Innovative Ways to Use Data to Improve Outcomes for High-Need Students

### **REQUIREMENTS**

Please respond to the following. The maximum score a Proposal can receive is 55 points. Your response to this section should not exceed 10 pages.

## Initiative Design and Implementation (40 points)

1. The data sharing agreements between DHS and local school districts provides opportunities for innovative programming. Describe your proposed Initiative and how sharing data between DHS and your district can be used to directly impact student success academically, socially and economically.

Propel Charter Schools ("Propel") uses many disparate data sources to track and account for student information including a student information system ("Skyward"), Special Education Services monitoring ("eStar"), and academic achievement indicators including PSSA results and NWEA Measures of Academic Progress scores. Propel sees not only the benefit of unifying these internal disparate data sources, but also the tremendously positive implication of bringing together both Propel data and DHS data to drive improvement in student outcomes. Given these factors, Propel is proposing an Initiative to develop and deploy the Propel Educational Data Link (PEDL), a digital dashboard system, at Propel Schools to visually convey and synthesize important insights from the disparate sources of Propel data together with DHS data. Propel's existing systems and data analysis

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methodologies allow our educators to see trends with the general student population, but we understand that a comprehensive digital dashboard that brings together data to inform instruction on a more granular level can make a significant impact to Propel's student population in general, and to our high-need students in particular. In PEDL, attendance, discipline, enrollment, demographic, and academic data will be linked to DHS data providing school leaders better insight into non-academic factors that may be impacting school attendance and behavior.

PEDL will be developed using Tableau business intelligence solutions, which combine separate data sources into one intuitive, analytics platform. Propel intends to procure one Tableau Desktop license for use by Propel's Data Analysis and Reporting Specialist, which will allow for the design and deployment of PEDL. A number of Tableau Online subscriptions will also be purchased to allow for Propel system-wide leaders and school principals to interact directly with PEDL. For all other Propel educators and system administrators, Tableau Reader is a free tool that can be used to review and interact with visualizations in a more limited capacity. Tableau has been successfully used by a number of school districts including the Spokane Public School District in Washington, Des Moines Public Schools in Iowa, and Uplift Education, a charter school network in Texas, to develop and deploy visual dashboards to provide greater insight into school data to enable targeted programming (Tableau).

Propel Charter Schools ("Propel") is a network of 11 not-for-profit public charter schools operating as eight (8) LEA's and serving 3,600 K-12 students in economically disadvantaged areas in Pittsburgh, PA and surrounding areas. Propel's mission is to catalyze the transformation of public education so that all children have access to high performing public schools. This mission is pursued by opening and operating high-quality schools of choice in educationally underserved communities, filling a community need for a quality school option where they are otherwise not available. Propel does not accept the premise that poverty or family structure determines educational performance or life outcome.

In recognition of the ongoing mental health needs of the student population, Propel has kicked-off the Propel Partners in Wellness program to provide mental health services across all schools. The Propel Partners in Wellness project will improve the outcomes of Propel Schools K-12 students and their families through the establishment of a unique "whole-child" focused, school-based mental/behavioral health services. The Propel Partners in Wellness project is designed with a comprehensive, pro-active strategy with three primary objectives that will benefit all Propel students and their families: direct clinical service delivery to students; education and engagement of Propel families regarding mental health issues and services; and school-based behavioral/cultural coaching for students and school staff. The Propel Partners in Wellness program supports Propel in taking significant strides to focus on the "whole-child," and PEDL will be a powerful tool in enabling Propel school leaders and educators to provide support to students and in identifying and individualizing therapeutic referrals as well as prevention.

The majority of Propel's student population is composed of high-need students with 75% being eligible for the Free and Reduced Price Lunch Program and 73% a minority. During the 2015-2016 school year, 19% of students attending Propel were chronically absent for 15 or more school days,

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which is higher than the national average of 13% as reported in the 2013-2014 Civil Rights Data Collection. The existing data sharing partnership between Propel and DHS enabled DHS to conduct a preliminary analysis of all Propel students for the 2014-2015 school year, and 46% of students had prior involvement with Human Services while 32% of students were involved with Human Services during the 2014-2015 school year. Based on these statistics, Propel considers the majority of its student population to be high-need or at risk of becoming high-need.

Propel has a significant proportion of high-need students, and it is important that our school leaders have access to timely, visually appealing data so that educators can quickly glean insight from the information. Propel has a student information system (Skyward), but given the fast paced nature of today's school day, Propel's school leaders do not have the time to run multiple reports and conduct the in-depth analysis that would give beneficial insight into daily enrollment changes, attendance, discipline, and academic achievement by student. Propel needs a system to visually synthesize and present such key data in one place, thus providing school leaders with the information necessary to make decisions and best serve students. The proposed PEDL will shine a light on these high-need students enabling for targeted interventions.

In PEDL, attendance, discipline, enrollment, demographic, and academic data will be linked to DHS data providing school leaders better insight into non-academic factors that may be impacting school attendance and behavior. During the data collaboration initiative that Propel and DHS conducted in the past, DHS discovered that Propel has a track record of serving students receiving Human Services and encouraging them to grow academically. In fact, the gap in average GPA performance for all Propel students as compared to those who had never been involved with Human Services was just about 5%, showing that Propel's high-need students are not losing significant academic ground to students who are not identified as high-need. By implementing PEDL, Propel and DHS will not only have an aggregate view of the data through Tableau, but we will also be able to drill down to Propel and DHS combined data on a granular, per-student basis. In particular, the following key metrics will be presented in conjunction with DHS data:

- Enrollment Entries and Withdrawals
- Attendance School Wide Year to Date Attendance Rates and Students Missing 10% of More of Possible School Days
- Discipline Discipline Referrals and Offenses by Type, In School and Out of School Suspensions by Demographics
- Academic Achievement Performance on State-Wide Tests and Performance on NWEA Measures of Academic Progress Tests

The goal of creating PEDL is to improve student outcomes from an academic and attendance standpoint by implementing targeted programming such as truancy support, individualized academic programming, and mental health support by bringing data together in a way that allows for educators to make meaningful and timely intervention decisions. More specifically from a curriculum and instruction standpoint, data is critical to informing targeted instruction. Propel Schools have a grade level instruction block devoted to grade level material and a data driven block that caters to the individualized needs of each student. During the data driven block, which is a

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staple of Propel curriculum, teacher's use multiple forms of data in order to personalize instruction for students at the appropriate level. PEDL will enable Propel to expand that personalization to include a greater depth of understanding of existing student-focused data in combination with DHS data.

#### Works Cited

Tableau Software. "Five Dashboards Improving Student Achievement." *Tableau Software*, http://www.tableau.com/learn/whitepapers/five-dashboards-improving-student-achievement. Accessed 5 August 2016.

2. Describe how the Initiative incorporates data into district practice and procedures, and how the award amount will help accomplish this goal.

PEDL will provide daily updated data visualizations combining existing Propel data sources and DHS data that will empower school educators in the decision making process to provide targeted support and interventions to high-need students. The grant award amount will provide the funds to secure licenses for Tableau, the data analytics platform that will be used to host PEDL. Different levels of Tableau licenses are available depending on end-use need, and Propel has developed a licensing proposal that will enable the Data Analysis and Reporting Specialist to author and distribute PEDL, school principals to interact with and drill down into PEDL data, and all other Propel educators, administrators, and support staff to review the visualizations. To position Propel for success with PEDL, the system will first be piloted for the 2016-2017 school year with 6 Propel schools including Braddock Hills Elementary School, Braddock Hills Middle School, Braddock Hills High School, McKeesport, Northside, and Pitcairn. After gaining support and feedback over the one-year adoption period, PEDL will be implemented at the remaining 5 schools.

- 3. Describe the target population for the Initiative and why you chose that population.

  Propel's student population includes a significant cross section of high-need students including:
  - 75% are eligible for the Free and Reduced Price Lunch Program
  - 73% are a minority
  - 19% of students attending Propel were chronically absent for 15 or more school days during the 2015-2016 school year
  - 46% of student involved with Human Services at some point in their life, as identified through data collaboration between Propel and DHS
  - 32% of students involved with Human Services during the 2014-2015 academic year, as identified through data collaboration between Propel and DHS

Given these factors, the vast majority of Propel students are considered high-need. Propel is confident that PEDL will be used by both Propel and the DHS to identify student trends related to high-need students. The real power of the system will be enabling educators to drill down into granular data to better understand key student factors that may be hidden by data viewed in the aggregate. Based on the proposed PEDL roll out plan, all students for Braddock Hills Elementary School, Braddock Hills Middle School, Braddock Hills High School, McKeesport, Northside, and Pitcairn will be the target population for the initial program roll out during the 2016-2017 school

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year. All Propel students will be included in the target population upon system wide roll-out during the 2017-2018 school year.

4. Describe the area of focus or academic metric(s) that the Initiative aims to improve and why you chose it.

Logic Model:

Area of	Input	Activities	Output	Year 1	Year 2
People	Propel Staff (Principals, Coaches, Educators, System- Wide Leaders, and the Data Analysis and Reporting Specialist)  DHS Team Members	Initial surveys of Propel Schools Staff comfort with data driven decision making  Professional Development and in-person support  Targeted programming such as truancy support, individualized academic interventions and mental health support for identified high-need students	# of Propel Schools Staff using PEDL  Propel Staff feedback on comfort for data interaction  # of students identified and selected for targeted programming	Increase in the comfort level and skill-set of Propel Staff involved in the PEDL Pilot when using data to inform curriculum instruction and design and targeted program implementation  Decrease in chronic absenteeism  Improvement in academic grades for highneed students	Increase in the comfort level and skill-set for all Propel Staff when using data to inform curriculum instruction and design and targeted program implementation  Continued decrease in chronic absenteeism  Continued improvement in academic grades for highneed students
Technology Systems and Data Sources	Student Information System (Skyward)  Special Education Services Monitoring (eStar)	Design and develop PEDL based on school needs and feedback from Propel Staff and DHS Team Members  Cross-platform data analysis	Frequency of PEDL updates # of data sources synthesized in PEDL	PEDL designed and implemented in order to enable Propel Schools Staff to understand granular, student-level data from multiple data sources	PEDL refined and expanded as needed to support Propel- wide roll out

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Area of	Input	Activities	Output	Year 1	Year 2
Focus				Outcomes	Outcomes
	Standardized	enabled by			
	Testing	PEDL			
	Results				
	(PSSA and				
	NWEA				
	Measures of				
	Academic				
	Progress)				
	DHS Data				
	Tableau				
	Desktop,				
	Online and				
	Reader				
	Licenses				

In PEDL, attendance, discipline, enrollment, demographic, and academic data will be linked to DHS data providing school leaders better insight into non-academic factors that may be impacting school attendance and behavior. The following key metrics will be presented by category in conjunction with DHS data:

- Enrollment Entries and Withdrawals
- Attendance School Wide Year to Date Attendance Rates and Students Missing 10% of More of Possible School Days
- Discipline Discipline Referrals and Offenses by Type, In School and Out of School Suspensions by Demographics
- Academic Achievement Performance on State-Wide Tests and Performance on NWEA Measures of Academic Progress Tests

These metrics were chosen since they are significant indicators of not only the health of the schools overall, but also key metrics in which high-needs students may struggle due to factors outside of the school.

5. Describe how the conclusions drawn from your proposed Initiative could be used or replicated in other schools/districts.

The PEDL digital dashboard, when combined with the Propel Partners in Wellness and other targeted programming interventions, can become a model for other schools and districts to use "whole-child" focused decision making to improve student outcomes. Propel will meet with other schools and districts together with the DHS team members to share best practices in the analysis and use of data to drive not only curriculum instruction and design, but also targeted programs for improving student outcomes. If PEDL gains traction outside of Propel, it would not be the first time a Tableau-based dashboard would be proven successful and expand outside the original intended

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audience. In an effort to target students at high risk for dropping out, the Spokane Public School District "provides educators with web-based data dashboards that integrate multiple data sources to track performance goals and priorities in near real-time, using an intuitive visual interface that highlights trends and outliers" (Tableau). These dashboards have been so successful, that they are planned to be replicated throughout the state of Washington (Tableau).

### **Works Cited**

Tableau Software. "Early Indicators: Using data to Keep High-Risk Students in the Classroom." *Tableau Software,* https://www.tableau.com/learn/whitepapers/early-indicators-using-data-keep-high-risk-students-classroom. Accessed 5 August 2016.

6. Provide an implementation plan, including a timeline and management plan that details when Initiative activities will occur and who is responsible for each activity.

Assuming a project start date of October 1, 2016, below is the implementation plan with timeline, management details, and action owner:

Activity	Action	Start	End Date
	Owner	Date	
Propel and DHS to meet to understand DHS data that can be	Sandra	10/1/16	10/31/16
shared and stored for use in dashboards	Bly		
Purchase Tableau licenses and implement software with connect	Sandra	10/1/16	10/31/16
to Skyward	Bly		
Propel and DHS to schedule continued weekly meetings to	Sandra	11/1/16	6/30/18
review project progress	Bly		
Develop prototype dashboard for rollout	Sandra	11/1/16	11/30/16
	Bly		
Meet with Propel Leadership Team, Principals for the Pilot	Sandra	12/1/16	12/22/16
schools, and DHS partners to provide professional development	Bly		
and training on PEDL			
Official PEDL "Go-Live" to occur when schools open after Holiday	Sandra	1/2/17	1/2/17
Break	Bly		
Continue in-person and remote support for Pilot users	Sandra	1/2/17	1/2/17
	Bly		
Monitor student metrics on a monthly basis with comparisons to	Sandra	1/2/17	6/16/17
previous school year	Bly		
Release surveys on a monthly basis to school Principals and	Sandra	1/2/17	6/16/17
Leadership Team to gauge effectiveness of dashboard and	Bly		
identify areas of improvement			
Evaluate effectiveness of first six-months of PEDL system and	Sandra	6/16/17	7/1/17
identify potential areas for improvements	Bly		
Make any required improvements to PEDL for Propel-wide roll	Sandra	7/1/17	8/1/17
out during the summer break	Bly		
Secure licenses for Propel-wide roll out for 2017-2018 school	Sandra	7/1/17	7/1/17
year	Bly		

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Activity	Action	Start	<b>End Date</b>
	Owner	Date	
Provide professional development and training for new PEDL	Sandra	8/10/17	9/1/17
users before 2017-2018 school year starts	Bly		
Continue in-person and remote support for all users	Sandra	9/1/17	6/30/18
	Bly		
Monitor student metrics on a monthly basis with comparisons to	Sandra	9/1/17	6/30/18
previous school year	Bly		
Release surveys on a monthly basis to school Principals and	Sandra	9/1/17	6/30/18
Leadership Team to gauge effectiveness of dashboard and	Bly		
identify areas of improvement			

7. Describe how you will partner with the Department of Human Services (DHS) and any other outside agencies to support the Initiative.

Propel and DHS have a successful history of partnership for the purposes of data sharing and evaluation across all Propel Schools. Additionally, a more in-depth data analysis was conducted at Northside and Braddock Hills. Propel looks forward to the opportunity to expand this partnership in an effort to continue improving student outcomes, especially those of high-need students. In the past, Propel and DHS have effectively communicated via email and telephone and through in-person meetings when necessary. To expand the opportunities for data and knowledge sharing, Propel will schedule weekly tracking meetings with DHS representatives to ensure that the project implementation schedule is on-schedule and to allow for an open dialogue about high-need students. Besides the significant opportunity to align DHS data with Propel data to target high-need students, Propel also sees a potential opportunity for two-way data sharing. If a student profile is identified for high-need students who typically receive Human Services, and Propel sees students meeting this profile but without Human Services support outside of school, there may be an opportunity for DHS to look into the external factors of the student and to understand if there may be a gap in the services being received outside of the school day. This data sharing between DHS and Propel will therefore benefit students both at school and outside the academic environment.

Propel is also partnering with TCV Community Services as part of the Propel Partners in Wellness Program. After a robust process to identify local mental health organization to engage as partners in providing services to students, families and staff in Propel Schools, Propel selected TCV Community Services as the partner organization. TCV Community Services possessed the knowledge of our families and community in addition to a genuine desire to engage as full partners in this project. TCV Community Services will provide two professionals who will be housed full-time with in the school building. The first individual will be a licensed mental health therapist. It will be their role to provide one-on-one and group therapeutic counseling to students and their families. In addition, they will be available to support the wellness of the school community through professional development and community support activities. The second individual will be a school community support specialist. It will be their role to work directly with students, staff and community members providing coaching, guidance and resources to support positive and healthy

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classroom, school and community culture. This partnership with TCV Community Services provides the support necessary for the Propel Partners in Wellness program to reach students when mental health services are required. The combination of partnership with DHS and TCV Community services will enable Propel to improve student outcomes.

8. Describe your plan to collect, track and store data about the Initiative.

Propel plans to collect, track, and store data regarding two significant facets of PEDL. The first is the comfort of Propel staff with PEDL and data-driven decision making. In order to evaluate the effectiveness of PEDL for Propel staff, initial surveys will be released to gather a baseline regarding comfort with data, frequency of data interaction, and the degree to which data analysis drives instruction at schools. Once PEDL goes live for the pilot, additional surveys will be released throughout the year to understand the effectiveness of the Initiative and the increase of educator comfort with data. The surveys will be released using the free Google Forms tool, and results will be tracked and stored in Google Sheets upon closure of the survey periods.

The second important facet of the PEDL project is to evaluate the improvement to student outcomes that the PEDL digital dashboard enables. Upon pilot go-live, student attendance and academic achievement as indicated by class grades will be measured on a monthly basis and compared to previous year monthly and year to date metrics to understand if driving better insights through the dashboard solution yields improved student outcomes. This data will be collected and stored through the Skyward system and will be tracked and monitored via the Tableau Software driven PEDL.

### Budget (10 points, not included in page count)

9. Provide a detailed budget that clearly supports the Initiative and corresponding plan. Provide details on staff and administrative costs, material costs, in-kind services, student costs, transportation expenses and other costs. You may attach budget files if necessary (e.g., Excel file).

		Year 1: 2016-2017 School Year		Year 2: 2017-2018 School Year	
<b>Budget Description</b>	<b>Unit Cost</b>	Quantity	<b>Total Cost</b>	Quantity	<b>Total Cost</b>
Tableau Desktop					
License for Data Analysis and Reporting	\$1,500	1	\$1,500		
Specialist					
Maintenance and support	\$300			1	\$300
Tableau Online					
Pilot - Licenses for Principals, Assistant Principals, Associate Principals, and Co- Principals at 6 Propel Schools	\$450	14	\$6,300	14	\$6,300
Propel-Wide Roll Out - Licenses for Principals, Assistant Principals, Associate Principals, and Co-Principals at 5 Propel Schools	\$450			10	\$4,500

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		Year 1: 2016-2017 School Year		Year 2: 2017-2018 School Year	
<b>Budget Description</b>	Unit Cost	Quantity	<b>Total Cost</b>	Quantity	Total Cost
Licenses for 5 System-Wide Administrators	\$450	5	\$2,250	5	\$2,250
Tableau Conference 2016					
TC16 Full Conference Registration	\$1,095	1	\$1,095		
Round Trip Flight	\$450	1	\$450		
Annual Cost			\$11,595		\$13,350
Total Grant Amount Requested					\$24,945
Propel Schools Budget Portion – For reference purposes					
Tableau Online					
License for Data Analysis and Reporting Specialist	\$450	1	\$450	1	\$450
Personnel					
Data Analysis and Reporting Specialist	\$74,000	0.3	\$22,200	0.2	\$14,800
Transportation Expenses					
Personal Car mileage for trainings and Professional Development sessions	\$0.54	2,040	\$1,102	2,040	\$1,102
Tableau Conference 2016					
Round Trip Taxi from Airport to Hotel	\$40	1	\$40		
Hotel	\$300	5	\$1,500		
Classroom Training	\$600	1	\$600		
Annual Cost			\$25,892		\$16,352
Total Propel Schools Budget					\$42,243
Total Project Budget					\$67,188

10. Provide a budget narrative that justifies costs associated with the Initiative.

## **Grant Amount Requested:**

Tableau Desktop

Tableau Desktop is an on-premise, downloadable software system that is required to author the visualizations comprising PEDL. The Propel Data Analysis and Reporting Specialist will be designing and developing PEDL, so one Tableau Desktop license is required for that role. Tableau Desktop standard pricing is \$1,999, but education organizations receive a 25% discount, bringing the total for this license down to \$1,500. For future years, maintenance and support is a flat \$300 rate, which provides access to any Tableau Desktop upgrades or support needs.

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### Tableau Online

Tableau Online is a secure, online sharing platform that allows visualizations created using Tableau Desktop to be shared with other users. Tableau Online licenses are being requested for the Pilot and for Propel-wide go-live for school principals and system-wide administration. Tableau Online licenses are \$500 per year, and volume discounts are available for this product. Propel has been in discussions with a Tableau Software Sales Area Manager, and there is a possibility of a 10% discount off list with a bundled purchase of at least 20 licenses. This would bring the per-license price down to \$450 per year.

## Tableau Conference 2016

The Tableau Conference 2016 is scheduled from November 7-11, 2016 in Austin, Texas. The conference includes sessions related to best practices, case studies, and networking opportunities with other Tableau users. The conference registration fee is typically \$1,595, but a \$500 discount is offered to education organizations, bringing the total down to \$1,095. The conference fee and round trip flight cost for the Propel Data Analysis and Reporting Specialist is being requested as part of the grant while additional travel and lodging will be funded by Propel. Conference attendance will allow the Data Analysis and Reporting Specialist to learn best practices for Tableau usage and network with other like-minded organizations.

### **Propel Schools Budget Portion:**

#### Tableau Online

An additional Tableau Online license will be procured by Propel for the Data Analysis and Reporting Specialist. This is recommended by Tableau as a best practice to give the administrator visibility into what has been published and the end user experience. Tableau Online licenses are \$500 per year, and volume discounts are available for this product. If this license is purchased as part of the DHS-funded bundle, the per-license price is expected to be \$450 per year.

### Personnel

A portion of Propel's Data Analysis and Reporting Specialist's time will be devoted to the design, creation, and deployment of the PEDL project. It is estimated that this Propel staff member will spend about 30% of her time during the 2016-2017 school year on this project developing PEDL, working together with DHS, and conducting training and support for the program. During the 2017-2018 school year, 20% of her time will be allocated to this project to provide training and support for new and existing users and updates to PEDL as needed. The Data Analysis and Reporting Specialist will be developing the tool and leading all trainings, therefore no external services are being budgeted in these areas. The Data Analysis and Reporting Specialist salary will continue to be funded by Propel.

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# Transportation

Mileage reimbursement will be provided to the Data Analysis and Reporting Specialist from Propel for all meetings and training sessions conducted outside of Propel's Administrative Offices. An average roundtrip mileage estimate of 15 miles per trip, with an estimated 4 trips per week for the first 34 weeks of the project, was used to calculate the total cost of \$1,102 for the 2016-2017 school year based on the current mileage reimbursement rate of \$0.54 per mile. The same number of trips was used to estimate the transportation spending over the 2017-2018 school year.

## Tableau Conference 2016

The Tableau Conference 2016 is scheduled from November 7-11, 2016 in Austin, Texas. The conference includes sessions related to best practices, case studies, and networking opportunities with other Tableau users. With DHS funding for the Conference fee and air transportation, Propel will plan to fund any taxi transportation required, hotel costs, and class room training for an estimated total of \$2,140.

### **CERTIFICATION**

Please read the below statement and check the box to indicate agreement with its content.

⊠ By submitting this proposal, I certify and represent to the County that all submitted materials are my work and that all responses are true and accurate.