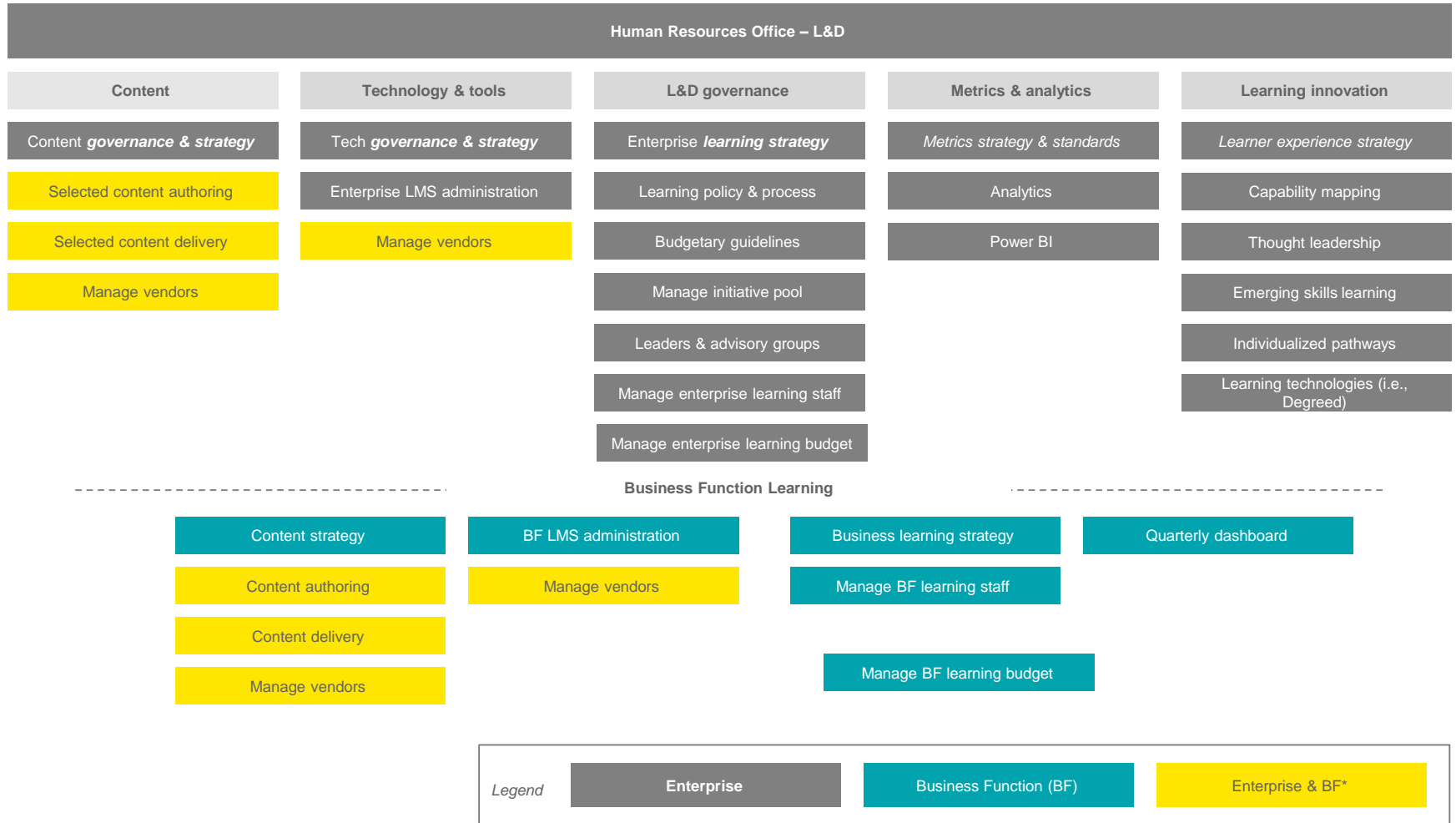
Sources:

1. ATD: 2017 State of the Industry Report
2. Brandon Hall: 2017 Training Benchmarking Study
3. Training Magazine: 2017 Training Industry Report
4. Brandon Hall Excellence in Learning Case Studies

Source: Secondary research

Supporting analysis recommendation #16

Example of operating model for Learning & Development function



Source: Secondary research

Supporting analysis recommendation #17

Analysis of NC DPI data suggests NCVIP-driven performance management results are not clearly correlated with compensation

Example 1: Education Consultant II (Total: 90 employees)



87%

Analysis of the data indicates **87%** of the employees classified as Education Consultant II received salary adjustments between **2.6% and 3.06%**, indicating that compensation based on performance is potentially **not differentiated** between low & high performers

16%

There is a **wide difference** noted in this analysis, as much as **16%**, among employees who perform at the same level

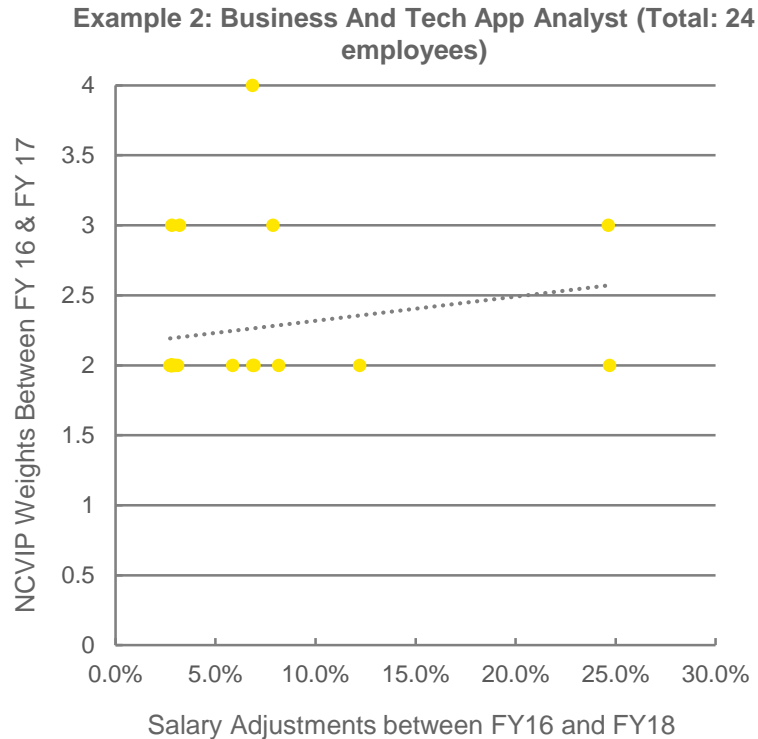
Methodology

- ▶ Employees whose NCVIP performance management information is available for FY16 and FY17
- ▶ Employees whose compensation information is available for FY16 and FY18
- ▶ Job level to which over 20 people are assigned
- ▶ NCVIP Weightage = “Does Not Meet Expectation”: 0; “Meets Expectation”: 1; and Exceeds Expectation: 2 (e.g., FY16 “Meets Expectation” and FY 17 “Meets Expectation” Weight = 2)

Source: Beacon HR Data; methodology confirmed by NC DPI in advance of analysis

Supporting analysis recommendation #17

There is significant variation observed in salary increases within a job level



63%

Analysis of the data indicates **63%** of the employees classified as Business and Technology Application Analyst received salary adjustments between **2.7% and 3.2%**, indicating that compensation based on performance is potentially **not differentiated** between low & high performers

22%

There is a **wide difference** noted in this analysis, as much as **22%**, among employees who perform at the same level

Methodology

- ▶ Employees whose NCVIP performance management information is available for FY16 and FY17
- ▶ Employees whose compensation information is available for FY16 and FY18
- ▶ Job level to which over 20 people are assigned
- ▶ NCVIP Weightage = "Does Not Meet Expectation": 0; "Meets Expectation": 1; and Exceeds Expectation: 2 (e.g., FY16 "Meets Expectation" and FY 17 "Meets Expectation" Weight = 2)

Source: Beacon HR Data; methodology confirmed by NC DPI in advance of analysis

Additional context



Additional context

The state is also subject to specific federal requirements for LEAs and state agencies that require states to maintain support for specific federal programs

NC DPI Maintenance of Effort Context

- ▶ NC DPI receives funds from various federal programs, but its largest federal funding streams include those consolidated under ESSA (Title programs), IDEA (special education), and Perkins (career and technical education, or CTE)
- ▶ While the majority of the funds NC DPI receives from the federal government are passed through to LEAs and schools, NC DPI does maintain some funds at the central agency level for state-wide programs and to cover grant and program administration costs; these funds are subject to maintenance of effort requirements

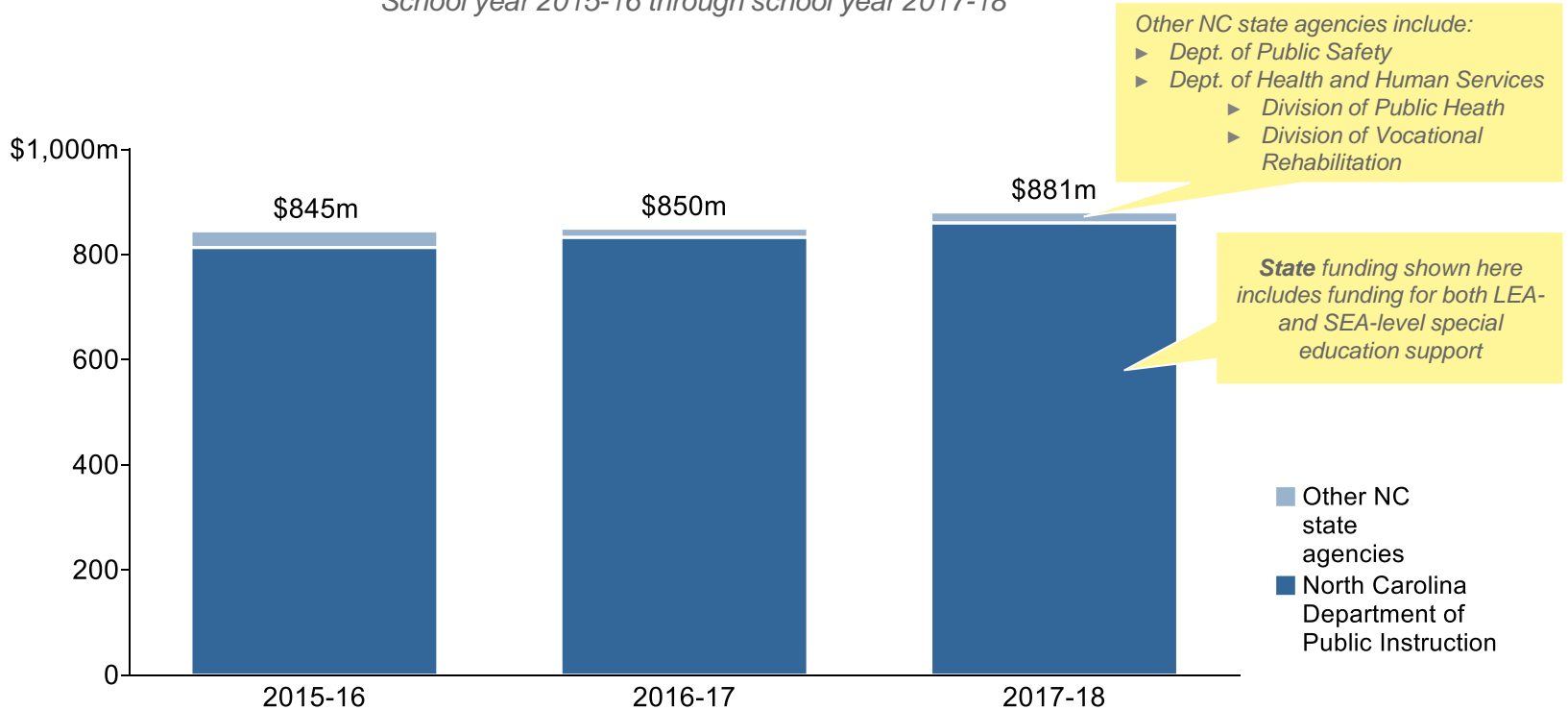
	ESSA (Title funding)	IDEA	Perkins
Federal program	▶ ESSA Title funds provide supplemental support for a range of student sub-populations (e.g. ELL, SPED)	▶ IDEA funds provides support for special education students and families	▶ Perkins program funding provides support for CTE programming statewide
SEA maintenance of effort requirements	▶ The state receives its full ESSA allotment for a given year provided: (1) the state's fiscal effort per student or in aggregate for the prior fiscal year is at least 90% of the fiscal effort of the second prior year, and (2) there is not an additional instance of noncompliance in the previous five fiscal years	▶ The state receives its full IDEA allocation provided the state has maintained its support for special education programs at at least 100% of prior-year funding levels, relative to federal funding	▶ The state receives its full Perkins allocation provided the state has maintained its support per student or in aggregate for CTE programs at at least 100% of prior-year funding levels
Other considerations	<p>▶ Consolidated reporting: NC DPI is able to consolidate administrative cost reporting across ESSA programs because the department meets the requirements allowing for consolidation (state agencies must be <50% federally-funded to consolidate reporting)</p>	<p>▶ Cross-agency collaboration: DPI's Exceptional Children Division consolidates relevant state spending across agencies to complete IDEA's Maintenance of Fiscal Support (MFS) requirement for the state; agencies are:</p> <ul style="list-style-type: none"> ▶ Dept. of Public Safety ▶ Dept. of Health and Human Services <ul style="list-style-type: none"> ▶ Division of Public Health ▶ Division of Vocational Rehabilitation 	<p>▶ Cross-agency collaboration: NC Dept. of Community Colleges is a sub-grantee of NC DPI for the Perkins grant; NC DPI FBS annually consolidates relevant expenditures to assess MOE</p> <p>▶ Expenditures excluded from MOE: MOE calculations exclude spending on capital expenditures, special one-time projects and pilot programs in CTE</p>

Note: Under IDEA, state-level funding maintenance requirements are referred to as 'maintenance of fiscal support' (MFS) to distinguish from LEA-level 'maintenance of effort' (MOE) requirements
 Source: USED, NC DPI Financial and Business Services team, state education agency websites

Additional context

Maintenance of fiscal support (MFS) for IDEA is calculated statewide; federal and state funding for special education have both increased over the last three years

Multi-agency state and federal funding to support special education in North Carolina,
School year 2015-16 through school year 2017-18



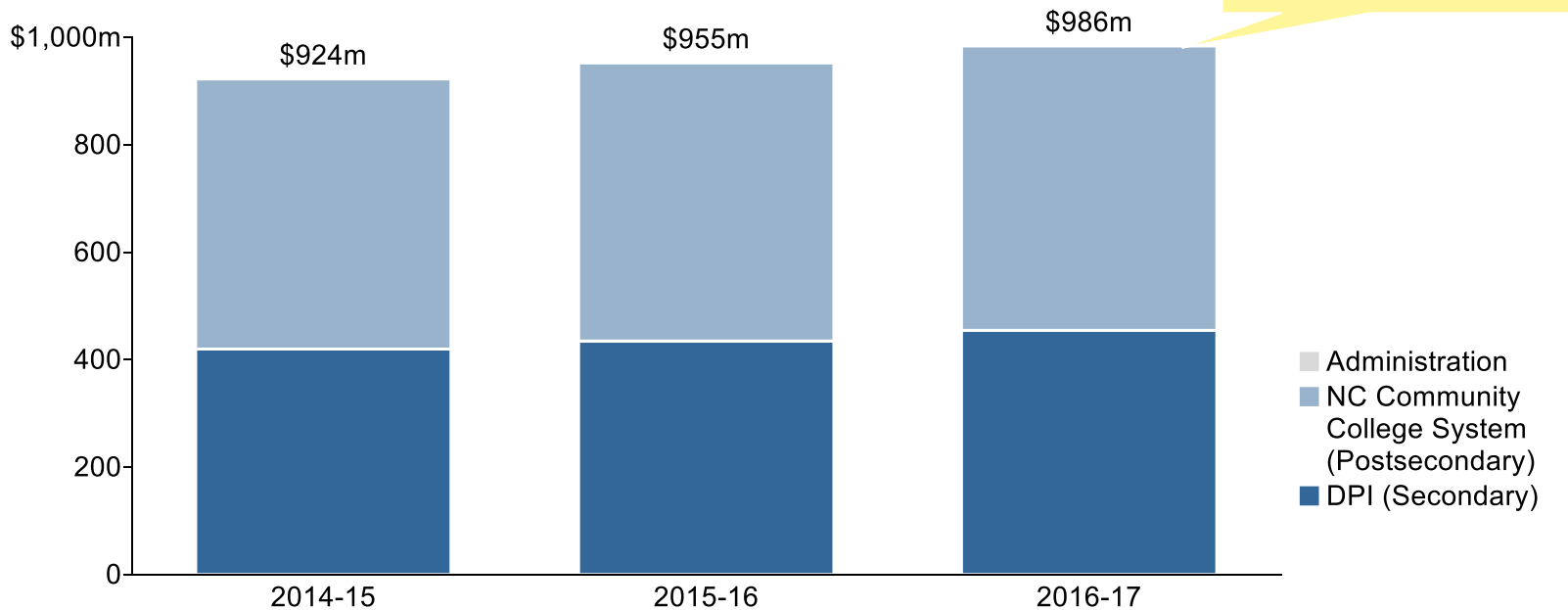
State funds available to DPI for SEA-level special education supports	2015-16	2016-17	2017-18
	\$27.7m	\$27.3m	\$27.7m

Note: Maintenance of effort (MOE, used under ESSA and Perkins) is equivalent to maintenance of fiscal support (MFS, used under IDEA)
Source: DPI Financial and Business Services team

Additional context

Maintenance of effort calculations for Perkins-supported CTE programs include NC community college system funds; state funding has increased in recent years

State funding to support CTE programming in North Carolina,
Grant year 2014-15 through grant year 2016-17



Source: NC DPI Financial and Business Services team

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