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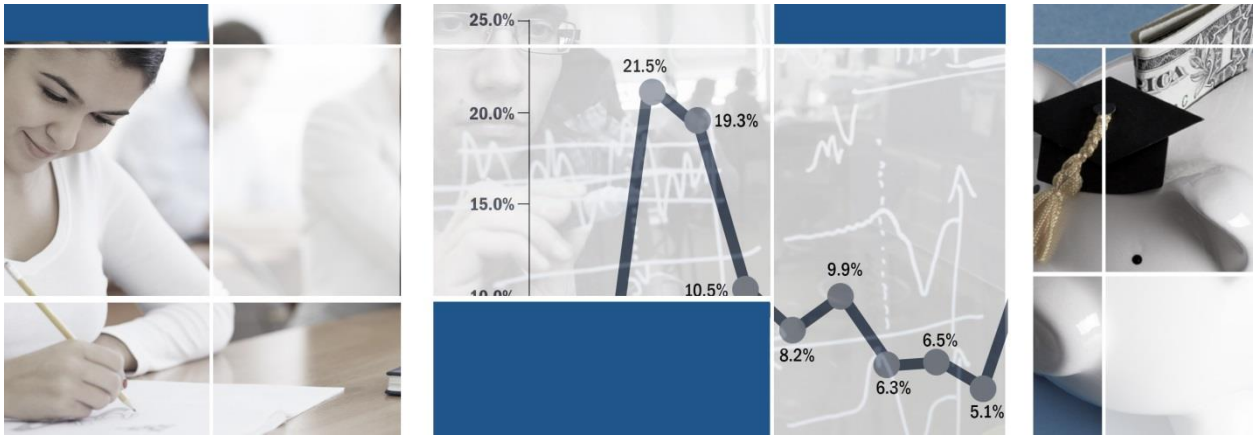

Using Data to Inform Policy:

Report of Council's Ad Hoc Committee on Data and Policy

STATE COUNCIL OF HIGHER EDUCATION FOR VIRGINIA

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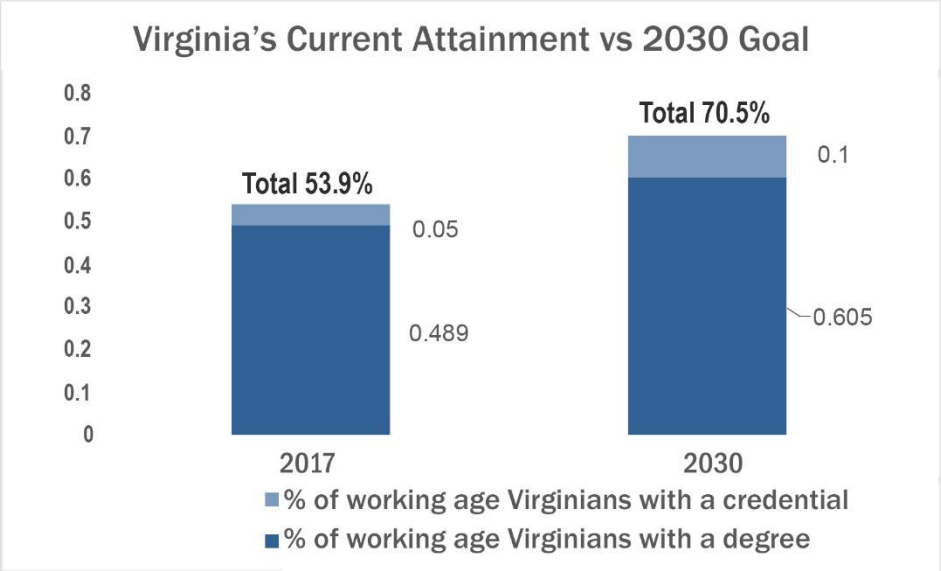
INTRODUCTION

The Virginia Plan for Higher Education articulates the objective that the Commonwealth will be the best-educated state by 2030. To achieve this objective, Virginia not only must increase educational-attainment rates, but also close the gaps in the differing rates of attainment that exist across its population and its regions. The effective use and communication of data are powerful tools in that effort.



For these higher levels of attainment to be achieved, Virginia must address the "value proposition" of higher education to students and families and to the Commonwealth. Policy makers, educators, families and students need easy access to trusted information upon which to make informed decisions about policies, funding and life choices. While SCHEV has significant data assets, including the Virginia Longitudinal Data System (VLDS), it is imperative that those data support the alignment among education, workforce and human capital needs of the Commonwealth and that information on the alignment is readily and easily available to the various users.[1]

Within this context, in January 2018 the State Council of Higher Education for Virginia (SCHEV) formed an ad hoc committee to develop a blueprint to guide the use of data policy and data systems maintained by SCHEV as strategic assets in transforming the

[1] This report is a summary of the ad hoc committee's considerations, findings and proposed actions. See the Appendix for additional information on *Code of Virginia* authority, committee and staff associated with its work.

lives of Virginians and the Commonwealth through higher education. Already committed to the goals of *The Virginia Plan*, the Council recognized the need to devote attention to making SCHEV's data resources more focused for policy decision-makers and other stakeholders.

ASSESSING SCHEV'S DATA RESOURCES – GAP ANALYSIS

At the outset of its deliberations, committee members recognized that the effective use of data would be more than just the availability of data; it would be succeeding in making that data accessible to the variety of audiences SCHEV needs to serve and connecting the data to state priorities.

In order to explore the question of appropriate data accessibility, the ad hoc committee created eight questions to guide their work:

1. How should we use the data we have more effectively to meet the needs of the Council and the Commonwealth?
2. What are the essential policy questions we should ask and how do we use our data to inform the answers?
3. What data collections do we suspend, continue or expand? Are they complete and suitable for achieving the goals of The Virginia Plan?
4. What improvements should we pursue to make our data more accessible and transparent to stakeholders?
5. What are the best means to communicate data sources, findings and reports to various audiences?
6. What other data sources should we consider incorporating into our system?
7. Are there data elements that currently do not exist that should be created?
8. What financial resources will be necessary to achieve the outcomes of the data blueprint?

To meet the committee's objective, committee members noted the need to identify stakeholders to engage in the process. The stakeholders identified included a mix of individuals that represent students/parents, institutions, policy makers and business/economic development.

The committee undertook an extensive review of SCHEV's current research website, research.schev.edu, which is in its third iteration since 2001. The data published are

intended to be authoritative, objective and consistent with good practices developed in the institutional research profession. Many of the site's reports are unchanged in their underlying structure since first developed in the 1990s. These represent a consistent history of reporting and data use that users rely upon. Further, these reports are designed with institutional use in mind, to allow easy access to comparable data that differs little from internal reporting. They are not, however, particularly user friendly to the occasional user – including students and families, the media, etc.

Other reports cross institutions. These are value-added reports that are not possible without a single collection point of student-level data. The Transfer Feedback and Cohort Lifecycle Reports are examples of cross-institutional reports in that student movement between institutions is captured and tracked. The Student Success Index, since it is agnostic as to where a student graduates, is a specific example of how these data are used. Still other reports cross agencies, most notably the reports on the wage outcomes of graduates.

The committee reviewed the principles upon which the SCHEV Research website was built:

- Reporting and data collection must be consistent with state and federal law.
- Reporting and data use should be consistent with the Code of Ethics developed by the Association for Institutional Research.
- Reporting of data should first do no harm. It should not appear to reference or relate to something that it does not. Appropriate disclosures to the limits of the data should be readily available.
- Reporting should create value for the institutions submitting the data. Large quantities of data should not be required of institutions that simply disappear into a black box.
- At all times we should be aware that what we are reporting reflects actions and choices of students, and that the policies that are created and enacted based on these data are intended to have direct impact on students, thus care should be taken to ensure that any reporting or calculations are made accurately and meaningfully reflect the underlying data.

The committee directed staff to complete a survey and interviews of SCHEV data users, policy makers and other stakeholders. The committee further directed staff to conduct a

review of other state higher education websites and provide examples of best and promising practices.

In February staff developed and published a short survey. A total of 128 stakeholders provided responses. An additional 11 Council members and "influencers" (Council members and individuals in the legislative and executive branch having significant influence on higher education policy) provided individual insights.

In response to the question, "What are the most pressing issues facing Virginia Higher Education for which more data and communications are needed?" the top four areas were student success, value, state funding and post-graduation outcomes. Similarly, in response to the question, "What should SCHEV be studying and reporting about higher education in Virginia?", the top responses were post-graduation outcomes and student success.

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Looking at the website, respondents were asked to suggest improvements. Two-thirds of the respondents said the "user experience" needed to be improved. The objectivity and reliability of the data provided on the website were highly rated by respondents. The clarity of tables and graphics received the lowest ratings among users, though SCHEV's reports had more positive rankings than those of other data sites (e.g., Integrated Postsecondary Educational Data System Data Center, National Center for Higher Education Management Systems, College Navigator, College Scorecard).

When asked how respondents would like to see data communicated, the most frequent response was dashboards, social media notifications, subscriptions and email/data newsletters. Surveys and interviews confirmed that SCHEV has many different audiences: students and parents looking for financial aid, tuition and fees, debt and job outcomes; policy makers looking for institutional performance/outcomes; employers looking for workers. That necessitates making the website and data more user friendly.

Interviews with "influencers" revealed a view that SCHEV's data are plentiful, but opaque. ("Influencers" are defined as legislative and executive staff and others involved in state policy development and implementation.) Influencers articulated the need to make SCHEV data more usable for all of its stakeholders. Influencers repeatedly offered the view that SCHEV likely has enough data. They felt the pressing issue to be the ability to get insights from the data. They suggested the need to start at the end and ask, "What questions are we are trying to answer and what data would do that?" And, "How do we get the data in a form that would make it easiest for different stakeholders to answer those questions?"

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Influencers noted the need to take the extensive amount of data SCHEV has and turn it into useful information for policy makers. Recognizing that policy makers have limited time and interest, they said the information should be put forth in an understandable format. Influencers advocated the use of multiple layers, such as single page infographics that lead into more extensive analyses, so that information is packaged at an appropriate level of detail for the different audiences SCHEV should be serving.

In response to what data SCHEV needed to be reporting, both survey respondents and influencers suggested a need for accessible data on:

- Student success – access, enrollment, retention, graduation, completion, awards.
- Value – return on investment for the individual and the state.
- Post-graduation success – employment, wages, quality of life.
- Student debt – as related to program of study and future wages.
- Equity and diversity.
- Cost of education – to the student/family and state support.
- Availability of and access to financial aid.

REVIEW OF OTHER STATE EFFORTS

Staff provided the committee with a review of other state higher education websites. That analysis revealed several major themes on the differences and similarities to SCHEV's data. These major comparisons were organized around the data presentation, data accessibility and data reported at comparable state agencies.

Data Presentation

In reviewing how other state agencies present their data, a majority of state higher education agencies produce static reports on key higher education statistics.[2] [3] [4]The reports are presented typically as an annual comprehensive look at the entire state or on specific higher education topics (e.g., enrollment, financial aid). The reports are intended to be a digest of information that would be printed and attempt to provide a user a comprehensive look at all aspects of higher education in a state.

Some states publish data in a manner similar to SCHEV's reports as data visualizations. States such as Kentucky[5], Minnesota[6], Mississippi[7] and Colorado[8] provide content through interactive data visualizations that allow the user to pick a topic of interest and gain insight by filtering the data to a certain view. Many of these visualizations operate using a data visualization tool, such as Tableau. The visualizations, similar to SCHEV's, guide the user into exploring an organized topic, and then provides the user with the flexibility to explore information on the entire topic or on a smaller subset of the data.

Data Accessibility

Accessibility of higher education data varies widely based on the presentation the state agency uses. Since most states report the state's data in a format intended for a printed format, a major concern identified is the ability to quickly find information or extract relevant information from a few limited reports. These static reports require a user to at least understand the content available within a report or invest significant resources to

[2] New Mexico Higher Education Department, Data Reports
[3] Indiana Commission Higher Education, Commission Reports
[4] Alabama Commission on Higher Education, Student Database Reports
[5] Kentucky Council on Postsecondary Education, Data
[6] Minnesota Office of Higher Education, Research Data and Reports
[7] Mississippi Institutions of Higher Learning, Interactive Data Portal
[8] Colorado Department of Higher Education, Longitudinal Charts and Graphs

learn about the content available. These concerns are diminished with richer data visualization products that allow a user to find information easier; however, these data visualizations tools employ certain filters and data layouts that may present new issues around accessibility for certain individuals.

An additional concern around the accessibility of data is the ability for stakeholders to find data from a state agency. State higher education agencies provide data in a variety of ways, but state agencies often lack a centralized location for their specific tools, reports or visualizations. Agencies usually provide the same report or data visualization in multiple locations on their websites to guide individuals to information. This method is slightly different than SCHEV's as SCHEV's site has two specific locations for SCHEV reports and data visualizations.

Data Reported

The data reported by most state agencies intends to provide a snapshot of a few select statistics important to understanding the state's higher education. Common data reported by most states include enrollment, financial aid and outcomes. For example, Oregon has created "Statewide Higher Education Snapshots" to provide consistent displays for each public institution in Oregon and a statewide view.[9] The trend to create reports or data visualizations on a selected few statistics has allowed states to publish infographics that attempt to provide a compact picture of higher education. These snapshot views often provide very little contextual information on the data reported, and limit the understanding of what additional information could help in decision-making. Further, they often implicitly push specific messages.

[9] Oregon Higher Education Coordinating Commission, Statewide Higher Education Snapshots

Advocacy Partnerships

In addition to state websites, which tend to be more formal and heavily data-driven advocacy partnerships with higher education, have developed in a number of states. Their websites provide targeted messages, information and links for specific campaigns in states. Some examples include:

Growth4VA

Growth4VA is a broad-based bipartisan coalition of business, education and political leaders and Virginians from all walks of life who believe that higher education is a crucial economic engine for our Commonwealth. The coalition was founded by the Virginia Business Higher Education Council and supported by all 16 public colleges and universities in Virginia, the Virginia Community College System and Virginia's non-profit private institutions. They work actively to promote reform and reinvestment throughout the Virginia higher education system.[12]

Forward Ohio

Forward Ohio is a public awareness campaign launched by the Inter-University Council of Ohio (IUC), an alliance of Ohio's 14 public universities. Their mission is to promote higher education and highlight the ways colleges and universities in Ohio promote growth and opportunity in their state.[13] See Forward Ohio advocacy reports.

Complete to Compete

Mississippi's Complete to Compete (C2C) is a statewide initiative designed to help Mississippi adults who have earned some college credit – but do not have a degree – better their lives by completing a degree program. Created by the Mississippi Institutions of Higher Learning and the Mississippi Community College Board, the C2C program combines the resources of the state's 15 community colleges and eight public universities.[14]

Complete Tennessee

Complete Tennessee is a nonprofit 501(c)3 education advocacy organization focused on increasing postsecondary access and completion in Tennessee. Complete Tennessee advocates for students and communities by supporting increased postsecondary access and completion. Complete Tennessee believes every Tennessean deserves the opportunity to earn a postsecondary degree or certificate that leads to increased economic mobility, community engagement and a better quality of life.[15]

Additionally, state agencies vary on the data reported. The variance in reported data are due mainly to their individual data collection systems or their reliance on the Integrated Postsecondary Education Data System (IPEDS) for data. SCHEV's data collection breadth, particularly its financial aid data is significantly different than most other states. States such as Colorado [10] and Minnesota[11] are reporting on the outcomes and wages of graduates similar to Virginia; however, the states reviewed rarely report as in depth as SCHEV's data, especially on graduate debt and wage outcomes.

Audience is also something that varies for reported data among states and by tool.

[10] Colorado Department of Higher Education, Postsecondary Degree Earnings Outcomes Tool
[11] Minnesota Office of Higher Education, College Graduate Outcomes
[12] Growth4VA
[13] Forward Ohio
[14] Mississippi Complete to Compete
[15] Tennessee Connect

Colorado explicitly states that their graduate earnings outcomes tool is intended to inform parents and students. Most other states reviewed either never clarify their intended audience or explain their intended audience as anyone in the state with interest in higher education data.

ALIGNING DATA AND INFORMATION WITH THE VIRGINIA PLAN

Following the reviews of the current status of SCHEV data sources and a comparison to other state practices, the committee recommended framing the development of data resources to align with The Virginia Plan. Through an iterative process, the committee advanced a series of "big questions" in each of the four goal areas of The Virginia Plan, recommending the alignment of the website, data and communications around those "big questions."

The committee recommends incorporating these questions into the ongoing work of the Council. The committee further recommends that the Council devote the time needed to prioritize the questions and the work associated with answering them.

Through an iterative process, the committee advanced a series of "big questions" in each of the four goal areas of The Virginia Plan.

IDENTIFYING FINANCIAL RESOURCES WITH DATA AND POLICY

Based on the committee's findings, the Council advanced budget requests aimed at improving public awareness of the value of higher education and increased credential attainment. The initiatives and potential funding strategies were grounded in the committee's recognition of the:

- **Need for public awareness of the value of higher education:** While several organizations publish college rankings based on various measures of quality, Virginia lacks the means to assess and report on the return on investment that higher education provides to individuals, communities and the Commonwealth.
- **Need for standard information and coordinated efforts to provide to students and parents about postsecondary options:** Many entities provide this information; however, it comes in many different and uncoordinated forms. Many states have launched coordinated efforts to provide basic information for all individuals interested in postsecondary education.
- **Need for transparency of information and data:** Additional data analysis and dissemination of data-informed reports can help students, policy makers, institutions and others.

Recent actions taken to improve data accessibility and relevancy

Over the past year, SCHEV staff has worked to develop a version of the SCHEV Research website. These efforts have focused on making it friendlier to all users, creating more appealing visualizations, and developing templates for providing answers to the "Big Questions" on the minds of our users. Staff have also worked to develop specific pages for potential college students and those that advise them. As part of this effort, staff has worked with the Virginia Council of Economic Education on these pages to ensure they are accessible and relevant.

To address the identified concerns regarding the outcomes of graduates and the return on investment of higher education to students, parents and the Commonwealth, the Council recommended funding to administer a comprehensive survey of Virginia graduates to measure their success in securing employment and contributing to the civic life in their communities. The survey results would provide insights for all higher education stakeholders, including SCHEV, the Virginia Economic Development Partnership, the Governor and the General Assembly. Combined with existing SCHEV data, the survey will help policy makers and the public have a better understanding of the following issues:

- How many graduates stay in Virginia? How many out-of-state graduates become employed in Virginia?
- Do they get employment related to their field of study?
- Are graduates satisfied with their educational experience?
- What experiences did graduates have in college that were most meaningful to their outcomes?
- How engaged are graduates in civic life?

In addition to the survey, SCHEV proposed additional resources to increase its capacity to analyze and communicate data to policy makers and the general public. SCHEV recommended $2 million for these efforts. The General Assembly appropriated $750,000 to conduct the survey, a one-time expense.

With these data SCHEV will gain new insights into where the graduates of Virginia institutions are living and working.

SCHEV staff has engaged in a contract with AlumniFinder/Accudata to match graduate records with addresses to support the planned graduate outcomes survey and to further enhance SCHEV's detailed records on wage and debt outcomes.

SCHEV submitted nearly one million names representing the last 10 years of graduates, at all levels, public and Tuition Assistance Grant-participating nonprofit institutions. AlumniFinder was able to match addresses to 58% of the graduates and email addresses to about 19%, some of which were matched with addresses. With these data SCHEV

will gain new insights into where the graduates of Virginia institutions are living and working. SCHEV also has a substantial database of potential survey recipients.

SCHEV has begun creating new visualizations and reports using these data to show the potential talent supply by locality in Virginia, as well as earnings by locality. These data add needed context and nuance to our reports on wage and debt outcomes because geography plays a huge role in earnings. The acquisition of these data are already paying dividends in understanding the differences in earnings of the same programs at different institutions.

OPPORTUNITIES TO IMPROVE INFORMATION AND DATA

From the outset, the ad hoc committee on data and policy was mindful of the roles of the Council and of SCHEV as an agency; and as a result, members and staff stayed focused on matters of utmost importance in higher education. Although discussions expanded into secondary education, economic development and various other topics, the findings and potential actions described herein are higher-education-centric and involve topics connected to Council's statutory duties and responsibilities.

The ad hoc committee offers these initial proposals for further action:

Need: Public awareness of the value of higher education.

1. Through a survey of college graduates and other means (e.g., the use of SCHEVs data and participation in VLDS), report on the outcomes associated with Virginia's system of higher education.
2. In coordination with partners, develop and disseminate resources to help students and families make good decisions about education beyond high school. Successful coalitions, such as Forward Ohio, Mississippi's Complete to Compete, and Complete Tennessee offer examples of such partnerships.
3. Disseminate information on present and future employment opportunities and associated degrees and credentials, particularly identifying professions where there is a known shortage.

Need: Transparency and accessibility of information and data.

1. Revise websites and other communications tools to make them easier to use and comprehend.

2. Devise the means to gain feedback from users such that improvements can be made continuously.
3. Within security and privacy requirements, seek partnerships with other organizations to access and analyze data.

Need: Alignment of data and information resources with The Virginia Plan for Higher Education.

1. Frame communications and web resources in the context of the "big questions" aligned with The Virginia Plan.
2. Incorporate effective data use into all facets of the Council's work.
3. Establish the means for SCHEV to support ongoing review and prioritization of policy questions and data resources needed to answer them.

If we fail to increase the transparency and accessibility of Virginia's higher education data resources in this increasingly fast-paced, information-driven, technology-rich environment, we will have chosen by default to stand by and watch other states move ahead of us.

CONCLUSIONS

The needs identified in this report derive from a thorough review of the current status of SCHEV data and communications, a scan of other state efforts to provide transparent, relevant higher education data to various stakeholders and an understanding of the need to take a multi-pronged approach to the data. If the Commonwealth commits to the actions and supports these steps with resources over a sustained period, we will have provided the tools needed for our citizens to meet The Virginia Plan's goal to become the best-educated workforce in the nation and perhaps the world.

If we aspire to be the best state for business, to be the best-educated state in the nation and to ensure opportunity for *all* Virginians, we must act with urgency to address the findings offered in this report. If we fail to increase the transparency and accessibility of Virginia's higher education data resources in this increasingly fast-paced, information-

driven, technology-rich environment, we will have chosen by default to stand by and watch other states move ahead of us.

APPENDIX A

The Council, pursuant to § 23.1-203.9 and § 23.1-203.30, *Code of Virginia*, has responsibilities to develop and maintain a comprehensive data information system and administer the Virginia Longitudinal Data System. Specifically, SCHEV has the responsibilities to:

> 9. Develop a uniform, comprehensive data information system designed to gather all information necessary to the performance of the Council's duties. The system shall include information on admissions, enrollment, self-identified students with documented disabilities, personnel, programs, financing, space inventory, facilities, and such other areas as the Council deems appropriate.
>
> 30. Administer the Virginia Longitudinal Data System as a multiagency partnership for the purposes of developing educational, health, social service, and employment outcome data; improving the efficacy of state services; and aiding decision-making.

Duty 9 also includes the following language, which is necessary to protect the privacy of individuals for certain data-sharing activities. "When consistent with the Government Data Collection and Dissemination Practices Act (§ 2.2-3800 et seq.), the Virginia Unemployment Compensation Act (§ 60.2-100et seq.), and applicable federal law, the Council, acting solely or in partnership with the Virginia Department of Education or the Virginia Employment Commission, may contract with private entities to create de-identified student records in which all personally identifiable information has been removed for the purpose of assessing the performance of institutions and specific programs relative to the workforce needs of the Commonwealth."

APPENDIX B

Council Ad Hoc Committee on Data and Policy

Created: January 2018

Members: Tom Slater (co-chair), Ken Ampy (co-chair), Marge Connelly, Stephen Moret

Council Participants: Katharine Webb

Purpose: To develop a blueprint to guide the use of data and data systems maintained by SCHEV as strategic assets in transforming the lives of Virginians and the Commonwealth through higher education. Through this blueprint, the Council shall:

- Provide leadership to ensure that Council's data assets, including the Virginia Longitudinal Data System (VLDS), meet the ongoing needs of the Commonwealth, are used effectively to communicate with various audiences and are adequately funded and staffed.
- Ensure that Council's data support the alignment among education, workforce and human capital needs of the Commonwealth, and that the Council makes information on the alignment readily and easily available to the public.
- Promote data governance and the protection of individual privacy as a fiduciary duty of the Council and its staff.
- Ensure alignment with The Virginia Plan for Higher Education.

Goal: Identify needs and recommend actions for improving SCHEV's data and communications resources.

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