



# Community Guilds Strategic Plan

August, 2015

# Executive summary: our five-year strategic plan

- **Prospects for low-income, minority students in Atlanta** – and Georgia broadly – **are bleak**: students leave school under-prepared for the realities of the workforce, dramatically limiting access to attractive careers and life options
- Founded in 2012-13, Community Guilds addresses this need head-on through its STE(A)M Truck program, changing students' trajectories by **engaging and inspiring them** – and their teachers – through an **experiential maker approach** to teaching and learning; the program is unique in its:
  - Access to adult **mentor experts** from the community (e.g., artists)
  - Access to “real-world” **STE(A)M resources and tools** (e.g., laser cutters and 3-D printers)
  - **Rigorous curriculum** focused on building design thinking and engineering skills, as well as character traits critical for success in all fields
- To date, roughly 300 youth across a breadth of partner organizations – including Atlanta Public Schools, KIPP Metro Atlanta, The Kindezi Schools, Boys & Girls Clubs of Metro Atlanta – have participated in STE(A)M Truck programming; **early outcomes have been promising**, with material increases in student non-cognitive skills and interest in STEM
- In 2015-16, Community Guilds plans to **more than double its reach while preserving its high bar for quality** – with plans to serve roughly 900-1,000 students per platform per year at full utilization; **in the next five years, Community Guilds will expand to five platforms serving over 4,000 students** in Atlanta and near-in districts, by:
  - Focusing on **deepening program outcomes**, by piloting several approaches to program delivery
  - Increasing capacity to **serve more students at a time**, by increasing the number of educators supporting the program and the student cohort sizes
  - Piloting programming days without the full platform and/or without heavy equipment, **increasing the number of students served by 1 “platform”**
  - **Engaging directly with teachers** over time, to increase the transformative impact of STE(A)M Truck
  - Maintaining a **low cost** for the programming (average program cost per student of \$200-300)
- The decision to thoughtfully approach pilot programs for both students (in the next 1-2 years) and teachers (through year 4) will **lead to a clear program model with proven outcomes**

# What is the problem we are trying to solve?

## What is the problem?

Public schools are not designed to instill the *competencies* needed to finish high school, complete college and compete in the 21<sup>st</sup> century.

Decades of school reform have failed to fundamentally change the trajectory of underserved students.

## How do we know?

- Georgia has the **third lowest graduation rate** in the country
- The picture is bleak for minority students: almost **half** of African-American and Latino students **will not graduate on time** with a regular diploma
- **Minority males in urban schools face the steepest challenge**: of those that do graduate high school, only 16% will finish college
- Yet, the **demand for professional workers is increasing** – by 2020, Georgia will add 124,000 jobs requiring a bachelor's degree or higher (a rate faster than overall population growth)

# Like literacy, STEM fluency is a key predictor of positive life outcomes – but Atlanta (and Georgia) trail the nation

## 4<sup>th</sup> Grade Science and Math NAEP Scores

Science	Math
1 Charlotte-Mecklenburg	1 Charlotte-Mecklenburg
2 Jefferson County (KY)	2 Austin
<b>3 Nation (149)</b>	3 Hillsborough County (FL)
4 Austin	<b>4 Nation (241)</b>
5 Miami-Dade	5 San Diego
6 San Diego	6 Boston
7 Boston	7 Miami-Dade
<b>8 Large city (135)</b>	8 Houston
9 Houston	9 New York City
10 New York City	<b>10 Large city (235)</b>
<b>11 Atlanta (134)</b>	11 Albuquerque
12 Milwaukee	12 Dallas
13 Chicago	13 Jefferson County (KY)
14 Los Angeles	<b>14 Atlanta (233)</b>
15 Fresno	15 Chicago
16 Philadelphia	16 District of Columbia
17 Baltimore City	17 Los Angeles
18 Cleveland	18 Baltimore City
19 Detroit	19 Philadelphia
	20 Milwaukee
	21 Fresno
	22 Cleveland
	23 Detroit

## 8<sup>th</sup> Grade Science and Math NAEP Scores

Science	Math
<b>1 Nation (149)</b>	1 Charlotte-Mecklenburg
2 Austin	2 Austin
3 Jefferson County (KY)	<b>3 Nation (284)</b>
4 Charlotte-Mecklenburg	4 Hillsborough County (FL)
5 Houston	5 Boston
6 San Diego	6 Houston
7 Miami-Dade	7 San Diego
<b>8 Large city (134)</b>	<b>8 Large city (276)</b>
9 Boston	9 Dallas
10 New York City	10 Albuquerque
<b>11 Atlanta (127)</b>	11 Miami-Dade
12 Fresno	12 New York City
13 Los Angeles	13 Jefferson County (KY)
14 Milwaukee	14 Chicago
15 Chicago	<b>15 Atlanta (233)</b>
16 Cleveland	16 Philadelphia
17 Philadelphia	17 Los Angeles
18 Baltimore City	18 Baltimore City
19 Detroit	19 District of Columbia
	20 Fresno
	21 Milwaukee
	22 Cleveland
	23 Detroit

# Experiential learning, through design thinking, can be a powerful way to spark student interest in STEM – and more



Studies of scientists and inventors strongly suggest that their **childhood experiences of tinkering and play** involving construction and experimentation **developed their interest in science**

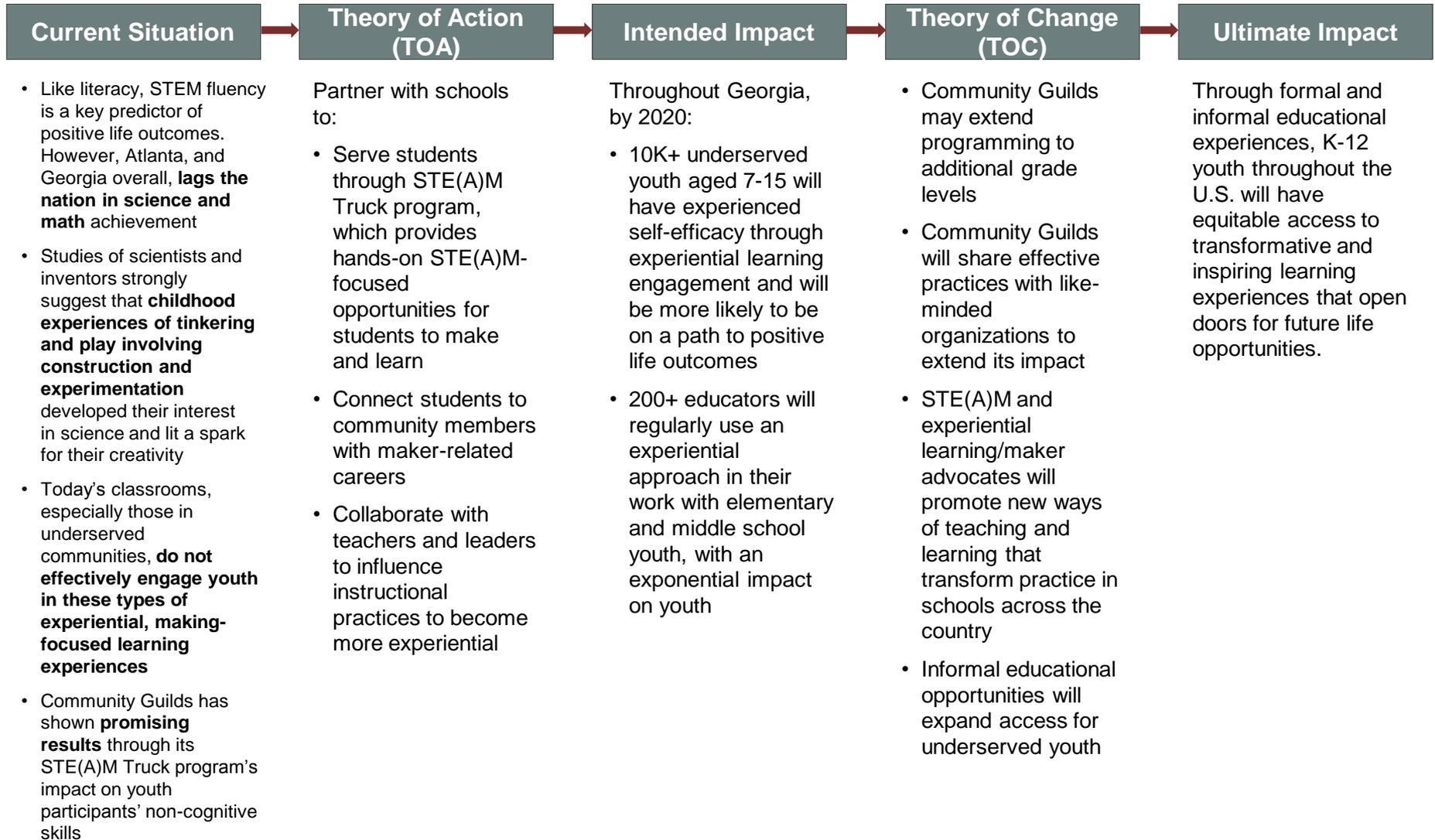
# Community Guilds directly addresses this need we see in Atlanta and beyond

**Community Guilds closes opportunity gaps and provides lifelong opportunities by...**



**...transforming teaching and learning through an experiential maker approach that brings together youth and adult learners within collaborative communities.**

# Our Theory of Action is grounded in providing experiential learning experiences for both students and educators



# The STE(A)M Truck program has three differentiators

## 20-day program experience, anchored on:

### 1 Community mentors

- Access to adult **mentor experts** (e.g., artists) from the community
- Role models that do not look like “typical” educators

### 2 Resources and tools

- Access to “real-world” **STE(A)M resources and tools**, both high-tech (e.g., laser cutters and 3-D printers) and low-tech
- Apply to relevant and tangible problems: for example, designing a camera for a teen videographer born without arms

### 3 Innovative experiential curriculum

- **Rigorous curriculum** focused on building design thinking and engineering skills, as well as character traits critical for success in all fields
- Broken down into six focus areas: Spark, Explore, Tinker, Design, Build, Share
- Integrates Georgia STEM standards with Maker Movement principles and hands-on, experiential learning

# Stakeholder feedback has been highly positive...

“STE(A)M Truck is an **exciting approach to engaging students in hands-on learning, and effective in engaging students that would not otherwise have the opportunity.**”

“**Relationships with artists and maker-mentors** provide a set of role models for students that vary refreshingly from the norm.”

“We see the applicability of STE(A)M Truck learning **across a breadth of ages and grades.**”



## ...And there are strong early outcomes

### Non-cognitive skills

- 97%+ of students have **improved non-cognitive skills**
- 90%+ of students performing at **satisfactory competency levels** on non-cognitive skills
- Increased **student interest and willingness to take risks** and try new things in learning
- **Improved classroom behavior** (e.g., significant decline in discipline referrals while STE(A)M Truck is on site)

### STEM skills and awareness

- 87%+ of students have **improved applied STEM skills**
- 2/3 (and as high as 90%) of students perform at **satisfactory competency levels** on STEM skills
- 73%+ of students have **increased interest and confidence** in pursuing a STEM career

# Going forward, Community Guilds will continue to refine its STE(A)M Truck model to deepen student impact

Program elements	Pilot approach during Years 1-2
1 <b>In- or after-school</b>	<ul style="list-style-type: none"> <li>• In-school as the ideal model to achieve highest impact</li> <li>• After-school model to extend reach of program, based on interest and funding</li> </ul>
2 <b>Length of program</b>	<ul style="list-style-type: none"> <li>• Combination of 20-day pull-out model and 20-day and 120-day (year-long) classroom models to test impact during the school year; plus pull-out summer programming</li> <li>• Single-day events for information and engagement purposes</li> </ul>
3 <b>Activities</b>	<ul style="list-style-type: none"> <li>• <i>20-day model or 120-day with multiple cohorts:</i> Mix of using the full platform (truck and trailer) and working without</li> </ul>
4 <b>Reach</b>	<ul style="list-style-type: none"> <li>• <i>Partnership:</i> School level partnerships with a possibility of a cluster of one or two schools within a district</li> <li>• <i>Number of cohorts:</i> Varies between 3-6 cohorts, depending on half-day or full-day programming; and 2 for after-school</li> <li>• <i>Cohort size:</i> Offer pull-out model for 10 students or full-class model for ~25 students</li> <li>• <i>Session length:</i> Standardized to 1 hour-long session</li> </ul>
5 <b>Curriculum</b>	<ul style="list-style-type: none"> <li>• Balance of prescriptive and constructivist where students solve real-world problems with a fixed set of materials/ equipment</li> <li>• Over time, align to Common Core</li> </ul>
6 <b>Staffing</b>	<ul style="list-style-type: none"> <li>• Staff truck with STEM designer (educator) who is there each day, with flexible staffing of maker-mentors and resident artists; range from 3-5 staff supporting each cohort</li> </ul>

# We will also deepen our educator supports: light-touch at first, with growing capabilities over time

Increasing intensity of support/partnership 

## Teacher “light touch” engagement

- Engaging teachers in current STE(A)M truck program through:
  - Orientation to program
  - Observation of program
  - Participation alongside students
  - Share general information about what students do on the truck
  - Feedback loop about strengths/opportunities for individual students
  - General leave-behinds

## Teacher support

- Working directly with teachers to identify ways to integrate hands-on/making work into their lessons including:
  - Debrief of STE(A)M truck day/project/ engagement
  - 1:1 consultations
  - Targeted leave-behinds tailored to teacher needs

## Teacher development

- Providing high-touch training and development, over time, to change teacher practice through things like:
  - Teacher coaching
  - Full-school PD sessions
  - Engaging teachers as learners with STE(A)M truck
  - Running full courses
  - Lesson study
  - University partnerships

**These practices will strengthen the STE(A)M Truck student program offering in addition to shaping students’ broader experience as they engage with their teachers**

# In sum, over the next five years, Community Guilds will evolve its programming to reach transformative school impact

## Phase 1

**Pilot and trial student engagement approaches with light touch teacher engagement**

- Approaches include:
  - 20 and 120 day length
  - Full-day, partial-day and after school
  - Some days without truck/trailer
  - Increased cohort sizes and new staffing approach
- Engage with teachers in “light touch” way to identify profiles of most interested teachers and elements that would most help them increase their effectiveness

## Phase 2

**Define and refine core offering(s) for STE(A)M Truck and pilot in-depth teacher engagement**

- Use data to decide on most impactful and partner-aligned configurations for the program
- Define student program non-negotiables
- Narrow student program options while remaining flexible to partner needs
- Pilot teacher support and development strategies with intentional learning goals to refine approach across capabilities/ expertise, relationships, and program model integration

## Phase 3

**Student program continuous improvement; ongoing teacher pilots**

- Continue to ensure soundness of student program non-negotiables
- Refine program model based on student outcomes and feedback from partners
- Continue to pilot model for teacher engagement and decide on programming

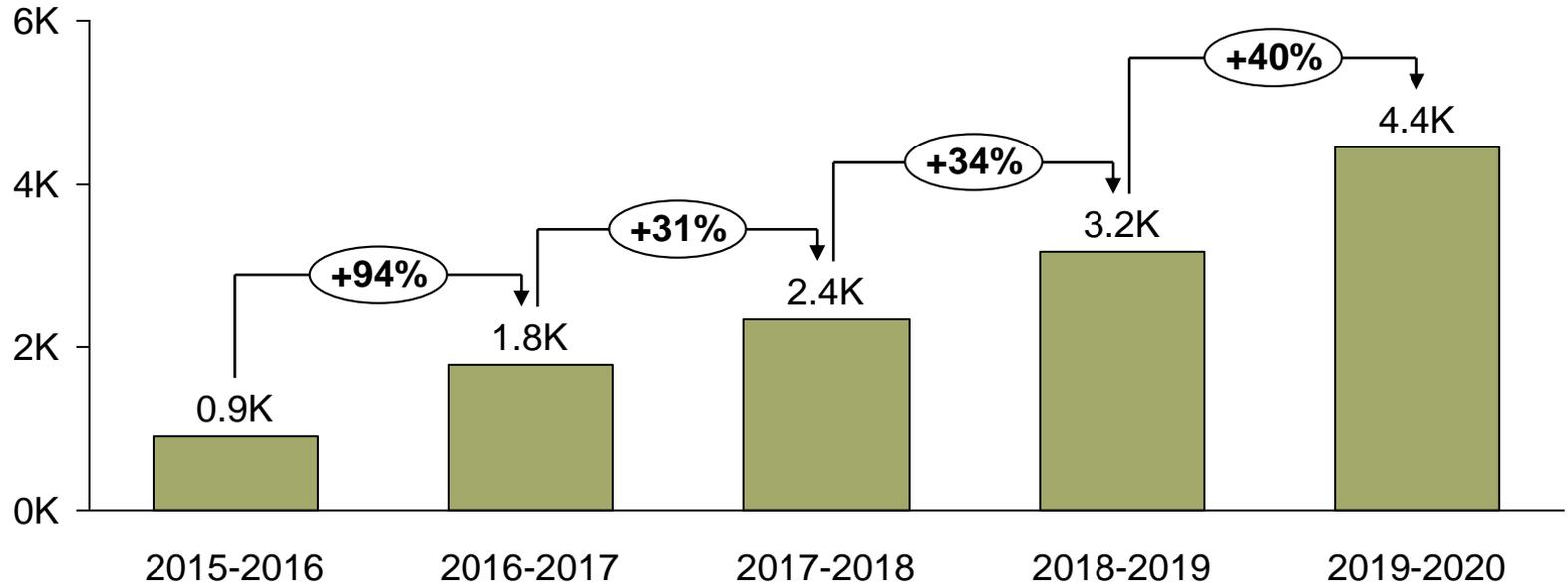
## Phase 4

**Transformative school impact; continuous improvement**

- Confirm teacher engagement approach
- Continuous improvement and refinement across programs
- Replication of programming throughout GA and Southeast

# We have laid out an aggressive yet achievable expansion plan, to 4 trucks serving over 4,000 students in Y5

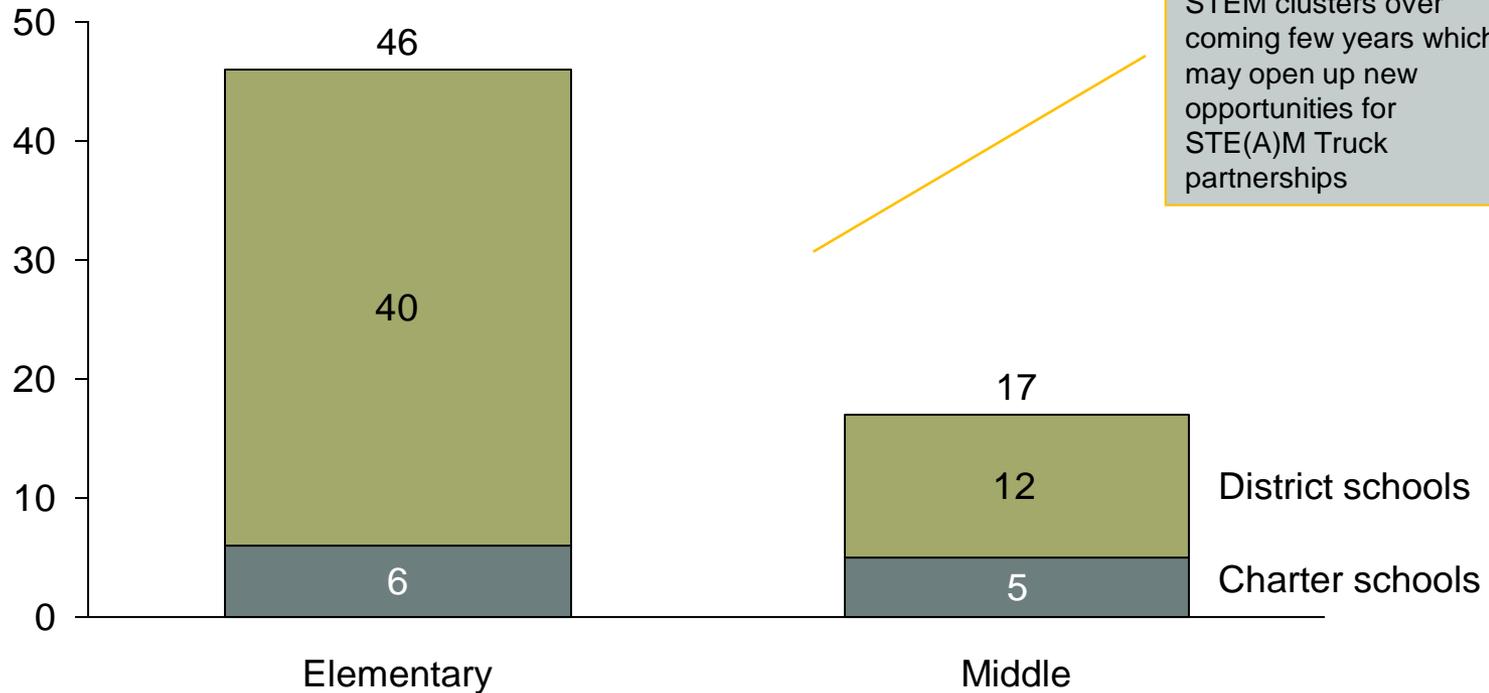
# students served annually



Number of school year programs/ partners	7	7	10	10	13
Number of summer programs/ partners	3	4	8	10	11
Number of platforms	1	2	2	3	4

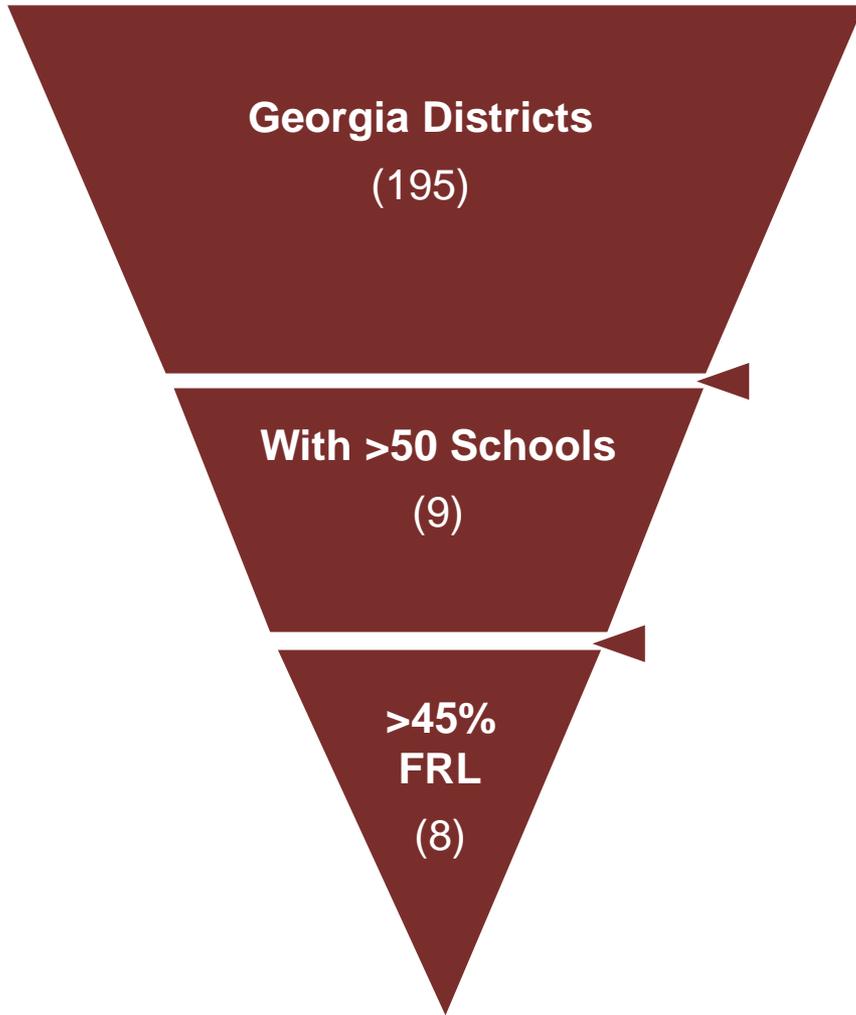
# Within APS there are ~60 schools that might be attractive partners based on serving a low-income population

# Atlanta schools serving >60% FRL population



**Serving 10 partners within Atlanta will mean serving 17% of Atlanta schools annually with the STE(A)M truck and ~6% of Atlanta elementary and middle school students who qualify for FRL**

# There are other attractive locations across Georgia: large districts, high-need populations, and potential charter partners



8 Target Districts	
<b>Clayton County School District</b> <ul style="list-style-type: none"> <li>86% FRL</li> <li>64 Schools</li> </ul>	<b>Gwinnett County School District</b> <ul style="list-style-type: none"> <li>56% FRL</li> <li>134 Schools</li> </ul>
<b>Cobb County School District</b> <ul style="list-style-type: none"> <li>45% FRL</li> <li>116 Schools</li> </ul>	<b>Muscogee County School District</b> <ul style="list-style-type: none"> <li>67% FRL</li> <li>59 Schools</li> </ul>
<b>DeKalb County School District</b> <ul style="list-style-type: none"> <li>72% FRL</li> <li>144 Schools</li> </ul>	<b>Augusta-Richmond County School District</b> <ul style="list-style-type: none"> <li>78% FRL</li> <li>61 Schools</li> </ul>
<b>Fulton County School District</b> <ul style="list-style-type: none"> <li>45% FRL</li> <li>106 Schools</li> </ul>	<b>Savannah-Chatham County School District</b> <ul style="list-style-type: none"> <li>65% FRL</li> <li>58 Schools</li> </ul>

*Atlanta Public Schools meets these qualifications but is an existing partner*

# Five districts emerged from the original target group; each of these could likely support its own STE(A)M truck

District	Number of Schools <sup>1</sup>	Number of Charters	Number of Title 1 <sup>2</sup>	FRL	Location Type	Distance from Atlanta	Desirability
DeKalb	144	11	89	71%	Suburb, Large	17-25 min.	HIGH
Clayton	64	4	60	86%	Suburb, Large	15-20 min.	HIGH
Fulton	106	35	54	45%	Suburb, Large	10-30 min.	HIGH
Augusta-Richmond	61	2	54	78%	City, Midsize	2 hours	HIGH
Gwinnett	134	8	41	56%	Suburb, Large	25-35 min.	HIGH
Cobb	116	5	41	45%	Suburb, Large	25-40 min.	MEDIUM
Muscogee	59	2	33	67%	City, Midsize	1 hr. 30 min.	MEDIUM
Savannah-Chatham	58	4	34	65%	City, Midsize	3-4 hours	MEDIUM

## High Desirability

Clayton and Augusta- Richmond: Medium sized districts, but a high concentration of FRL students/Title 1 schools

DeKalb, Gwinnett, and Fulton: A lower concentration of FRL/Title 1, but large districts

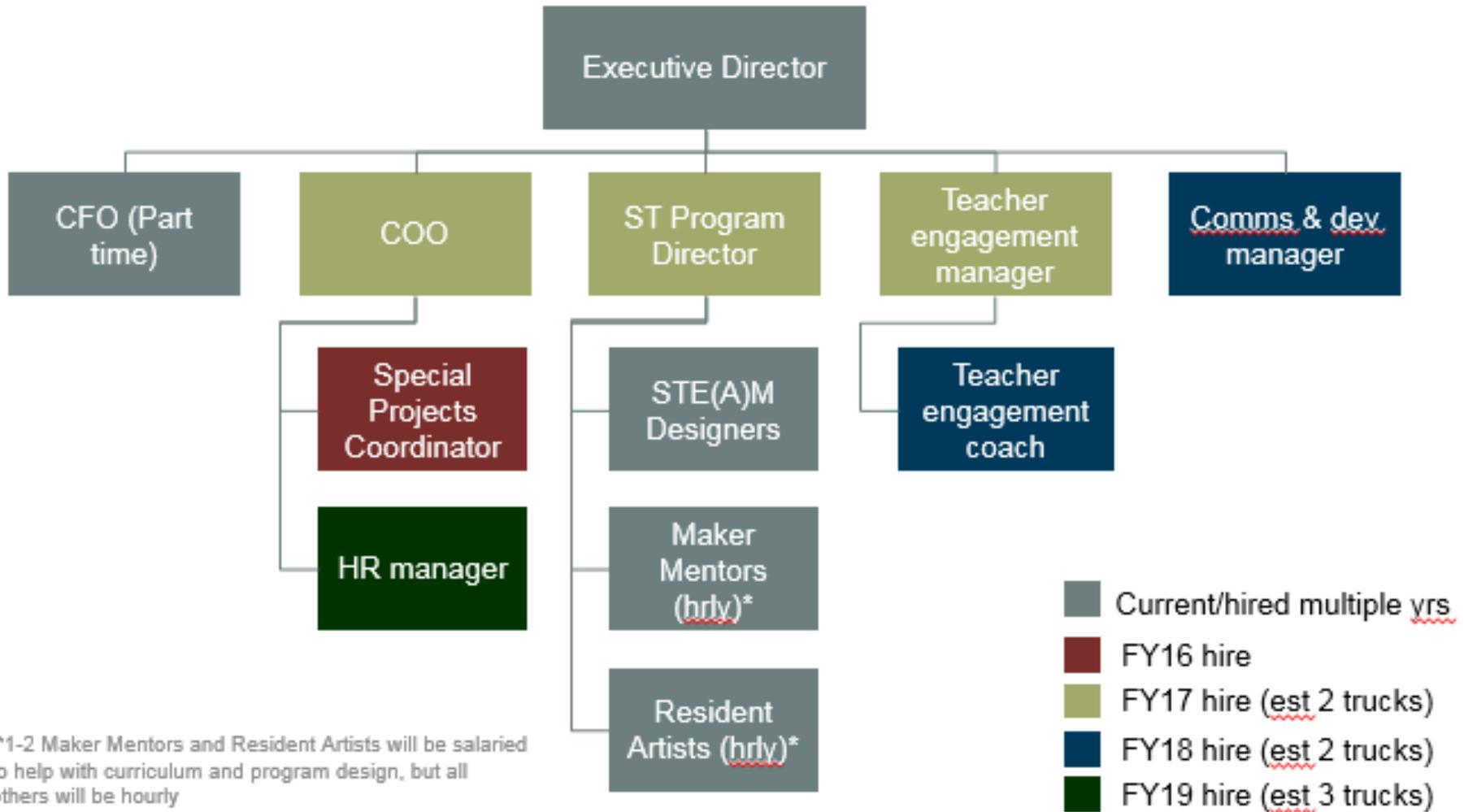
## Medium Desirability

Cobb: Large district, but concentration of FRL/Title 1 is lower

Savannah-Chatham and Muscogee: Smaller districts requiring higher penetration to yield full utilization (and far from other regions)

<sup>1</sup> Includes high schools <sup>2</sup> Title I Schools = Greater than 40% FRL, includes charter schools

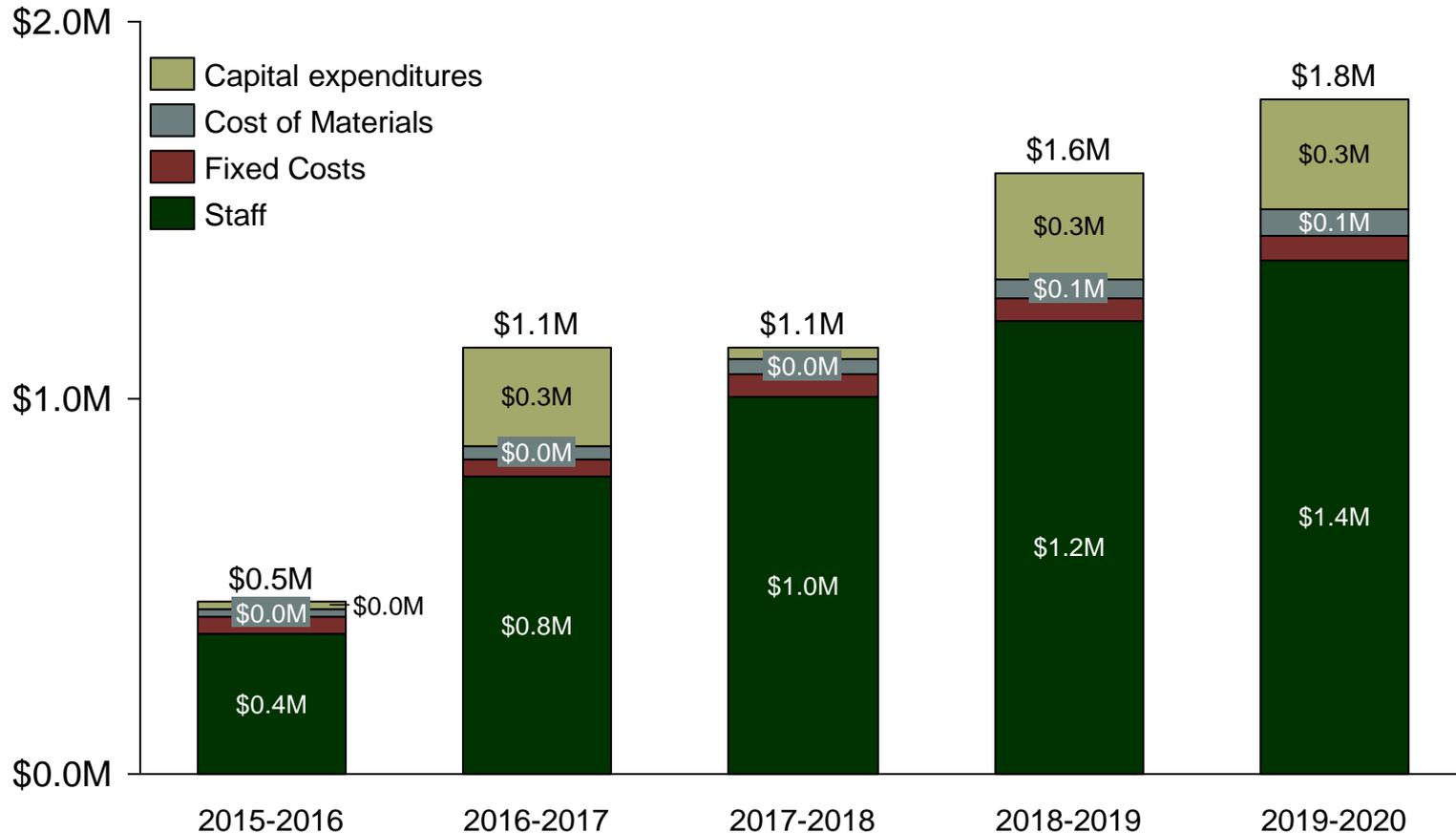
# To execute on this plan, Community Guilds will need to expand its capacity to deliver high-quality programming



# The ask: solving for a \$1.8M budget over the next five years

## Annual Expenses

Note: the average program cost per student is \$200-300



Note: Includes fully allocated overhead costs, which drive increased cost per student v. program allocation.

# Investment in STE(A)M Truck will go a long way

**In addition to directly supporting programming, there are a number of funding opportunities that will support Community Guilds' operations and sustain impact over the long term:**

- \$150K for an additional platform including STE(A)M Truck and Trailer
- \$80K to outfit a Trailer platform with needed equipment
- \$40-80K to fund at least 1 key role (e.g., STEM designer and/or special projects support) on full-time staff
- \$30-50K for consulting support for capacity building on special projects and programs

# How will we know we're successful?

	Categories	Metrics
Annual Outputs	Reach	<ul style="list-style-type: none"> <li>Number of students reached</li> <li>Number of teachers reached and engaged</li> <li>Percent of days of programming per year (utilization)</li> </ul>
Short-term Outcomes	Non-cognitive characteristics	<ul style="list-style-type: none"> <li>Assessment of student maker characteristics and problem-solving skills (optimism and zest, grit and perseverance, curiosity, teamwork and collaboration, gratitude, focus and self-control, and creativity and innovation), through student self-assessment and educator surveys</li> </ul>
	School attitude	<ul style="list-style-type: none"> <li>Student attitudes towards school, through student baseline and follow-up surveys</li> </ul>
	Participant satisfaction	<ul style="list-style-type: none"> <li>Net promoter score: "I would recommend to another student that they participate in STE(A)M Truck" (scale of 0-10)</li> <li>Net promoter score: "I would recommend to a colleague that they partner with Community Guilds" (scale of 0-10)</li> </ul>
	Teacher impact	<ul style="list-style-type: none"> <li>Because of our partnership with Community Guilds, I am more confident in using an experiential maker approach in my classroom (scale of 1-5)</li> </ul>
Medium- and Long-term Outcomes	Non-cognitive characteristics	<ul style="list-style-type: none"> <li>Middle/high school readiness and predictors of success measurements</li> <li>Student displays of grit and perseverance (through educator survey)</li> <li>Increased teacher use of experiential approach in classrooms (through educator survey)</li> <li>Parent and community engagement and interest in STE(A)M (through educator survey)</li> </ul>
	Attendance and behavior	<ul style="list-style-type: none"> <li>School attendance</li> <li>Middle/high school readiness and predictors of success measurements</li> <li>Student displays of grit and perseverance (through educator survey)</li> <li>Rates of discipline referrals of participating students (through educator survey)</li> </ul>
	Adult impact	<ul style="list-style-type: none"> <li>Increased teacher use of experiential approach in classrooms (through educator survey)</li> <li>Parent and community engagement and interest in STE(A)M (through educator survey)</li> </ul>

# Any questions?

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Contact Jason Martin

[Jason@community-guilds.org](mailto:Jason@community-guilds.org)

[www.community-guilds.org](http://www.community-guilds.org)

[www.steamtruck.org](http://www.steamtruck.org)