



Improving Teacher Effectiveness and Student Learning Through Comprehensive Induction

A Proposal by New Teacher Center, partnering with Broward County Public Schools, Denver Public Schools, Fresno Unified School District, New York City Department of Education, Polk County Public Schools, and San Francisco Unified School District.

Absolute Priority 1 and Competitive Preference Priority 2

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Response to Priorities: New Teacher Center (NTC) and its official partners, six high-need Local Education Agencies (LEAs): Broward County Public Schools, Denver Public Schools, Fresno Unified School District, New York City Department of Education, Polk County Public Schools, and San Francisco Unified School District, along with evaluation partner SRI Education, seek an i3 Scale Up grant under **Absolute Priority 1** (and **Competitive Preference Priority 2**). NTC meets the grant’s eligibility criteria, and, with its partners, proposes to scale its innovative, cost effective model for supporting and retaining effective new teachers. Over the 5 year grant term, this project will serve 116,992 K-12 students and 1,828 K-12 teachers, with a primary focus on new teachers supporting students in high-need schools. In partnership with NTC, LEAs will establish, expand, and improve their induction programs using data and feedback to inform instructional practice in order to increase student achievement aligned with new academic standards for students. This will be accomplished through one-on-one, job embedded instructional mentoring to new teachers along with high quality professional development to the exemplary teacher leaders who mentor them.

Competitive Preference Priority 2: Enabling Broad Adoption of Effective Practices: NTC’s proposed project meets the criteria for Competitive Preference Priority 2 and will implement systematic methods for continuing to identify effective induction practices and sharing this information broadly with the educational community. NTC and its six LEA partners will build their capacity to replicate and sustain NTC’s research-based Teacher Induction (“TI”) Model across 4 states. As described in Section C-1, NTC has an explicit goal (see Goal 5) around dissemination of best practices to the policy community. Additionally, NTC has identified Broward County Public Schools – a current NTC induction partner – to serve as a demonstration site to other LEAs, and has also set forth additional scale-up strategies (see Section B-2) that will

support Goal 5 and enable broad adoption of the most effective, and most sustainable practices across the country. NTC has also worked with a variety of evaluators such as the University of California, Santa Cruz, Mathematica, and SRI International to begin to codify aspects of the model that make it effective and will continue to share these results. Through this work, and specifically in NTC’s current i3 validation grant (See Appendix C), this type of information has resulted in design refinements and strategy enhancements that have improved the outcomes NTC programs are able to achieve. A similar feedback loop will be applied in this work to ensure the NTC model is responsive to changes in the educational context, including teacher evaluation efforts and the adoption of college and career ready standards.

A. SIGNIFICANCE

(I) NTC’s TI model is substantively different from the often-unfunded “buddy” mentoring that is the common default in school districts today. This project implements NTC’s TI model, which has been designed over the past 17 years in partnership with hundreds of school districts across the nation, focusing on strengthening new and veterans teachers’ practice by developing veteran teacher leaders as exemplary mentors who work 1:1 with new teachers.

NTC’s Impact-based Strategic Approach: A growing body of research demonstrates the statistically significant positive impact NTC new teachers have on student achievement, and that students of NTC-supported new teachers perform better than both students of other new teachers and students of veteran teachers. Based on NTC’s proven impact, detailed in Appendix C, NTC’s TI model both meets the strong evidence requirements set forth in this grant, and is a much stronger alternative to status quo practices due to the systemic approach and methods (described in Section C). NTC’s model builds off important research demonstrating that mentoring as a primary means of delivering and reinforcing professional development is effective at changing

teacher practice and student achievement.^{i ii} When professional development introduces a skill in isolation, only 10% transfer it to their practice, as opposed to the 95% of teachers who can transfer the skill when they are mentored through the phases of implementation.ⁱⁱⁱ

Building new teachers' skills in this way requires expertise in content, instruction, and adult learning. Many exemplary teachers who transition into the role of a mentor may have little-to-no experience teaching their peers. Ongoing, targeted and effective professional development is essential for their success as mentors. Effective mentors need strong communication and interpersonal skills^{iv} as well as the ability to diagnose teacher needs in order to move instructional practice and student learning forward.^v It is also essential that mentors have clarity around their role and expectations, and use research-backed, best practices such as those proposed in this application. However, many mentors do not receive this level of support and research reports that the overall characteristics and content of induction programs vary widely, including duration, intensity, frequency of mentoring, training and criteria for mentor selection.^{vi} ^{vii} These ad hoc approaches have not demonstrated any statistically significant improvements in teacher practice or student learning. In contrast, the NTC approach, which is explicit about new teachers' induction needs and the role of the mentor, has been shown to reduce teacher turnover, while raising the quality of a new teacher's instructional practice and increasing student learning.^{viii ix x}

(2) NTC has successfully demonstrated the ability to expand program reach, growing from a small organization supporting 1,000 new teachers in 1998 to a nationally recognized non-profit with a \$41.6 million budget supporting nearly 26,000 teachers and increasing the learning of nearly 1.8 million students during the 2013-14 school year. School districts in 33 states use NTC programs and/or materials. NTC's strategy relies on its long-standing ability to build bridges

among stakeholders invested in improving teacher effectiveness, including LEA leadership, teacher unions, and funders. NTC’s primary relationships, however, are with its LEA partners, helping to ensure program relevancy and sustainability. To assure that this project’s effectiveness can be established across a variety of student populations, NTC has partnered with LEAs that represent different regions of the country including a dense urban district, large metropolitan areas, and geographically dispersed schools across California, Colorado, Florida, New York.

LEA/District	Participating New Teachers* (Students)	
	Cohort 1 (Students)	Cohort 2 (Students)
Broward County Public Schools	223 (14,272)	223 (14,272)
Denver Public Schools	100 (6,400)	100 (6,400)
Fresno Unified School District	97 (6,208)	97 (6,208)
New York City Department of Education	152 (9,728)	152 (9,728)
Polk County Public Schools	167 (10,688)	167 (10,688)
San Francisco USD	175 (11,200)	175 (11,200)
Total Treatment Teachers (Students)	914 (58,496)	914 (58,496)

*Each treatment teacher receives two years of support. The student teacher ratio for these calculations is 32 students per teacher per year.

Described in Sections B-2 and C-2, as implementation of the induction program begins with a pre-assessment of the LEA’s human capital continuum, some flexibility is built into NTC’s model in order to adjust the induction program to meet LEAs’ specific needs, while adhering to NTC implementation standards and expectations for impact. Discussed more fully in Section B-2, this flexibility allows LEAs across the country to fit the NTC model within their context, without losing the impact or financial return on investment for teachers and students.

(3) With over 240,000 new teachers hired each year in the U.S.,^{xi} there is a moral and practical imperative to ensure that new teachers are provided the quality support and development needed to improve teaching practice and help their students thrive. This is especially true considering that by 2020 nearly 1.5 million new teachers may be needed in the U.S.^{xii} This project focuses specifically on accelerating the effectiveness of new teachers, as research demonstrates that many new teachers are not as effective as experienced teachers.^{xiii} This is especially urgent for teachers serving poor and minority students often lack the support and strategies they need to successfully prepare their students to succeed.^{xiv} Many new teachers are disproportionately assigned to hard-to-staff schools in low-income areas,^{xv} and schools serving urban and poor students are more likely to employ teachers on emergency waivers or those who are not certified in the subject area they are assigned to teach.^{xvi xvii} This results in their students being further disadvantaged by receiving teachers who are both new to the profession and new to their content area.^{xviii} Access to quality induction supports also remains inequitable, with teachers in schools with the highest concentrations of high need students reporting significantly lower participation rates in induction than their counterparts in more affluent schools.^{xix} To break this cycle of inequity and better prepare underserved students for success in college and career, schools everywhere need highly effective teachers, as the quality of a student's teacher is the most important school-based factor to improved student achievement.^{xx}

A partial cause for this climate of poor induction is the absence of comprehensive state induction policies. Single-year induction programs don't improve teacher practice, yet 16 of the 27 states with induction requirements define it as a one-year program, and even less require dedicated time for mentoring. This lack of attention to quality standards and research-based requirements can suppress district commitment to develop and support early-career teachers in

effective ways. In addition to district-focused work, NTC has worked with state education leaders and policymakers, actively strengthening policies and regulations in more than a dozen states. This knowledge and engagement with induction policy, and the proposed work with NTC's LEA partners, will help LEAs to navigate and advocate for policies within their state that contribute to high-impact induction programs.

B. STRATEGIES TO SCALE

(I) There is a great demand for comprehensive, systemic new teacher induction in NTC's LEA partners. All 6 LEA partners are familiar with NTC's induction program and are partnering with NTC on this project because they need the scaled induction support that NTC and i3 grant would provide. Additionally, the NTC model for comprehensive induction and new teacher support aligns tightly to each LEAs strategy for improving teacher effectiveness and student achievement.

Broward County Public Schools, Florida (BCPS): Will serve as a demonstration site for other LEAs around establishing strong programs in complex settings. As a partner in NTC's i3 validation grant, BCPS runs a new full-release comprehensive mentoring program for 223 new teachers. Early evaluation data indicates this work has allowed new teachers to receive more frequent, intense, and instructionally focused support compared to the new teachers who receive the status quo district support. Additionally, preliminary observation data shows this support results in improved instructional practice for the NTC supported new teachers compared to the comparison group of teachers. Due to these early indicators and the broad base support for programming, the district has committed to serving as a demonstration site.

Denver Public Schools, Colorado (DPS): Hires 380 teachers per year and estimates an annual new teacher turnover rate of 28%. DPS has a well-documented emphasis on differentiated

teacher leadership roles to “extend the reach of effective teachers” and create communities where teachers can both lead and remain in the classroom.^{xxi} As described more fully in Section C-1, NTC’s model promotes differentiated roles for teachers and is greatly aligned with DPS in the desire to promote mentoring for new teachers as an essential system of support.

Fresno Unified School District (FUSD), California: Hires approximately 350 new teachers per year and estimates an annual new teacher turnover rate of 27%. Induction is an explicit strategy of their Step Up, Teach Fresno, a comprehensive recruitment and preparation program with a focus on growing their own new teachers while they are still students, and partnering with local Universities to ensure the pre-service experience is as robust as possible. NTC will integrate the induction program within this framework to ensure the investment Fresno is making in their future teachers and teacher leaders pays off in terms of instructional excellence for students.

New York City Department of Education (NYCDOE), New York: Hires over 3,000 new teachers per year and estimates 36.1% of new teachers leave within their first five years. The annual attrition of first-year teachers is estimated at 17%.^{xxii} In District 9, where teacher turnover is particularly high, half of elementary and middle schools are on state improvement lists, and only 10% of students graduate college ready.^{xxiii} NYCDOE has recently released their Framework for Great Schools,^{xxiv} which includes an emphasis on: Rigorous Instruction, Supportive Environment, Collaborative Teachers, Effective Leadership, and Strong Family-Community Ties. NTC has cross-walked its induction program with these 5 elements and details can be found in Appendix J.

Polk County Public Schools, Florida: Hires over 330 teachers per year and has an estimated annual new teacher turnover rate of 37%. The district’s strategic plan has specific call-outs to “retaining qualified and valuable instructional personnel through support and quality professional

learning” and measurable outcomes of reducing their turnover rate for teachers in the first 3 years of the profession to 10% by 2017-18.^{xxv} Additionally, the plan calls for an emphasis on improving the instructional effectiveness of new teachers by “increasing the number of points on the Teacher Evaluation System for Category 1 Teachers Interim Evaluation for the Essential Performance Criteria (EPCs) from 44.47 to 49.47 (increase of 11%).”

San Francisco Unified School District, California: Hires over 350 teachers per year and estimates an annual new teacher turnover rate of 56%. SFUSD is shining a laser like focus on their workforce, with explicit attention to who is leaving their schools and why. The district has conducted an in-depth analysis of teacher retention and identified that the majority of their teachers who are exiting the system, are first year teachers. The partnership with NTC will allow us to jointly address this pressing issue.

(2) The structure of NTC’s program is designed so that it can be applied to the diverse needs of districts across the country while ensuring the fidelity of its program, however this grant provides NTC a unique opportunity to address the following barriers to reaching the level of scale proposed in this project.

A. Isolated Programming: Historically, induction was viewed as an isolated program involving only mentors and new teachers. As a result, programs often lacked sustainability and dissolved during LEA leadership changes. The approach for developing new teachers was also fragmented, especially in complex LEA environments, with induction lacking the connection to other talent development efforts. NTC proposes two solutions for this barrier: 1) strategic grant staffing and 2) use of a demonstration site.

1) If awarded this grant, two key positions would be supported in each LEA: program lead and mentor leads. This grant would also allow NTC to further refine and codify leader

responsibilities. These two supports will help integrate induction with other district priorities, state and local evaluation systems, and increase principal support and deeper consultation with superintendents and district leaders to ensure a broad understanding and support for the work. It is key to note that grant funds will not be used to support actual mentor roles, which could dissolve if they do not come from a sustainable district source. This solution builds off of other sites, such as Hillsborough County Public Schools, Tulsa Public Schools, and Austin Independent School District, which have tested this approach and embedded new teacher support as part of the talent development system. As programs become embedded and are more mature in their implementation, the original needs at start-up phase out and become maintenance and enhancement roles, requiring less resources.

2) As a long-term partner to NTC around teacher induction, instructional coaching, and school leader development, NTC is partnering with Broward County Public schools (BCPS) to serve as an exemplar for starting programs. As a demonstration site, BCPS will host new grantee site visits, have their Program Lead and Lead Mentor meet on joint forums with the new grantees, as well as provide individual consultation to grantees. BCPS will also document key levers and strategies for implementing a strong program.

B. Lack of Data to Drive Programming and Dissemination: In spite of research that shows what effective new teacher support is, there are still many low quality models of induction that are not transforming teaching practice. To ensure improved instruction and improved student learning, new teachers and their supporting mentors need to understand where teachers are starting in their practice and identify areas for improvement based on evidence and data. NTC will implement two solutions to help address this barrier 1) online reporting capabilities and

enhanced formative assessment tools; 2) communication and dissemination of implementation and funding model best practices.

1) NTC recently developed an online platform for data collection, analysis, and reporting, the NTC Learning Zone Formative Assessment System (FAS). This online portal provides new teachers, program leaders/lead mentors, and mentors, with access to real time data to assess new teacher progress. This access provides users with formative, benchmark and summative information about teacher and mentor practice, allowing NTC and partners to better pinpoint what key strategies accelerate teacher effectiveness and student learning. Funding through this project will help refine FAS tools to further integrate college and career ready standards (CCSS) into the work mentors do with new teachers. Additionally, Learning Zone will be refined and enhanced to ensure programs have increased access to reports about new teacher development, aligned to CCSS standards.

2) Funding will also help NTC to further codify strategies and document our communications and evaluation efforts to ensure that NTC is using the best and most direct means to demonstrate the results the model achieves, and so that other districts can fully understand how it fits into their strategic plans. In particular, NTC will seek to codify which mentor-new teacher interactions have the highest correlation with teacher practice improvements on the Danielson evaluation framework components associated with instructional practice. NTC will also report on how to effectively use formative assessment tools to ensure new teachers are able to both articulate the fundamental shifts required by CCSS, and also embody them in their instruction. NTC will also codify and document the essential funding supports necessary for successful implementation along with the communication methods used to present and package this knowledge for districts, states, and policy makers.

C. Inefficient Local Customization: When NTC began this work back in 1998, it allowed extensive local program customization. This approach required tremendous internal resources, and the result was that programs across the nation implemented NTC’s model with great variation. While an entire body of research around improvement science agrees with the importance of local adaption and variation, NTC felt that it was lacking the necessary balance between local adaption and ensuring program fidelity and program outcomes. NTC has addressed the codification aspect of our model through our existing SEED and i3 Validation grants and is now seeking to better document and understand adaptations that will provide more LEA flexibility, but not hinder program implementation quality or fidelity to outcomes. NTC will explore 3 areas for local adaptation: 1) flexible mentor assignments; 2) professional development activities available either face to face and/or online; 3) technology to support virtual classroom observations and feedback cycles.

1) NTC is allowing LEAs to explore different models of mentoring, beyond just a full release mentor model, which is employed in our SEED and i3 Validation grants. This will allow LEAs, such as DPS and NYCDOE, who have invested tremendously in differentiated models of school-based teacher leadership roles, to address the needs of new teachers, while remaining true to their visions of school-based teacher leadership. While the ratios and methods of support listed below are flexible, the intensity and focus remain on improving instruction, and all mentors will have instructionally focused, 60-90 minute, 1-on-1 meetings with new teachers 3-4 times a month. The ratios below may include teacher leaders who split their time between mentoring and classroom instruction, or teacher leaders who split their time between mentoring new teachers and other teacher leadership roles.

- Fully released mentors serve a cohort of 15 new teachers per year, as is the standard NTC model; 50% released mentors can serve a cohort of 8 new teachers per year; 25% released mentors can serve a cohort of 4 new teachers per year

2) Traditional NTC professional development for mentors has been delivered entirely face-to-face. While this has tremendous benefits for building mentor community and ensuring mentor accountability, there have been some practical barriers that NTC plans to address in this grant. Many of NTC's district partners, even those in urban settings, are geographically dispersed between schools and traveling to a central location is extremely time intensive. Additionally, by only offering mentor professional development in an in-person setting, NTC is limiting the ability of mentors across LEAs to learn from each other. NTC proposes to address this barrier by providing online professional learning communities for mentors in some of the participating LEA partners. NTC has been piloting online delivery both internationally with the Singapore Ministry of Education, with rural partners in North Dakota, and with our demonstration site Broward County Public Schools. Described in Section C-1, these communities, called Forums, provide space for mentors to deepen skills acquired during formal professional development, collaboratively solve for issues of implementation, and share case studies of new teacher practice. By allowing LEAs to deliver these Forums in an online setting, NTC hopes to minimize the barrier of having mentors use precious time that they could be working with new teachers for travel. Additionally, LEA will hopefully take advantage of cross-site Forums, allowing NTC to study and document whether having mentors from different states or geographic regions collaborate with each other is a replicable practice for other LEAs across the country.

3) Video observations will be implemented to allow for mentors and new teachers to have more flexibility around observing authentic teacher practice and providing feedback. Observing real

teaching and learning is a core practice of the NTC model, and it can be difficult for mentors to observe teachers as much as they would like given practical constraints such as travel time, school schedules, etc. Because our model allows for more flexible models of mentoring, it is equally critical that mentors have multiple avenues for observing teachers. The NTC Learning Zone, described above and in Section C-1, houses the capability for teachers to upload videos of their instruction and for both the mentor and new teacher to annotate those videos. Video observation provides immediate feedback for the new teacher, as well as the chance to review the evidence of practice with their mentor. This may supplement the common approach where a new teacher may have to wait several days before testing and getting face-to-face feedback on a new skill from their mentor. NTC has piloted this work in other LEA partners, such as Chicago Public Schools, and Grant Wood Area Education Agency, and seek to learn more about how to support teachers and mentors in transferring this aspect of their work to a digital setting.

Collectively, these three approaches support our overall desire to better understand local adaptation that translates into efficiencies and improvements across sites and for NTC as a whole, without sacrificing fidelity to the model.

D. Limited Induction Awareness: NTC has grown by reputation, “word of mouth,” and has invested little in outreach and expansion. While this has not been a detriment to our ability to work deeply with LEA partners, it has limited our ability to influence the national dialog around the needs of new teachers and the role comprehensive induction can play in addressing pervasive educational challenges around teacher quality and helping students be college and career ready. As described in Section A-3, current state level policies for induction are relatively weak and neither adhere to, or in some cases, directly contradict, research-backed best practices. NTC

proposes three grant-supported strategies to address this barrier: 1) dissemination of grant progress, 2) shift to a regional staffing model, 3) broad policy work to improve induction.

1) NTC will employ an extensive communication plan consisting of direct dissemination of grant strategies and findings through social media, publications, NTC national events, and conferences. Both SRI and NTC would be responsible for sharing learnings, so that other districts can fully understand how NTC's TI model fits into their strategic plans. Numerous products will also be created such as digital stories about each site's progress to be used by the sites and NTC to increase program awareness, support and sustainability.

2) NTC has recently transitioned to a regional staffing model, as opposed to a national one. This model allows for NTC staff to work more closely with their LEA partners, acquire greater knowledge about the states and regions they are staffed to, including the local and state contexts surrounding implementation, obtain a greater regional presence, as well as support sustainability and ensure continued funding streams are in place to support work beyond the grant.

3) As described earlier, there is much work to be done to help inform and shape the greater policy community around the needs of new teachers and effective, researched based, induction practices. In particular, NTC intends to address this barrier by:

- Supporting adoption of state induction program standards. Currently, only 15 states have comprehensive induction program standards that articulate a compelling program vision and establish key program design elements. NTC will commit to meeting with state leaders in each of the LEA partner states to review any existing program standards and if interested, allow for free adoption of the NTC induction program standards (already adopted in GA, NC, ID).

- Building awareness for multi-year induction programs and establishing dedicated state funding streams. Without dedicated state induction funding, most school districts utilize federal Title II, Part A funding. As one of 17 allowable uses under existing federal law, induction often gets short shrift in local funding prioritization. NTC intends to provide each LEA and state with a funding analysis to support mentor release time, on-going mentor professional learning, and multi-year support for new teachers.

(3) NTC and its partners expect to identify key learnings for broad dissemination through a variety of strategies. Anticipated learnings include deeper understanding of critical levers related to improving student learning; how to employ mixed models of mentor release time to maximize LEA investments in teacher leaders; how to best utilize classroom observation and professional development technology; how the NTC model develops a common language and methodology for new teacher development by focusing on multiple stakeholders; and how to help LEAs and states to understand how to alter induction policies to ensure high quality implementation and outcomes. NTC will use the following mechanisms to broadly disseminate this information across the field to further support replication.

- National Teacher Induction Network (NTIN): LEA partners will participate in the NTC's NTIN, a long-standing hallmark of NTC's support to partnering LEAs that fosters program discipline, fidelity, and continuous improvement. This participation will provide a virtual as well as a physical community of practice between the LEA partners and 23 other NTIN member districts with well-established induction programs. This venue allows LEAs to showcase their strengths, share strategies that support key elements of teacher effectiveness, consider the implications of program practices and articulate steps towards program goals.

- **NTC’s National Induction Symposium:** NTC’s Symposium on Teacher Induction is an annual event in which over 900 educators, administrators and other organizations gather together to learn more about designing and implementing high quality induction programs. The data gathered from the implementation of this project will be presented at Symposium.
- **National Exposure:** Not only will the grant affect at least 116,000 students, but because the LEA partners represent California, Colorado, Florida, New York, key states for national education policy, the success of the comprehensive, job-embedded model will receive prominent national exposure. As this project will be implemented in a mixture of high performing and struggling schools, urban, suburban, and ethnic and culturally diverse communities, the initiative will create a model for scale-up and replication in any district across the country. LEA program leaders will have many opportunities to speak at conferences and present evaluation findings and implementation strategies at national and regional conferences sponsored by organizations such as Learning Forward and Council of Great City Schools (Broward, Denver, Fresno, New York City, San Francisco are members).
- **NTC Reach and Growth:** The proposed project is also likely to yield findings, tools, and resources that will be used by other agencies and organizations due to NTC’s vast network of education partner organizations across the nation. Transparency around evaluation activities will be a hallmark of this program and partnership. Annual reports prepared by SRI will integrate findings across data sources, addressing implementation, impact, and exploratory questions as appropriate during the study. SRI will also provide informal formative feedback to NTC based on qualitative and quantitative data captured during implementation. In NTC’s current SEED and i3 grants focused on teacher induction, all partners gather annually to review initial findings. Additionally, through NTC’s i3 Validation grant, NTC has

collaborated with the Department of Education around a blog post that shared our evaluation activities.^{xxvi}

Furthermore, NTC has implemented a strategic communication plan that has led to recent media appearances in *Education Week*, *The Huffington Post*, *PBS NewsHour*, and others. These high-visibility national media placements, NTC's increasing social media reach and the vast network of partners NTC has created throughout all 50 states, provides NTC a national forum to disseminate and share the results and findings across the education sector for a broad impact. If awarded grant funds, NTC will develop a dissemination strategy to share best practices with a range of key stakeholders.

C. QUALITY OF THE PROJECT DESIGN AND MANAGEMENT PLAN

(I). The goals, outcomes and objectives for this proposal are:

Goals	Outcomes
1. Improve student reading and mathematics learning.	By the end of two years of mentoring support, students of treatment teachers will on average perform higher than students control teachers on the developmental scale score of their state's standardized achievement test in reading and mathematics, grades 4-8, at a level of statistical significance.
2. Improve instructional practice of teachers.	After two years of support, treatment teachers will on average show higher quality instructional practice compared to control teachers at a level of statistical significance. This comparison will be assessed using an observation instrument.
3. Improve teacher retention.	After two years of support, treatment teachers will on average show higher retention compared to control teachers at a level of statistical significance.
4. Build LEA capacity to support programming and develop teacher leaders.	Partner sites will present NTC curriculum in years 2 and 3.
5. Support organizational expansion and dissemination of best practices.	Establish a demonstration site to guide new programs through implementation. Disseminate learning through national convenings, conferences, and publications.

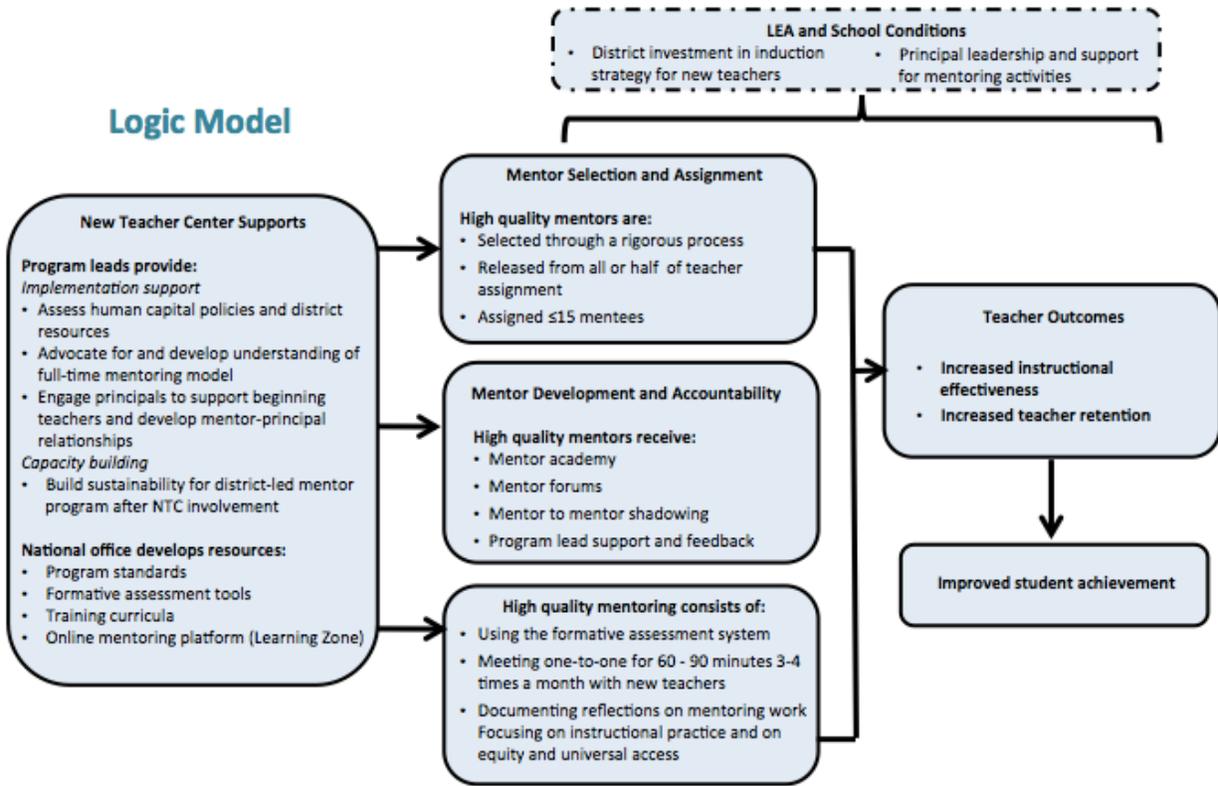
Objectives to support goal attainment	Evidence of achieving objective

1. Select mentors through a rigorous process.	All sites will use a rigorous NTC protocol for mentor selection.
2. Provide mentors with high-quality training.	Documentation of professional support provided and attendance.
3. Support mentors through intensive in-field observations and feedback.	Documentation of mentor observations and lead mentor supports.
4. Provide new teachers with frequent, intense, and instructionally focused support.	Documentation of frequency and duration of interactions and tool use.
5. Facilitate partner presentation and support of training.	Documentation of site presentations.
6. Build organization and partner capacity to support sustainability and dissemination to the field.	<p>Identify a demonstration site to host learning activities for starting grantees and other NTC programs nationally.</p> <p>Identified LEA leads will attend NTC Presenter’s Academy, bi-annual National Teacher Induction Network, and annual Symposium.</p> <p>NTC and SRI will provide lessons learned and best practices to the field through publications and conference presentations at venues such as practitioner/partner conferences like Council of Great City Schools and Learning Forward, and research audiences like AERA and SREE. In addition, learnings will be shared at NTC sponsored national events.</p>

Strategies to Achieve Goals and Objectives: NTC’s unique data-driven and standards-based program is rooted in the goals delineated above and is designed to meet the objectives. To support the outcomes identified above, NTC will implement a comprehensive Teacher Induction program that includes all the elements from our Logic Model:

1. **Committed Partner LEA** (Supports Goal 5, Objectives 5 and 6)
2. **Implementation Support and Capacity Building** (Supports Goals 1-4;Objective 5)
3. **Rigorous Mentor Selection and Assignment** (Supports Goals 1-3; Objectives 1 and 2)
4. **Comprehensive Mentor and Principal Professional Development** (Supports Goals 1-4;Objectives 3 and 4)

5. **High Quality Mentoring** (Supports Goals 1-4; Objectives 3-5)



1. Committed LEA partners: The selection of the LEA partners helps to ensure that the program achieves its results. LEAs and NTC will co-establish and sign a formal MOU defining the scope of the partnership and outlining agreements to provide the fundamental supports, dedicated resources, as well as commitments over time to the endeavor. LEA partners have joined NTC in this proposal because there exists, at their highest levels: 1) funds to support mentors; 2) strong support for the programmatic approach; 3) a wish to grow, own, and sustain the induction program

Partner Demographics

Partner	# Students	Student Demographics	% Free and Reduced Lunch	# Schools
Broward County Public Schools	260,000	39.1% AA, 28.6% H, 25.7% W, 3.5% A,	57%	337

(FL)		2.6% MR, 0.4% NA or PI		
Denver Public Schools (CO)	90,150	56.7% H, 21.9% W, 14.1% B, 3.4% O, 3.3% A, 0.6% AI	70%	185
Fresno Unified School District (CA)	74,235	66.8% H, 11.7% A, 10.3% W, 9.0% AA, 0.9% NA or PI	77%	106
New York City Department of Education (NY)	1,122,783	40% H, 28% AA, 15% W, 15% A, 2% O	78%	1,800
Polk County Public Schools (FL)	96,070	43.9% W, 30.2% H, 20.7% AA, 1.6% A, 3.6% AI, AN, MR or PI	68%	126
San Francisco Unified School District (CA)	56,310	39% A, 26% L, 12% W, 9% AA, 9% MR, DTS, PI, or AI, 5% F	59%	118

AA=African American, AI=American Indian, A=Asian, B=Black, DTS=Declined to state, F=Filipino, H=Hispanic, L=Latino, MR=Multi-racial, NA=Native American, O=Other, PI=Pacific Islander, W=White

Partner Scale-Up Areas of Focus: NTC Scale Up Strategies are described more fully in Section B-2. The table below identifies the strategies each partner LEA will implement during the grant period.

LEA	Scale Up Strategies
Broward County Public Schools	A2, B1, C2, C3, D3
Denver Public Schools	A1, B1, B2, C1, C3, D3
Fresno Unified School District	A1, B1, B2, C3, D3
New York City Department of Education	A1, B1, B2, C1, C2, C3, D3
Polk County Public Schools	A1, B1, B2, C2, C3, D3
San Francisco Unified School District	A1, B1, B2, C1, C3, D3

2. Implementation Support Provided by NTC to LEA Partners: Implementation of the model begins with a pre-assessment of the LEA’s human capital continuum. Special focus is placed on

teacher placement practices, retention rates, and assessment of district resources that can support partial or full release mentoring. NTC analyzes existing teacher and leader professional development and school-level conditions for teacher and leadership development with an eye on the maximum effect on learning per dollar invested.

Building Capacity: In support of Goal 4 (district capacity-building), NTC and its LEA partners will develop an MOU and an action plan with specific aims supporting each LEA's intention to implement, expand and sustain their induction programs. Also in support of Goal 4, NTC will provide direct technical assistance to LEA partners on implementing the induction model within their own contexts. Locally delivered professional development, including Mentor Academy Series (MA) and Mentor Forums, are presented by NTC in collaboration with the LEAs. This collaboration certifies LEAs to conduct many events on their own at the end of the grant term. To ensure this, NTC and LEA partners collaboratively implement a program-level formative assessment system that includes program standards and a continuum, allowing LEAs to monitor program implementation. Researchers have found that this collaborative process is key to the evolution of a shared vision and direction among all participants.^{xxvii} NTC also works with the LEAs to advocate effectively with school boards and other stakeholders for continued investment in high quality TI programs that are appropriately differentiated to support new and experienced teachers. NTC assists in writing project reports and press releases, as well as grant proposals and briefings for potential funders who might assist with continued program funding.

Enriching the Leadership Pool: While working with new teachers and participating in Mentor Academies and Forums, mentors continue to be employees of their districts and their growing expertise becomes part of an enriched pool of LEA human capital. NTC advocates an induction model in which mentors are released from classroom duties for a period not to exceed four years.

Whether they return to their classrooms with enhanced skills or accept leadership positions, mentor alumni continue to represent the values and strategies of the program within their schools.

Online Data Collection: From the start of the partnership with these LEAs, NTC will provide a dedicated portal into NTC’s Learning Zone, described both in Section B-2 and below. This resource will support LEAs’ growing capacity to implement the program independently and sustain it at a high level through ongoing formative data review and programmatic adjustments, based on data.

3. Rigorous Mentor Selection and Assignment: During the pre-implementation phase, NTC works with LEAs to select released exemplary teacher leaders to serve as mentors whose role is to work one-on-one with new (Y1 and Y2) teachers to increase their instructional effectiveness. The selection of mentors involves resume screenings, phone interviews focused on the analysis of a classroom teaching video to determine instructional knowledge and mentoring potential, and a face-to-face panel interview consisting of a scenario-based writing sample, mentoring scenarios, a sample teaching lesson, and a written reflection. Selected mentors are released from some classroom/ other duties in order to have sufficient time to meet the rigorous mentoring expectations. Assignments are based on matching mentors and new teachers across several factors with an emphasis on maintaining appropriate caseloads.

4. Professional Development for Mentors: Mentors receive intensive professional development through a three-year program of Mentor Academies and monthly Mentor Forums. Mentors also participate in a parallel process of peer coaching to accelerate the development of their practice and receive in-the-field shadowing and co-observation opportunities for on-going learning. On average, mentors receive over 100 hours of training per year.

Mentor Academy Series: This is NTC’s core sequenced and recursive curriculum of professional development that supports a mentor through the development of comprehensive mentoring knowledge and skills using formative assessment while building a community of learners who support each other’s growth. Each Academy session has a specific focus to gradually build the learning and development of the mentors’ abilities to advance teachers’ practice; particular focus is given to adult learning needs and effective strategies; strategic and consistent use of both professional and student standards; and the social-emotional needs of learners (both teachers and students). Academies also promote the collection and analysis of field-based data of teacher practice and student learning. The Academy series consists of four, three-day sessions during both Years 1 and 2, and three, three-day sessions in Year 3. Mentors receive 45-56 hours of direct professional development support each year. Areas of focus during the professional development include the following, further outlined in Appendix J:

Instructional mentors also engage in an NTC-lead, four-hour community of learning twice per month, called a ***Mentor Forum***. Through participation in these additional 64 hours of professional learning, mentors continue to expand their skills and knowledge of best practices for teacher development. Facilitated forums create a collaborative community of practice, supporting each mentor’s emerging leadership; deepen mentor skills and advance a high standard of program implementation; provide for accountability in a supportive environment; and encourage sharing and analysis of data to track program impact and suggests constructive interventions. As described in Section B-2, these may be delivered face-to-face or online.

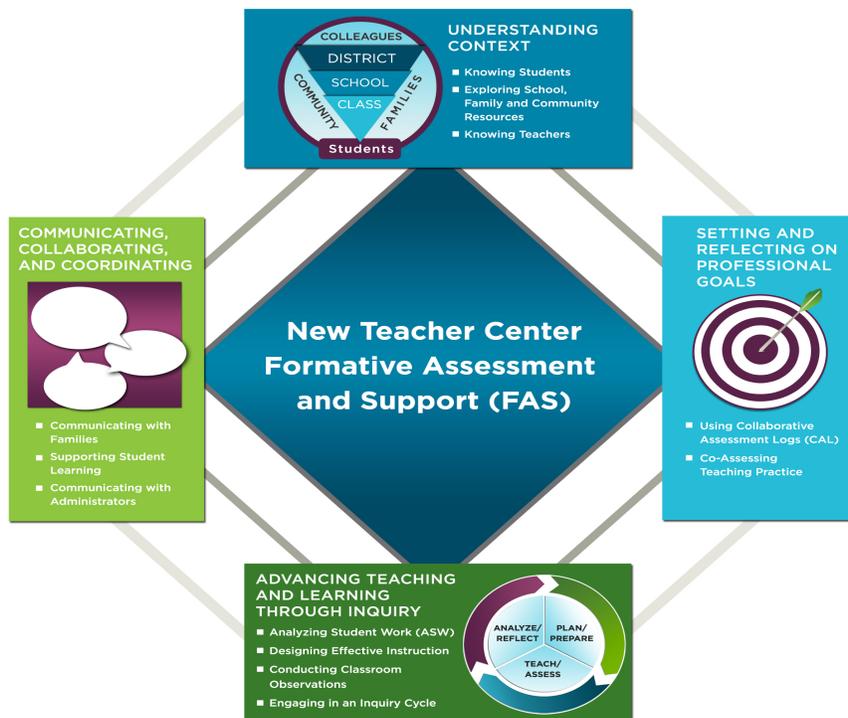
Mentor Assessment and Leadership: Instructional mentors engage in a parallel formative assessment of their own, growing skills using a continuum of mentor development based on a set of mentor professional standards, a goal-setting process (with mid-year review and end-of-year

reflections), a peer coaching process, and data collection. Mentors work directly with a Lead Mentor who facilitates this formative learning process that includes observation of mentoring conversations and feedback, and analysis of FAS data from mentor-teacher interactions. After approximately four years, mentors return to the classroom as more highly effective teachers or accept a leadership position in their LEAs. Data from Hillsborough County Public Schools demonstrate that five years into implementation of NTC’s teacher induction model, 93% of NTC-trained mentors still serve in their district as teachers, other coaching/teacher leadership roles, or in administrative positions.

Supporting Principals: NTC recognizes the essential role that support from administrators plays in teacher effectiveness and retention, and works to expand the capacity of principals to support instructional mentoring in their schools and the development of high quality teacher practice.^{xxviii} NTC works with principals using formative supervision practices and research-based tools and protocols that are aligned to the locally adopted evaluation framework and designed to support principals in providing evidence-based feedback that enhances teacher growth. NTC will present two professional development modules for site administrators: “Improving Student Achievement Through Teacher Observation and Feedback” and “The Role of the Principal in Supporting High-Quality Induction.” Each module develops principals’ capacity to work with teachers to advance their instructional practice through formative observation strategies and developmentally appropriate, focused feedback. Principals benefit from 11 hours of professional development, designed to help develop permanent leadership capacity within the LEA and to foster collaboration between mentors, teachers, and administration.

5. High Quality Mentoring: This relationship is shaped by NTC’s FAS, a unique, strategic, research-based series of high impact collaborative tools and processes focused on advancing

teaching practice and student learning. Aligned with locally adopted professional teaching standards, state-adopted student standards, and LEA goals, the FAS guides the work of the mentors and provides the foundation for accelerating the development of teacher practice. The FAS includes structured protocols, conversation guides, strategies, and resources that provide support tailored to an individual teacher’s assessed needs.



Mentors use the FAS, accessed via the online NTC Learning Zone, to analyze, assess, and document their work with teachers. As described above and in Section B-2, this portal allows mentors and teachers to keep mentoring and observational data organized and secure. Additionally, the data can be aggregated to the mentor and program level allowing program leads to understand trends and isolated issues across participants. LEA partners, their mentors, and teachers use the online FAS tools to focus teachers’ attention on collecting and analyzing student work to refine instruction to meet students’ differentiated needs. This continuous inquiry cycle

ensures that teachers regularly assess the growth of *every* student, including those research shows are often overlooked.

(2) NTC has gone from managing a handful of induction engagements in 1998 to managing over 400 per year in 2015. It has accomplished this by being well managed and by delivering excellent work on time and on budget. The strength of CEO Ellen Moir and senior staff can be seen in the resumes in Appendix F.

Management Structures. The organization proposes replicating successful management structures from our current SEED and i3 Validation grants, if selected for this award.

The NTC i3 Management Council will manage the implementation of the initiative and will be directed by Project Director, Cynthia Brunswick. The Council will provide supervision of the entire i3 program and strategic support to all components and partners. The Council's primary focus is to meet the goals and objectives of the i3 grant, managing the initiative with fidelity to the aims and requirements of the U.S.DOE and those of its LEA partners, and moving forward in a timely and fiscally responsive manner. Members of the Council include: Project Director, Finance Director, Senior Impact Director, Site Leads, and Senior Program Manager.

The i3 Evaluation Council meets virtually once per month to discuss issues of evaluation implementation. Members include SRI International, NTC's Senior Impact Director and Impact Analyst, and LEA Program Leaders. Once per year, SRI convenes all NTC and LEA stakeholders at NTC's annual Symposium to review evaluation design and high-level findings across sites.

I3 Site Lead Forums: Each month, the NTC i3 Site Leads meet to discuss topics related to implementation across sites, deal with issues of contextualization, and plan cross-site learning. These Forums are facilitated by the Senior Program Manager.

Lead Mentor Forums: Lead Mentors from each LEA will participate in quarterly virtual learning communities, providing coaches with a community of practice that supports their unique role of Mentor developer. Forums are facilitated by the Site Leads.

I3 Site Visits: Two times per year, NTC Management Council members and NTC's Director of Policy visit each LEA for in-person visits with Program Leaders, and other District leadership to review implementation and interim outcome data, identify and solve problems of practice, and establish action plans and next steps for high quality implementation.

I3 Demonstration Site Visit and Virtual Meetings: As a demonstration site, Broward County Public Schools will serve as a partner in collecting data and sharing learnings; sharing best practices; hosting calls and joint forums for the new grantees; and sharing lessons learned throughout the duration of the grant

I3 Retreat: During each year of the grant, NTC will convene in-person meetings with the Management Council, LEA Program Directors, Director of Policy, LEA Lead Mentors, and SRI across sites to review data and program implementation, and create opportunities for LEAs to shadow each other.

National Teacher Induction Network: As described in Section B-2, each LEA Program Leader will participate in NTC's national teacher induction network.

NTC and its partners bring a wealth of expertise in education and have a dedicated group of educational leaders and managers to execute its i3 project. The i3 Management Council has proven their ability to manage a series of complex educational projects and programs, including two other federal grants. Under the leadership and vision CEO Ellen Moir, NTC is confident in its ability to manage the complexities of this project. NTC proposes the following key roles based on our past experience implementing federal grants of this scale. Outside of SRI

International providing the evaluation, all project staff are employees of NTC.

The Project Director will be NTC Executive Vice President Cynthia Brunswick EdD, who oversees NTC's work in high profile LEAs such as Hillsborough County Public Schools, Chicago Public Schools, Tulsa Public Schools, Los Angeles Unified School District Schools, and Austin Independent School District,. She is the current Project Director for NTC's i3 Validation and SEED awards. Dr. Brunswick will oversee the strategic implementation of the work and manage the staff implementing the project. This position convenes and leads the i3 Management Council and has ultimate responsibility and authority over the project.

The Finance Director will be NTC's Director of Finance, Justin Rall who has been overseeing NTC's existing federal grants since 2012. Justin will oversee the business and operations aspects of the project, administer the funds that are passed through to the LEAs and manages the relationship with DOE.

The Senior Director of Impact will be Ali Picucci, PhD who oversees NTC's current SEED and i3 Validation studies as well as overseeing research to improve NTC products and services. She has 15 years of experience in educational research and program evaluation and four years of experience as a public school teacher in secondary schools. Dr. Picucci will oversee NTC's performance management internally and across LEA sites providing feedback to make program improvements. The SDOI is the liaison with the SRI International evaluators.

The Evaluation Co-Principal Investigators (PIs) will be Drs. Haiwen Wang and Viki Young from SRI International. Dr. Wang has expertise designing and executing experimental and quasi-experimental studies, including RCTs for studies of NTC's i3 validation grant, the Florida Master Teacher Initiative (i3), and the National Writing Project. Dr. Young, an expert in human capital strategy and district policy, was PI for the study of the Rio Grande Valley Center for

Teaching and Leading Excellence (i3) and for a study of the Human Resources Pilot, a Massachusetts initiative under Race to the Top, and is on the core leadership team for the NTC i3 study. Drs. Wang and Young will oversee the external evaluation, monitor detailed work plans and budgets related to the external evaluation, present detailed analysis of program efficacy.

The Impact Analyst will support SRI, LEAs, and NTC with data gathering and reporting and will be charged with monitoring ongoing day-to-day data implementation across the sites. This position will be hired upon notification of award.

The Senior Program Manager will be Victoria Horn, who has served in this role for NTC's current i3 Validation grant and prior to coming to NTC, lead Boston Public Schools' teacher induction program, which utilizes the NTC model. Victoria will ensure that the program is implemented with fidelity, manage timeline and deliverables, provide support to implementation staff, and co-ordinate implementation activities.

The Director of Policy will be Liam Goldrick, who leads initiatives designed to accelerate new teacher effectiveness and strengthen the quality of induction and mentoring policies at the federal and state levels. Prior to joining NTC, Liam served as education policy advisor to former Wisconsin Governor Jim Doyle and as a senior policy analyst in the Education Division at the National Governors Association. Liam will support dissemination of learnings from NTC's model and i3 scale-up strategies to national and state policymakers as outlined in Section B-2.

The NTC Site Leads will be Mimi Appel for Broward County Public Schools, Tammy Phong for Denver Public Schools, Thandi Center for New York City Department of Education, Laura Baker for Polk County, and Jennifer Bloom for San Francisco Unified School District and Fresno Unified School District. Site Leads will support program implementation and fidelity, providing critical technical assistance and consultation as well as program delivery to build the

capacity of the LEA program leaders and coaches.

Timeline and Milestones

Key: PD= Project Director; FD= Finance Director; SDOI= Senior Director, Impact; PI= SRI Principal Investigators; IA= Impact Analyst; SPM= Senior Program Manager; SL= Site Leads; DP= Director, Policy; LEA= Local Education Agency Partners (Broward, Denver, Fresno, NYC, Polk, San Francisco)

Table 1							
Activity	Milestone	Responsible	Year and Quarter				
			Y1	Y2	Y3	Y4	Y5
<i>LEA Capacity Building</i>							
Project Goals	Sign MOUs, hire positions, meet with evaluator	PD, FD, SID, PI, LEAs	Q1				
LEA Technical Assistance	Provide technical assistance to support implementation of the NTC induction model; transfer ownership of implementation to the LEAs	SL	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
LEA Capacity Building	LEAs attend NTIN; i3 site visits; visits to demonstration site	LEAs	Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1, Q2, Q3
<i>Coach Roles and Responsibilities</i>							
Mentor Selection	Recruit, select, assign mentors in each LEA	SL, LEA	Q2	Q2	Q2	Q2	Q2
<i>Program Assessment, Evaluation, and Accountability</i>							
Data Collection	SRI and NTC collect program data	SPM, PI, Co-PI, SID, IA, LEA	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Reporting	SRI and NTC report out around program data	PI, Co-PI, SID, IA, LEAs	Q4	Q2, Q4	Q2, Q4	Q2, Q4	Q2, Q4

I3 Evaluation Council	Discuss issues of implementation related to evaluation	PD, FD, SID, PI, Co-PI, IA, LEAs	Q3, Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
<i>Coach/Principal/Teacher PD</i>							
Mentor Academy	12 days of prof'l development each to Y1 & Y2 mentors; 9 days of prof'l development to Y3 mentors; work with LEAs to turn over delivery	SL, LEAs	Q3, Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Mentor Forums	Provide 2x per month mentor community of practice to Y1, Y2, Y3 mentors; work with LEAs to turn over delivery	SL, LEAs	Q3, Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Lead Mentor Forums	Provide professional learning communities to Lead mentors; work with LEA partners to turn over delivery	SL, LEAs	Q3, Q4	Q1-Q4	Q1-Q4	Q1-Q4	
Principal Professional Development	3.5 days of prof'l development to principals; work with LEAs to turn over delivery to any new principals in subsequent years	SL, LEAs	Q4	Q1, Q2, Q4	Q1, Q2, Q4	Q1, Q2, Q4	Q1, Q2, Q4
<i>Content Development / Alignment</i>							
Instructional Standards	Pilot new FAS materials aligned to CCSS; gather data from LEAs	SL, LEAs, IA, SPM	Q3, Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Video Observation	Gather data from LEAs around using video software for observation of teacher practice	SL, LEAs, IA, SPM	Q3, Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Online mentor forums	Develop content, pilot and gather data from LEAs around mentors	SL, IA, SPM	Q3, Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4

	interacting in this community of learning virtually						
<i>FAS and Learning Zone</i>							
Implement- ation	Implement Learning Zone in all participating LEAs	SL, LEAs	Q3, Q4	Q1- Q4	Q1- Q4	Q1- Q4	Q1- Q4
Reporting	Review quarterly LZ data with partners to discuss issues of implementation	SL, LEAs, IA, SPM	Q3, Q4	Q1- Q4	Q1- Q4	Q1- Q4	Q1- Q4
<i>Grant Oversight</i>							
I3 Manage- ment Council	Council supervises the entire i3 program and strategic support to all components and partners	PD, FD, SID, SL, SPM	Q1- Q4	Q1- Q4	Q1- Q4	Q1- Q4	Q1- Q4
I3 Client Lead Forums	Discuss topics related to implementation across sites, deal with issues of contextualization, and plan cross-site learning	SPM, SL	Q2, Q3, Q4	Q1- Q4	Q1- Q4	Q1- Q4	Q1- Q4
Lead Mentor Forums	Quarterly virtual learning communities provide coaches with a community of practice that supports their role of Mentor developer	SL, LEA	Q3, Q4	Q1- Q4	Q1- Q4	Q1- Q4	Q1- Q4
I3 Site Visits	Visit LEAs to review implementation, interim outcome data and identify any problems of practice, set next steps	PD, FD, SID, SL, SPM, DP	Q4	Q2, Q4	Q2, Q4	Q2, Q4	Q2, Q4
I3 Demon- stration Site Visits	Visit Broward County Public Schools in person and participate in virtual learning communities	SL, LEAs, SPM, IA		Q1, Q3	Q1, Q3	Q1, Q3	Q1, Q3

I3 Retreat	Annual cross-shadowing visit for LEAs	PD, FD, SID, SL, SPM, PI, LEAs, DP	Q4	Q4	Q4	Q4	Q4
Policy and Dissemination							
Communications Plan	Disseminate results and learnings via social media, conferences, digital stories	DP, LEA, SPM	Q4	Q2, Q4	Q2, Q4	Q2, Q4	Q2, Q4
Policy Plan	Work with state and LEA policy makers around 1. Induction Standards; 2. Funding analysis	DP, LEA, SPM	Q4	Q4	Q4	Q4	Q4

(3) Organizational Capacity: NTC has a staff of over 200 FTE (“full-time equivalent” employee) and 46 FTE located in our business and finance departments. NTC operates 9 offices across the country, including ones in the LEA partner states of New York and California. NTC’s current annual operating budget is \$41.6 million, which includes a healthy mix of private, federal, and local dollars. Current revenue is derived from approximately 37% percent private philanthropy, 17% federal grants and 46% contracts. NTC has been effectively and successfully managing federal grants since our SEED and i3 Validation awards in 2012, and is well familiar with the rigorous expectations associated with managing a federal project.

Equal to effective and appropriate financial management is our commitment to program quality and NTC has assigned staff who have prior experience implementing federal grants, deep experience leading other LEAs in adoption of the NTC model, and equally deep experience and knowledge of the various LEA partner contexts they will be supporting.

Scaling NTC’s work to these 4 states will not be a challenge as NTC already operates in 35 states. Since 2010, NTC has reached 88,899 new teachers and 6.2 million students. NTC also

launched several massive open online courses (MOOCs) in partnership with Coursera that had 78,000 participants in 2013-14, helping to prepare teachers to design instruction incorporating common core state standards.

Support from the Funding Community: Additionally, NTC enjoys the long-time philanthropic support of a vast and diverse network of funders, including large giving foundations, small family foundations, and corporations. Philanthropic support allows NTC to expand its impact, develop new products and services, and build organization infrastructure. Both district and philanthropic alliances create long-term opportunities to seed programs across the nation with awareness of diverse learning styles and the instructional strategies appropriate for reaching diverse learners. NTC currently receives support from over 100 funders. Over the past 3 years, NTC has raised \$46 million in private funding. NTC has included letters of support from funders who are currently supporting work both nationally and in the LEA regions.

LEA Community Support: NTC's LEA partners demonstrate the highest commitment to implementation, scalability, and sustainability of this grant. Letters of support from both them and key state and community leaders are attached. NTC provides its services to LEAs through a fee-based model. That the majority of NTC's revenue comes from contracts with school districts, LEA consortiums, and state organizations willing to invest their own resources into the work, and that NTC has many repeat partners, demonstrates that NTC offers a valuable solution.

(4) In order to provide ongoing feedback for improvement, NTC supports partners through the use of formative feedback, performance metrics and benchmarks, and summative data. As described in Sections B2 and C2, NTC's online FAS is at the core of NTC's approach to performance management and improvement. **Formative feedback** occurs through the frequent meetings between program leads, lead mentors, and mentors. Daily, program leads and lead

mentors are in the field with mentor observing first hand and monitoring the focus and intensity of mentor/new teacher interactions. This in-field support is documented through the FAS online tools. In Learning Zone, leads can then pull these reports when having program-level meetings as well as mentor-level meeting with individuals to assess progress and offer recommendations for areas of focus. Additionally, this data in aggregate is used to set the agenda for bi-monthly mentor forums that focus on relevant problems of practice from the field ensuring an evidence-based and real time approach to new teacher support.

As part of NTC's approach to providing structured, intense, and instructionally focused support, NTC sets target benchmarks across multiple key **performance metrics** for mentors to meet with each new teacher, such frequency, duration, and focus of interactions across time. These metrics are monitored through the FAS online tools and drive mentor-new teacher interactions. Leads and mentors are able to monitor progress towards target benchmarks with each teacher. Additionally, NTC provides monthly summaries towards meeting targets by mentor and program so partners can assess progress and diagnose areas for support.

As part of NTC's i3 validation grant, NTC, partners, and SRI work very closely to share both formative and summative data. As described in Section C-2, NTC and SRI meet monthly with each LEA to understand program implementation and contextual changes that impact the project and strategize improvements. NTC provides site-based debriefs of **summative evaluation findings** as data is released including teacher observations, surveys, and implementation data. SRI also provides annual cross-site overviews at the NTC Symposium as well as annual reports with are shared with sites and the USDOE.

Organizational and programmatic level improvement monitoring: As described with the FAS, a continuous feedback system is at the core of the mentor/new teacher and program

lead/mentor relationships. NTC mirrors this approach at the program and organization level through collaboratively implementing its Program Quality Review Tool (PQRT) with LEA partners. The PQRT is based on the core NTC program standards, developed over 17 years of research, that ensure systemic new teacher support. The PQRT promotes strategies for implementing key standards and defines metrics for monitoring progress towards achieving strong implementation of the standards. This tool provides a structured process for routinely assessing implementation and identifying areas for more focus and improvement.

D. QUALITY OF THE PROJECT EVALUATION

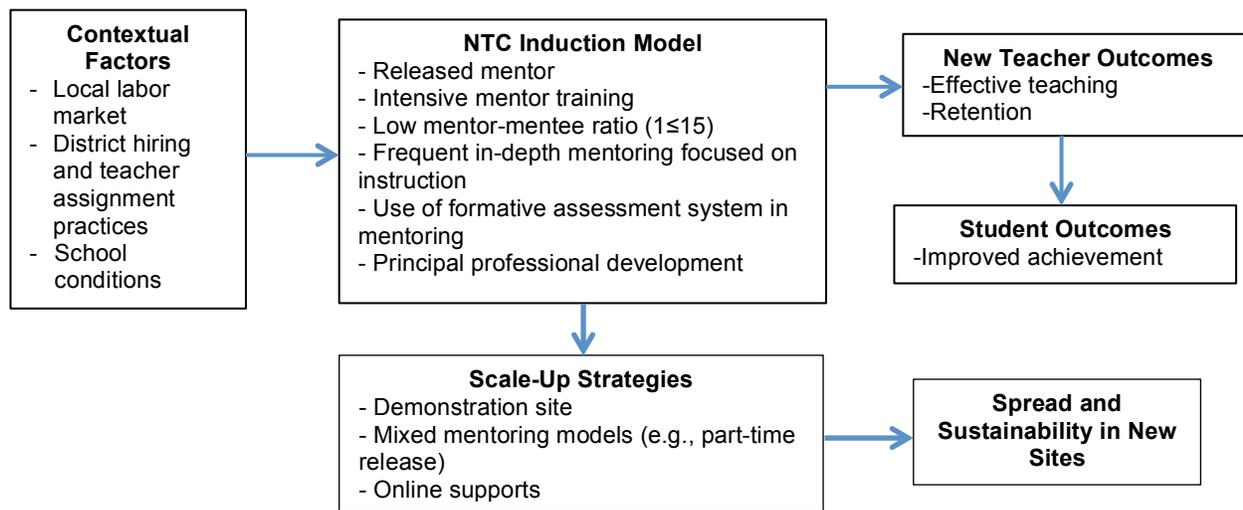
Design Quality: SRI will conduct an independent, rigorous evaluation that will document the extent of implementation in partner sites and identify the impact of the NTC treatment on new teachers and their students. The evaluation will feature a randomized controlled trial (RCT) using clustered random assignment to assign schools within sites to the full NTC induction model or to the site’s status quo induction practices. The study will follow two cohorts of new teachers through 2 years of induction each: Cohort 1 in 2016-17 and 2017-18 and Cohort 2 in 2017-18 and 2018-19. The study will include five sites: New York City, Denver Public Schools, Polk County Public Schools in Florida, San Francisco Unified School District, and Fresno Unified School District in California.

Implementation measures will come from online mentor logs and annual teacher and mentor surveys, with site visits and interviews providing important contextual information. Teacher outcomes will derive from direct classroom observations of new teachers, the teacher surveys, and human resources data from partner sites. Student outcomes will be extracted from district data sets. Data on scale-up strategies will come from in-depth interviews with key informants to understand how three strategies—establishing mixed models of mentoring (i.e.,

with part-time released mentors); integrating technology into mentor and new teacher supports; and offering Broward County Public Schools as the demonstration site—sustain support for the NTC model and new teacher induction.

Evaluation questions and logic model: Exhibit 1 illustrates the logic model driving the evaluation. It reflects the analytic process of the research design, examining first the effects of NTC treatment on student outcomes and second the mechanisms associated with any effects. The evaluation will address the following key impact, exploratory, implementation, and scale-up questions. Impact questions: (1) Does participating in the full NTC induction model result in better teaching practices in the domains of classroom environment and instruction? (2) Does participating in the full NTC induction model result in improved student achievement in reading and math? (3) Does participating in the full NTC induction model result in improved teacher retention? Exploratory questions: (1) Is effective instruction related to student achievement, potentially mediating the NTC effect on student outcomes? (2) Among NTC-served teachers, are higher levels of mentoring (e.g., in terms of frequency and instructional focus) related to more effective instruction and higher student achievement? Implementation questions: (1) What is the level of implementation fidelity to the NTC model in the partner sites? (2) To what extent and in what ways does implementation differ within and across sites? Scale-up question: (1) How do NTC’s scale-up strategies (i.e., part-time release mentors, online supports, and use of a demonstration site) support the spread of new teacher induction practices?

Exhibit 1. Logic Model for Evaluation



Sampling for the RCTs: SRI will conduct RCTs in the five partner districts (Denver, Fresno, New York City, Polk, and San Francisco). In each district, SRI will assign all schools employing new teachers to either the treatment (50%) or control (50%) group, blocking on school level (elementary, middle, and high). Where other local factors indicate that schools vary in ways that might be related to outcomes, SRI will block on those variables. For example, under the current i3 validation grant, K-8 schools in Chicago were randomized within geographic administrative regions, because regional superintendents had discretion to provide teacher supports in addition to district initiatives and because student demographics fell along geographic lines.

SRI proposes using this cluster random assignment instead of individual teacher assignment because of the threat of treatment contamination within schools. New teachers within the same school can be expected to discuss planning and management strategies and share survival tips. Thus randomization at the teacher level within schools would not be practical. SRI will track two cohorts of all new teachers in the treatment and control schools for two years each, reflecting NTC’s two-year induction model (Cohort 1 in 2016–17 and 2017–18 and Cohort 2 in 2017–18 and 2018–19). All new teachers in treatment and control schools will be included in the

teacher surveys and teacher retention analysis. New teachers in treatment and control schools who teach grades 4 through 8 in reading and math will be included in student achievement analyses. As evident during the validation grant, district hiring can extend into the school year because of budget uncertainties, district reorganization, and inaccurate estimates of incoming students. To ensure that the study findings are based on teachers with the opportunity to participate in the full NTC model for virtually the full school year, only those new teachers employed before October 1 will be included in the study cohorts.

For classroom observation, SRI will randomly sample 45 treatment and 45 control teachers from each cohort in each district. This observation sample size is larger than that under the i3 Validation grant to account for teacher attrition, especially as novice teachers leave the profession at higher rates than more veteran teachers. The first cohort of new teachers under the validation grant experienced attrition of approximately one-third to 40%, due to attrition from the district and in a few cases, refusal to participate in the post-observation. With a beginning sample size of 45 treatment and 45 control teachers, one-third attrition overall will still yield 30 treatment and 30 control teachers on average per site.

Student outcome measures: To assess impact on student achievement, SRI will collect annual student test score data linked to teachers from each site. The study will use scores from each district's respective state standardized test (New York State Assessment Program, PARCC Assessment, Florida Standards Assessment, and Smarter Balanced Assessment System). Each of the states requires reading and math assessments in grades 3 through 8. The NTC effect will be analyzed for each cohort after the second year of teaching, reflecting NTC's two-year induction model. SRI will collect historical student achievement data to establish equivalency between

treatment and control schools at baseline and to control for students' prior achievement in the impact analysis, using grade 3 scores as baseline for grade 4 students.

Teacher outcome measures: The evaluation will include two teacher outcome measures: classroom teaching and retention. SRI will conduct classroom observations for a sample of teachers receiving the NTC treatment and teachers in the control schools. Observations will use the Framework for Teaching (Danielson Group, 2013),^{xxix} an externally validated instrument that aligns well with the NTC model, and will focus on two domains: classroom environment and instruction. Under the validation grant, SRI observers calibrated scoring to achieve a one-point range on all observed elements on independently scored training videos. Observers then conducted the baseline and post-treatment observations blind to treatment or control condition. SRI plans to conduct one baseline observation per teacher in the observation sample during the fall of their first year of teaching and one observation in the spring of their second year, close to the completion of the NTC teachers' induction program. Observation scores will be used as an intermediate outcome measure and in association with teachers' student achievement outcomes. To analyze teacher retention, SRI will obtain human resources data annually from partner sites to identify teachers in both treatment and control schools who return to their schools or districts the following year.

Implementation measures: Multiple data sources will allow researchers to monitor the fidelity and quality of implementation, provide feedback to the NTC, explore how specific program components might lead to changes in outcomes, and understand the "induction as usual" received by control teachers. The implementation measures map to the NTC induction model components listed in the logic model (Exhibit 1). Based on the validation study, key components include (a) NTC supports for districts, (b) mentor selection and assignment, (c) mentor development and

accountability, and (d) the provision of high quality mentoring. Each key component is measured by three to seven defined indicators, e.g., indicators for the provision of high quality mentoring include mentors' meeting regularly with mentees, using NTC's formative assessments, engaging in and documenting reflections on their mentoring quality, and mentees' rating mentor supports as valuable on a robust, multi-item survey scale. Each indicator is a quantified metric and NTC established thresholds for high, medium, and low implementation fidelity for each indicator. SRI will work with NTC to define implementation fidelity indicators pertaining to their scale-up strategy, in addition to refining the fidelity measures associated with mentoring activity developed under the validation grant.

SRI will use the NTC annual surveys of new teachers and mentors to measure differences in mentor activity between treatment and control teachers and to measure certain implementation fidelity indicators. Under the validation grant, SRI worked with NTC to replicate validated items that form reliable scales and will leverage that refined survey for the scale-up evaluation. The survey is administered through NTC's online survey platform. SRI will coordinate with NTC and local site liaisons on follow-up activities to achieve a high response rate, tracking response rates between treatment and control groups and monitoring differential attrition between the groups. Control teachers will receive gift cards as an incentive to respond to the survey. The teacher surveys will provide quantifiable data on induction practices in both NTC and control conditions (e.g., mentor or no mentor, frequency and intensity of mentor contact, nature of mentoring, what tools mentors use, and other supports). The mentor survey will describe the nature of mentoring offered and whether supports were sufficient for mentors to carry out their responsibilities. An NTC-developed online mentor log (Learning Zone) will provide consistent data on the frequency and nature of NTC mentoring across the sites, including the number of mentor hours

for each mentee and the number of NTC-designed Formative Assessment tools each mentor-mentee pair completes. The Learning Zone elements required for gauging implementation fidelity were refined under the validation grant and will be leveraged for the scale-up grant.

To understand the implementation context, SRI will conduct interviews at the school and district levels in each site. In a sample of six schools per site, representing the range of schools with new teachers, SRI will interview mentors, mentees, and mentees' principals to understand their perceived effects of the NTC induction model and factors supporting or hindering implementation. Interviews with district administrators in each site will illuminate the status quo induction strategy (if any) for control teachers, as well as local labor market forces and district recruitment, hiring, assignment, and evaluation policies as contexts within which the NTC model is being implemented.

Scale up data collection: Building on lessons learned from the validation grant, NTC aims to implement scale-up strategies that support new teacher induction practices in new sites. SRI will evaluate three of NTC's scale up strategies using data from in-person and phone interviews with mentors, staff at the partner sites, and staff at the demonstration site. First, because a full-time release mentor model is resource intensive and because some districts view being a mentor as a teacher leadership opportunity, partner sites have expressed interest in using a part-time release mentorship model. SRI will codify the part-time model and provide guidance to the field about potential advantages and trade-offs in implementing the model compared with the full-time release model. Second, to maximize the time mentors and program leaders are able to spend with new teachers, sites will integrate technology into its new teacher induction model by using online mentor forums and virtual coaching. For example, a teacher may videotape herself teaching a lesson and the mentor will then provide feedback. Additionally, sites will participate in online

forum as described above. SRI seeks to understand how well and under what conditions the online mentoring supports work. Third, to understand best practices in supporting sustained, intensive new teacher induction, NTC designated Broward County Public Schools as a demonstration site. SRI will identify lessons learned from Broward County in implementing the full NTC induction model, including the district and contextual characteristics suggesting how these lessons might apply to other districts. SRI will also document how Broward County shares best practices with partner sites and to what extent the partner sites benefit from the shared lessons.

Analysis of NTC effect on teacher outcomes: Teacher outcomes collected from classroom observations will be comparable across sites. Thus, researchers will pool data from all sites to conduct the impact analysis, positing a two-level hierarchical model with teacher and school levels. The treatment effect will be estimated at the school level. The model is shown below:

$$y_{ij} = \beta_0 + \beta_1(\text{NTC}_j) + \beta_k(\text{kth - teacher covariate}_{ij}) + \beta_l(\text{lth - school covariate}_j) + e_{ij} + r_j$$

where i is teachers, j is schools; Y_{ij} is a teacher outcome; NTC_j equals 1 for schools assigned to NTC induction and 0 for control schools; e_{ij} and r_j are teacher and school random effects. β_1 is the estimated impact of NTC induction on the teacher outcome.

With a beginning sample size of 45 treatment and 45 control teachers per cohort at each site, one-third overall attrition will still yield 600 teachers observed for outcome (30 treatment and 30 control teachers at baseline and control in five sites). Assuming a total of 600 observed teachers from 340 schools, half treatment and half control, and assuming 10% of the variation in teacher observation score lies between schools and 15% of the variation in the outcomes is explained by teacher and school covariates, the analysis will yield a minimum detectable effect size (MDES) of 0.22.

Analysis of NTC effect on student reading and math achievement: SRI will conduct student test score analysis for new teachers teaching tested grades and subjects.¹ Because of the different state testing systems, researchers will conduct the analyses for reading and math separately for each site. For each subject, researchers will standardize test scores at each grade level and conduct analysis combining all tested grades (grades 4 through 8) based on the standardized test scores, while adjusting for grade-level effect. This analysis will involve positing a three-level hierarchical model with student, teacher, and school levels, with NTC induction effects estimated at the school level. The model is:

$$y_{ij} = \beta_0 + \beta_1(\text{NTC}_j) + \beta_m(\text{mth - student covariate}_{cij}) + \beta_k(\text{kth - teacher covariate}_{ij}) + \beta_l(\text{lth - school covariate}_j) + e_{cij} + r_{ij} + u_j$$

where c is students, i is teachers, j is schools; Y_{cij} is a student reading or math score; and e_{cij} , r_{ij} , and u_j are student, teacher, and school random effects, respectively. β_l is the estimated impact of NTC induction on student achievement.

After conducting student achievement analyses for each site, SRI will further estimate an overall NTC effect on student achievement for all sites using a meta-analysis. Assuming a beginning sample size of 60 treatment and 60 control teachers at each site in grades 4 to 8 for reading and math, a 20% attrition² will yield a total of 480 new teachers in their second year of teaching. The following power analysis assumes: an average of 50 students per teacher (to factor in higher teaching loads at middle school); a final sample of 480 teachers in tested grades in 324 schools; that 10% of the variation in student test scores lies in each of the school and teacher

¹ Researchers will determine if teacher outcomes on the survey differ for teachers in untested grades and subjects from those in tested grades.

² The attrition assumption for student achievement analysis is lower than that for observations because the data will come from extant data and teacher refusal will not be a factor.

levels; and that student pretest score and other covariates explain 50% of the between-school variation. The MDES with all sites combined is 0.09.

Mediation analysis: The researchers hypothesize that teacher outcomes (effective teaching) may mediate NTC effects on student outcomes. To test this hypothesis, SRI will examine whether stronger instructional practice is related to higher student outcomes for treatment and control teachers with observation data and student-teacher linked data. Once positive NTC impact is found, SRI will apply the same models as presented in the impact analysis, but replace the treatment indicator with a classroom practice indicator to examine the relationship between classroom practice and student achievement, adjusting for student, teacher, and school characteristics.

Analysis of relationship between levels of mentoring and teacher and student outcomes:

SRI will include only teachers in treatment schools to investigate whether greater levels of mentoring lead to more effective instruction and higher student outcomes. SRI will apply the same models as presented in the impact analysis for new teachers who participated in the intervention, including mentoring frequency and quality indicators as predictors.

Implementation analysis: For implementation measures derived from the teacher and mentor surveys, SRI will use factor analysis to create reliable scales that describe induction for treatment and control teachers. To assess differences between the two groups, SRI will conduct chi-square tests for categorical variables and ANOVA for continuous variables. For implementation measures from the NTC online mentor log, researchers will calculate the data at the individual level (i.e., mentor or mentee as applicable), aggregate to the indicator level (e.g., percentage of mentees meeting an average of 180 minutes per month with mentor), and apply the threshold for high implementation fidelity for that indicator (e.g., 80% of mentees received mentoring for at

least 180 minute per months equals high implementation). SRI will calculate implementation fidelity for each indicator and roll up implementation scores for each key component for each district. To calculate fidelity at the program level, SRI will then aggregate the fidelity scores for each key component across all participating districts. The implementation measures will also be predictors in analyzing the relationship between mentoring levels and teacher and student outcomes (described above).

The qualitative data will provide a more comprehensive and holistic understanding of the district and school contexts that affect teacher induction. Within each district, the interview data will be analyzed according to key topics that help explain induction differences in treatment and control schools, such as the role of district human capital policies (recruitment, hiring, induction, teacher assignment, evaluation); local labor market conditions (quality of applicant pool, shortages); school leader instructional support; teacher collaboration and community; instructional change/reform initiatives; mentor training/supports; nature of mentoring (frequency, topics, usefulness); and unmet induction needs. After within-district analysis, the research team will compare implementation themes across the sites to generate themes for the overall NTC model implementation. The research team will use this same process to examine the interview data on each scale-up strategy.

Reporting: Annual reports will integrate findings across data sources, addressing the implementation, impact, exploratory, and scale-up questions as appropriate during the course of the study. SRI will also provide informal formative feedback to NTC based on qualitative data gathered through observations and interviews. The final report will include impact findings on the effectiveness of the NTC induction model and findings on implementation and scale up intended to facilitate model replication.

Proposed Evaluation Team and Evaluation Resources: The core leadership team for this study includes both methodological and content experts who have extensive experience with teacher development research and lead major evaluations employing randomized controlled trials, including extensive experience leading i3 evaluations. Drs. Rebecca Schmidt, Haiwen Wang, Marjorie Wechsler, and Viki Young will serve as co-Principal Investigators. All four are part of the core team leading NTC's i3 validation grant. Dr. Schmidt's expertise is in applied research design in educational settings, advanced statistical methods, survey design, and policy analysis. Dr. Wang has expertise designing and executing experimental and quasi-experimental studies, including RCTs for studies of the Florida Master Teacher Initiative (i3), the National Writing Project, and English language learner reclassification. Dr. Wechsler is an expert in teacher induction and professional development. She was Principal Investigator for studies of the Florida Master Teacher Initiative (i3) and of the effectiveness of the Lastinger Center for Learning School Improvement Model. Dr. Viki Young, an expert in human capital strategy and district policy, was Principal Investigator for the study of the Rio Grande Valley Center for Teaching and Leading Excellence (i3) and for a study of the Human Resources Pilot, a Massachusetts initiative under Race to the Top. Ms Juliet Tiffany-Morales will serve as Project Director. Ms Tiffany-Morales has over 15 years of experience managing large-scale evaluations with multiple data collections both qualitative and quantitative.

The SRI leadership team will collaborate closely with NTC on the overall direction of the evaluation. Because SRI is the evaluator on more than 10 i3 development and validation grants, it has a robust professional community with expertise and extensive experience in the requirements particular to i3 evaluations. Further, SRI has a deep capacity to conduct large-scale, multiyear, multisite evaluations. In addition to the i3 evaluations, other significant projects

including the 4-year, \$8MM evaluation of the Texas High School Project in over 120 schools statewide, featuring in-depth case studies, principal, teacher, and student surveys, and quasi-experimental design to study the impact of high school reform models on student achievement; a \$6.2MM randomized control trial of the National Writing Project in 14 sites nationwide over 4 years, with extensive teacher assignment/student work data collection; and a 6-year, \$5.2MM evaluation of the LinkedLearning District Initiative across 9 sites in California. This experience and expertise indicate SRI's breadth and depth to conduct the proposed i3 scale-up evaluation.

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