SECTION B: WISCONSIN LDS PROJECT -- NARRATIVE

(A) NEED FOR THE PROJECT

Through the support of previous State Longitudinal Data System (SLDS) grants from the Department of Education, the Wisconsin Department of Public Instruction (DPI) has implemented statewide systems to help schools and districts access and use data, significantly improving the landscape of education data usage in the state of Wisconsin. By demonstrating the value of SLDS to a wide audience of stakeholders, DPI has built a system that is sustainable with ongoing financial support from the State. We are proud of what we have accomplished, but believe there is more to be done to extend the value of these data systems, particularly to identify and address educational disparities.

DPI has an agency strategic plan known as *Agenda 2017[1]*. One of four key elements of *Agenda 2017*, "Assessments and Data Systems," calls for the Department to build data systems that streamline operations, support districts, and expand research (Evers, 2012)[2]. The Department believes that with the additional resources from this grant, we can build upon the foundation of tools necessary to bring the power of the SLDS to arguably the most important audience of all, education practitioners: teachers, principals, and pupil support staff. To do this, we request funding under the Instructional Support and Evaluation and Research Priorities. Wisconsin is uniquely situated, with the additional resources available through this grant, to build a model of how instructional supports and high-quality education research can and should be used together to drive better and more equitable outcomes for students.

In this proposal we describe the current state of DPI's longitudinal data system (LDS), WISEdash, and its complementary components. Next, we describe the need for more work to connect two important new audiences to the value of the LDS: teachers and external education researchers. We believe that as with the previous LDS grants, we can leverage these one-time funds to build projects that justify a sustained investment in the LDS. Our approach is to build a strong protocol for gathering input from, and then working in collaboration with, representatives of these communities to build tools, processes, and training that meet their needs. We describe our plans under the Evaluation and Research and the Instructional Support Priorities. We include a detailed description of our planned timeline for each project, based on our previous experience managing data system projects with external and internal stakeholders. Finally, we turn our attention to the governance plan for the project. We have learned from our prior SLDS projects the importance of defining roles and responsibilities among partners and within the agency up front. The proposal ends with a description of project staffing in greater detail.

Current Capabilities
Wisconsin's LDS is comprised of a comprehensive data warehouse with pupil and school data from a variety of sources; public and secure reporting tools for users to access and analyze the data; multiple security components to ensure that only authorized personnel view confidential data; and professional development focused on data literacy. WISEdash - DPI's public and secure reporting portal - has developed rapidly over the last several years. This development was

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[1] An Agenda 2017 Overview is in Appendix A.
[2] http://statesupt.dpi.wi.gov/asd

initiated by three previous SLDS grants from IES, and now supported with ongoing state funding to support maintenance and operations, Wisconsin has a robust statewide data warehouse and dashboard system. Please see Appendix B for a summary of current SLDS capabilities.

Data Requirements
DPI currently has the capacity to issue a statewide unique student identifier, the Wisconsin Student Number (WSN), to all public school students in the state. This system is the basis for the Individual Student Enrollment System (ISES), the collection of student-level enrollment, demographic, and program participation data. ISES provides a look at key PK-12 data, including transfers in and out of schools and school completion or dropout status. Our data collection applications, including ISES, implement data validation procedures at the point of collection. The Data Warehouse and Decision Support team at DPI also has an extensive data audit procedure before loading data into the data warehouse. The procedure includes reliability and quality checks by data owners in the teams responsible for use of the data.

WISEdash also includes data on an array of individual student assessment results including those required under section 1111(b) of the Elementary and Secondary Education Act of 1965. Through the census of students collected and the ability to match on a unique student identifier between test result data and the enrollment data from ISES, DPI is able to provide information on students not tested by grade and subject. Additional assessment data are available in public and/or (for authorized users) secure instances of WISEdash, including ACT and AP assessments to measure the college readiness of individual students, ACCESS for English Language Learners, the Phonological Awareness and Literacy Screener (PALS) for grades PK-2, and, at the request of participating districts, Measures of Academic Progress (MAP) benchmark assessment results.

A component of DPI's 2009 SLDS ARRA grant was the transition to a web-based teacher licensing and data management system, which enabled DPI to construct a teacher identifier system. Additionally, data on student course taking, course completion, and grades earned is provided by the Coursework Completion System (CWCS). CWCS also includes information about the teachers assigned to each course, allowing teachers and students to be matched. CWCS was launched in March 2011 and was funded by an SLDS 2009 grant.

DPI makes use of National Student Clearinghouse (NSC) data to capture the postsecondary careers of individual students, including timing of transition from secondary to postsecondary education, whether students transfer, and if students complete a degree. Additionally, through our work on the Advanced Postsecondary Infrastructure (APSI) project of our 2009 SLDS ARRA grant, we have demonstrated the capacity to communicate with higher education data systems including the University of Wisconsin System (UWS) and the Wisconsin Technical College System (WTCS). Through the APSI partnership, DPI is currently working with UWS, WTCS, and the Wisconsin Association of Independent Colleges and Universities (WAICU) to define and share student enrollment in remedial coursework data.

Data Governance and Policy Requirements
In order to ensure data in the SLDS meets the needs of a variety of users, DPI has multiple tools that leverage the data warehouse architecture to provide meaningful information to users. The

largest of these is the state dashboard tool known as WISEdash.[3]. WISEdash has both secure and public reporting components, both of which draw on data in the data warehouse. The WISEdash Public Portal displays relevant information to anyone online about the demographics, student outcomes, and enrollment trends of schools and districts within the state.[4] The data in the public portal are summarized and redacted to protect student privacy. The design of WISEdash Public was informed by extensive user testing including parents, researchers, education organizations, businesses, and nonprofits.

WISEdash for Districts[5], DPI's secure reporting tool, uses a role-based security model to provide authorized users within school districts access to unredacted data on their students. WISEdash for Districts includes a number of features designed specifically based on the feedback of users across the state. Examples include student growth percentile (SGP) reports, the Wisconsin Dropout Early Warning System, high school feedback reports, and postsecondary enrollment results. WISEdash for Districts launched in October of 2012 and WISEdash Public launched in October of 2013. Recent enhancements include the beginning stages of guided analysis through a forms tool - a component we propose to advance with this application - and a new feature that allows grouping of students into cohorts based on local inquiry needs.

The Data Warehouse and Decision Support team was established at DPI in 2011 specifically to tend to the detail of LDS-related objectives and integration issues within the agency. This team establishes the look and feel of the LDS portal and identifies tools that would be useful for future LDS development. Using an Agile development process with a customer-service focus, this team engages routinely with program areas to assure that the products of our student data system are relevant and useful to internal and external stakeholders alike.

Data governance for the data warehouse is overseen by a full-time Data Governance Coordinator who works with data owners and data stewards to ensure that all data warehouse decisions are communicated and made with input of key internal and external stakeholders. This role also leverages existing DPI committees and workgroups of internal and external stakeholders to provide updates on any changes or proposed modifications to the data warehouse or applications that are driven by the data warehouse.

DPI recognizes the importance of managing specific data issues including data ownership, management, confidentiality and access in an open and transparent manner. DPI data are extensively documented, and publicly-available "About the Data" pages explain all of the data elements accessed within both public and secure WISEdash.[6] DPI has also built rigor into our communication with external stakeholders. A key partner is the State Superintendent's Education Data Advisory Committee (SSEDAC), chaired by the DPI Chief Information Officer. The group includes district superintendents, assessment directors, IT directors, and representatives from the Cooperative Education Service Agencies (CESA), Wisconsin Education Association Council (WEAC), and school boards. Project plans and data issues are routinely shared with SSEDAC, and the group directly advises the State Superintendent and Cabinet.

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[3] http://wise.dpi.wi.gov/wisedash
[4] www.wisedash.dpi.wi.gov
[5] http://wise.dpi.wi.gov/wise_wisedashdistricts
[6] http://wise.dpi.wi.gov/about-data

Wis. Stat. § 115.297 requires that state agencies "establish and maintain a longitudinal data system of student data that links such data from preschool programs to postsecondary education programs, describes the process by which the data system will be established and maintained, and ensures its interoperability with workforce data systems […]" and the ability to use this data for research and evaluation is explicitly protected in statute Wis. Stat. § 115.297 (2).[7]

Wisconsin funds the requirements above through two separate budget appropriations: one to fund work on improving data collection and ease LEA reporting burdens and one to fund the continued maintenance and improvement of the data warehouse (Wis Stat. § 20.255 e, 20.255 ek). Combined, these represent nearly a $7,000,000 annual investment. This data collection initiative, known as WISEdata, is designed specifically to reduce the collection burden and yet increase the frequency data are reported to DPI from districts and charter schools. The legislation providing the WISEdata funds also authorizes the limited collection of data on private school students receiving a state subsidy, or voucher, for their tuition.

Technical Requirements
Privacy Protection and Data Accessibility
Privacy of student records is critical to the integrity of any data system. DPI has strict suppression rules for public reporting, and state law provides additional safeguards to student data beyond FERPA mandates. To address data confidentiality and access, the agency initially established a Pupil Data Policy Advisor position in 2007. The work was significant enough, however, that two staff members now share data governance and data privacy responsibilities, facilitating work within the information technology (IT) teams and across the agency. This coordinated effort results in reviews of all data access requests and approval or denial of the requests. DPI strictly adheres to and documents these student privacy rules.

The WISEdash Public Portal does on-the-fly redaction of data in the data warehouse that adheres to DPI's redaction and suppression guidelines. Student names and social security numbers are never used for outcome data. Only locally-authorized district and school personnel have access to WSNs with identifying information attached, for the purpose of registering students. Security and access to SLDS data are role-based with authorization and authentication occurring at the individual user level. Only authorized users have access to confidential data. Role assignments are made by the school district giving authorized local staff complete control over who in their organization has access to what level of student data.

Data quality efforts begin with data collection, continue with agency-wide data verification procedures, and extend to all data collections whether they are collected externally or internally. DPI has taken several steps to ensure the reliability and validity of data stored in the longitudinal data system. As the data systems have grown, DPI established a Customer Service team which explicitly focuses on providing documentation, communication, policy and procedure, and technical assistance related to DPI's data collection efforts. As a standard part of every data collection, DPI publishes written documentation defining the data elements for that collection. Documentation includes a list of acceptable values. Automated web applications have built in

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[7] Complete text of relevant state statute is available in Appendix C.

validation and edit checks to prevent data mismatches from being submitted. This also ensures that data is collected in a consistent manner across the state.

Data quality training is provided to districts and schools through a variety of formats including on-site training, user manuals, and multi-media presentations posted on the agency website. Technical Support Staff conduct biweekly teleconferences during the data reporting collection periods in which vendors and districts can ask questions. These efforts are supplementary to DPI's day-to-day Help Desk service. Also, as a part of DPI's data collection protocols, districts are able to review data submitted prior to final submission. Internal DPI staff also review summary reports to enhance data quality, looking for reasonability and comparing to prior years' data. District administrators are contacted when anomalies are identified. Districts are given a sufficient window of opportunity to revise the data, and the window of time is announced to districts well in advance of the verification period. DPI has dedicated staff members who address problem WSNs, including one position devoted to detecting and correcting duplicate student identification numbers.

Interoperability
DPI's data systems are fully CEDS 3.0 (Common Education Data Standards) compliant. DPI and its higher education partners have agreed on adoption of the CEDS 2.0 standards for the purposes of data sharing; DPI has conducted test exchanges with UWS, WTCS, and WAICU. The planned adoption of the Ed-Fi data reporting suite with Student Information System (SIS) connectors funded under the WISEdata project will further make the interoperation of DPI's SLDS and school district data systems seamless. DPI has also been an active participant in the Council of Chief State School Officers (CCSSO) Educational Information Management Advisory Council (EIMAC) and the CIO Network. These groups are focused on cross-state collaboration in the areas of standards-based data sharing and software development interoperability. CCSSO supports our application because of our pledge to continue this collaboration.

DPI's WISEdata initiative is designed to leverage our new data warehouse architecture, the Ed-Fi application programming interface (API), and collaboration with SIS vendors to implement the API. The project will, over the next several years, eliminate the need for manual submission from school districts. Further, it will result in improved data quality and usefulness for the field. Wisconsin benefits from the technical assets inherent in the Ed-Fi framework and tools, and appreciates the opportunity to contribute back to the collaborative.[8]

Data Use Requirements
Secure access
DPI has invested substantially into the policies and procedures to ensure secure and appropriate access to data. The core piece of this infrastructure is the Application Security Manager (ASM), enabled by the SLDS 2009 grant. ASM enables security access to student records based on one of three roles: 1) student detail including economic indicators; 2) student detail absent economic indicators; and 3) a restricted role only able to see aggregated but unredacted data. School districts decide who has access to their data and assign and manage roles. DPI has instituted role-based security for agency staff as well. DPI established an internal access request process that requires program area staff to demonstrate their legitimate access need. The request requires both

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[8] A letter of support from the Ed-Fi Foundation for our project is included in Appendix C.

supervisor approval and a data privacy review by designated staff. A prerequisite for consideration is completion of training on pupil privacy, which is certified by the supervisor.

To facilitate appropriate external access to state data, DPI has a well-documented public online application for researchers to make their data requests (http://wise.dpi.wi.gov/dpi-confidential-data-application). This process tracks the decision to grant or deny each request, and monitors all data-sharing agreements and data deliveries made with each researcher. This process ensures that data requests are processed in an objective and timely manner and makes it easy for DPI staff to audit who possesses what data at any moment. Data access requests are reviewed by DPI's Data Request Review Board which weighs requests based on their alignment to agency priorities, potential burden to staff to deliver the data, potential benefit to policy and practice in the state of Wisconsin, and compliance with all relevant privacy laws and ethical research practices.

This process has grown out of many fruitful partnerships between DPI and external researcher organizations. To manage these partnerships and advise the state on relations with the education research community, DPI established the Wisconsin Education Research Advisory Council in October of 2011. The committee is co-chaired by Dr. Jared Knowles, a DPI research analyst, and Professor William Clune of the Wisconsin Center for Education Research (WCER). WERAC serves as a space where researchers and practitioners meet to advise DPI on education-related research and to discuss issues related to data sharing. Due to DPI's investment in research capacity, DPI's in-house researchers are able to identify high-quality external researchers and work with them collaboratively to craft research projects that are mutually beneficial. In addition, through the Early Childhood Race to the Top grant, DPI has participated in defining an internal research agenda that is cross-agency by working with research analysts at the Wisconsin Department of Children and Families and the Wisconsin Department of Health Services.

As we will demonstrate below, DPI proposes to use the funds in this grant to expand and deepen our relationships to the external research community with a specific focus around dissemination of high quality research produced by internal and external researchers, driven by demand from education practitioners in Wisconsin, with an aim to inform and improve instructional practices.

Data Use Deliverables
To facilitate the use of data stored in DPI's data warehouse, DPI has built a robust platform whose data model conforms to CEDS. On top of this data warehouse, the most visible application is WISEdash, the business intelligence solution discussed above. WISEdash includes the following components:

- An education data model structured to enable smart reporting on education data;
- A data warehouse;
- Role-based data access and dashboards, as described above;
- Public and secured reporting through the same technology, as described above;
- Interactive filters for ad hoc data querying;
- Custom reporting capabilities for power users at the district and state level; and
- Professional development resources such as pre-made workbooks and videos to guide understanding and use of dashboards and reports.

Complementary to this dashboard, DPI also provides analytics to school districts built off of the core data in the SLDS. These analytics include a statewide middle school Dropout Early Warning System (DEWS), accountability report cards, growth model reports, and ad hoc reports about policy-relevant issues as they occur.

Data Use Training
Within DPI, efforts are underway to increase training on the importance of data quality and how data may be used for decision-making, along with efforts to develop and strengthen the data skills of agency staff. Training sessions have been held to give program users a better idea of what data are collected through the ISES system, what data are available for analysis, and how data may be used to evaluate educational effectiveness. The ISES helpdesk and support staff work closely with program area experts, providing summary reports for data quality review.

DPI maintains a revolving series of brown bag events updating staff about the data available in the data warehouse, what data staff are able to access as part of their work, and how to use and interpret data. This includes a series of workshops around education statistics known as StatChat. Additionally, DPI has twice offered a bootcamp training series for three days in Madison on the use of the open source statistical platform R. These trainings have been attended by about a dozen internal staff as well as staff at other SEAs including Arizona.

WISExplore
DPI's WISEdash data warehouse and reporting solutions form a strong foundation; with this foundation in place, the Department has turned its attention to extending the audience of the system into the classroom. In this vein, the Department has invested in building a training infrastructure that helps both identify desired features and additions to WISEdash and create a common language of data-informed inquiry for educators across the state to make use of the resources provided in WISEdash. This training effort is known as WISExplore.

WISExplore represents the DPI training efforts around SLDS data. Since 2013, nearly 1,300 school district staff representing over 180 school districts have participated in WISExplore data retreats across the state. A combined mix of Cooperative Education Service Agency (CESA) and internal DPI staff, the WISExplore team collaborates with key educational programs in Wisconsin including Title programs, Special Education, RtI, Educator Effectiveness, state leadership organizations, and research partners at the University of Wisconsin-Madison.

The purpose of the WISExplore Project is to design, develop, pilot, and disseminate a consistent data inquiry process for use by DPI staff, school boards, administrators, and classroom educators to improve student achievement in Wisconsin. WISExplore partners help grow capacity for data inquiry using data available through WISEdash and other sources, and to design and implement thoughtful school improvement action plans informed by the inquiry. The process is supported by e-learning modules, supplemental materials, and valuable data inquiry methods (shared via in-person training and the on-demand modules), free to use by Wisconsin educators. The WISExplore team routinely gathers feedback on the WISExplore data inquiry process and tools to continue to refine resources and training protocols.

In 2014, the WISExplore and WISEdash teams worked collaboratively to create a tool, embedded directly within WISEdash, that facilitates the WISExplore data inquiry process. The tool - called Data Inquiry Journals - steps school improvement teams through the process of problem identification, data exploration, root cause analysis, and hypothesizing to inform action plans and evaluation. By embedding these steps within the data analysis tool, the data inquiry process is simplified for school staff, eliminating barriers of extra effort that would otherwise be required in accessing, analyzing, and displaying their data stories. A primary goal of the SLDS grant is to continue to expand on the utility of the embedded process such that relevant digital curricular objects and open education resources (OER) are discoverable directly within the WISEdash inquiry tools. Making these tools even easier to use, eliminating extra steps for search and discovery, allows educators more time to focus on the activities that matter, i.e., rigorous discussions about practices that impact instruction and how they can support each other in implementing them. By following the data interoperability standards promoted via CEDS, Ed-Fi, and other groups, we can assure that these relevant and exceptional digital objects are reusable in other resource portals and platforms that follow the same standards.

WISEdash Local
The WISExplore project is built around a common inquiry process that is meant to be applicable regardless of local data systems a school district chooses to use. Initial WISExplore trainings, however, uncovered a need for expanding the SLDS; a consistent request from the field is for further inclusion of data elements that are more relevant and useful for classroom educators.

In 2014, WISEdash was expanded to allow school districts to add local data to a separate instance of WISEdash. The separate instance was created to limit state-required data collections from districts to ensure data sent to the Department meet state and federal reporting requirements, while still allowing local districts an option for expanding their business intelligence functionality. This instance is called WISEdash Local. It both addresses a district desire to analyze and display local data in the WISEdash reporting structure and mitigates challenges related to the lag time of state reporting. An additional advantage WISEdash Local is a lowered barrier of entry for schools and districts interested in engaging in research and evaluation because of the ability to warehouse data in a manner more easily used by researchers.

Districts are interested in WISEdash local, but not all are able to take advantage of this tool. This grant project will allow DPI to better promote the WISEdash local option and support the implementation across more districts choosing to use that option. DPI staff can provide districts with the technical assistance they need to put their data to use informing decisions through common data extract routines, common data definitions (e.g., CEDS), and a shared language of data inquiry and infrastructure.

WISEdata
WISEdash Local currently allows a subset of school districts to address some concerns related to latency of data access. DPI also plans to improve data timeliness through the implementation of the Ed-FI API tools. Using state funds, DPI will roll out the Ed-Fi standards as part of that multi-state collaborative effort. Eliminating the need for manual file upload and download procedures will simultaneously 1) improve the cycle time for source data to make their way into the WISEdash District Secure data warehouse and dashboards; 2) improve the quality of that

data by embedding quality validation checks within the extract/transform/load (ETL) procedures used by the API and the local SIS vendors; and 3) save a significant amount of school district staff time in processing data files.

The WISEdata project addresses another concern of school district staff: the currently cumbersome process of identity access management and role-based security. DPI plans to deploy a variation of the federated security access management tool initially created by the Georgia Department of Education and now implemented in several other states. This approach relies on the local account management procedures used by school districts to create trusted users that then connect to DPI software applications. This also creates a form of "single-sign-on" to secure DPI applications. The result will be an enormous time savings for staff that create and manage user accounts while maintaining high levels of security, and we anticipate increased use of the SLDS by more school staff who can avoid the hassle of creating and managing yet one more username and password.

WISELearn

With WISEdash, the tools are in place for districts to access data. With WISExplore, the data literacy and training infrastructure is in place. DPI is now beginning to design, develop, and implement an educator resource portal known as WISELearn. It is designed to be a "one-stop shop" for Wisconsin educators searching for instructional content and professional learning resources. The portal has three components: 1) a learning management system focused on virtual professional learning opportunities; 2) a content repository of tagged instructional resources; and 3) a social network platform to facilitate virtual professional learning communities.

WISELearn was created to address two needs for Wisconsin educators: first, they need equitable access. Whether they're in the largest or smallest school district, in a metropolitan area or in rural northern Wisconsin, educators need access to the right tools and information. Second, they need personalized, applied, and engaged learning. The learner experience must be engaging, relevant, and personalized to maximize each person's learning potential.

WISELearn addresses these needs by ensuring all educators can find top quality resources in one easy-to-use portal. The development and population of WISExplore will draw upon the expertise of educators in Wisconsin, integrating both existing and new content. Further WISELearn will break down barriers to engaged learning by uniformly addressing infrastructure, professional development, curriculum, assessment, and leadership needs.

A primary goal of this SLDS grant proposal is the integration of the WISEdash and WISELearn tools in order to better facilitate the use of data to the point of instructional decision making in schools and classrooms.

In 2014, DPI used state funds to coordinate digital content curation workshops in partnership with CESAs. To ensure consistent and high quality content reviews, the curation process followed the Achieve program rubric protocols. This curation process, which we intend to expand with this SLDS grant, also allows for digital content sharing via the US Department of Education Learning Registry protocol. Indeed, the curators already tagged digital content according to the Learning Resource Metadata Initiative (LRMI) standards. These same

standards have been leveraged by many states participating in the Council of Chief State School Officers (CCSSO) Educational Information Management Advisory Committee (EIMAC) work focused on instructional improvement systems. The adoption of these standards and protocols assures that the work performed by Wisconsin can be shared across every state.

Evaluation and Research
A final investment by DPI, now with the support of state funds, to take advantage of the SLDS platform built under the previous SLDS grants, is to increase internal research and evaluation capacity to meet the needs of our agency, policymakers, schools, and districts. DPI now maintains a staff of two agency-wide research analysts tasked with developing and carrying out the Department's research agenda. Data from the SLDS forms the core of this research and evaluation work. In the past two years, DPI's research staff have lead development of an internal research agenda and annual research agenda setting process, deployed a nationally recognized and fully open-source dropout early warning system, and have built strong partnerships with educational researchers at the University of Wisconsin-Madison.

DPI's internal research agenda process is the way by which the agency prioritizes the use of its limited internal research and evaluation resources. This process is aligned to the agency wide strategic goals of *Agenda 2017*, to ensure that all students graduate from high school ready for college and career. Particular focus is paid to Wisconsin's racial and economic achievement gaps in these efforts. All program areas of the agency submit research requests to the Policy & Budget team which scores them based on their alignment to *Agenda 2017*, feasibility, and projected completion time. DPI's Cabinet then meets to review these and determine which projects will be carried out over the next year.[9]

DPI has also been very active in promoting cross-state collaboration of research staff at state and local education agencies. For example, the source code for Wisconsin's Dropout Early Warning System (DEWS) is freely available and has been adapted for use in a number of early warning implementations across the country. This proposal allows DPI even more capacity to produce high-quality research products and to disseminate them more broadly to the SLDS community.

Bringing It Together
DPI is proud of the high quality longitudinal data system it has built and its innovative approach to building mechanisms for data use to be integrated with instructional practices. However, what our users have told us time and time again is that they would like more guidance on their options in responding to the challenges they identify in their data. Two recent examples are telling:

First, the DEWS system referenced above was implemented in the fall of 2013 (Knowles, forthcoming). As part of launching that system, WISExplore and DPI staff engaged with hundreds of practitioners across the state to raise awareness about the availability of this tool and to train practitioners on its use. One consistent message returned to DPI: districts desire to know what options are available to intervene for students identified. While the Department currently provides limited recommendations on the DEWS homepage, districts want to know what programs are being used by their peers, and how peers match students to interventions. In short, they want an answer to the question, "We see what the data say, but now what?"

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[9] An example DPI research agenda planning document is in Appendix A.

DEWS has been a major initiative at DPI and much of the analytical resources of the agency have been devoted to making sure the predictions produced by DEWS and the documentation around the system are just right. However, the Department lacks the resources and expertise to provide individualized recommendations to districts or schools about how to intervene with students. This is because the Department does not currently have the same level of data that schools do to provide a more precise diagnosis. Additionally, the Department's research staff has limited expertise in student interventions and classroom practices. With the help of this grant and the work in the two priority areas below, the Department will partner with experts in the field to build a bridge between research-supported practices and the needs of individual schools and districts. This bridge will result in the means to match schools with interventions, practices, or other resources and support that are based on the current challenges faced in each school.

The department does not expect this matching to be a panacea for school districts or to replace the thoughtful work of educators. Instead, just as DEWS serves as an efficient starting point to discuss dropout prevention and individual student interventions, the Department imagines the recommendations provided through WISEdash and WISELearn as something for practitioners to react to, adapt to their needs, and reflect upon. And, if done right, to provide a feedback mechanism for the Department about what practitioners find helpful or not helpful -- to shape future professional development, data system development, and policy initiatives at DPI.

A second example of the demand for recommended practices from Wisconsin is the Achievement Gap Task Force established by State Superintendent Tony Evers and lead by Superintendent of the Mequon-Thiensville School District, Demond Means. The Task Force brought together educators from schools that had been identified as making sustained progress in closing the achievement gap within their schools. DPI selected schools through a rigorous process of customized student growth models applied to SLDS data by in-house research analysts. Staff from these schools were convened with the goal of identifying the practices they thought were most important to their success. This practice information was captured, analyzed, and summarized in conjunction with assistance from the Midwest Comprehensive Center. The result is Promoting Excellence for All (PEFA), strategies that close achievement gaps. PEFA is both a report and an initiative to continue to conversation about addressing educational achievement gaps (and particularly racial and economic gaps) in Wisconsin.

PEFA has been a success. Educators across the state are encouraged by hearing the examples of practices applied in Wisconsin schools that have shown progress in making a difference for the state's biggest educational challenge -- the racial and economic achievement gap. However, PEFA was a large undertaking at DPI that leveraged external resources in a way that was not sustainable. Additionally, the practices identified by through PEFA have not yet been linked to rigorous evaluations or justified by further research. An additional limitation is that PEFA focused solely on sustained closing of achievement gaps on statewide summative assessments; other outcomes were not explored.

Both examples show a need for what we propose below, a coordinated and focused effort to link research and practice directly. By partnering with external researchers and committing DPI

resources to using SLDS data to identify schools with promising practices, DPI believes it can build a sustained and rigorous ongoing improvement process modeled after PEFA.

The work we propose seeks to move along two parallel tracks: providing access to data and educator practice information most relevant to classroom educators and students, and building a process of inquiry that can identify the data of most utility to educators and produce recommended practices centered on the closing of the statewide achievement gap. The first is accomplished by our proposed Outcomes under the Instructional Support Priority, and the latter by our Evaluation and Research Outcomes. A chart depicting the vision for the linkage between these priority areas is included in Appendix A for reference.

(B) PROJECT OUTCOMES

Two to four deliverables will serve as key milestones toward achieving each Outcome. Timelines for all deliverables, as well as key staff and resources, are provided in Section C and the Budget Narrative. A chart summarizing deliverable timelines is available in Appendix A.

Instructional Support
Educators are bombarded with data and information. They need a filter for that information, a way to feel confident that the data they use are accurate and their analyses appropriate, and that the plans they create, sustain, or adjust based on those data are premised on actionable and trusted information. To address this problem, we need both data that are meaningful to educators and resources that can be linked to those data. The resources will serve as trusted, relevant, and helpful recommendations for educators.

Our work in this priority area will focus on building the infrastructure necessary to provide educators with rigorous evidence based recommendations based on the data for their students in a timely and easy to access fashion. These recommendations will serve as the basis for professional development and action plans. Training and resource infrastructure will be built in an iterative fashion in step with one another; training will serve the role of helping identify unanticipated needs, and the resource infrastructure will be the focal point for the content of the training. Outcomes 1 and 2 build capacity to use SLDS data and resources to inform instruction; Outcome 3 provides the bridge to evaluation of those practices and resources, providing evidence directly to practitioners to transform instruction.

Outcome 1: Extending SLDS to the Classroom
Above, we describe past and present plans to accelerate SLDS development to meet educator needs. Here, we discuss our plans to use SLDS funds to acquire additional data of direct relevance to practitioners resulting in a cohesive and seamless series of interactive tools.

Deliverable 1.1: Expand availability and access to a localized data warehouse for school districts.
In response to local requests, DPI plans to expand the number of districts using WISEdash Local at low- to no-cost. This will create a space for more research using local data, research controlled by the districts holding the data. DPI and researchers will work with districts to identify the questions they want answered, and build a common set of tools to address those questions.

Currently, five districts have started using WISEdash local, with five more in the onboarding process. As noted above, there is broad interest in WISEdash Local. With this grant we will onboard one new district per month over the grant period. In four years, 48-60 of Wisconsin's 424 districts could be leveraging WISEdash local.

Deliverable 1.2: Extend SLDS to Include Meaningful Local Data via District Opt-In
Another strategy used by the Department to leverage the WISEdash infrastructure to provide more timely and relevant data to educators is to allow districts to opt-in to non-mandated data collections added to WISEdash for Districts. DPI first established this process for the Measures of Academic Progress (MAP) benchmark assessment, a product used by over 200 Wisconsin school districts. DPI worked with the assessment vendor and with individual school districts to secure their permission to obtain the assessment data directly from the vendor and to make those results available in WISEdash alongside all of the other data in the SLDS.

DPI recognizes that our SLDS will never have the depth of data that school districts have in local systems, and Wisconsin will never mandate a data collection broad enough to serve the needs of local educators. Instead, we seek to gather classroom-relevant data based on optional opt-in programs focused on identifying the data *most* important to educators. We have seen with the MAP project that if we provide value and demonstrate that value, school district participation will grow. DPI will use SLDS funds to identify, acquire, test, and validate the data that is the most relevant to classroom educators to be reported in the system.

With the agency's strategic focus on assessment (see Outcomes 2 and 3), DPI anticipates demand to acquire and report back benchmark assessment results on behalf of school districts. DPI plan to integrate two additional assessment platforms with the funds available – discussed in more detail in the Budget Narrative.

Deliverable 1.3: Build and Deploy an Optional Statewide Student Intervention Management System
Wisconsin has a long tradition of addressing Response to Intervention (RtI) within the PK-12 system. Within the *Agenda 2017* focus area of "Standards and Instruction," there is a call to expand systems that promote early interventions in reading and mathematics, such as RtI and early literacy screening in kindergarten.

In Wisconsin's vision for RtI, the three essential elements of high quality instruction, balanced assessment, and collaboration systematically interact within a multi-level system of support to provide the structures to increase success for all students (http://www.wisconsinrticenter.org/administrators/understanding-rti.html). Culturally responsive practices are central to an effective RtI system and are evident within each of the three essential elements. In a multi-level system of support, schools employ the three essential elements of RtI at varying levels of intensity based upon student responsiveness to instruction and intervention. These elements do not work in isolation. Rather, all components of the visual model inform and are impacted by the others; this relationship forms Wisconsin's vision for RtI.

Districts in Wisconsin have different ways to manage and document local intervention practices. To continue DPI's support of streamlined technology benefitting from economies of scale and a

data-informed selection process, we intend to provide a student intervention management system available for districts in Wisconsin. Our project calls first for a review of existing intervention management systems both within the state among school districts as well as those in place across other SEAs. Recommendations based on the review would inform a detailed plan. The plan will address whether to acquire or build a system to be made available statewide. Implementation of the system would occur in phases starting with a pilot in year 2 and expanding each year through year 4 of the grant period. This statewide system would provide a common platform for districts, but would not be required.

The final product would integrate the operational intervention management system between the WISELearn educator resource portal and the WISEdash data warehouse and dashboard system. For WISELearn, this means interconnecting the curated and tagged digital resources used by educators as they discover and implement such resources for students with intervention plans. In the case of WISEdash, the integration means that important data around local assessments and intervention practices are included in the analysis phase for school improvement planning. As part of this integration, DPI plans to explore the use of the Ed-Fi Foundation's dashboard suite along with its existing dashboard environment already in use by other states.

Along with tool development and systems integration, we plan to devote energy with our WISExplore data use team to integrate more blended learning opportunities for school staff in these areas. Our next two outcomes are projects that will take the data inquiry processes deeper than ever before for our state.

Outcome 2: Increase assessment literacy and balanced assessment practices
Assessment is a critical source of data with direct relevance to classroom practice. Yet, while DPI has a strong history of supporting balanced assessment, DPI's current SLDS does not enable or encompass the state's vision for balanced assessment. In 2009, State Superintendent Evers convened the Next Generation Assessment Task Force, which established key recommendations for a balanced assessment system[10]. Those recommendations were the grounding framework for Wisconsin's participation in the Smarter Balanced Assessment Consortium, and have informed agency work to promote balanced assessment throughout the state. A Google image search for "balanced assessment" yields DPI resources that are accessed and used across the country. (See https://oea.dpi.wi.gov/assessment/balanced for examples.)

Two projects have spurred efforts to explore new ways that our SLDS can more explicitly address assessment needs and promote positive practice across the state. In recent months, the agency has focused on updating the balanced assessment resources mentioned earlier. Additionally, we are engaged in a project funded by the Gates Foundation via the Council of Chief State School Officers (CCSSO), called the Cross-State Learning Collaborative (CSLC). The CSLC process facilitates identification of a "problem of practice" for an SEA and development of a plan to address that problem of practice. This is Wisconsin's problem of practice:

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[10] http://oea.dpi.wi.gov/sites/default/files/imce/oea/pdf/NGTFbr.pdf

Purposeful assessment drives instruction and affects learning, but in order to be purposeful, it must be based on a plan that is informed by understanding of appropriate assessment practice and followed by purposeful and appropriate data use.

To that end, how can the Wisconsin Department of Public Instruction (DPI) increase the assessment and data literacy of our educators so they can better select, implement, and interpret results of both local and state assessments--formative, benchmark, and summative-- within a balanced assessment system to inform teacher practice and improve student achievement?

Conversations and planning related to the problem of practice and updating existing balanced assessment documents have made clear that 1) DPI would benefit from a better understanding of local assessment practices in order to determine the appropriate agency role/tasks to further support balanced assessment in the state. To this end, DPI's CSLC plan involves working with a local consulting firm to hold focus groups across the state. The purpose of the group is to learn from local educators about local assessment practices and the decisions that result in those practices. 2) Regardless of local assessment practices, DPI can support districts in evaluating their own use of assessment; and 3) the most critical kind of assessment, the one that most directly informs educators and students on a day-to-day basis is what DPI calls Formative Practices. These are the day-to-day exchanges, activities, and "assessments" that instruction is most impacted. As such, Formative practices must be a key area of support going forward, and yet our agency and our SLDS have not traditionally been organized to support non-mandated assessment practices. To that end, DPI seeks to hire a project position to support this critical work supporting formative assessment practices in Wisconsin.

Deliverable 2.1: Increase and extend assessment literacy and planning capacity
The Cross-State Learning Collaborative project has enabled DPI to better understand local assessment practices. It has also highlighted a need for the agency to step into a new role in more expressly advocating for and advertizing excellent assessment practices, from highlighting appropriate district or school assessment systems, to classroom-level practices that are positively impacting students and educators. This new SEA role will require expert leadership and coordination across the agency and with education organizations representing classroom educators and other school and district leaders.

To meet this goal, DPI will use a mix of existing content experts and a new Formative Practices consultant to:
- ❖ Curate and develop resources for a balanced assessment toolkit
  Please note that final determination of resources to be included in the balanced assessment toolkit will be based on the findings of the Cross-State Learning Collaborative project to better understand local assessment practices (results due in the end of July, 2015).
    - ➢ Assessment inventory tool for districts
      - ■ Wisconsin intends to convene stakeholders with the purpose of customizing the Achieve Student Assessment Inventory for School Districts. This customization would incorporate considerations that take into account Wisconsin's assessment context.

- On-demand and in-person training will be available to ensure use of the inventory is efficient and productive for districts.
        - A facilitator's guide will help interested school and district leaders coordinate the inventory process.
    - ➢ Updated balanced assessment visuals and descriptive resources
        - Wisconsin's balanced assessment resources that educators across the country use were developed in 2009-10; an update is overdue. Internal staff have accomplished an initial update of the existing resources, but this process drew to light additional needs and potential methods for better presenting Wisconsin's vision of balanced assessment. These methods include more dynamic and interactive presentations of assessment types and purpose. To this end, DPI proposes to work with technology experts in the department to craft these technology-enhanced resources.
- ❖ Four comprehensive on-demand modules, training, and supplemental materials will translate high-level balanced assessment frameworks into relevant materials for specific audiences:
    - ➢ Classroom teachers
    - ➢ School leaders
    - ➢ Superintendents
    - ➢ School Board members

Modules will include
- ➢ Training materials about assessment types and use of assessment data
- ➢ Facilitator guides for school and district leaders to support appropriate local assessment practices
- ➢ Videos that highlight educators and schools/districts with replicable, appropriate, and useful local assessment systems.

Such resources will be informed by a consistent group of expert stakeholders gathered as an advisory group. The group of stakeholders will include internal staff as well as representation from standards organizations, the school psychologists association, and special education experts and advocates, among others. As with other projects, these resources will be well-grounded in Wisconsin's current assessment landscape/reality, including RtI.

DPI, through its partnerships with education service agencies and through WISExplore, will identify if/how these modules can be folded into broader WISExplore training.
- ❖ Develop induction resources districts may use with new staff that may need to develop their understanding of formative practices assessment literacy within a district context.

Deliverable 2.2: Formative Practices Collection within WISELearn
Formative practices, described above, are important in informing instruction to best target and improve student outcomes. DPI has not traditionally singled out formative practices for particular support. This has not been because of a lack of interest or intent, but more because the agency has lacked the staff resources to support this work. This SLDS grant will allow DPI to step into an important role in highlighting the value and importance of formative practices locally as well as providing support and training around formative practices. This goal includes the following projects:

- ❖ Curate and develop exceptional resources and technical support for purposeful formative practices at a local level, including
  - ➢ Videos that highlight educators demonstrating appropriate and replicable practices;
  - ➢ Example formative practices; and
  - ➢ Increased internal capacity to provide direct technical assistance for this work.
- ❖ Build local assessment literacy training curriculum centered on classroom formative assessment practices.
- ❖ Disseminate curriculum in a blended format via the WISElearn tool and in partnership with professional organizations, regional education agencies, and higher education.
- ❖ Develop induction resources districts may use with new staff that may need to develop their understanding of formative practices within a district context.

These tools will be integrated into WISELearn, allowing DPI to identify use cases, where we can learn from who uses the tools, how resources are shared, and what educators find useful among the resources. This understanding of resource use and usefulness is a crucial first link to improving evaluation of practices in school districts by finding out what districts are interested in trying and in evaluating. (See Outcome 5).

Outcome 3: Increase data-informed planning and better facilitate research-supported improvement planning
Assessment literacy is critical to appropriate data use, but appropriate data use extends beyond evaluation of assessment results. Educators have myriad data topics - attendance, graduation, postsecondary enrollment, discipline, achievement - and myriad data sources - tables, reports, early warning systems, and the like - available to inform decisions in a variety of educational contexts. These data and data tools, however, are empty of purpose if not accessed and used appropriately. Wisconsin has benefited greatly from previous SLDS grants that have allowed DPI to increase access to useful, dynamic public and secure reporting tools, as well as to on-demand resources to support a process of data inquiry in schools and districts. Our attention turns now to linking our excellent data system to research-supported classroom, school, and district practices and resources. This is the crux of our work.

The projects proposed for this Outcome will facilitate increased data literacy by allowing DPI to better target data-use resources to specific audiences and to build out data inquiry processes. Ultimately, DPI's vision is that an educator working through a local or individual data inquiry process will have immediate access to high-quality resources that are directly relevant to needs in their district, school, or classrooms *based on the results available in the WISEdash for Districts reporting system.*

Deliverable 3.1: Increase data literacy and data-informed planning capacity
DPI staff have strong relationships with professional organizations (e.g., the state principals' and superintendents' organizations, school board association, and association of administrators of special services) and regional education service agencies in the state. A consistent request from these partners is for audience-specific resources for their membership. Often, with limited staff, time, and funding, DPI must create resources that can work for a wide audience. These resources are important and valuable, but also may leave out information that is particularly relevant to a

specific stakeholder group. This grant would allow DPI not only to create audience-specific resources, but also to reach more stakeholders, including classroom educators, with relevant resources and support to build data literacy and data-informed practices. To do this we will

- ❖ Create audience-specific best practice guides for working with data. The focus of these guides will be to provide questions to ask and considerations when reviewing or being presented data. Audiences will include
    - ➢ school board members
    - ➢ school leaders
    - ➢ classroom educators
    - ➢ parents
    - ➢ the public

    The resources above will be built in consultation with stakeholders via the advisory groups highlighted under Goal #1 of Outcome 2 and with the professional organizations mentioned above.
- ❖ Produce videos of educators talking about using data and demonstrating how local and state data can inform planning
- ❖ Develop a coordinated, multi-year training plan for building data literacy and supporting appropriate data use. This will include
    - ➢ Continued development of WISEcoaches.
      WISEcoaches are regional data inquiry coaches trained by WISExplore. They are located in each of the CESAs and in six of our largest districts. Given limited staff resources at DPI and on the WISExplore team, we must be strategic in our implementation efforts. WISEcoaches play a key role in disseminating and supporting the WISExplore data inquiry process and resources in schools and districts across the state. We seek to expand this group, offering for an additional five districts to have staff participate in WISExplore training, and to deepen WISEcoach knowledge of data inquiry and research-supported promising practices so that, as coaches, they can best facilitate school improvement planning that doesn't have to stop at "We see what the data say, but now what?" (This is related to Deliverable 3.2, below, as well.)
    - ➢ Partnering with an existing initiative of Wisconsin's Educator Effectiveness System - Working On the Work (WOW) - to provide statewide training to teachers and principals with focus on data use at the classroom level.
- ❖ Development of induction resources districts may use for new staff that may need to develop their data analysis capacity.

Deliverable 3.2: Link results, research, and resources to inform local planning
Time is precious to classroom educators and school leaders; how can we expect them to take and use resources they neither trust nor see as relevant? We envision that Deliverable 3.1 will help build demand from practitioners for evidence of the likely effectiveness of practices in their specific context. This goal addresses the current disconnect between research, education practices, results, and context. In many ways, it is the glue between the two Priorities of this grant. We see this work as absolutely critical to the value of both our Evaluation and Research and Instructional Support proposals. In short, we hope to present educators with research-informed and educator-vetted resources that directly relate to outcomes in schools and districts.

Currently, a school team working through the WISExplore data inquiry process (question, investigate, clarify, hypothesize) may be stalled after hypothesizing, not necessarily having the time to develop a research-supported and appropriate improvement plan based on the team's findings. For example, a school improvement team finds in WISEdash that, over several years, Hispanic students in the school have had both lower attendance and lower proficiency rates in a particular content area on state assessments. With a hypothesis in place - that the school may needs to better engage Hispanic students in school - the team is left to seek out, vet, and implement possible resources. This is the point in the process that DPI intends to provide more explicit support. Through this grant, DPI will start the work to link WISELearn resources directly to results in WISEdash. In other words, meta-tagging would allow for recommended educational resources to be presented within WISEdash on the same screen as the results that "pull" the relevant resources.

This goal represents a major project that DPI recognizes will be ongoing over multiple years. We also recognize the initial work that needs to take place well before any resources are linked in WISEdash. This goal includes the following:

- ❖ A project plan for linking data outcomes in WISEdash to appropriate metadata in WISElearn resources
  - ➢ The plan will address sustainability of this project.
- ❖ Resource vetting by an internal/external advisory committee for initial linkage between WISElearn and WISEdash.
  - ➢ A likely area to start this project will linking Wisconsin's Dropout Early Warning System reporting with resources that may address local needs.
  - ➢ Again, an important connection exists between this goal and the Evaluation and Research priority; the practices and resources that emerge from state research projects will provide trustworthy and relevant links between outcomes and research within WISEdash. This will facilitate data inquiry processes that can more easily move beyond hypothesizing to improvement planning with specific projects and resources in mind.

Outcomes 2 and 3 both require the identification of high-quality materials to make available to the field via existing technology. DPI has already engaged in an extensive content curation process with Open Education Resources (OER). The curation process for the OER project centered on convening teams of subject matter experts (mostly teachers) in ELA, mathematics, and science to identify and curate materials for teaching students. The curation process involved cataloging found materials based on the required fields of the Learning Resource Metadata Initiative metadata schema and reviewing the materials for quality. The review process had two steps: a gateway or screening review to identify materials with significant deficiencies before curators invested much time in cataloging them, and a more in-depth review using questions we adapted from Achieve's OER rubrics and Achieve's EQuiP rubrics.

The curation process was premised on face-to-face collaboration. DPI convened groups of curators for full-day work sessions during which they worked in teams of two or three. Curators undertook several hours of training before the curation work day. For the training, DPI created

online modules that covered the purpose of the project and the definition of an online resource, metadata, copyright & licensing, resource quality review rubrics, and the data entry process. Curators also performed a practice curation exercise prior to attending the work day. Time for discussion of the exercise and other questions at the beginning of the work day helped curators normalize their approach and clear up uncertainties about the process.

About 150 educators were convened through the OER project, resulting in the curation of about 200 resources. These results, combined with lessons learned that make us confident that the process can be further streamlined to be even more efficient, make DPI confident in the approach. DPI proposes a similar process for curation of high-quality resources to be incorporated in the WISElearn platform. The process will result in resources with a specific focus on assessment literacy and formative practices in particular. Some of this curation will come from the work with WCER (outlined below) to identify and disseminate Evaluation and Research results. Other curation activities will occur separately.

The assessment and academic standards landscape has been full of distractions across the country in recent years, and Wisconsin is no different. DPI intends to build off the excellent existing SLDS data and resources to help re-focus on the strong foundation of balanced assessment and data use in our state. In order to reach this goal, DPI aims to convene expert stakeholders, produce excellent on-demand training, curate and/or develop toolkits and resources for school and district staff, and use videos to highlight appropriate practices across the state. The gatherings, training, and resources will all have key take-aways to support balanced assessment and improved data literacy and use in our state. And, critical to Wisconsin's proposal, they will be backed by relevant in-state research.

Taken together, the Outcomes above will build the process and infrastructure necessary to create a pipeline of evidence based recommendations and locally relevant data to be loaded into the DPI data system and connected to educators in ways that are most meaningful for them.

Evaluation and Research
The practices developed above need to be informed by research and evaluation. A key barrier to adoption of evidence based practices is that the definition of evidence is often contested and much of the research on educational interventions downplays or outright ignores context. Context matters very much for practitioners, and context determines which interventions are possible and not possible within a district or a school. By building a process to conduct research on education practices in Wisconsin by partnering with two external partners at UW-Madison, we believe this project will greatly enhance the menu of evidence based practices with credibility in Wisconsin schools and districts, and deepen the research base around the best ways to match school contexts and practices.

For our first two Evaluation and Research outcomes, DPI will partner with the Wisconsin Center for Education Research on three inter-related projects. We will collaborate with WCER in leveraging the SLDS to learn more about barriers to student opportunity and achievement across the state and to learn from schools that are particularly successful in reducing these barriers; WCER will support DPI by providing professional development and consultation to LEAs in Wisconsin to enhance their capacity to use LDS and other data for ongoing evaluation of

educator practices; and enhance the flow of ideas about important problems of practice and innovations to address those problems bi-directionally, from the field to the research and evaluation enterprise and from research and evaluation to the field. This will help surface practices that have credibility with educators and enthusiastic adopters, but may not yet have an evidence base. By partnering with interested researchers, we can more quickly construct and evaluate the evidence for the efficacy of these practices, and as importantly, explore the contexts and mechanisms that enable, sustain, or inhibit their success.

As demonstrated above, DPI has exceptional analytic capacity, but it is bound by budgetary constraints and competing demands for reporting and support. Additionally, DPI's research expertise is not diverse enough to serve a broad set of educational stakeholders, specifically practitioners. As a result of these constraints, DPI is not able to take full advantage of the extant LDS to address pressing problems of practice in the state. WCER has exceptional capacity to produce fundamental, applied, and translational research in the field of education. As one of the most established education research centers in the nation and a part of the top-ranked public school of education in the country, WCER houses a wealth of human capital and maintains a deep interest in and commitment to equality of educational opportunity. WCER also possesses an enormous amount of research capacity in the graduate students in its affiliated departments, centers and projects and through the IES Pre-Doctoral Training Program, the Interdisciplinary Training Program (ITP), it houses. Just after DPI rolled out its Promoting Excellence for All initiative in 2014, WCER partnered with the School of Education to host an Achieving Excellence for All event to inventory expertise across campus in the service of reducing disparities in academic achievement and school success by race/ethnicity and family income and to foster increased mutual awareness and dialogue in the service of achieving these goals. The opportunity for collaboration on these critical shared interests comes at exactly the right time given WCER's increasing focus on inequalities in educational opportunity and achievement and ITP's commitment to foster and sustain educational research in partnership with practitioners and of relevance to important problems of practice in education.

WCER will support DPI's capacity to more fully realize the potential of the LDS through three distinct but interrelated pathways. Professors Eric Grodsky and an investigator to be identified later will engage in a series of *investigator initiated* projects to understand variation in opportunity and achievement disparities and effective practices to reduce those disparities in the state. Dr. Brad Carl and Dr. Steve Kimball will evaluate and support an array of *practitioner initiated* practices and interventions under the mantle of the Wisconsin Evaluation Collaborative (WEC). Finally, Dr. Rich Halverson and the Wisconsin Collaborative Education Research Network (the Network) will facilitate bidirectional communication between practitioner communities and other WCER partners to inform investigator initiated research, enable practitioner initiated projects, and disseminate results from both groups in a way that is useful to educators in the state.

Outcome 4: Using the SLDS to Identify and Evaluate Equity-Promoting Practices
Under the proposed funding, Professor Eric Grodsky will lead a team of graduate and undergraduate researchers to accomplish four goals: **First**, analyze the extant LDS data to adjudicate, by school level (primary, middle, and high school) those schools that are most effective at reducing achievement disparities among children of different racial/ethnic or

economic backgrounds. **Second**, Grodsky and another investigator to be named will conduct a series of focus groups with staff and students at a small number of purposely selected schools around the state to learn more about their understanding of opportunity and achievement gaps. In addition to providing data of substantive use, these focus groups will inform the development of school and student survey instruments. **Third**, Grodsky and another investigator to be named will work with the University of Wisconsin Survey Center to develop and field a survey of school practices and school climate. These data will enrich the LDS and our collective capacity to understand patterns of promising practices to reduce inequalities in opportunities for success in school. **Fourth**, the team will increase the visibility and reach of the partnership between WCER and DPI by a) coauthoring with researchers at DPI at least one study related to opportunity and achievement gaps that builds on the shared data resources residing in IRP and funded in part by this grant; b) presenting work from the partnership at various state and national venues and c) taking advantage of Grodsky's role as organizer of the ITP seminar series to share and improve emergent research and recruit graduate students to participate in project addressing problems of practice in partnership with DPI research staff. This process is explicitly modeled after the successful Promoting Excellence for All process to build credibility with practitioners.

Deliverable 4.1. Identifying Effective Schools
With the assistance of funds awarded under previous SLDS competitions, DPI has amassed a rich array of data about students and schools in Wisconsin. We are now in a position to construct panels of students across multiple cohorts to understand how student educational trajectories vary over place and time and by race/ethnicity and family income. The first step in our collaborative work on opportunity and achievement gaps will be to use these data to distinguish schools serving similar populations of students that are more and less effective at 1) reducing achievement disparities and 2) maximizing achievement trajectories of economically disadvantaged students and students of color. We will then push the existing LDS as far as we can to ascertain what it is about particularly successful and struggling schools that make the achievement trajectories of their students atypical. These analyses form the foundation for much of the basic research about educational inequalities that our team will undertake. We will build upon existing DPI and WCER data sharing agreements and collaborate on making DPI data more easily utilized by internal and external researchers with researcher specific documentation.

Deliverable 4.2. Gathering Promising Practices
Based on the analyses undertaken above, we will group schools by student attributes, region, and achievement trajectories. We will then choose up to eight school districts to visit to host focus groups. These focus groups will accomplish two objectives. First, this will offer some initial insights into what organizational, social, and instructional arrangements lead to variation in reducing disparities in educational opportunity and school success. By meeting with groups of teachers, staff and students, we will learn from the actors that most directly influence students' academic trajectories what *they* view as key obstacles or practices that impact student growth and inequality in student growth.

Second, these focus groups will help us to formulate the right questions and response categories for the surveys we propose to field (described below). To maximize the validity of our surveys we must understand how our respondents, both students and school personnel, see opportunity and achievement disparities, and the language they use for discussing barriers to achievement. In

this way, the focus group data will both inform our understanding of disparities and enable us to explore how perceptions of disparities and practices to reduce them vary at the population level.

Deliverable 4.3. Develop and Field a Statewide Survey of Equity Promoting Practices and School Climate

As discussed above, Wisconsin's LDS still has important gaps in its coverage of critical dimensions that shape equity and productivity in student learning outcomes. Under the proposed project we will address two of these gaps by producing data on school practices and school climate. With 424 districts and over 2,000 public schools, Wisconsin is truly a living laboratory for educational experimentation. Our school systems range from the urban districts of Milwaukee (78,502 students) and Madison (27,186 students) to small rural districts like Edgar in the north central region of the state (population 1,474) and Bayfield, serving 422 students on the south shore of Lake Superior. While we have exceptional data about students and school personnel, we lack consistent data on what schools *do*; on the different program,s policies, and practices in which administrators and faculty engage to reduce disparities in opportunities for educational success. We propose to collect these data by a web survey of school administrators with a paper and pencil follow up to non-respondents. By partnering with DPI to collect detailed information on current and recent innovations in organization and instruction at the school level and merging those data with our LDS we will enhance the power of the LDS to inform our understanding of how educators are working more or less effectively to provide opportunities to historically disadvantaged subpopulations of students. These survey items will be developed in alignment with what DPI learns from practitioners in Outcomes 1 and 2.

In addition to data on promising practices and organizational innovations, we also propose collecting data from both administrators and students on school climate. Some districts in Wisconsin have sought to measure climate in their schools, but not all Wisconsin districts have done so and those that have may not collected have data in a systematic manner or using common measures. Perceptions of school climate are critical outcomes, mediators and moderators of policies intended to enhance productivity and equity. For example, a change in discipline policy may lead students to perceive the school as a fairer, more welcoming space and thus enable them to benefit more readily from changes to instruction. In contrast, the best curricular innovations may fail to increase student achievement or equity in achievement in a school characterized by high levels of racial animosity and distrust. WCER will work with DPI to draw on multiple existing surveys of school climate, as well as the focus group data we collect, to develop and deploy a web-based survey of school climate in Wisconsin.

Deliverable 4.4. Increase the Visibility of the DPI and UW Partnership
 While partnerships like the ones we propose are rooted in relationships of trust among the principal architects of those interorganizational relationships (Turley and Stevens 2015), their longer term success is enabled by institutionalized relationship and shared understandings of the mutual benefit born by the collaboration. The present proposal is enabled by such relationships; its success hinges on their evolution beyond the interpersonal to the structural.

We have already made modest inroads to establishing these structural ties. For example, Kimball and Carl have worked extensively with DPI for many years on a range of evaluation projects. The Network of which Halverson is Primary Investigator is funded by a unique cost sharing

agreement between the Wisconsin Center for Education Research, the University of Wisconsin's School of Education and the state's Department of Public Instruction. Under the leadership of Knowles (DPI) and Grodsky (WCER), personnel from DPI have begun attending and serving as discussants for a seminar Grodsky runs as part of Wisconsin's IES-funded doctoral training program in education sciences.

The proposed funding builds on this foundation of trust to strengthen and institutionalize the collaborative relationship between WCER and DPI. Under our fourth goal we will collaborate on at least one manuscript of mutual interest around opportunity and achievement gaps in Wisconsin, present our evolving collaborative work at state and national conferences, and present our research at the ITP training seminar Grodsky organizes. We will continue to increase the flow of researchers from WCER to DPI by working with ITP to bring interns into DPI on a temporary basis and by encouraging students funded by ITP to consider using LDS and additional data sources funded under the proposed research in their own academic work. The proposed project will mark a new chapter in creating a more sustainable partnership between WCER and DPI that we anticipate will benefit children in the state of Wisconsin for years.

Outcome 5: Increase the Frequency, Quality, and Capacity for Local Evaluation
In addition to enabling rich, timely investigator-initiated research, the LDS is a powerful resource for practitioner-initiated inquiry. The addition of school and student survey data under Deliverable 4.3 will further strengthen the capacity of the LDS to support such inquiry. Unfortunately, relatively few school districts in Wisconsin have the evaluation expertise necessary to capitalize on the opportunities the LDS offers for improving practices in the service of productivity and equity. The Wisconsin Evaluation Collaborative (WEC) will offer districts the support they need to develop that expertise and/or make more effective use of the LDS to enable all of their learners to achieve educational success. WEC is a new unit within WCER that conducts and supports transformative PK-12 evaluations in direct response to the needs of Wisconsin educators and policymakers. WEC advances evidence-based knowledge about teaching, learning, leadership, and organizational effectiveness by partnering with Wisconsin school districts, professional associations, community-based education organizations, and CESAs on evaluation activities.

We envision WEC as an investment in sustained demand for SLDS and for the deliverables in Outcomes 1-4. Thanks in part to previous SLDS funding cycles, Wisconsin districts, schools, and educators have access to an array of data with the potential to significantly enhance both the quality and equity of the services they offer to students and their families. Building on the rich history of WCER in providing cutting-edge education research, WEC will partner with DPI, the Network, statewide professional associations, and all 12 CESAs to address Deliverables 5.1-5.3 by engaging in outreach to inform Wisconsin districts about evaluation support opportunities aimed at forming communities of practice; building evaluation capacity at the local level (districts and CESAs); and providing timely, high-quality evaluation services directly to educational partners.

In order to maximize the impact of investigator-initiated research and enable the success of practitioner-initiated inquiry, we must establish clear and effective bi-directional lines of communication between WCER and practitioner communities in the state. The Network was

started in 2013 to build research-practice partnerships around key issues in education around the state. Funded by UW–Madison, the Wisconsin Center for Education Research (WCER), and DPI to identify and link innovation communities committed to educational change in Wisconsin, The Network's mission is to connect researchers, funders, policymakers, educators, the business community, and the wider community in short- and long-term activities that spark innovative ideas for change. The Network links researchers in the UW–Madison School of Education and WCER with relevant practice and policy communities to address the needs and challenges of public schools. The Network will serve as a key conduit between DPI, WCER, and the field.

Deliverable 5.1: Conduct outreach activities to inform Wisconsin educators, leaders and policymakers about support available through the DPI-WCER SLDS partnership.
Currently, DPI funds training for districts through online data inquiry journals and encourages schools to engage in school improvement planning processes using a standardized and well-organized data inquiry process with a focus on achievement and opportunity gaps. To augment this process, the Network will work with DPI and WEC to coordinate communication and outreach activities about potential uses of SLDS data for program evaluation by visiting each of the 12 CESAs in the state, presenting information workshops at state conferences, and maintaining a website dedicated to WEC support. Concurrently, the Network will share information and resources with other key education stakeholders in the state including those identified in Outcomes 2 and 3.

We expect that these outreach activities will yield requests for evaluation support (see below for Deliverables 5.2 and 5.3) and surface potential communities of practice consisting of educators that have both (a) a new or innovative practice they intend to implement; and (b) an interest in evaluating the new practice. At least 2 such networks will be identified by outreach activities conducted during the first year of the new SLDS grant, and the Network will help to connect the groups with WEC to provide evaluation support as they engage in a PDSA (Plan-Do-Study-Act) continuous improvement process that clearly documents the problem of practice and the intervention, implements the new practice or intervention, assesses progress, modifies results based on evaluation processes, and summarize results.

Deliverable 5.2: Build local evaluation capacity by providing evaluation training to CESA and district staff at 6 CESAs each year, covering all 12 CESAs during the first two-years of the grant.
WEC will work with the Network to coordinate and carry out one-day regional trainings focused on building evaluation capacity at the local level to six CESAs in each of the first two years of the grant. These meetings will build local evaluation capacity through an interactive "Evaluation 101" seminar that describes basic program evaluation concepts, highlights key steps in the evaluation process (for example, how to create a logic model and how to develop good research questions to guide evaluation), and discusses the utility of data from the SLDS and other sources to inform research questions. In advance of these seminars we will ask attendees to identify potential evaluation goals and questions and we will use their responses to ground the training in practical problems of practice related to educational equity. After each seminar we will gather feedback from participants on the demand or interest in incorporating additional local data to the state data warehouse to facilitate easier evaluation and cross-district joint evaluations.

Deliverable 5.3: Establish and make available directly to Wisconsin stakeholders a range of timely, high-quality evaluation support services, which will directly impact at least 40 districts over the 4 years of the grant.
WEC will partner with DPI, statewide professional associations, and CESAs to make available to Wisconsin school districts a broad array of evaluation services described in the table below. We envision that these services will range in scope, duration, complexity, and cost from very short-term activities (a telephone consultation to identify potential research questions) to longer-term (planning and conducting a full program evaluation). In considering requests for evaluation assistance, WEC will give preference to those that focus on the priorities articulated by DPI's Promoting Excellence for All report, which includes effective instruction, student-teacher relationships, family and community engagement, and school and instructional leadership. Funding from the DPI SLDS partnership will allow WEC to provide more specific, focused evaluation support to <u>at least 10 Wisconsin school districts</u> each year of the grant and beyond, with <u>support to at least 3 of these districts being of a deeper nature</u> as described in the table below. The WEC team will work with DPI and other partners to identify sustainable funding opportunities so that this support may be provided beyond the grant duration.

Summary of WEC Evaluation Support Services

Scope	Support Type	Activities
Focused		
	Phone consultation	First line of contact; help clarify evaluation needs; and provide referrals for next steps
	Evaluation identification and planning	Follow-up conversations about problems and evaluation options
	Assistance with evaluation tool development	Review or develop evaluation tools (i.e., surveys, interview protocols)
	Strategic planning	Engage in limited strategic planning (i.e., theory of action; logic model development)
	Feedback on evaluation methods and/or research questions	Engage in limited consultation on evaluation methods
Deep		
	Evaluation planning	Assist with or develop evaluation plan
	Conduct an aspect of an evaluation	Develop and administer survey Conduct focus groups
	Ongoing review and feedback	Could include evaluation plan, methods, analysis or written reports
	Conducting comprehensive evaluations	Includes the full range of service from evaluation planning to reporting evaluation results

"Bundling" support

An important concept cuts across Deliverables 5.1-5.3: the notion of "bundling" outreach, networking, and evaluation support services wherever appropriate. Given the limited resources available to districts and CESAs for deep evaluation work, and the small size of most Wisconsin districts, WEC will identify and connect districts with common research interests and problems of practice (i.e., literacy evaluation, college- and career-ready standards implementation) and/or geography (small/rural districts) to increase the efficiency of our efforts to provide evaluation expertise and support. This bundling will help make evaluation affordable and feasible statewide (e.g., not just to the largest districts).

Given the limited capacity of many districts to engage in expert and sustained program evaluation, as well as their shared desire to continuously improve the quality of the education their children experience, we anticipate that widespread interest in WEC support related to the SLDS initiative. Accordingly, a screening or filter process will help manage the flow of requests and prioritize support. We will develop the screening process in conjunction with DPI in a manner that prioritizes evaluation support activities around the overall emphasis of the SLDS initiative and the DPI Agenda 2017 strategic plan. We will exercise caution and engage in a limited number of "deep" projects to avoid over-committing staff. The complexity of the deeper projects will be a primary consideration in the number in which WEC will engage.

Deliverable 5.4. Disseminate research and evaluation results including those from 4.1 to 4.4 and 5.1 to 5.3 within the networked groups and the broader education community.

The Network will disseminate results from WCER activities (Grodsky et al. and WEC) through multiple media and in-person venues. The WCER partners will utilize the Network website and social media (Twitter, Facebook, etc.) to provide updates on the SLDS activities, link to written reports on project Deliverables, and generate dialog about the progress and potential of the SLDS-supported initiatives. These social media sources will also allow input from practitioners about how research and evaluation can help to address challenges schools and districts confront around enhancing opportunity and achievement. In addition, the WCER partners will deliver at least two topical webinars per year focusing on key topics in evaluation and results from Wisconsin evaluation projects, deliver three total presentations in state professional association conferences, and convene a culminating WCER/DPI conference in the final year of the SLDS grant focused on applying lessons learned toward a sustainable model of evaluation support to Wisconsin's K12 community. This communication component is critical to establishing a shared language among researchers and practitioners.

In addition to disseminating the results of research completed under this grant, the Network and WEC will help build a bank of research briefs and summaries that DPI can make available within WISELearn, connected to instructional practice resources, and linked into WISEdash through appropriate content and context tagging. This process will start with existing resources such as the What Works Clearinghouse, but grow to include research conducted within the state of Wisconsin. A key distinction is that these resources will be rated for various levels of evidence that are relevant to practitioners in the field as determined by our needs assessment in Outcome 2 and Outcome 3.

Outcome 6: Conduct research with data from other state agencies linked to the LDS

DPI will contract with the University of Wisconsin Institute for Research on Poverty (IRP), coordinating with WCER, to investigate the association between family income and student achievement. Almost all of the research on economic disparities in educational outcomes based on administrative sources relies on a crude indicator of income—eligibility for the federal free and reduced lunch program. However, this indicator masks substantial heterogeneity in the economic resources available to children and their families and can lead to serious misrepresentation of the income-achievement relationship (Harwell and LeBeau 2010). This failure of administrative data is all the more pressing given recent trends in the relationship between economic resources and educational achievement (Reardon 2011) and Wisconsin's slow recovery from the great recession.

This project will serve two purposes. The first purpose is that it will allow DPI to understand a more nuanced picture of the role economic disadvantage plays on student achievement. As DPI's focus is on eliminating equity gaps for economically disadvantaged students, it is critical to go beyond the simple binary indicator of free and reduced lunch eligibility and understand the impact of poverty in more nuanced ways. The second purpose is that it will serve as a demonstration of the power of combining administrative data across state agencies to inform policy and practice.

From 2013 to present DPI has worked jointly with IRP on a study initiated by the Wisconsin Department of Children and Families to investigate the impact of out-of-home-care on educational outcomes. However, DPI's participation in that partnership was limited to providing data and gaining familiarity with the data sharing agreements necessary to conduct the research. With that experience behind us, we propose leveraging SLDS funds to conduct a research project and share the results with both the research community and education practitioners in Wisconsin through the dissemination methods described above.

Deliverable 6.1: Complete a joint research project with IRP on the impact of economic status on students
IRP has produced and continuously updates a dataset comprised of administrative data on social programs from a number of Wisconsin state agencies including the Department of Children and Families (DCF), the Department of Workforce Development (DWD), and the Department of Health Services (DHS). Using this data system, IRP will help DPI measure the magnitude of the impact of varying degrees of poverty on student performance, and identify which school systems are exceeding or lagging the expected performance of their students given their relative levels of poverty. We will also investigate the impact of economic inequality within a school on achievement and achievement disparities. This will culminate in both an academic research paper and a set of aggregated contextual measures of school performance that can inform the sample for Deliverables 4.2 and 4.3 (focus groups and surveys of school staff). DPI and IRP will work with WCER staff to ensure this work aligns with the work in Outcomes 4 and 5.

Deliverable 6.2 Expand DPI's participation in IRP research community
IRP has built an extensive network of relationships within Wisconsin state government to serve as a trusted neutral broker of data for research purposes. DPI has not participated in this network to-date, in part due to staffing restraints. Through the increased capacity made available by hiring

a new research analyst, DPI will commit to participating in this network and gaining the trust and familiarity with other state agencies. This will include participating in regular meetings with data owners at other agencies; networking with cross-state-agency research staff; and seeking out and identifying mutually beneficial research topics that align to DPI's stated goal of identifying strategies to eliminate educational inequalities in Wisconsin.

DPI sees Deliverables 6.1 and 6.2 as mutually beneficial. IRP will gain increased familiarity with educational data by partnering with DPI. DPI will develop relationships and potential partnerships with other state agencies holding administrative data that may enhance the power of SLDS data by providing critical measure of the social and economic contexts in which students and educators work. Critical to our proposal, the work on instructional support and classroom practices will be better informed by a more nuanced understanding of the impact that the context of poverty has on both educators and students.

Sustainability and Collaboration
DPI is committed to ensuring the sustainability of the work done under this project. Through previous SLDS grants, our agency has developed governance processes and collaborative cross-agency decision making structures necessary to ensure that the SLDS work is integrated into the agency strategic plan and key agency initiatives. To make sure the project is sustained beyond the grant, the Outcomes and Deliverables in this grant will exist within this mature governance structure.

Additionally, we intend to integrate staff from across the agency into the project. We believe, based on our experience with previous SLDS grants, this strategy (as discussed in the timeline and budget narrative) ensures that the benefits of the project will be more widely apparent to other program areas and will incentivize and enable their participation and continued collaboration and support beyond the grant. An overarching goal of this grant is to infuse research into practice and practice into research by fostering ongoing collaboration between multiple teams in each area. Our staffing plan shows this.

Another key component to ensuring sustainability is expanding the number of organizations with a stake in the success of the SLDS. Our project is structured to ensure that more educators, school districts, education researchers, and agencies in Wisconsin state government benefit from a healthy and robust SLDS. To the extent possible we will work to make the resources we curate and create under this grant widely available to other education agencies to use. DPI has a strong track record of collaborating with other states including multiple presentations at best practice conferences, sharing of open source code behind our Dropout Early Warning System, and working collaboratively with education analysts across the country. At the same time, all of the projects were developed with a goal of collaboration across states in mind. Our letters of support indicate this.

(C) TIMELINE FOR PROJECT OUTCOMES
The timeline for each outcome described above is broken down for each deliverable. A chart summarizing these timelines can be found in Appendix A. A more detailed description of staff and resources involved can be found in the Budget Narrative which includes a breakout of costs for each outcome by each year.

Priority: Instructional Support
Outcome 1: Extending the SLDS to Classroom Relevant Data

Deliverable 1.1 - Increase District Participation in WISEdash Local
Lead Staff: Kurt Kiefer, IT Contractors
Estimated Dates: October 2015 to October 2019

WISEdash Local is an existing effort to bring benefits of a data warehouse to school districts that cannot otherwise manage or afford such a system. To-date approximately ten of Wisconsin's 424 school districts have set up a WISEdash Local system using local funds to pay for the integration with their SIS. DPI estimates it will add 12 districts per year each year with funds in this grant.

Deliverable 1.2 - Acquire Locally Relevant Data for Statewide LDS on Opt-In
Lead Staff: Laura Pinsonneault, Emilie Amundson, Brad Carl, Steve Kimball, IT Staff
Estimated Dates: March 2015 to October 2019

In year one, working in conjunction with other outreach efforts to school districts by WCER, under Outcome 4 and Outcome 5, DPI staff will work to identify the demand for local assessments in WISEdash. In year two DPI IT staff will begin reaching out to vendors as well as signing data sharing agreements with school districts to put the policy in place to obtain the data. DPI staff will also begin dashboard design sessions. In years three and four – DPI IT staff will develop the ETL routines to load the assessment data into WISEdash and user test then deploy new assessment dashboards.

The project budget includes built 125 hours per year of IT staff time. The hours and timeline are based on previous experience with this process for the Measures of Academic Progress assessment, and should allow DPI to integrate two additional local assessments into WISEdash during the grant.

Deliverable 1.3 - Deploy a Voluntary Statewide Intervention Management System
Lead Staff: Kurt Kiefer, Jonas Zuckerman, Barbara Van Haren, IT Staff
Estimated Dates: October 2015 to August 2018

In year one, DPI will work with internal and external stakeholders in both Title I and the Special Education program areas to evaluate a number of possible existing student intervention management system tools. We will also begin planning for implementation with IT staff. In years two and three, DPI has planned for 500 hours of IT developer time in each year to acquire implement, integrate, and deploy a student intervention management system. This estimate is based on DPI experience with integrating similar projects into the data warehouse.

In year four, the internal stakeholders on the Title I and Special Education teams will be charged with recruiting schools to use the system and raising awareness of its capabilities. We also anticipate that the WEC will also be involved by promoting this system as a tool with which to capture information necessary to conduct local evaluations.

Outcome 2: Increase Assessment Literacy

Deliverable 2.1 - Increase Capacity For Assessment Literacy
Lead Staff: Troy Couillard, Laura Pinsonneault
Estimated Dates: September 2015 to September 2018

Plans for this deliverable will be directly informed by results (due by end of July, 2015) of statewide focus groups currently underway in Wisconsin. Some work, however, is already planned: continued updates to existing balanced assessment visuals and descriptions as well as the customization of an assessment inventory tool for districts. Without this grant, the impact of focus group findings might be stymied; DPI needs a project lead to coordinate this effort over coming years, as well resources to support the dedication of existing staff time for this work. Finally, new technology staff will partner with consultants to build updated resources and new training materials. In order to facilitate immediate take-up of this work, even prior to hiring a project manager, DPI will allocate grant funds to allow a selected group of cross agency staff to dedicate a portion of their time to this work. The timeline for Deliverable 2.1 is below:

Deliverable component	Timeline	Key staff
Balanced Assessment toolkit	Work on the <u>assessment inventory tool</u> will begin immediately upon receiving the grant award. The <u>technology-enhanced updates to existing balanced assessment visuals</u> will be planned by the cross-agency workgroup and external partners. The toolkit will be available by the end of the first year of the grant.	Cross-agency workgroup including directors from the assessment and accountability teams, consultants from those teams, and content specialists across the agency Technology consultant to build out technology-enhanced resources
On-demand training modules	The cross-agency workgroup referenced above will also support this work. The modules will be informed by the toolkit resources above and, as such, work will start on this project, near the end of the updates to the existing balanced assessment materials (Q3). Modules will be built for four different audiences, with final releases scheduled for the end of the second year of the grant.	Same as above
Induction materials for districts to use with new educators	These resources will be built in partnership with external education organizations, based on feedback to	Same as above, in partnership with an external advisory committee comprised of

	the on-demand modules above. Work will take place during the third year of the grant.	classroom educators, district-level staff, and the State Superintendent's Parent Advisory Council

Deliverable 2.2 - Develop a Collection of Formative Practices within WISELearn
Lead Staff: Troy Couillard, Laura Pinsonneault, Emilie Amundson, Formative Practices Consultant
Estimated Dates: March 2016 to March 2018

As with Deliverable 2.1, plans for this deliverable will be directly informed by results (due by August, 2015) of statewide focus groups currently underway in Wisconsin. As noted in the problem of practice quoted above (see page 15), DPI hopes to pay particular focus on formative practices as part of our ongoing efforts to inform instruction and build assessment and data literacy. The timeline for key components of the Deliverable is below.

Deliverable component	Timeline	Key staff
Curation and customization of formative assessment resources within WISELearn	The timeline for this work will be linked to the rollout timeline for WISELearn. Wisconsin's experience with content curation makes us well suited to start planning for this curation/customization project in Q3 of the grant. Stakeholder partnership and engagement is particularly critical to this work; to ensure close working relationships, the curation will be phased over several events, with the project wrapping up in the third year of the grant.	Expert advisory workgroup, facilitated by new DPI formative assessment practices consultant, and working in partnership with internal assessment literacy workgroup and with external education organization partners.
Assessment literacy training focused on classroom formative practices, incorporated into WISELearn	This deliverable is directly related to the on-demand modules for Deliverable 2.1 and will be informed by that work. We expect to initiate this work at the same time as the curation project, once the new positions have been hired. The final steps, loading the training resources into WISELearn, would take place in the beginning of the	Internal assessment literacy workgroup; external advisory workgroup; WISELearn steering committee and implementation team

	fourth year of the grant.	
Induction materials for districts to use with new educators	These resources will be built in partnership with external education organizations, based on feedback to the on-demand training modules above. Work will take place during the fourth year of the grant.	See above, in partnership with WASDA, AWSA, WASB, and in consultation with an external advisory committee comprised of classroom educators, district-level staff, and the State Superintendent's Parent Advisory Council

Outcome 3: Increase Capacity for Data Informed Planning

Deliverable 3.1 - Increase Capacity of Schools and Districts for Data Informed Planning
Lead Staff: Laura Pinsonneault, WISExplore
Estimated Dates: September 2015 to March 2018

This work will start as soon as possible after the grant is awarded, starting with resources for school board members. The final resources will be available by the end of the second year of the grant. Other resources as well as a coordinated, multi-year training plan comprised in partnership with WISExplore and other education organizations will also be developed over the first two years of the grant. Finally, induction resources, a component of Deliverables 2.1, 2.2, and 3.1, will be developed later in the grant cycle, during years three and four. Details follow:

Deliverable component	Timeline	Key staff
Audience specific data-use guides	Start as soon as possible upon grant award (expected, January of 2016); wrap up final guides (and edit any earlier guides based on user response) by the end of the second year.	Director accountability office; consultants in the assessment and accountability offices; WISExplore; partnerships with education organizations including CSN, AWSA, WASDA, and WASB.
Other data use resources (videos, additional training)	Same as above	Same as above
Multi-year coordinated training plan for building data capacity	Coordinating with external stakeholders will start following internal capacity building and planning. The full plan should be in place by the end of the second year of the grant.	Director of accountability; consultants from accountability and assessment offices as well as Title I, special education, and content standards teams; WISExplore;

		partnerships with education organizations including CSN, AWSA, WASDA, and WASB.

Deliverable 3.2 - Make Link between Research Informed Practice and Planning Data
Lead Staff: Emilie Amundson, Janice Mertes, Laura Pinsonneault
Estimated Dates: January 2015 to March 2018

For this work to be successful, we have developed a phased-in plan that involves two key Deliverables: a project plan for linking resources to research and data, and a case-study linking project utilizing DEWS results. Details follow:

Deliverable component	Timeline	Key staff
Project plan to link resources to research and data	This component will start in the second year of the grant, ending by the third year.	Project Manager; Assistant Superintendent, Division for Libraries and Technology; Director, Office of Educational Accountability; Director, Literacy and Mathematics team; Research Analyst; partnerships with WCER, IRP
Link DEWS data to recommended resources	This project will start at the end of the second year of the grant, lasting to the end of the grant.	Same as above

Priority: Evaluation and Research
Outcome 4: Use LDS to Identify and Evaluate Equity Promoting Practices

Deliverable 4.1 - Identify Schools Effectively Reducing Inequality
Lead Staff: Eric Grodsky, Jared Knowles, Research Analysts
Estimated Dates: October 2015 to August 2016

Leveraging existing data sharing agreements between DPI and WCER, DPI staff will work to deliver necessary data to WCER by December. WCER will assemble a research team during this period and schools will be identified by the end of the spring semester in 2016. The rest of 2016 will be spent documenting the research process, refining models, writing up results, and integrating the analysis into DPI's research process for reproduction in future years. DPI research analysts will be responsible for integrating this methodology into existing DPI systems using the open source statistical platform R for reproduction in future years

Deliverable 4.2 - Conduct Focus Groups of Schools to Uncover Promising Practices
Lead Staff: Eric Grodsky, WCER Research Staff, DPI Research Analyst
Estimated Dates: October 2015 to October 2017

During year one, WCER researchers will work to develop a protocol for focus groups centered around identifying equity promoting practices in schools selected under Deliverable 4.1. This protocol development process will include consultation with DPI content experts and DPI's existing Promoting Excellence for All workgroup. In year two the focus groups will be identified by the research team under Deliverable 4.1 and WCER researchers will conduct the focus groups and write up the reports which will include a recommendation for survey items and survey domains to be used in Deliverable 4.3.

Deliverable 4.3 - Build Statewide Practice and Climate Survey around Equity
Lead Staff: Eric Grodsky, UW Survey Center, DPI Research Analyst
Estimated Dates: March 2016 to October 2018

During year one WCER researchers led by Grodsky will meet with content specialists at DPI, review existing survey instruments available at DPI and at WCER, and write a report summarizing the scope of the project. In year two, WCER researchers will work on identifying the sample and on outreach to school districts about the upcoming survey and its importance. The survey will be conducted in the spring of year two, with results analyzed at the end of year two and beginning of year three. A report will be prepared in year four as well as a plan for follow-up studies, recommendations for integrating survey estimates of climate with LDS data.

Deliverable 4.4 - Strengthen Partnership with UW by Jointly Sharing Work
Lead Staff: Grodsky, DPI Research Analyst, Knowles
Estimated Dates: Ongoing

The work under this deliverable will be ongoing. In the first year it will include convening two meetings of WERAC with a commitment to at least two annually for the next three years chaired by a DPI research analyst and a WCER representative (currently co-chair William Clune). Each year DPI staff will participate in the weekly ITP brownbag seminar and WCER staff will conduct two brownbag presentations at DPI. In year three and year four DPI and WCER staff will collaborate on at least one manuscript for publication in a research journal.

Outcome 5: Increase Local Evaluation Capacity

Deliverable 5.1 - Outreach and Awareness around Available Evaluation Support
Lead Staff: Carl, Kimball, DPI Project Manager, Halverson
Estimated Dates: October 2015 to October 2017

In the first two years of the project WEC will visit each of the 12 CESAs in Wisconsin, present at state education conferences, and construct and maintain a website dedicated to WEC support.

In the first year WEC and the Network will identify two networks of educators to work with as described in Section B (year 1). WEC will work with these networks in year two.

Deliverable 5.2 - Conduct Cross-State Evaluation Training
Lead Staff: Carl, Kimball, DPI Project Manager, Halverson
Estimated Dates: September 2015 to September 2017

Building on the success of Deliverable 5.1 and following the outreach meetings, WEC will schedule a follow-up one-day workshop on local evaluation to six CESAs in year one and the other six CESAs in year two. The lag time will allow WEC and CESA staff to work together to recruit school district staff to attend.

Deliverable 5.3 - Deliver High Quality Evaluation Services
Lead Staff: Carl, Kimball, DPI Project Manager, Halverson
Estimated Dates: September 2015 to September 2019

In year one WEC will define and advertise the services it has available to school districts in conjunction with DPI staff. In years two through four WEC will work on evaluations from 10 school districts each year, with some referrals coming from DPI and some coming from WEC outreach activities described in Deliverables 5.1 and 5.2.

In years three and four, WEC will work with interested school districts to identify funding opportunities to support continued evaluation services.

Deliverable 5.4 - Disseminate Research and Surface Promising Practices
Lead Staff: Brad Carl, Steve Kimball
Estimated Dates: October 2015 to October 2019

Each year WCER partners will deliver dissemination activities including two annual webinars on evaluation and results of Wisconsin evaluations and three presentations to state professional association conferences.

In March of year four WCER and DPI will jointly convene a conference reporting the lessons learned from the grant and to generate ideas about sustaining the work after the expiration of federal funds.

Additionally, WCER staff, DPI staff, and WCER graduate assistants will work to build a bank of research briefs and evaluation summaries that are tagged for dissemination in multiple venues including WISELearn. This work will continue for all four years of the grant.

Outcome 6: Conduct Cross-Agency Research on School Context

Deliverable 6.1 - Study Impact of Poverty on Student Outcomes
Lead Staff: Jennifer Noyes, Lawrence Berger, DPI Research Analyst,
Estimated Dates: October 2015 to October 2017

DPI and IRP staff will collaborate on producing a report investigating the differential impact of different levels and types of economic disadvantage in Wisconsin public schools. This work will be done early in the grant period to ensure that it can be used to inform the development of best practices, evaluation services, and future research.

Deliverable 6.2 - Expand DPI Participation in IRP Data Sharing Process
Lead Staff: DPI Data Governance Coordinator, DPI Research Analyst, Jennifer Noyes
Estimated Dates: October 2016 to October 2019

DPI's research analyst and Jennifer Noyes will attend standing and ad hoc meetings with data owners at other state agencies to raise awareness of the availability of DPI data and look for mutually beneficial partnerships with other state agencies. We anticipate 4-8 such meetings annually.

(D) PROJECT MANAGEMENT AND GOVERNANCE PLAN
Building on the governance structure established under previous SLDS grants, DPI plans a tiered project management and data governance structure to allow the overall project and the connections between the Priorities to be effectively managed. The grant project manager will co-facilitate the DPI Data Governance Steering Committee with the agency's Data Governance Coordinator. The Steering Committee has managed previous DPI SLDS initiatives; membership will be updated to reflect the needs of this grant plan. The group will be charged with reviewing the decisions related to the Outcomes and Deliverables in both Priorities, and ensuring close alignment between this work and agency goals. Given the overarching goal of creating a positive feedback loop between instructional practices and education research, this shared high-level governance is a key component to ensuring continued collaboration and alignment.

To make more day-to-day decisions and monitor progress toward each of the deliverables for each Outcome described above, the Project Manager (PM) will also convene Instructional Support and Evaluation and Research subcommittees. These subcommittees will be a place for the PM to communicate links to projects under the other Priority and to discuss alignment between the projects. It is important to note that because of the large degree of external coordination and overlap between the two projects, these committees will include external stakeholders as well as DPI staff.

The Evaluation and Research subcommittee will be chaired by the new research analyst hired under the grant who will serve as the chief liaison between DPI and the WCER project. This person will inform internal DPI researchers about the progress of the project and serve as a conduit from DPI to WCER, joining the WCER team for meetings and project planning. The Instructional Support subcommittee will also have a mixture of internal and external stakeholders. The external stakeholders will be made up of networks of representatives of practitioners and practitioners themselves in order to ensure that the work under these Deliverables is focused on the items most needed by educators in the field.

At the beginning of the grant these two subcommittees will identify current staff to serve on workgroups related to each of the Deliverables as necessary. Flexible, project based workgroups

were a key strategy in DPI's previous SLDS grants as a way to coordinate effort without creating an unnecessary burden on staff tasked with carrying out the work.

Participation on the committees from external stakeholders will be funded through the travel budget for this grant. Committee meetings will also take place not only in Madison, but also opportunistically at large gatherings of audiences such as the State Superintendent's education conference and other large gatherings of practitioners in the state.

External Agencies

DPI is proposing two distinct subcontracts with outside agencies to support joint work on both the Evaluation and Research and instructional support priority areas. DPI's new Research Analyst will be responsible with attending project meetings with both IRP and WCER as necessary to monitor the progress of these grants and to provide data documentation, expertise, and analytic support where necessary to ensure projects stay on time. These meetings will be facilitated by the close working relationships we are already developing (in part around preparation for this grant competition) and the physical proximity of our offices (just over a mile apart in downtown Madison).

(E) STAFFING

DPI Key Staff

Kurt Kiefer, Assistant State Superintendent for Libraries and Technology
Kurt has served as the division administrator for the Division of Libraries and Technology since 2010. In that time he has overseen the completion of work under one SLDS grant, and the ongoing work under another SLDS 2009 ARRA grant. Additionally, he has worked closely with external stakeholders to build ongoing state support for DPI's data initiatives including successful initiatives to secure two new streams of state funding to support the SLDS, WISEdash, and WISEdata. Kurt will serve as the overall executive sponsor of this project. He will work to identify key internal and external stakeholders as well as manage budget expenditures and liaison with federal grant coordinators as necessary.

Dr. Jared Knowles, Research Analyst, Policy and Budget Team
Dr. Knowles has served as a research analyst at DPI since 2011. In that time he has helped to strengthen DPI's ties to the research community by developing DPI policy around evaluation and research, conducting in-house research, and co-authoring research on Wisconsin programs with external researchers. Dr. Knowles serves as the co-chair of the Wisconsin Education Research Advisory Council (WERAC). Dr. Knowles also built Wisconsin's open source Dropout Early Warning System (DEWS). Dr. Knowles received his PhD in Political Science from UW-Madison in 2015 and was an IES Pre-Doctoral Fellow in the WCER Interdisciplinary Training Program (ITP). Dr. Knowles will be funded at 15% in year 1 of the grant and 10% in years 2-4 reflecting the work he will do in helping make connections between the new staff hired under the grant and the external partners at WCER and IRP. It is expected that Dr. Knowles will serve on workgroups related to the evaluation and research outcomes as well as in collaborations between DPI research staff and research staff at WCER and IRP.

Instructional Support Leadership, cross-agency
The Outcomes and projects in this grant represent an agency-wide intention to build upon DPI's strong SLDS to support school improvement efforts that result in better outcomes for all students. The agency is prepared to dedicate substantial staff time and expertise to these combined efforts. In particular, Directors from three teams across the agency will play key roles in this work. Emilie Amundson directs the Literacy and Mathematics Team, focusing on high-quality instruction based on college- and career-ready academic standards; Troy Couillard directs the Office of Student Assessment, which oversees and provides technical support for the administration of all statewide required assessments; Laura Pinsonneault directs the Office of Educational Accountability, which produces accountability report cards and provides resources to support data analysis for school improvement in partnership with WISExplore. These Directors have backgrounds in classroom instruction, special education, school and district leadership, policy, program management, and statistical analysis and program evaluation. The additional resources in this grant will enable their teams to engage in the important work of building assessment and data literacy, curating excellent instructional resources, and continuing to expand school improvement efforts in Wisconsin.

Project Manager
A project manager will be hired to coordinate major tasks and facilitate cross-agency data governance (in coordination with DPI's Data Governance Coordinator) for the grant project. Please see the Budget Narrative for a more detailed description of this position.

Contracts
DPI recognizes that much of the expertise necessary to conduct research and to build a sustainable process to develop research grants and provide ongoing support in collaboration with DPI staff. Key staff identified at WCER and IRP include:

Dr. Eric Grodsky is Associate Professor of Sociology and Educational Policy Studies at the University of Wisconsin—Madison and Coordinator of Opportunity and Achievement Gap Initiatives for the Wisconsin Center for Education Research. Grodsky has published extensively on social stratification in education. His work has generally focused on racial/ethnic and socioeconomic inequalities in educational processes and outcomes and has relied on a variety of quasi-experimental methods applied to large, nationally representative data sets. He also has extensive experience using administrative data from the state of California, including data from the California Department of Education, the California State University, the California Community College system and the University of California. Grodsky currently serves as Deputy Editor for *Sociology of Education*, Associate Editor for the *American Journal of Educational Research*, and is on the editorial board for *Educational Evaluation and Policy Analysis*. Grodsky will serve as lead investigator for WCER, will supervise two project assistants undertaking quantitative analyses in support of this grant, and will work with the Wisconsin Center for Education Research and an additional investigator at WCER to develop and field the proposed surveys. Grodsky will collaborate with DPI on at least one paper in addition to other products for dissemination. Grodsky will dedicate 15% of his time per year to this project.

Dr. Lonnie Berger is the Director of the UW-Madison Institute for Research on Poverty. Dr. Berger's research focuses on the ways in which economic resources, sociodemographic characteristics, and public policies affect parental behaviors and child and family well-being. He is engaged in studies in three primary areas: (1) examining the determinants of substandard parenting, child maltreatment, and out-of-home placement for children; (2) exploring associations among socioeconomic factors (family structure and composition, economic resources), parenting behaviors, and children's care, development, and well-being; and (3) assessing the influence of public policies on parental behaviors and child and family well-being. This research has largely been funded by the National Institutes of Health (National Institute of Child Health and Human Development), U.S. Department of Health and Human Services (Administration on Children and Families), Doris Duke Charitable Foundation, and John D. and Catherine T. MacArthur Foundation. Berger will serve as co-PI on Outcome 6 and dedicate 5-15% of his time to the project.

Dr. Jennifer Noyes is Associate Director at the UW-Madison Institute for Research on Poverty. Prior to joining the IRP, Jennifer Noyes was a senior fellow at the Madison office of the Hudson Institute's Welfare Policy Center. She has served in senior positions with the Wisconsin Department of Workforce Development, including Executive Assistant to the Secretary, where she was responsible for managing key external relations related to policy development for, and implementation of, the state's work-related programs. She also served as the administrator of the department's Division of Economic Support, where she was responsible for the management, development, administration, and direction of Wisconsin's programs designed to assist and support low-income families in their efforts to achieve self-sufficiency. In both of these roles, Noyes served as Wisconsin's leader in the development and implementation of Wisconsin Works (W-2) policy, the state's ground-breaking welfare replacement program. Other past professional positions include director, Performance Evaluation Office, Wisconsin Department of Administration. Noyes will serve as co-PI on Outcome 6 and dedicate 5-15% of her time to the project.

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