PUBLIC POLICY LAB

NEW YORK CITY DEPARTMENT OF EDUCATION

DESIGNING BUSING SERVICES

INNOVATION IN FAMILY-FRIENDLY TRANSPORTATION SERVICES FOR STUDENTS WITH DISABILITIES

DISCOVERY & DESIGN

PUBLIC POLICY LAB

NEW YORK CITY DEPARTMENT OF EDUCATION

DESIGNING BUSING SERVICES

INNOVATION IN FAMILY-FRIENDLY TRANSPORTATION SERVICES FOR STUDENTS WITH DISABILITIES

DISCOVERY & DESIGN

Chelsea Mauldin
Jennifer Rose

Alexandra Fiorillo
Miya Osaki
Tina Park
Natalia Radywyl
Anna Vignet

ISBN 978-0-9886455-1-6


563D
8908D

Executive Summary

Background

The New York City Department of Education (NYC DOE) Office of Innovation launched the Chancellor's Challenge to provide an opportunity for DOE offices to identify an important opportunity for improvement and put it to a design challenge. The Public Policy Lab, a nonprofit organization dedicated to improving the design and delivery of public services, served as the DOE's design partner.

The Division of Operations and the Division of Specialized Instruction and Student Support submitted the selected challenge area: the provision of door-to-door busing service for more than 45,000 students with disabilities. Discovery and design work related to this topic was carried out over eight months ending in 2014.

Project Proposals

Team members from the Public Policy Lab and the DOE collaborated with service providers and family members in ethnographic research activities (p. 8). The project team identified unmet user needs (p. 12) and proposed project ideas (p. 14), two of which were then developed through collaborative design and prototyping (p. 22) with family members and front-line staff. This work resulted in three proposals for improving the family and student experience of door-to-door busing provision:

- **Frame Family Expectations for Transportation** (p. 38)
Preempt potential problems by using the social-history meeting to set expectations around transportation provision. Initiate a collaborative decision-making process around transport needs using a family-friendly discussion tool.

- **Share Family Knowledge of Child with Bus Team** (p. 44)
Facilitate more tailored, child-centered care on the bus and mitigate against inevitable service changes. Use a tool to transfer families' deep knowledge of their children to bus teams and better integrate family and team approaches.

- **Alert Families to Service Changes** (p. 50)
Expand outreach to families so they can prepare their children for service changes. Use a tool that aligns school staff, bus teams, and families to provide more written notice about a wider range of service changes.

Next Steps

This document is intended to serve as a guide for planning small-scale implementation and evaluation activities related to the three proposals above.

1

DISCOVERY

We do discovery research with service users and providers to understand people's experiences and identify how to respond to their needs. This research process results in a diagnosis of user needs and a set of potential design concepts.

DISCOVERY

Discovery Process

Why do we do 'discovery'?

User-centered design involves the participants in a service in every aspect of solution generation, from identifying areas of possible focus to creating prototypes of new services. The intention is to rapidly generate results that have a high level of buy-in from all service participants, using a development process that is relatively low cost and low risk.

Our primary goal during the discovery phase is to understand the context in which design activities will eventually occur. We use a research method developed by anthropologists called ethnography – it's the structured investigation of the daily lives, behaviors, and beliefs of individuals. The aim of this type of research is not to generate statistical evidence or survey the beliefs of large groups of people, but rather to provide fuel for new ideas.

We carry out our ethnographic discovery with our partners participating alongside, both so agency staff gain exposure to a design-research process and to allow for more collaborative synthesis and idea generation.

What sorts of people did the team talk to?

A wide spectrum of participants in special-education busing shared their insights with us, including staff and leadership at the Division of Operations' Office of Pupil Transportation (OPT), staff and leadership at Division of Specialized Instruction and Student Support (SISS) and District 75, Department of Health staff, in-school staff and leadership, bus company management, bus drivers, bus attendants, and parents and guardians. In all, our team did more than 80 hours of discovery research.

Most of our research was carried out in the homes or workplaces of service participants and providers (including on buses!). By immersing ourselves in the service environment, we learn about the contexts in which people use the service through multiple user groups' eyes. This approach also means that the people we meet are "on their own turf" and feel more comfortable sharing the details of their experience.

Fieldwork Participants

The primary users of special-education busing are students. However, we believe that other participants and providers – from families, school staff, bus drivers, and attendants, to staffers from Pupil Transportation, Specialized Instruction and Student Support, and related offices – can also be seen as users of the service. Our team did more than 80 hours of interviews and observation with a spectrum of users.

Key Findings

What are our key findings from discovery?

Fieldwork revealed the incredible complexity of the special-education busing service. We learned about the significant efforts made by the DOE in recent years to improve the service, and we heard about ongoing initiatives that will deliver improvements in the coming years.

Our findings fall under four key themes: knowledge communities, community disconnection, service varieties, and 'outside the bus' solutions. These findings confirm some previously identified challenges, while hopefully adding to policymakers' understanding and offering some new angles for generating solutions.

FINDING 1

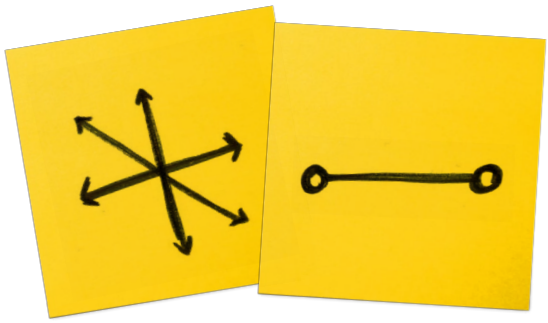
User Communities Possess Valuable Knowledge That Could Improve the Service

Across all of the service, families, on-the-ground providers, and DOE staff have a deep understanding of children's needs and how the service works for them.

FINDING 2

The Service Doesn't Take Full Advantage of Community Knowledge

The system could better capture and integrate the best practices and other useful knowledge currently embedded in different, disconnected user groups.



FINDING 3

Children's Needs Exist Along Continuums, but Service Delivery is Polar

Depending on their trip, their disability, and their family circumstances, children could benefit from different varieties of service provision – but right now the service is either uniform or individually customized for each child.

FINDING 4

Impacts on the System from "Outside The Bus" May Require Solutions Outside the Current Service System

Students need access to their learning community. In some circumstances, other transport options besides busing may serve them better, or access might be provided through means other than transportation.

User Needs

What do our findings suggest about user needs?

Users have at least two important, under-served needs: they need better knowledge sharing and more varieties of service. We believe these needs are shared by all users – by children, by front-line providers (at home, on the bus, and in school), and by system providers at bus companies and in the DOE.

BETTER KNOWLEDGE SHARING

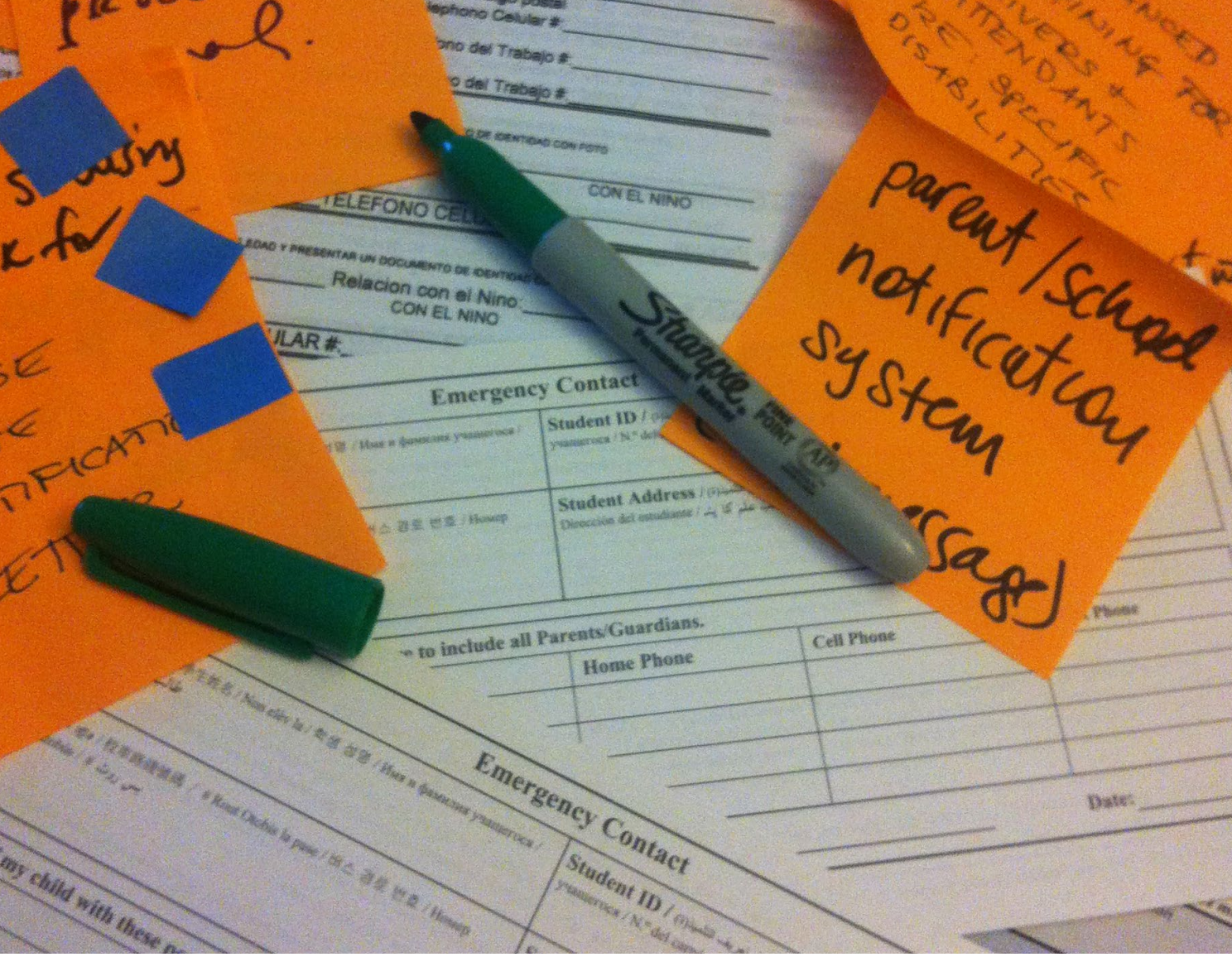
Shared Need 1

Better knowledge sharing first requires recognition and valuing of the rich embedded knowledge in communities (bus staff, parents, school staff, and DOE divisions). This dispersed body of best practices and wisdom must be brought together and translated into usable forms, and then distributed to the other communities of users who could benefit from it.

MORE VARIETIES OF SERVICE

Shared Need 2

Children, front-line providers, and system providers might all benefit from categories of service that address the common needs of particular clusters of users. This might provide better service for many children (particularly those without the resources to seek special accommodations) while also reducing resource demands by satisfying the needs of some children who would have otherwise required accommodations. Once a number of different service varieties are defined, everything from the type of bus to parent communications can be tailored to meet the needs of the users of each particular service category.



Project Ideas

What specific initiatives could address the needs we diagnosed?

Through our discovery process, we identified nine potential project concepts that could be explored through collaborative design.

Two of these concepts – Welcome Touchpoints and Single-Table Planning – ultimately moved forward as the primary objectives of our design phase, but the issues that inspired the remaining seven concepts continued to surface during user discussions. Some of these ideas are new, while others dovetail with current initiatives (in which case we certainly suggest that any future efforts integrate existing and new ideas).

We believe the concepts retain the potential to spark subsequent user-centered design efforts, so they're described here for future reference.

SERVICE FLAVORS	ROUTE LOOP	WELCOME TOUCHPOINTS
REAL-TIME NOTIFICATION	SCHOOL BUSING ASSOCIATIONS	PRACTICE-BASED TRAINING
SINGLE-TABLE PLANNING	SQUARE DATA	HOT SPOT SOLUTIONS

SERVICE FLAVORS

Define the most-needed varieties of busing, then create services to match common user needs.

Children with (for example) mobility challenges may have a set of typical transportation needs that are distinguishable from the typical needs of children with behavioral and/or cognitive disabilities. Similarly, older children and younger children may have needs typical to their age group. By identifying common needs among clusters of users, it could be possible to better address some unmet needs (particularly among children from low-resource families) while also reducing investment in the creation and provision of highly individualized service offerings.

ROUTE LOOP

Carry over effective routes, then improve with feedback from on-the-ground providers.

As the school year progresses, it seems that routes become more stable and satisfactory to their users. Rather than starting fresh each school year with new routes – which then necessarily go through a 'shake down' period – it could be helpful to carry over routes, adjusting them to reflect student home and school moves. Additionally, on-the ground service providers, from bus drivers to school staff, have knowledge about students' trips that could be used to improve routing; new feedback mechanisms could allow those insights to inform the system.

WELCOME TOUCHPOINTS

Share knowledge and expectations at the beginning of each school year with all front-line service users.

See page 23 for a detailed description of this project concept, which was selected for design development.

REAL-TIME NOTIFICATION

Send real-time alerts about the location of a child and/or their bus.

Families of students with disabilities told us that they found it very challenging to deal with service changes. Alterations to routine not only disrupt parents' abilities to meet their other work and family responsibilities, but also affect the well-being of students, particularly those with disabilities that require careful maintenance of routine, from medication dosing to emotional predictability. Real-time 'push' notifications regarding bus status, delivered via phone, text, or email, could mitigate some uncertainty about day-to-day service delays.

SCHOOL BUSING ASSOCIATIONS

Establish PTAs for busing: school-based groups of parents, educators, and bus staff.

Schools recognize the importance of collaborative community engagement through the establishment of parent-teacher associations, school leadership teams, and other school-based groups. It could be valuable to expand the existing once- or semi-annual mandated meeting between bus teams and school staff to include families of children who use busing. Meetings could also be scheduled more frequently. These forums could provide an opportunity for consensus building, group problem solving, and other community-based value.

PRACTICE-BASED TRAINING

Create a hands-on learning program for drivers and attendants, focusing on best practices and child needs.

Bus drivers and attendants receive most of their formal training, including instruction in supporting children with disabilities, in classroom settings. We heard from bus teams and school staff, however, that drivers and attendants could benefit from hands-on, practice-based training. Specific techniques to better assist students (both with orthopedic and emotional or cognitive issues) could be taught in the context of a mentoring relationship between senior and less-experienced staff – a model used for bus team members' initial training and one that we heard was appreciated and effective.

SINGLE-TABLE PLANNING

Identify crucial decision points and invite all knowledge communities to contribute.

See page 23 for a detailed description of this project concept, which was selected for design development.

SQUARE DATA

Rationalize data collection and data content between multiple knowledge-management systems.

Digitized data about children and their busing needs exist in multiple databases. A number of these crucial systems are disconnected and their data schemas are not fully compatible. A process to map data and develop migration scripts to integrate these systems could speed transportation workflows and reduce inconsistencies generated through multiple points of data entry and hand-keying of content between systems.

HOT SPOT SOLUTIONS

Pinpoint locations or populations who chronically require better service, then source alternative solutions.

Data analysis and visualization of customer-service calls, incident reports, and other indicators could identify specific neighborhoods or student populations that struggle with service challenges, e.g. persistently long trip times. That analysis could then drive development of alternatives — from new school placement to distance learning programs — to ensure that students are connected with their learning community.

2

DESIGN

During the collaborative design phase, our designers, users, and service providers work together to create and test mock-ups or simulations of possible new service interactions and tools.

DESIGN

Design Process & Point-of-View

What happens during collaborative design?

During our design phase, designers and users work together to build 'fast and dirty' mock-ups or simulations of possible new service interactions and tools. We then do rapid internal trials of our designs. After a round of testing, we adjust our assumptions and design a new round of options with users. We repeat this cycle multiple times.

This process is referred to as collaborative design (or 'co-design') and iteration. With each cycle of development, we improve and refine our new services until we have something to take outside of the design environment for test implementation.

Did the team approach design from a particular point of view?

Yes: While our discovery process identified a number of potential projects purely internal to the DOE, team members and project leadership decided to focus on services that directly engage the families of children with disabilities. All of our work in this phase is therefore keyed to an understanding of a family's 'journey' – from identifying a need for transportation assistance to using busing services.

Which project ideas from discovery were developed into design objectives and why were they chosen?

Two concepts, Welcome Touchpoints and Single-Table Planning, were identified as having the best potential for creating value, given the expected timeframe and resources for small-scale, test implementations in the next school year.

Design Objectives

WELCOME TOUCHPOINTS

ORIGINAL CONCEPT

Share knowledge and expectations at the beginning of each school year with all front-line service users.

REVISED DESIGN OBJECTIVE

Clarify family expectations and encourage appropriate engagement by sharing knowledge at key moments in the process.

Design for our Welcome Touchpoints objective focused on how to help clarify families' expectations about transportation and encourage appropriate forms of engagement with the system. During discovery, we identified the start of school year as a key welcome moment, due to its role as an 'entry point' for the provision of busing services. For our design phase, we also added an earlier entry point: when families first are offered transportation services.

SINGLE-TABLE PLANNING

ORIGINAL CONCEPT

Identify crucial decision points and invite all knowledge communities to contribute.

REVISED DESIGN OBJECTIVE

Increase informed and collaborative decision-making by helping families to more effectively participate and contribute at crucial points in the service.

The Single-Table Planning objective speaks to the need to build stronger pathways for all service participants to share information and decision-making. For design, we specifically focused on how families could participate more collaboratively, both during the IEP process and once their child's busing service has begun.

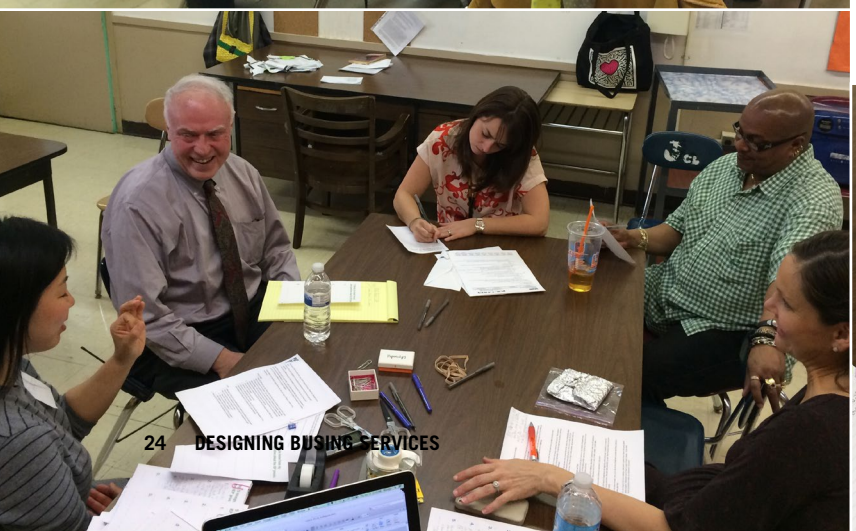
Behavioral Underpinning for Proposals

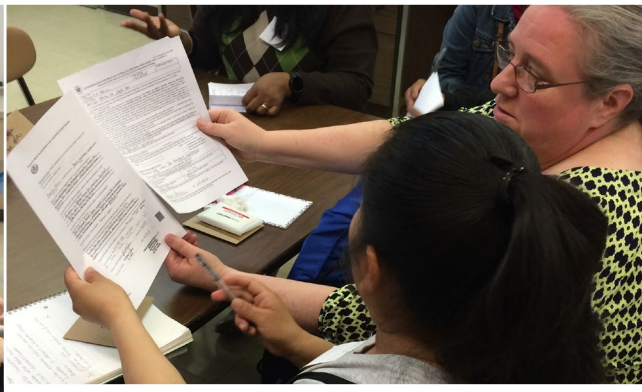
Our design objectives are rooted in a behavioral insight that spans the busing service experience: Some families take action to tailor their child's bus service too late in the process, and they may also take action in ways that are not effective. Our aspiration is to design ways to help families take action to avoid or intercept problems before they occur — or take action more effectively when issues do arise.

Collaborative Design Sessions

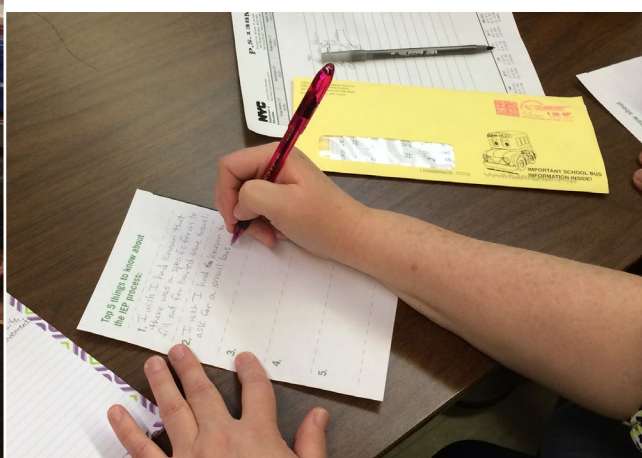
We developed new service interactions and tools through collaborative design with a range of front-line participants in the busing process – from families of students with disabilities to school staff to bus drivers and attendants.

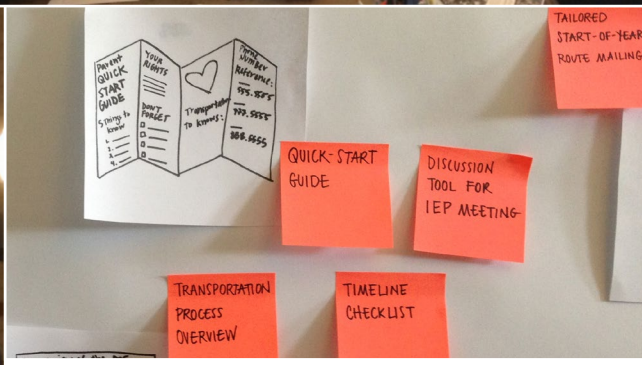
Design sessions with families and service providers occurred over three rounds, with revision and refinement of work in between each round. We validated our evolving designs through three 'pin-up' feedback sessions with DOE leadership, through interviews with operations staff, and with the weekly input of three DOE staffers embedded in our design team.



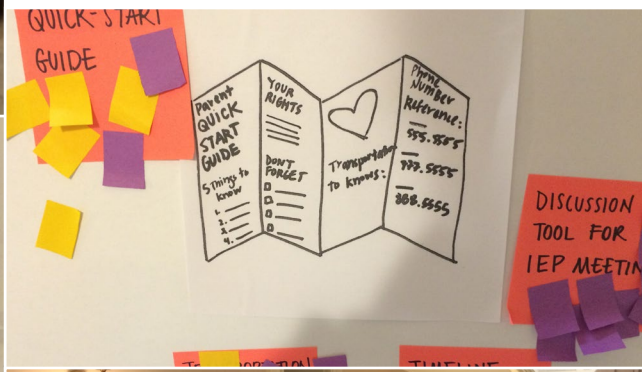


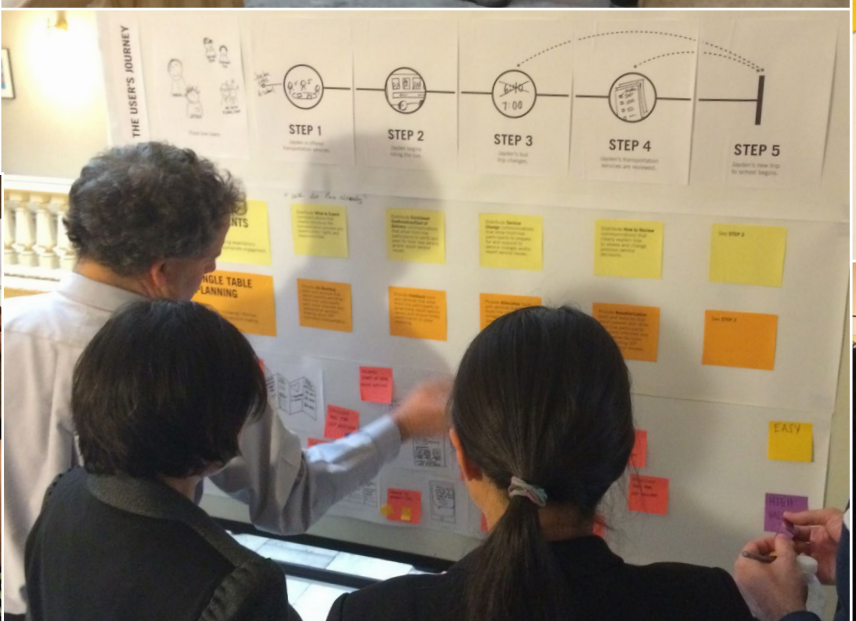
ROUND 1 COLLABORATIVE DESIGN
For our first round, we met with family members and staff at an East Harlem school serving children with significant medical and orthopedic disabilities. We collaborated to identify tips for managing and resolving the types of obstacles they had experienced while accessing transportation services for the children in their care.



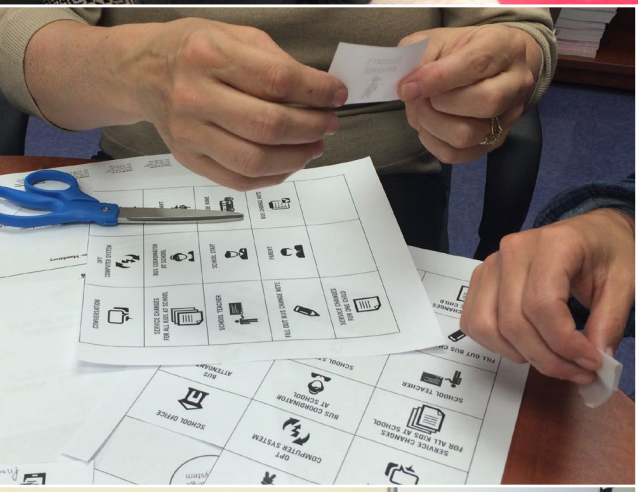


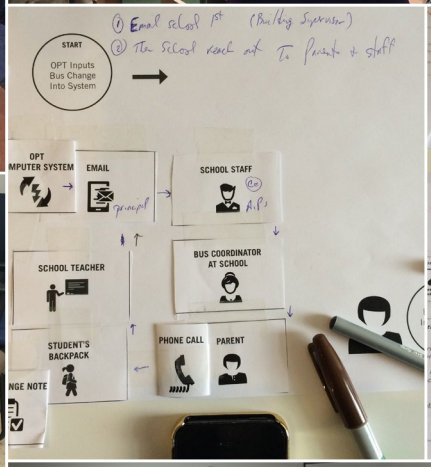
ROUND 1 ITERATION & FEEDBACK
After our sessions with front-line staff and family members, we met with our core design team of DOE and Public Policy Lab staff and fellows to develop preliminary service concepts — new interactions and tools for testing in Round 2. We also held the first of three feedback sessions with DOE executive leadership, sharing process and design directions and asking for their input and approval for next steps.

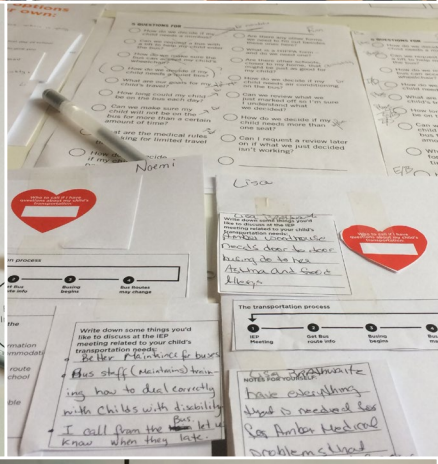




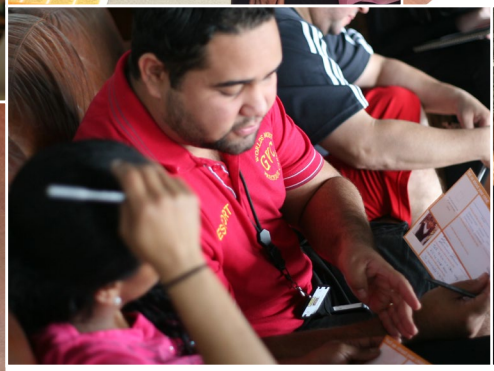
ROUND 2 COLLABORATIVE DESIGN
In our second round, we met with staff and family at a community school in the South Bronx and at an Upper East Side school that serves students with significant emotional disabilities. We used design stimuli, inspired by our first round, that were intentionally left incomplete to engage our collaborators in 'finishing' the designs.

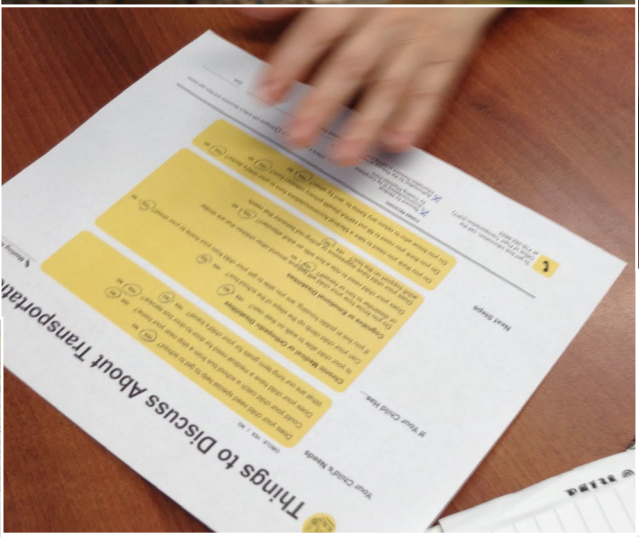






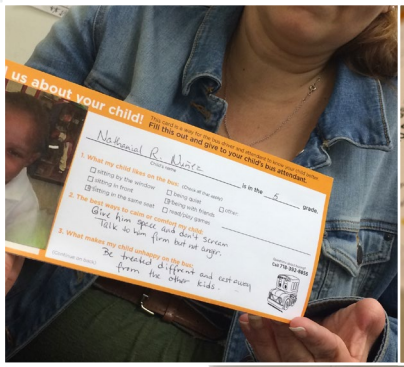
ROUND 2 ITERATION & FEEDBACK
After our second round of collaborative sessions, we designed high-fidelity stimuli intended to evoke more final materials and interactions. We met again with our internal team members, visited with DOE technical staff to gain clarity on a number of processes, and met again with leadership to share progress and get feedback.





ROUND 3 COLLABORATIVE DESIGN
We returned to the schools in the Bronx and East Harlem for our final sessions, meeting again with family members and staff to test whether our design prototypes generated the intended experiences for users. We further tested our designs with bus drivers and attendants at a bus company in the Bronx.

ROUND 3 FEEDBACK, PRESENTATION & ITERATION
We shared findings from our rapid testing with members of DOE leadership, then we presented the project work to senior executives. Based on feedback from our user collaborators and DOE policymakers, we made final revisions to our design proposals and tools and documented our recommendations for testing and evaluation.



The Family's Service Journey

STEP 1

CHILD'S TRANSPORTATION NEEDS ARE PROCESSED

Parent or School Staff ask for an initial referral

Child attends evaluations in or out of school

Parent and Social Worker have Social History Meeting

Parent gives Medical Accomodations form to Doctor

Parent returns Med Accomodations & HIPAA forms to School Staff

IN THE SPRING...

School Staff gives Parent the Notice of Request for Initial Request

Social Worker calls Parent to set up Social History Meeting

Social Worker may give Parent the Medical Accomoda-tions form and the HIPAA form

School Staff give Medical Accomoda tions form that call for limited travel ti to Dept. of Health

School Staff sends Parent a Notice of Referral Letter and more info

Dept. of Health ma assessment and giv School Staff a recommendation

Parent returns contact card to bus team on first day of school

Parent might be contacted by Bus Company

Parent may call OPT or school with questions

EARLY SEPTEMBER

LATE AUGUST / EARLY SEPTEMBER

Bus Companies deliver duplicate copy of contact card to OPT

Bus Team may do dry run and/or contact Parent before start of year

Bus Companies assign Bus Teams to routes; teams see codes for each Child

OPT Customer Service Line

STEP 3

CHILD'S TRIP CHANGES

Parent requests a change to bus service

Parent receives letter in mail with new service info

Parent may be contacted by bus company with new service info

ANY POINT DURING THE YEAR

AT LEAST 5 DAYS BEFORE CHANGE

UP TO THE DAY OF CHANGE

OPT moves Students to different routes, setting off ripples of changes to other students routes

OPT mails Parent a new route letter when the child's route changes

Bus Team informs Parents of changes to times or personnel

Bus Teams switch to new routes during their pick

Bus Companies call Parents to inform them of changes to times or personnel

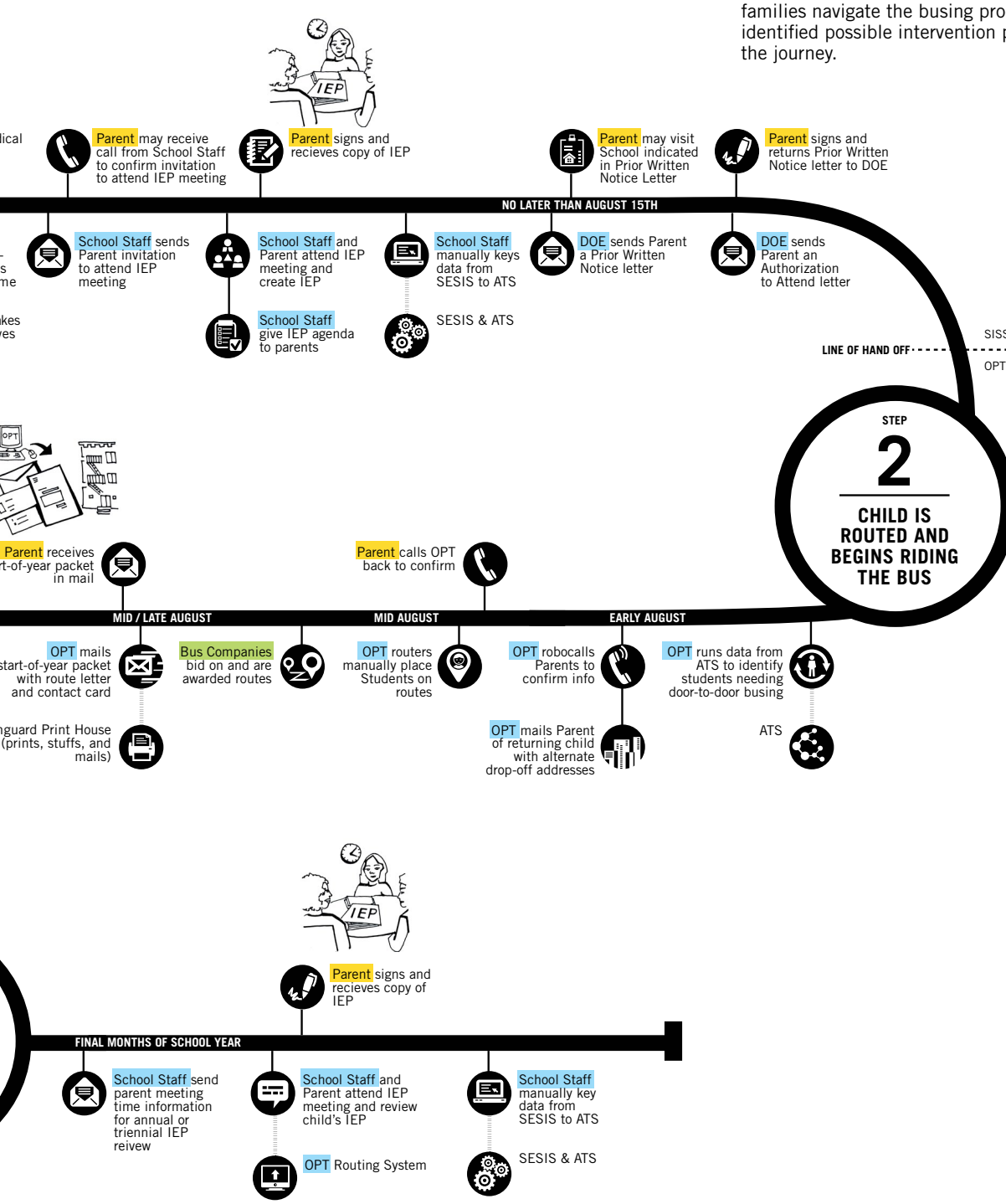
OPT Routing System

STEP 4

CHILD'S SERVICES ARE REVIEWED

What Families Experience Now

Through our collaborative design activities, we developed an understanding of how families navigate the busing process now and identified possible intervention points along the journey.



STEP
1
CHILD'S TRANSPORTATION NEEDS ARE PROCESSED

Step 1 Current Insight

Some families participate in transport decisions without understanding the process or what transport options would be best for their child. Decision-making at the official IEP meeting is not always adequately supported by earlier preparations, beginning with the preliminary needs assessment at the social history meeting.

Step 1 Short-Term Welcome Touchpoint Goal

Distribute **What to Expect*** communications that clearly introduce the transportation process and participants' rights and responsibilities.

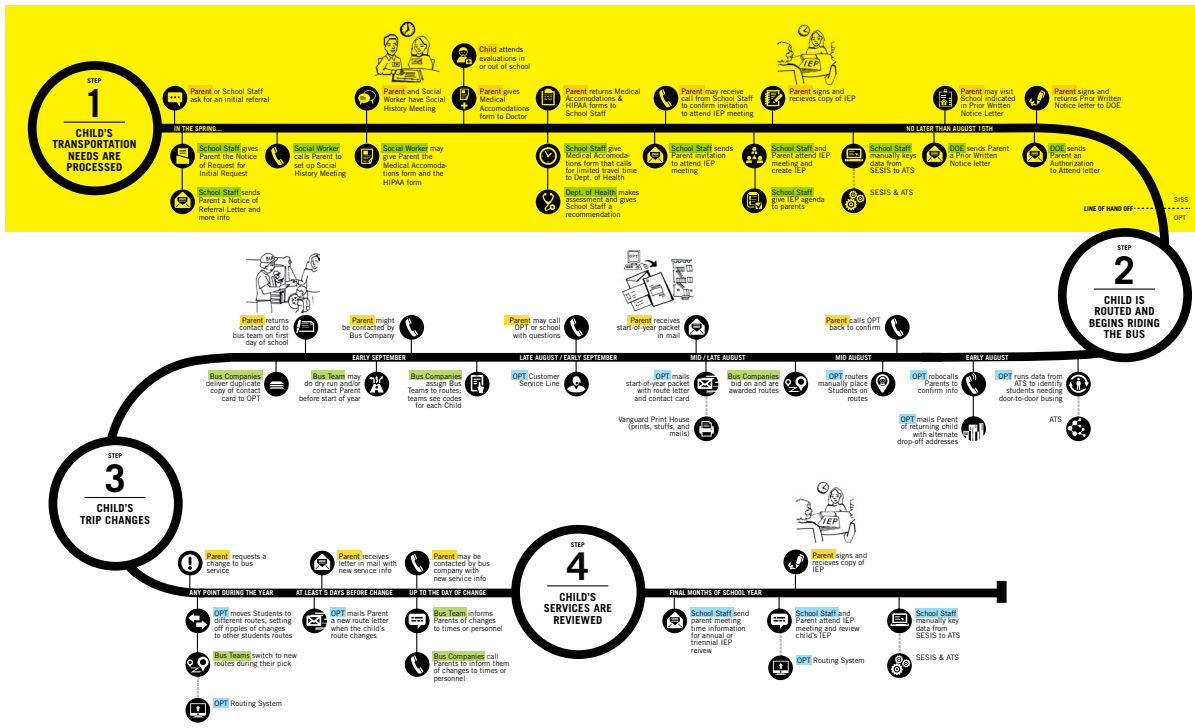
Step 1 Short-Term Single-Table Planning Goal

Provide **On-Boarding*** tools and services that assist families and other front-line participants with more informed and deliberative decision-making about IEP-mandated transportation.

Step 2 Long-Term Aspiration

Families participate in transport decisions knowing what to expect from the process and how their child can best get to school.

*Proposal A (p. 36) responds to these goals.



STEP
2
CHILD IS ROUTED AND BEGINS RIDING THE BUS

Step 2 Current Insight

Some families accept busing service as provided, without understanding if it adequately meets their child's needs; if issues arise, they may take action that comes too late or is directed to the wrong people.

Step 2 Short-Term Welcome Touchpoint Goal

Distribute **Enrollment Confirmation/Start of Delivery** communications that help families verify and plan for their child's new service and identify/report issues.

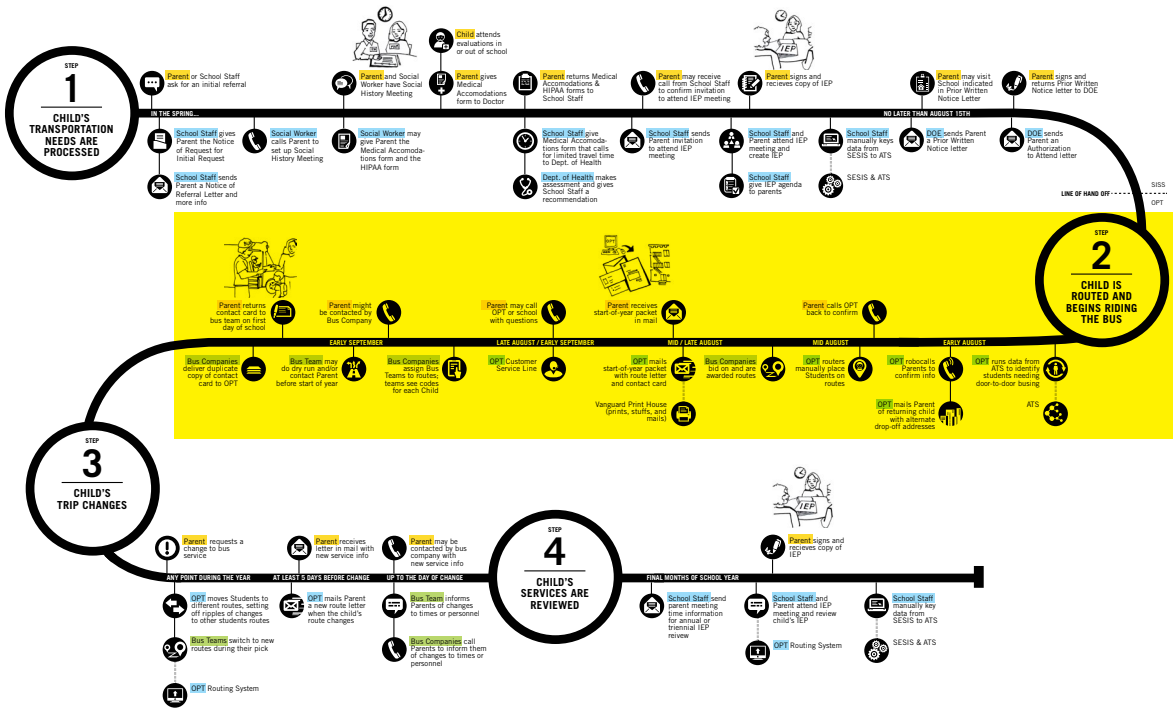
Step 2 Short-Term Single-Table Planning Goal

Provide **Participation/Feedback*** tools and services that allow families to proactively engage around service issues with other service stakeholders.

Step 2 Long-Term Aspiration

Families actively monitor busing service, in partnership with bus team members and school staff. Before issues arise, families proactively and effectively advocate for their child's care.

*Proposal B (p. 44) responds to this goal.



STEP
3
CHILD'S TRIP CHANGES

Step 3 Current Insight

Some families do not prepare for service changes due to insufficient prior notice.

Step 3 Short-Term Welcome Touchpoint Goal

Distribute **Service Change*** communications that help families prepare for and respond to service changes and identify/report issues.

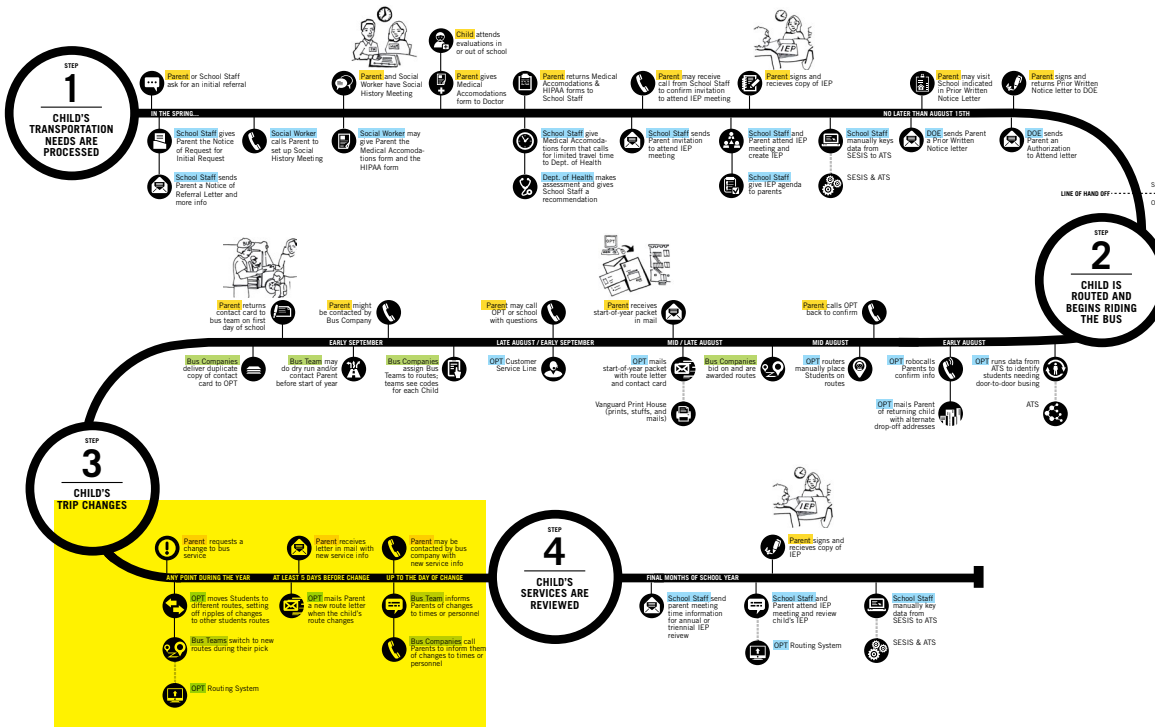
Step 3 Short-Term Single-Table Planning Goal

Provide **Alleviation** tools and services that help families mitigate against disruptions caused by unavoidable service changes.

Step 3 Long-Term Aspiration

Families use timely, actionable notifications and tools to prepare for service changes.

*Proposal C (p. 50) responds to this goal.



STEP

4

CHILD'S SERVICES ARE REVIEWED

Step 4 Current Insight

See Step 1.

Step 4 Short-Term Welcome Touchpoint Goal

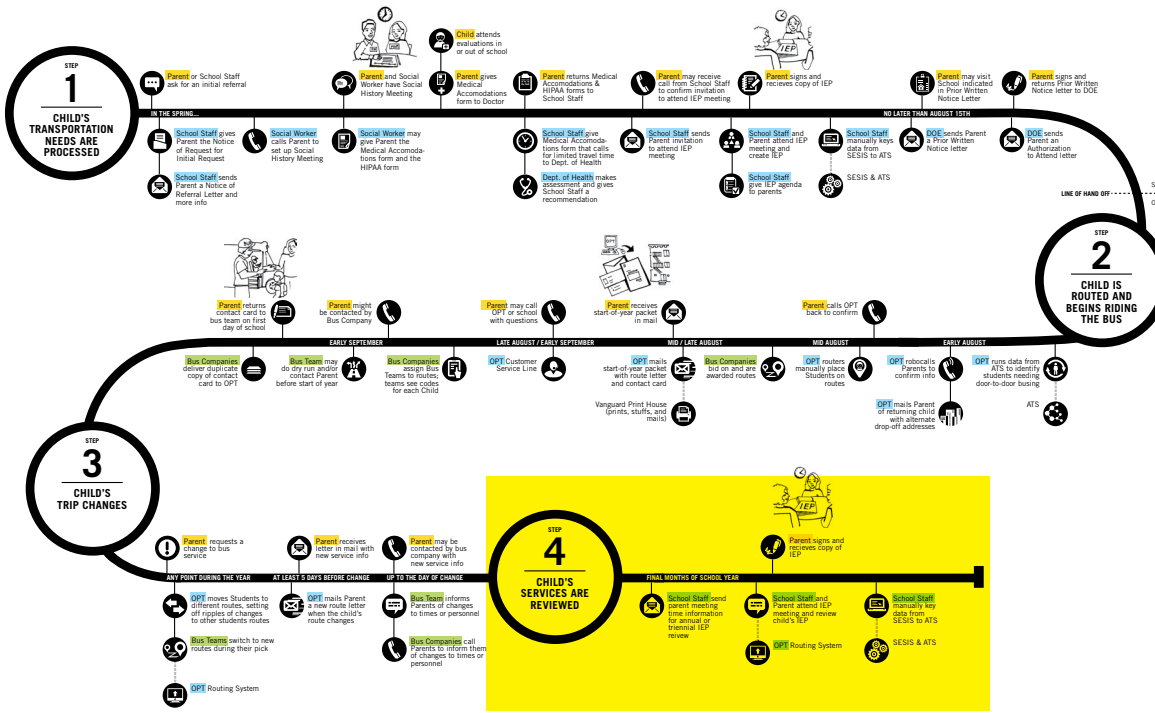
Distribute **How to Review** communications that clearly explain how to assess and change previous service decisions.

Step 4 Short-Term Single-Table Planning Goal

Provide **Reauthorization** tools and services that assist families with more informed and deliberative decision-making during IEP transportation reviews.

Step 4 Long-Term Aspiration

See Step 1.



3

PROPOSALS

Opportunities for new, desirable family interactions surfaced through our design sessions. We've developed service proposals (and related tools) for three of these interactions. Note that these proposals are hypotheses: they need to be tested in real-world conditions to determine their value before full implementation.

PROPOSALS

Testing the Proposals

The proposals developed through collaborative design address areas of demonstrated family need and have the potential to create value for families and other service participants. However, these proposals should be understood as prototypes: they require real-world testing with a small sample population to validate their feasibility for larger-scale implementation.

The three proposals — Frame Family Expectations for Transportation, Share Family Knowledge of Child with Bus Team, and Alert Families to Service Changes — each describe a new service interaction, supported with a tool to facilitate that interaction.

Readers should consider the three proposals with the following suggested testing process in mind. This process involves five steps of review, implementation, and evaluation. Implementation recommendations specific to each proposal are provided in each of the three proposal sections, on pages 45, 51, and 57.

STEP 1
REVIEW FEASIBILITY

Before any small-scale tests occur, relevant DOE staff – including legal staff, subject-matter experts, and leadership – should review the interaction concepts and associated tools for a range of feasibility issues:

CONSIDER SITE & PERSONNEL FEASIBILITY

- What sorts of school staff, bus staff, and student families would need to be recruited to participate in small-scale testing?
- How many participants should be recruited? How long should they participate?
- What labor agreements might impact the ability of various school or bus staff to participate in small-scale tests?
- What training or background information would need to be provided to participants in advance of test implementation?

CONSIDER CONTENT & COMMUNICATIONS FEASIBILITY

- What subject-matter experts should review the proposed interactions and tools for accuracy?
- How can participants be best apprised of the testing goals and process, and how can their informed consent and compliance be assured?
- Given the recruited participants, what languages in addition to English should be used for the trainings, tools, and evaluations?
- What public communications regarding the test implementations will serve the goals of all the project participants?

CONSIDER IT & PRODUCTION FEASIBILITY

- What digital systems – databases, automated message tools, etc. – might need to be adapted for test requirements or goals? What costs and staff requirements would be associated with those changes?
- What print production systems would need to be developed to generate recommended hard-copy tools? What costs and staff requirements would be associated with those changes?
- How will the test tools be distributed to participants?

CONSIDER LEGAL FEASIBILITY

- Given the context of a small-scale test implementation, what aspects of the proposed interactions and tools require adjustment related to legal risks? (Note that the goal of the proposals is to test new approaches to engaging with and serving the needs of families, so it's hoped that the informed consent of participants may serve as a legal safeguard in lieu of major alterations to interaction or tool content.)

Note that specific recommendations related to each proposal, addressing the issues above, can be found in each of the proposal sections that follows.

STEP 2
REVISE PROPOSALS PER FEASIBILITY REVIEW

IDENTIFY ISSUES & REVISE PROPOSALS

- After the feasibility review, the project team should meet to discuss any identified issues. The design team should then make alterations to the proposed interactions and tools in response to the issues raised. Revised proposals should be circulated for approval.

STEP 3
PREPARE FOR TEST IMPLEMENTATIONS & EVALUATION

DEVELOP IMPLEMENTATION AND EVALUATION PLAN

- Once proposals have been approved for testing, the project team should develop an implementation and evaluation plan. This plan should outline a timeline of activities for the remainder of Phase 3. At a minimum, the plan should also identify implementation sites, intended participants, necessary training and outreach sessions, systems and material requirements, and translation needs.
- The plan should also include an actionable plan for evaluating both the implementation process and the impact of the proposals. The Evaluation section, beginning page 58, proposes a preliminary evaluation framework that can be expanded once the proposals have been cleared for testing.

PREPARE SYSTEMS

- Necessary IT systems to support the proposals and print production methods for new tools should be developed and tested.

RECRUIT AND PREPARE PARTICIPANTS

- Based on the proposals selected for implementation, appropriate school staff, family members, and/or bus staff should be identified and recruited to participate. Participants should receive appropriate training or information to take part in the test implementations in an informed capacity.

STEP 4
LAUNCH TEST IMPLEMENTATIONS & CARRY OUT QUALITATIVE EVALUATIONS

CARRY OUT PROPOSAL TESTING

- Using the timeline identified in the implementation and evaluation plan, test activities should be launched with participants. Depending on the overall implementation timeline, the project team may choose the launch the tests simultaneously or sequentially. The 'run' of each test implantation should be determined in advance, and the stop date should be observed, so as to allow for prompt assessment and subsequent collaborative redesign.

BEGIN EVALUATION

- Evaluation activities should launch more or less simultaneously, as qualitative assessment is likely to require shadowing or observation of test activities as they occur, as opposed to a post-facto review of data.

STEP 5
ASSESS AND DOCUMENT THE TEST IMPLEMENTATIONS

COMPLETE EVALUATION

- The project team should synthesize findings from qualitative data (e.g. from observation, shadowing, interviews, surveys, etc.), from test implementation data (e.g. content generated by the tests themselves), and from any administrative data that can be tied to the test implementations (e.g. IEPs or complaint calls from participating families).

ENGAGE IN FINAL ROUND OF COLLABORATIVE DESIGN

- Based on findings from the evaluation, there may be obvious areas for improvement in the interactions and/or tools. The design team should carry out a final round of collaborative design to improve the proposals based on those findings.

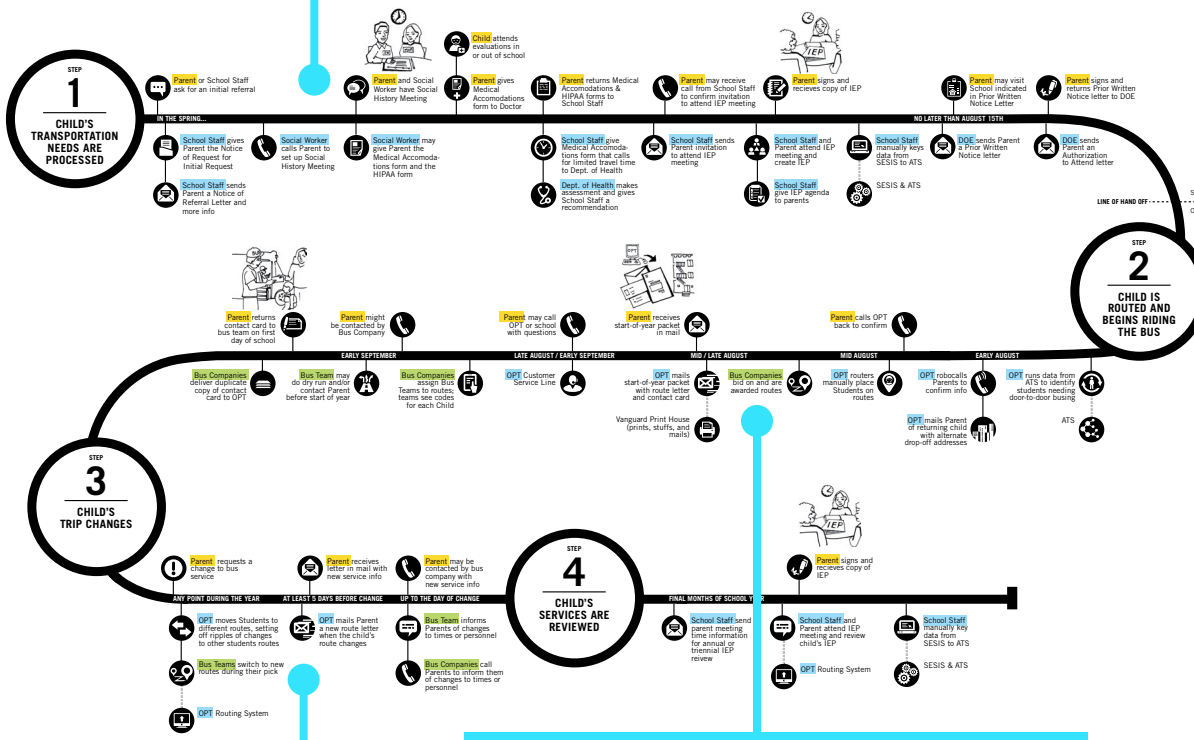
DOCUMENT THE PROCESS, ITS IMPACTS, AND RESPONSES

- To support future efforts – whether to take the proposals to scale or to apply similar user-centered methodologies to other challenges – the project team should document the implementation process, the degree to which the proposals met design objectives, and the ways in which findings from the project can be addressed in subsequent efforts.

Proposals to Test

PROPOSAL A

Frame Family Expectations for Transportation



PROPOSAL B

Share Family Knowledge of Child with Bus Team

PROPOSAL C

Alert Families to Changes

PROPOSAL A

Frame Family Expectations for Transportation

Preempt some later service problems by using the social-history meeting to set expectations around transportation provision. Initiate a collaborative decision-making process around transport needs using a family-friendly discussion tool.

Short-Term Welcome Touchpoint Goal

Distribute **What to Expect** communications that clearly introduce the transportation process and participants' rights and responsibilities.

Short-Term Single-Table Planning Goal

Provide **On-Boarding** tools and services that assist families and other front-line participants with more informed and deliberative decision-making about IEP-mandated transportation.

Long-Term Aspiration

Families participate in transport decisions knowing what to expect from the process and how their child can best get to school.

What We Heard

Families and school staff told us that understanding about transportation services varies significantly from family to family.

Some families aren't aware what services exist or how to receive assistance; others have service expectations that may not be matched by the realities of the system or their child's medical need.

Families are sometimes confused by the IEP process and may arrive at the IEP meeting without having contemplated their child's transport needs or having completed necessary documentation, leading to frustration and delays in completing the IEP.

Lack of clarity can also result in families being unhappy with transportation decisions, which they may not perceive as the result of a collaborative process.

"Parents come into the DOE with no understanding of the process of IEP development. They should have more info… There are MANY confusing steps involved in adding a needed transportation accommodation."

– SCHOOL LEADERSHIP STAFFER

"Do you know how hard it is to get a medical [form] from back from a parent? They don't come back with the medical and then the case has to close. It's a disservice to the child."

– SOCIAL WORKER

"Transportation starts with the social history meeting. By the time the IEP [meeting] happens, the plan has already been made."

– SOCIAL WORKER

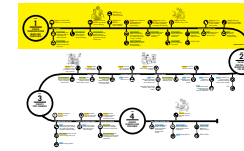
Design Response

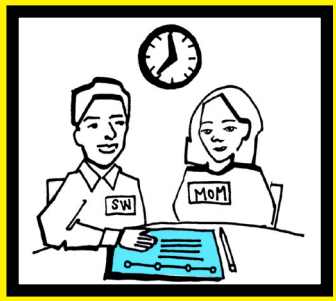
Multiple participants identified the social history meeting – an initial conversation between a family and social worker – as a key moment where transport expectations and requirements could be clarified.

At this meeting, family and school staff decide which evaluations are necessary to create an IEP. Per DOE policy, this is when a family is told about specialized transportation and given necessary related forms. We believe this is a opportune point for collaborative discussion about the least restrictive transportation context that would serve a student's needs.

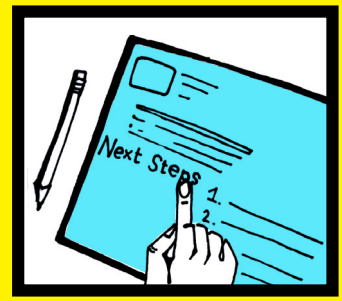
To facilitate this interaction, we've designed a discussion tool that explains the process, helps families know what to expect, and guides collaborative decision-making by the social worker and the family.

Interaction Model

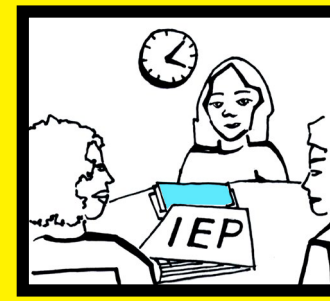




SOCIAL WORKER CONTACTS PARENT TO ATTEND SOCIAL HISTORY MEETING



SOCIAL WORKER AND PARENT FRAME TRANSPORTATION EXPECTATIONS AND NEEDS

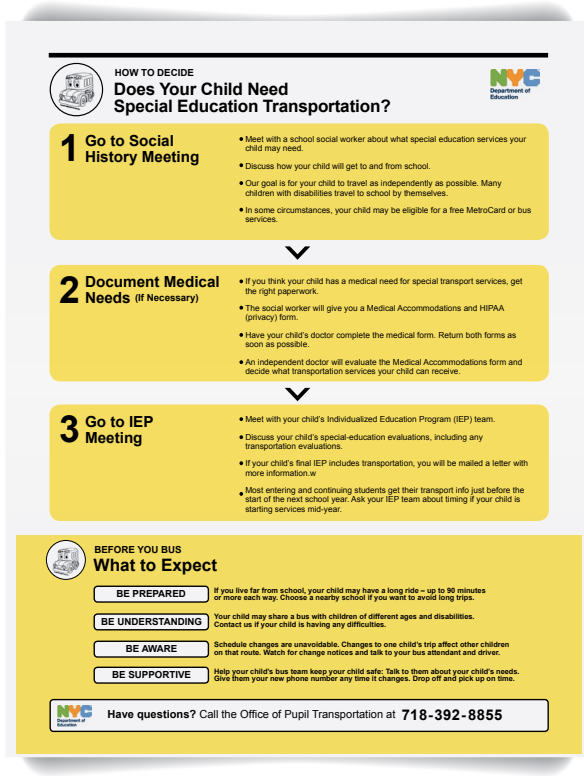


PARENT ATTENDS SOCIAL HISTORY MEETING INFORMED AND PREPARED TO DISCUSS BUSING

"This [transportation] process is nebulous, especially for someone like me that spearheads the IEP meeting. This is a step in the right direction…so that [the DOE] can properly disseminate the information in a way that's consistent."

– SCHOOL PSYCHOLOGIST

Tool Prototype



HOW TO DECIDE

Does Your Child Need Special Education Transportation?

1 Go to Social History Meeting

- Meet with a school social worker about what special education services your child may need.
- Discuss how your child will get to and from school.
- Our goal is for your child to travel as independently as possible. Many children with disabilities travel to school by themselves.
- In some circumstances, your child may be eligible for a free MetroCard or bus services.

2 Document Medical Needs (If Necessary)

- If you think your child has a medical need for special transport services, get the right paperwork.
- The social worker will give you a Medical Accommodations and HIPAA (privacy) form.
- Have your child's doctor complete the medical form. Return both forms as soon as possible.
- An independent doctor will evaluate the Medical Accommodations form and decide what transportation services your child can receive.

3 Go to IEP Meeting

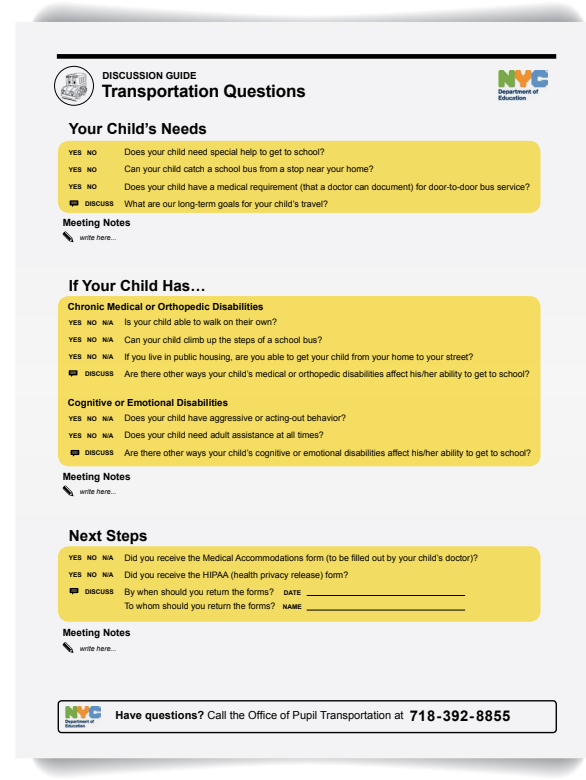
- Meet with your child's Individualized Education Program (IEP) team.
- Discuss your child's special-education evaluations, including any transportation evaluations.
- If your child's final IEP includes transportation, you will be mailed a letter with more information.w
- Most entering and continuing students get their transport info just before the start of the next school year. Ask your IEP team about timing if your child is starting services mid-year.

BEFORE YOU BUS

What to Expect

BE PREPARED	If you live far from school, your child may have a long ride – up to 90 minutes or more each way. Choose a nearby school if you want to avoid long trips.
BE UNDERSTANDING	Your child may share a bus with children of different ages and disabilities. Contact us if your child is having any difficulties.
BE AWARE	Schedule changes are unavoidable. Changes to one child's trip affect other children on that route. Watch for change notices and talk to your bus attendant and driver.
BE SUPPORTIVE	Help your child's bus team keep your child safe: Talk to them about your child's needs. Give them your new phone number any time it changes. Drop off and pick up on time.

Have questions? Call the Office of Pupil Transportation at **718-392-8855**



DISCUSSION GUIDE

Transportation Questions

Your Child's Needs

YES NO	Does your child need special help to get to school?
YES NO	Can your child catch a school bus from a stop near your home?
YES NO	Does your child have a medical requirement (that a doctor can document) for door-to-door bus service?
DISCUSS	What are our long-term goals for your child's travel?

Meeting Notes

write here...

If Your Child Has…

Chronic Medical or Orthopedic Disabilities

YES NO N/A	Is your child able to walk on their own?
YES NO N/A	Can your child climb up the steps of a school bus?
YES NO N/A	If you live in public housing, are you able to get your child from your home to your street?
DISCUSS	Are there other ways your child's medical or orthopedic disabilities affect his/her ability to get to school?

Cognitive or Emotional Disabilities

YES NO N/A	Does your child have aggressive or acting-out behavior?
YES NO N/A	Does your child need adult assistance at all times?
DISCUSS	Are there other ways your child's cognitive or emotional disabilities affect his/her ability to get to school?

Meeting Notes

write here...

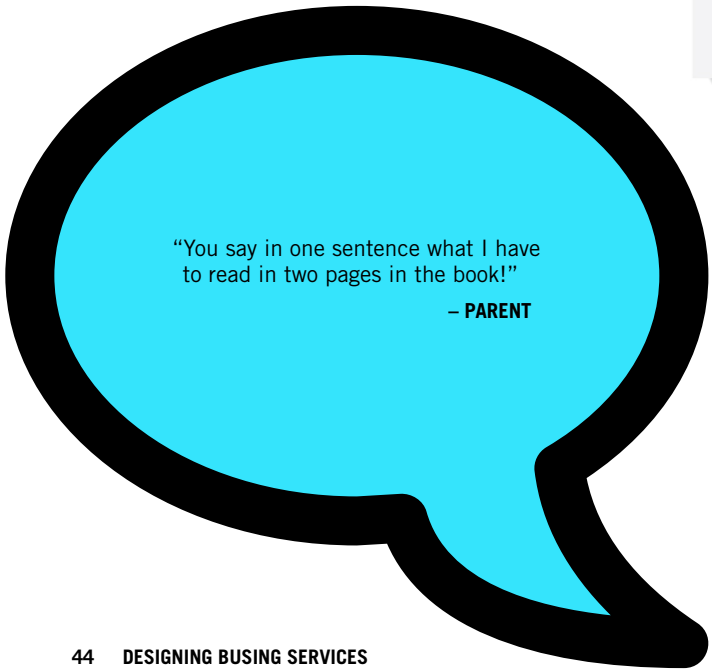
Next Steps

YES NO N/A	Did you receive the Medical Accommodations form (to be filled out by your child's doctor)?
YES NO N/A	Did you receive the HIPAA (health privacy release) form?
DISCUSS	By when should you return the forms? DATE _____
	To whom should you return the forms? NAME _____

Meeting Notes

write here...

Have questions? Call the Office of Pupil Transportation at **718-392-8855**



Implementation Recommendations

Meaningful small-scale test implementation of this proposal – to frame family expectations for transportation using a discussion tool in the social history meting – might be carried out with the following minimum components:

SITE & PERSONNEL REQUIREMENTS

- This proposal requires the participation of social workers and families. All testing can be carried out at school sites.
- At a minimum, the test implementation should have at least three different social workers participating, and each social worker should test the proposed interaction and tool with at least 10 families, for a minimum test implementation of 30 interactions.
- Participating families should optimally represent a range of student ages (e.g. turning 5s and older children), student needs, and family resources. Note that the interaction and tool should be tested at the social worker's discretion when s/he feels like it would be appropriate to bring up transportation with a given family. The interaction should not be tested in meetings where the social worker perceives no need to discuss transportation.
- Optimally the duration of this test is no more than one month. Discussion with social workers should determine the best month for testing.
- Social workers who agree to participate should be trained in the use of the tool in an in-person training that involves role-play with the tool.

CONTENT & COMMUNICATIONS REQUIREMENTS

- Experts in the IEP and transportation process should review the proposed interaction and tool for accuracy. In addition, during training the participating social workers may identify small changes that should also be incorporated.
- Social workers (and their supervisors) should agree to participate in this testing process and in its evaluation.
- Families should be asked to consent at the point in the social history meeting when the social worker decides to use the tool. They should also be asked to fill out a contact card at the end of the meeting, acknowledging that the tool was used and asking them if they would be willing to be contacted by the project team.
- Thought should be given as to whether the evaluation should include observation or follow-up related to the IEP meeting.
- Once social workers are recruited, the team should collaborate with them to identify any languages besides English that should be used for trainings, materials, etc.

IT & PRODUCTION REQUIREMENTS

- This proposal doesn't require use of any digital systems.
- Copies of the discussion tool will need to be printed in color, double-sided, on letter-sized paper. At least 50 copies should be distributed to each social worker. In addition, social workers should have a PDF of the tool available, as well.

LEGAL REQUIREMENTS

- It may be helpful to have a legal assurance that the testing of the interaction and tool creates no implicit or explicit promises regarding ultimate decisions about a student's transportation services. Care should be taken, however, to not complicate the interaction with 'legalese' that is not family friendly.

Note that the recommendations above are preliminary, for the purpose of reviewing the overall feasibility of the proposal. After proposals are reviewed and revised, a detailed implementation and evaluation plan should be created.

PROPOSAL B

Share Family Knowledge of Child with Bus Team

Facilitate more tailored, child-centered care on the bus and mitigate against inevitable service changes. Use a tool to transfer families' deep knowledge of their children to bus teams and better integrate family and team approaches.

Short-Term Welcome Touchpoint Goal

Distribute **Enrollment Confirmation/Start of Delivery** communications that help families verify and plan for their child's new service and identify/report issues.

Short-Term Single-Table Planning Goal

Provide **Participation/Feedback** tools and services that allow families to proactively engage around service issues with other service stakeholders.

Long-Term Aspiration

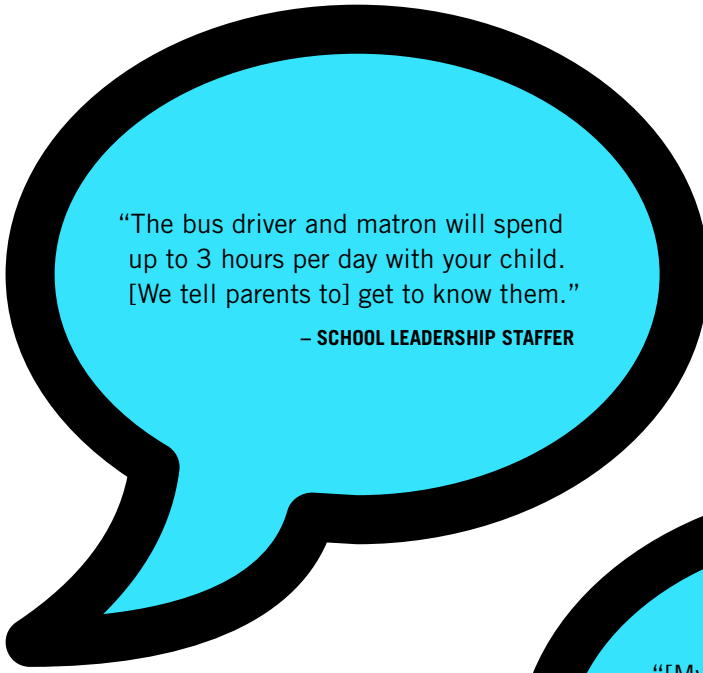
Families actively monitor busing service, in partnership with bus team members and school staff. Before issues arise, families proactively and effectively advocate for their child's care.

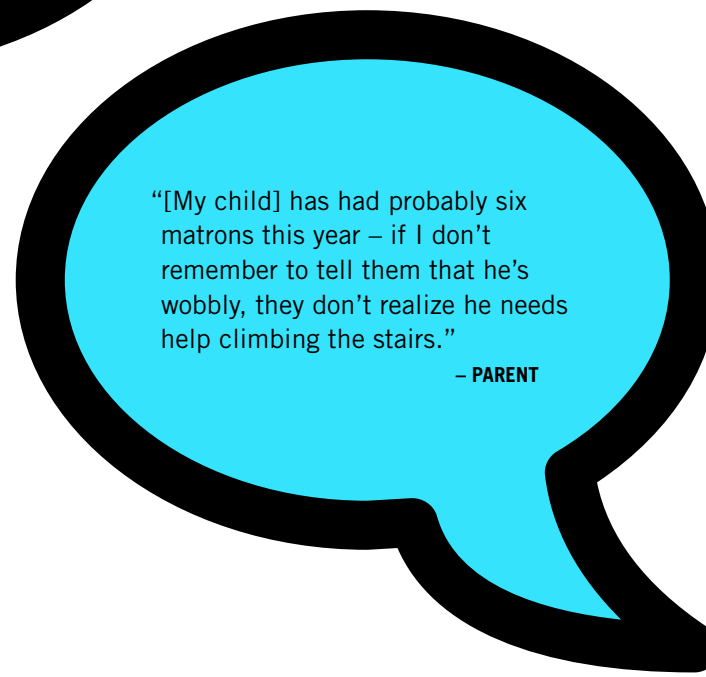
What We Heard

Families of children with disabilities often have a deep understanding of their children's special needs and develop specific strategies to help keep their children safe and happy.

While family members have channels to engage with school staff and teachers regarding their children's requirements, they currently have limited formal opportunities to share their knowledge with bus teams.

Meanwhile, bus drivers and attendants have a responsibility to provide excellent care to the children they transport and would appreciate additional support and productive engagement from families.





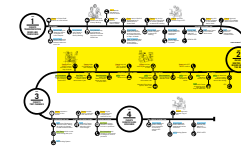
Design Response

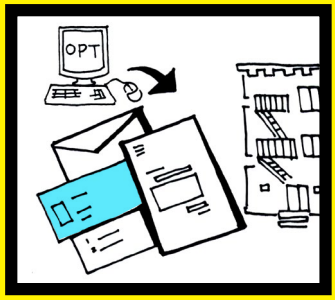
We identified the first day or two of a bus route – whether at the beginning of the year or later, when a child or bus team switch routes – as a key time where families could engage with bus teams by sharing their knowledge of their child's needs. This mutual engagement could both address family concerns about their child's care and also assist bus teams in knowing how to best help a particular student.

To facilitate this interaction, we've designed a card that families can use to share caregiving information. It's hoped that the card will also prompt subsequent collaborative conversation between teams and families regarding any questions or concerns.

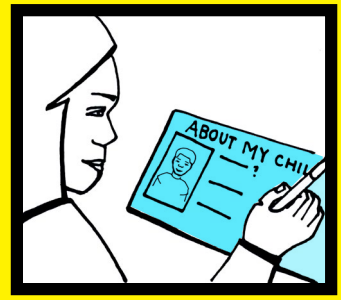
The card can travel with a child when she moves to a new bus, or can otherwise be stored with the set of cards for a given route, allowing bus teams (or substitutes) to review the needs of all the children they carry.

Interaction Model

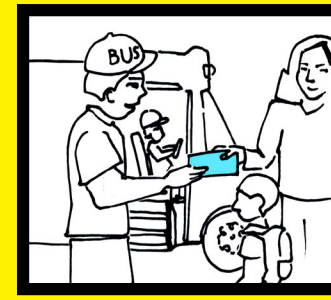




OPT MAILS START-OF-YEAR PACKET TO CHILD'S HOME

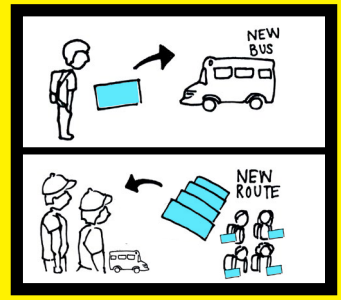


PARENT WRITES CHILD CARE INFO ON THE "ABOUT MY CHILD CARD"



PARENT RETURNS CARD TO BUS TEAM ON FIRST DAY OF SCHOOL

BUS TEAM LEARNS ABOUT THE CHILD

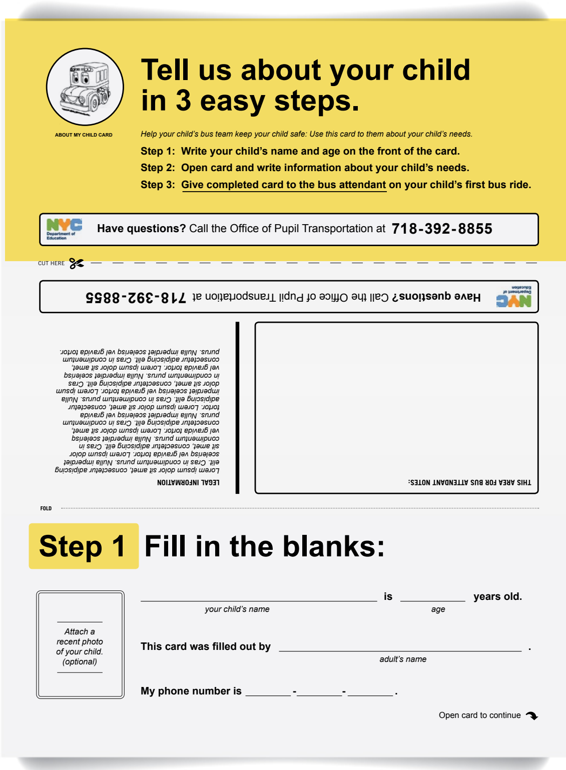


CHILD AND/OR BUS TEAMS CHANGE ROUTES AND CARD IS TRANSFERRED

"This one is the key to sharing information with the people who take care of my child…It's a bridge to communicate… to work as a team"

– PARENT

Tool Prototype


Tell us about your child in 3 easy steps.

ABOUT MY CHILD CARD

Help your child's bus team keep your child safe: Use this card to them about your child's needs.

Step 1: Write your child's name and age on the front of the card.
Step 2: Open card and write information about your child's needs.
Step 3: Give completed card to the bus attendant on your child's first bus ride.

Have questions? Call the Office of Pupil Transportation at **718-392-8855**

CUT HERE

Have questions? Call the Office of Pupil Transportation at **718-392-8855**

LEGAL INFORMATION

THIS AREA FOR BUS ATTENDANT NOTES:

FOLD

Step 1 Fill in the blanks:

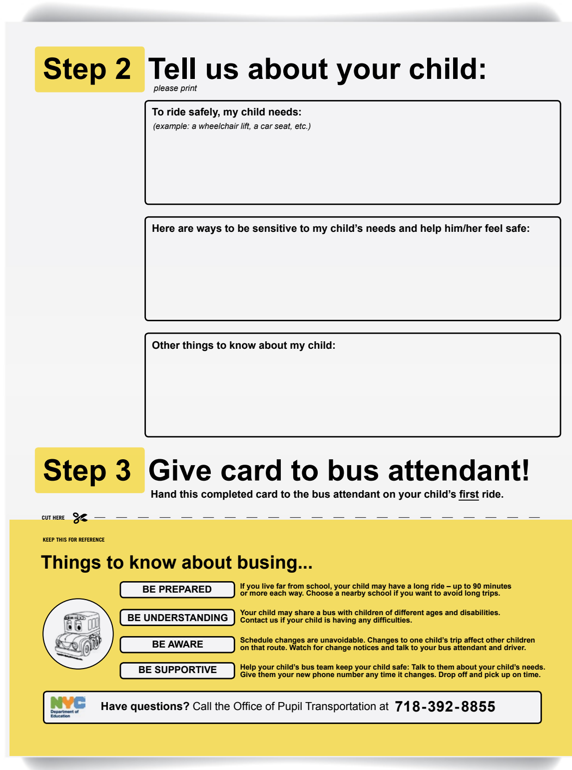
Attach a recent photo of your child. (optional)

____________ is ______ years old.
your child's name *age*

This card was filled out by ____________ .
adult's name

My phone number is ____-____-____ .

Open card to continue


Step 2 Tell us about your child:
please print

To ride safely, my child needs:
(example: a wheelchair lift, a car seat, etc.)

Here are ways to be sensitive to my child's needs and help him/her feel safe:

Other things to know about my child:

Step 3 Give card to bus attendant!
Hand this completed card to the bus attendant on your child's first ride.

CUT HERE

KEEP THIS FOR REFERENCE

Things to know about busing...

BE PREPARED	If you live far from school, your child may have a long ride – up to 90 minutes or more each way. Choose a nearby school if you want to avoid long trips.
BE UNDERSTANDING	Your child may share a bus with children of different ages and disabilities. Contact us if your child is having any difficulties.
BE AWARE	Schedule changes are unavoidable. Changes to one child's trip affect other children on that route. Watch for change notices and talk to your bus attendant and driver.
BE SUPPORTIVE	Help your child's bus team keep your child safe: Talk to them about your child's needs. Give them your new phone number any time it changes. Drop off and pick up on time.

Have questions? Call the Office of Pupil Transportation at **718-392-8855**

"I want to hear what a parent says [about their child's needs]."

– BUS ATTENDANT

Implementation Recommendations

Meaningful small-scale test implementation of this proposal – to share family knowledge of their child with the bus team – might be carried out with the following minimum components:

SITE & PERSONNEL REQUIREMENTS

- This proposal requires the participation of families and bus teams (attendants and drivers). Activities related to this proposal will take place in family homes, at bus pick-up and drop-off locations, and on buses or at bus bases.
- At a minimum, the test implementation should involve at least three different bus teams, along with the families on their respective routes, for an intended total of at least 30 participating families. If the test period includes points when new bus teams rotate in to a participating route or participating children shift to another route, the new bus team should also be recruited to participate.
- Participating families should represent a range of student ages and family resources. Most crucially, the test implementation should seek to involve both families of students with orthopedic/medical disabilities and those with cognitive/emotional disabilities, to explore whether the interaction and tool assist families in conveying varying student needs equally well.
- Optimally the duration of this test covers several different interactions: the initial filling out of the tool by the family, the handing-off of the tool by the family to the child's bus team, and also the transition of children and/or bus teams to new routes, to test if the interaction and tool stimulate knowledge exchange between participants. One viable test timeframe might be in the early fall, after children have been initially assigned to routes. The testing period could then overlap the 'pick' when bus teams shift amongst routes, allowing for an assessment of knowledge transfer when teams meet students on their new route.
- Bus teams who agree to participate (and their supervisors) should be trained in the interaction and use of the tool in an in-person training that involves role-play with the tool.

CONTENT & COMMUNICATIONS REQUIREMENTS

- Experts in the needs of children with disabilities should review the tool to determine if its proposed prompts are optimally framed. Transportation experts should review the proposed interaction and tool to identify any feasibility issues. In addition, during training the participating bus teams may identify small changes that should also be incorporated.
- Bus teams, their supervisors, and families should agree to participate in this testing process and in its evaluation.
- Families should optimally be asked to consent prior to receipt of the tool; less optimally, the tool itself could contain a consent component.
- Once participating bus teams/routes are identified, the project team should collaborate with them to identify any languages besides English that should be used for trainings, materials, etc.

IT & PRODUCTION REQUIREMENTS

- This proposal doesn't require use of any digital systems.
- Copies of the card tool will need to be printed in color, double-sided, on letter-sized paper, then folded and mailed to participating families. Receipt of the card should be confirmed.
- Cards returned to bus teams should be copied or photographed for evaluation purposes.

LEGAL REQUIREMENTS

- It may be helpful to have a legal assurance that completion and return of the card creates no implicit or explicit promises regarding services to be performed by bus teams, above and beyond their current approved activities.
- Care should also be taken to evaluate any potential liability concerns created by allowing families to provide written information to bus teams.

Note that the recommendations above are preliminary, for the purpose of reviewing the overall feasibility of the proposal. After proposals are reviewed and revised, a detailed implementation and evaluation plan should be created.

PROPOSAL C

Alert Families to Changes

Expand outreach to families so they can prepare their children for service changes. Use a tool that aligns school staff, bus teams, and families to provide more written notice about a wider range of service changes.

Short-Term Welcome Touchpoint Goal

Distribute **Service Change** communications that help families prepare for and respond to service changes and identify/report issues.

Short-Term Single-Table Planning Goal

Provide **Alleviation** tools and services that help families mitigate against disruptions caused by unavoidable service changes.

Long-Term Aspiration

Families use timely, actionable notifications and tools to prepare for service changes.

What We Heard

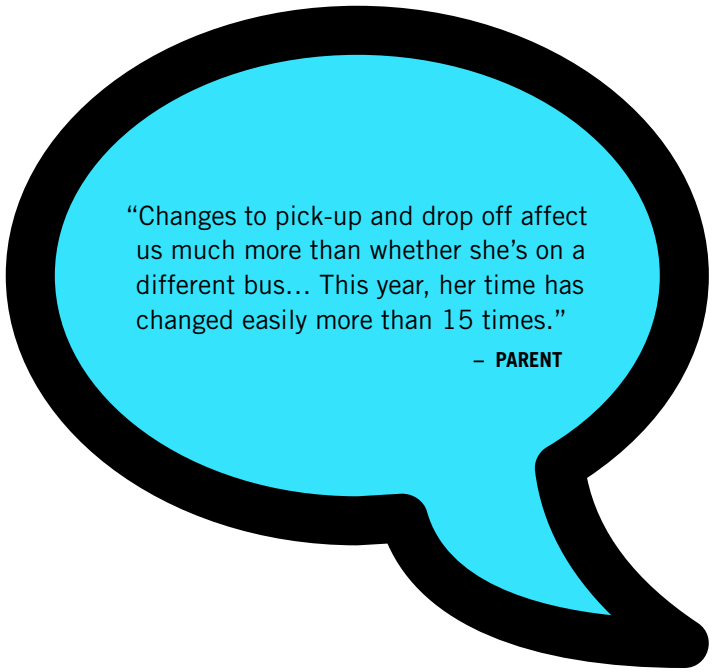
Families experience routing and schedule changes throughout the year, as trip changes for one child have a ripple effect on the bus trips of other children.

The DOE mails a notification letter to families at least five days before their child is going to be switched to a new bus, but families do not receive written notification if other aspects of their child's trip — including pick-up and drop-off time — are going to change. It's expected that bus teams will relay this information orally.

Some bus drivers and attendants noted that it's common practice to inform families of time changes the day before they occur.

Families find short-notice trip changes both logistically challenging and disruptive for their disabled children, many of whom prize routine.

School staff also indicated that they'd appreciate an alert when a student's route or schedule changes, something they do not currently receive as a 'push' notification.



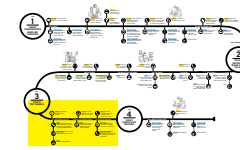
Design Response

We identified the possibility of the DOE generating a change notification any time any aspect of a student's route or sequence changes.

This increased level of notification could help families better prepare for service changes and help them respond in a timely and appropriate manner if the change is problematic, while also assisting families, bus teams, and school staff in all having the same information about a child's trip.

To facilitate this interaction, we've designed a service-change memo to be auto-generated by the Office of Pupil Transportation and then emailed to schools on the day a trip change is approved. This notification could be quickly hand-delivered to families by bus teams or through 'backpack mail.'

Interaction Model



CHILDREN MOVE TO DIFFERENT ROUTES, OPT MAILS PARENT A NEW SERVICE LETTER

OPT EMAILS "SERVICE CHANGE MEMO" TO SCHOOL FOR STAFF TO SEND HOME VIA BACKPACK MAIL OR BUS TEAM

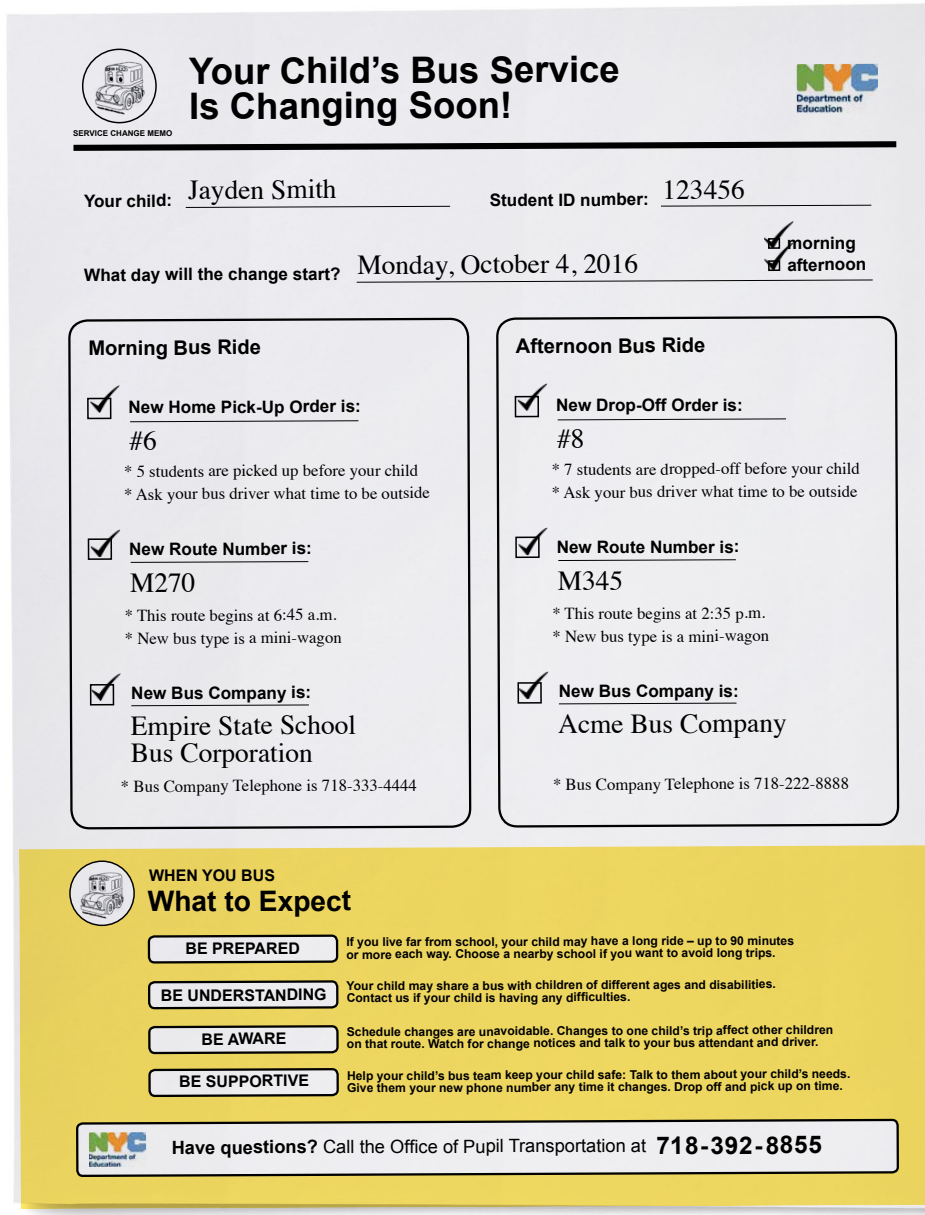
PARENT GETS MEMO FROM BUS TEAM OR CHILD'S BACKPACK

FAMILY PREPARES FOR SERVICE CHANGE

"This would help the Transportation Coordinator immensely – make changes easier. I can't go to the OPT website, I just don't have time."

– AP/TRANSPORTATION COORDINATOR

Tool Prototype



SERVICE CHANGE MEMO

Your Child's Bus Service Is Changing Soon!

NYC Department of Education

Your child: Jayden Smith Student ID number: 123456

What day will the change start? Monday, October 4, 2016 ☑ morning ☑ afternoon

Morning Bus Ride

☑ **New Home Pick-Up Order is:**
#6
* 5 students are picked up before your child
* Ask your bus driver what time to be outside

☑ **New Route Number is:**
M270
* This route begins at 6:45 a.m.
* New bus type is a mini-wagon

☑ **New Bus Company is:**
Empire State School Bus Corporation
* Bus Company Telephone is 718-333-4444

Afternoon Bus Ride

☑ **New Drop-Off Order is:**
#8
* 7 students are dropped-off before your child
* Ask your bus driver what time to be outside

☑ **New Route Number is:**
M345
* This route begins at 2:35 p.m.
* New bus type is a mini-wagon

☑ **New Bus Company is:**
Acme Bus Company
* Bus Company Telephone is 718-222-8888

WHEN YOU BUS
What to Expect

BE PREPARED	If you live far from school, your child may have a long ride – up to 90 minutes or more each way. Choose a nearby school if you want to avoid long trips.
BE UNDERSTANDING	Your child may share a bus with children of different ages and disabilities. Contact us if your child is having any difficulties.
BE AWARE	Schedule changes are unavoidable. Changes to one child's trip affect other children on that route. Watch for change notices and talk to your bus attendant and driver.
BE SUPPORTIVE	Help your child's bus team keep your child safe: Talk to them about your child's needs. Give them your new phone number any time it changes. Drop off and pick up on time.

NYC Department of Education **Have questions?** Call the Office of Pupil Transportation at **718-392-8855**

Implementation Recommendations

Meaningful small-scale test implementation of this proposal – to alert families about service changes – might be carried out with the following minimum components:

SITE & PERSONNEL REQUIREMENTS

- This proposal requires participation primarily from school staff, with secondary participation from families and bus teams (attendants and drivers). Activities related to this proposal will take place primarily at schools, with secondary activities at bus drop-off locations and in family homes.
- At a minimum, the test implementation should involve one school site. Site selection should prioritize a District 75 school. If it's possible to also test implementation at a second site, a community school should be selected, so as to compare process and outcomes in settings where staff members have less familiarity with busing for children with disabilities.
- After school site selection, it may helpful to then select specific bus routes for testing, attempting to find routes that serve only the selected school.
- Optimally the duration of this test is no more than one month, and two weeks may be sufficient; the goal should be to generate and circulate at least 100 service change memos. For feasibility purposes, a month with regular but not overwhelming numbers of changes might be preferred (e.g. not September).
- School staff who agree to participate (and their supervisors) should be trained in the interaction and use of the tool in an in-person training that involves role-play with the tool. Participating bus teams (and their supervisors) should also be informed and/or trained. Customer-service staff at OPT may also need to be trained to respond to any questions generated by the distribution of the tool prototype.

CONTENT & COMMUNICATIONS REQUIREMENTS

- Transportation experts should review the proposed interaction and tool to identify any feasibility issues. In addition, during school recruitment or training the participating school staff may identify small changes that should also be incorporated.
- School staff, bus teams, their respective supervisors, and families should agree to participate in this testing process and in its evaluation.
- Consent requirements should be evaluated as specific implantation plans are developed.
- Once participating schools and bus teams are identified, the project team should collaborate with them to identify any languages besides English that should be used for trainings, materials, etc.

IT & PRODUCTION REQUIREMENTS

- This proposal may require investment in new IT procedures. Specifically, it's hoped that data from OPT's routing system can be used to identify any changes to a participating student's trip, including changes in sequence order. Those changes should either trigger the generation of a service change memo, or the data should be used to populate memo templates on a 'pull' basis, resulting in a personalized PDF document. The PDF memo files should be emailed (preferably daily and automatically) to one or more designated email accounts at participating schools. Duplicate copies of the memos should also be mailed to the project team for evaluation purposes.
- Print production of the memos should occur on-site at participating schools, so it should be verified that schools have color printing capabilities.

LEGAL REQUIREMENTS

- It may be helpful to have a legal assurance that distribution of the change memo does not create liability or other legal issues.

Note that the recommendations above are preliminary, for the purpose of reviewing the overall feasibility of the proposal. After proposals are reviewed and revised, a detailed implementation and evaluation plan should be created.

4

EVALUATION

Evaluation and ongoing co-design during proposal implementation is necessary if the testing process is to generate useful insights. Assessment of both implementation activities and the outcomes of testing can generate findings about the overall value of the project's user-centered innovation process and how to scale the proposals.

EVALUATION

Methods of Evaluation

It's intended that the three proposals be evaluated during small-scale test implementations. These test implementations would be trials on the part of the DOE to understand whether new interactions and tools, created through a user-centered design process, can help improve the family experience of door-to-door busing provision.

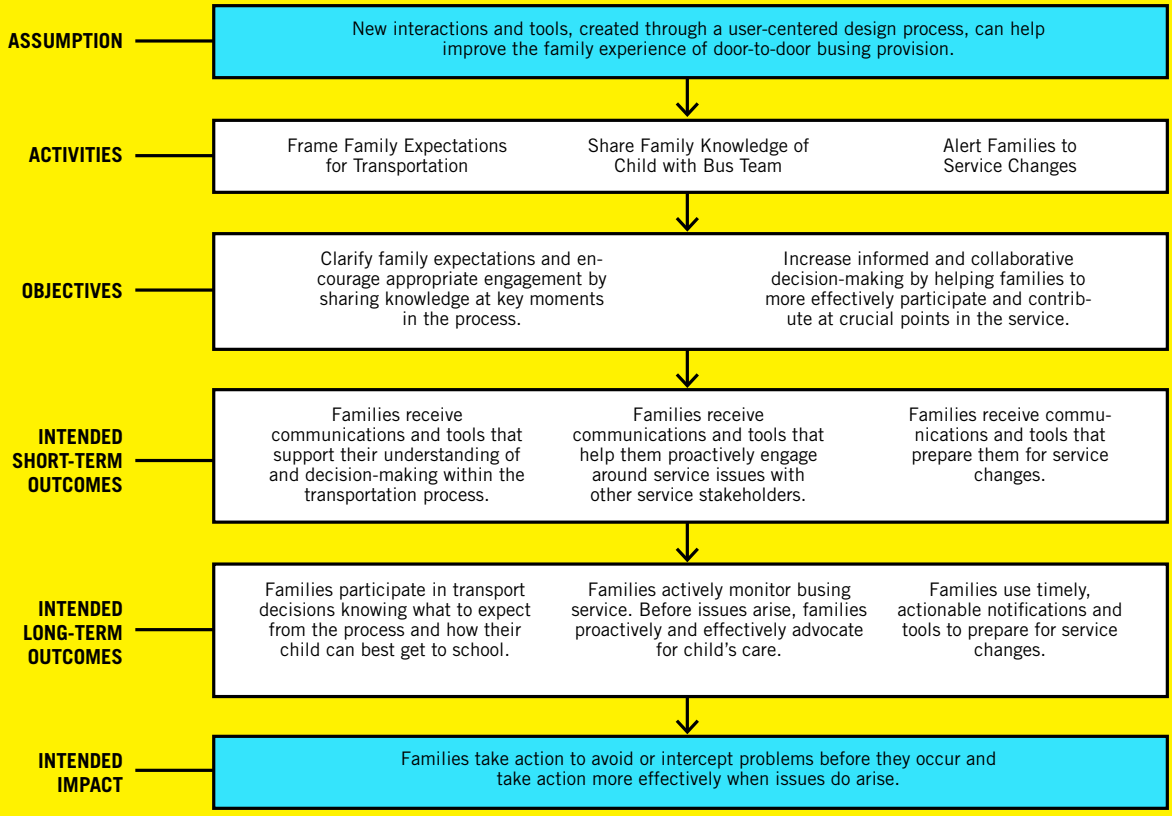
The planned project evaluation is intended to enable the DOE to understand what works and what doesn't work from a process and usability perspective, in order to modify the proposals prior to full-scale implementation. Within the context of a formative evaluation, it's also proposed that the project team attempt to evaluate the extent to which the proposals lived up to the project's theory of change.

The proposed evaluation therefore consists of two parts: an assessment of the design objectives embodied in the three proposals and an assessment of the small-scale implementation process. The project team will use qualitative and quantitative data collection techniques —including surveys, interviews, and observations — to conduct the evaluation before, during, and after test implementation.

Note that this evaluation will not allow the DOE to understand the comprehensive impact that these proposals have on the system: only an experimental research model, with a control group and an experimental group, can accurately measure impact. Should the DOE decide to scale up the proposals, it's recommended that the agency set up an experimental research model to assess the specific impact that the proposals have on helping families take action to avoid or intercept problems before they occur and taking action more effectively when issues do arise.

Theory of Change

Two guiding design objectives (p. 23), identified during discovery and refined during the collaborative-design process, inform each of the three proposals. Our theory of change is that by implementing the proposals (pp. 35–55), the DOE will meet the design objectives and see positive short- and long-term outcomes in each step (pp. 30–33) of the family journey.



Evaluating Outcomes

Potential areas of evaluation related to the two design objectives are outlined below. The purpose of exploring these proposed topics is to assess to what degree test implementations of the new interactions and tools actually met the design objectives.

Note that the six evaluation topics proposed below should be refined and further developed in the evaluation plan recommended in Step 3 of the proposed testing process (p. 37). To whatever extent is possible, it would be useful to identify baseline metrics related to service experience in advance of the test implementations, and then compare post-implementation data to those earlier findings.

ASSESSING OBJECTIVE 1

Did the proposals clarify family expectations and encourage appropriate engagement by sharing knowledge at key moments in the process?

To evaluate how well the proposals helped clarify families' expectations about transportation and encourage appropriate forms of engagement with the system, the project team will use qualitative methods to assess to what extent the implementation of the proposals:

- Preempted some later service problems by setting expectations around transportation provision during the IEP process.
- Facilitated more tailored, child-centered care on the bus.
- Expanded outreach to families about changes so they could better prepare their children for service changes.

ASSESSING OBJECTIVE 2

Did the proposals increase informed and collaborative decision-making by helping families to more effectively participate and contribute at crucial points in the service?

To evaluate how well the proposals helped build stronger pathways for all service participants to share information and decision-making and create ways for families to participate more collaboratively, both during the IEP process and once their child's busing service has begun, the project team will use qualitative methods to assess to what extent the implementation of the proposals:

- Initiated a collaborative decision-making process around transport needs.
- Transferred families' deep knowledge of their children to bus teams and better integrated family and team approaches.
- Provided more written notice and aligned school staff, bus teams, and families around a wider range of service changes.

Evaluating Process

In addition to assessing the guiding design objectives and their outcomes, the DOE also needs to understand the costs and skill sets associated with carrying out each proposal, as well as the resources needed to sustain each proposal over time. Process evaluation will track the implementation of proposal activities and stakeholders' experiences during the testing phase.

Each proposal requires creating a new interaction between families and service providers, typically within the context of existing service transactions, using a tool prototype designed for the proposal. The project team will explore a number of questions in regards to processes around each proposal and its related tool:

ASSESSING IMPLEMENTATION PREPARATIONS

How successful was the preparation process for implementing the proposal tests?

When preparing to test each proposal and its related tool:

- Was the DOE able to find sufficient and appropriate test sites and personnel?
- How effective were the planning activities related to implementing the proposal?
- How effective were the trainings conducted in advance of implementation?
- What material and time resources did planning activities require?

ASSESSING IMPLEMENTATION ACTIVITIES

How successful was the testing process, in terms of participants being able to engage in the interactions and tool use?

Once test implementation began:

- Did participants carry out the proposed interaction(s) as designed?
- What challenges emerged in regards to the interaction(s)?
- Did the tool prototype function as designed?
- What challenges emerged in regards to the tool?

ASSESSING IMPLEMENTATION RESOURCES

What resources did testing the proposals require?

In total, after completing testing:

- What material and time resources did implementation activities require?
- Are those resource requirements sustainable at a larger scale?

Acknowledgments

Many dedicated professionals took part in the creation of this work. The roles and titles below reflect participants' status at the completion of the design phase in 2014.

CORE PROJECT TEAM

PUBLIC POLICY LAB

Alexandra Fiorillo, Strategy Fellow
Chelsea Mauldin, Executive Director
Miya Osaki, Design Fellow
Tina Park, Design Fellow
Natalia Radywyl, Research Fellow
Jennifer Rose, Design Director
Anna Vignet, Multimedia Fellow

NYC DEPARTMENT OF EDUCATION

Matt Berlin, Division of Specialized Instruction and Student Support
Ariana Jaffee, Office of Pupil Transportation, Division of Operations
Carmela Resuma, Division of Operations
Deirdre Smith, Chief of Staff, Office of Innovation

EXECUTIVE LEADERSHIP

Kathleen Grimm, Deputy Chancellor, Division of Operations
Corinne Rello-Anselmi, Deputy Chancellor, Division of Specialized Instruction and Student Support

Andrea Coleman, CEO, Office of Innovation
Steven Hodas, Executive Director, Innovate NYC Schools
Josh Morgenstern, Division of Specialized Instruction and Student Support
Yurij Pawluk, Chief of Staff, Division of Specialized Instruction and Student Support
Alexandra Robinson, Office of Pupil Transporation, Division of Operations
Elizabeth Rose, Chief of Staff, Division of Operations
Seth Schoenfeld, CEO, Office of Innovation
Elana Sigall, Division of Specialized Instruction and Student Support

PROJECT PARTICIPANTS

Our work on this project was only was possible because of the thoughtful participation of dozens of DOE staff members, front-line transportation service providers, and New York City families. To respect participants' privacy, we include their contributions anonymously. We offer them our sincere thanks. Any insights in the document come from their generously shared wisdom; all mistakes are the authors' own.

PUBLIC POLICY LAB

info@publicpolicylab.org
www.publicpolicylab.org

The Public Policy Lab is a tax-exempt 501(c)(3) nonprofit organization.

PUBLIC POLICY LAB

DESIGNING BETTER PUBLIC EDUCATION SERVICES

Each school day, more than 45,000 New York City children with disabilities rely on bus services to get to school. The NYC Department of Education's Office of Innovation invited the Public Policy Lab to collaborate with DOE offices involved in transportation decisions and operations — with the ultimate goal of improving student experiences.

Our design team worked with service providers and family members to identify unmet user needs. We then developed potential service improvements through collaborative prototyping with family members and front-line staff. This work resulted in three proposals for better involving students' families at crucial points in the service.