Invention Convention
City Jump-Start Program

TEACHING INVENTION TO UNDERSERVED K-12 POPULATIONS
Achieving Invention Education in All 50 States and 10 million Students by 2021

The National Invention Convention program has a goal of reaching 50 states (plus DC) in five years

- There are more than 600 Invention Convention Programs across the U.S. today
- But many inner city schools are not taking part
- Our City Jump-Start Program is designed specifically to help underserved communities take part
Why Cities and not States?

The First Robotics Model: City-by-city instead of state-by-state

- Going state-by-state is daunting to supporters, and can be mired in state-level politics and discussions
- Beginning in cities makes for a more manageable project and, with success, spreads to neighboring cities
- Allows better matching of sponsors with the places they care most about
Let’s Take a Look at Some City Jump-Start Success Stories...
Connecticut Invention Convention

The Connecticut Invention Convention (www.ctinventionconvention.org) serves more than 250 schools and 100+ school districts in Connecticut

- With almost 20,000 kids get in-school and after-school training annually, it is the largest program of its kind in the nation

But many cities and towns remain underserved, and simply cannot support an Invention Convention program without external funding

To remedy this situation, the CIC embarked on a program of matching corporations and foundations with CIC-selected city schools

- Involves corporate volunteers as well as financial support
The Danbury Invention Convention

Before Danbury, Connecticut, launched its Jump-Start program in 2008, not a single school in the entire Danbury District was participating in the Connecticut Invention Convention program.

Boehringer-Ingelheim Cares Foundation adopted Danbury, located near its headquarters in CT.
- Long term support program – in its 7th year
- First five, then two more schools each year were recruited to the CIC program, for a total of 11 schools participating both on the elementary and middle school levels by the end of 6 years
- Last year (2014-2015), the All-Danbury Invention Convention event was so large (over 500 students) that they had to run it over two days

Today, the Danbury event is so successful that this year, private schools in Danbury, which are not part of the Danbury school district, are asking Danbury IC if they can participate in the All-Danbury event.
The Hartford Invention Convention

In 2007, the Lincoln Financial Foundation (LFF) started funding three Hartford schools for after-school programs.

As a result of work with Lincoln Financial Foundation, the Hartford Schools Director of Science, principals of selected schools, and CIC’s Outreach staff, created a new model of engagement with city schools and piloted the “Hartford Invention Convention Initiative (HICI).

The CIC Hartford Invention Convention Initiative was proposed to take CIC's “City Jump-Start Program” to another level, by piloting an intensive, teacher- and principal-focused program.
The Hartford Invention Convention Initiative

The CIC Hartford Invention Convention Initiative takes CIC's “City Jump-Start Program” to another level, by piloting an intensive, teacher and principal focused program

- Fourth grade teachers in four schools are provided with a **$900 stipend** for undergoing training, then delivering and completing the program and assessment
- Teachers receive invention education under **formal professional development training**.
- **Teacher support meetings** are held every month: teachers are provided with materials to teach the course and participate in hands-on activities to take back to their classrooms
- **Mentoring and support** are provided to teachers and principals on a monthly and as-needed basis

The CIC pays for poster boards, markers, tape, scissors, log books, and other such materials necessary for the prototyping and presentation aspect of the program

In order to ensure that students, families, and teachers are able to attend the State Finals, bus transportation is provided to/from the Finals
Outcome of the Hartford Invention Convention Initiative

First year results:
- 147 out of 165 students had fully completed projects, with an invention, invention log, and display board (88% completion)
- 100% of the teachers in the program the first year wanted to continue their participation in the next year and they did so at a stipend amount less than half of what they had gotten the first year
  - “The money is a good incentive to get started, but now that we know how great the program is, we are not doing it for the money.”
- All of the principals of all four schools loved the program and voted to continue it in their schools the next year, adding another grade

Second year results:
- Participation rate shot up 100% — 350 students and 19 teachers took part
- Teachers from adjacent Hartford Area schools started asking to be included in the program, showing the viral success of the program
Other Successful City Jump-Start Cities

New Haven, CT (via Annie E. Casey Foundation and Alexion Pharmaceuticals)
Bridgeport, CT (via Petit Family Foundation)
Waterbury, CT (via Connecticut Community Foundation and Peoples United Community Foundation)
New London, CT (via Liberty Bank Foundation, and Community Foundation of Eastern Connecticut)
Groton, CT (via General Dynamics, and Liberty Bank Foundation)

What cities would you like to see Jump-Started?
Launching Your Own City Jump-Start

The City Jump-Start Program has the following key requirements:

- **Main Sponsor(s):** Budgets vary by size of district, number of grades and classes, number of teachers, etc., but in general a two-year program of $25K-$50K each year is needed.

- **Participating School District(s):** Superintendents need to buy into the program wholly and support this systematically in their systems at the building and district level.

- **Invention Convention Support:** STEMIE’s staffers and regional support personnel can help convene and train local outreach supporters to help work with teachers and students with their invention convention programs.

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Employee Engagement

When sponsors sign on to financially support the Jump-Start program, they also encourage their employees to volunteer in the schools to help kids create their projects:

- Schools will set aside specific times of the day for external mentors to come into the classroom and meet with their mentees
- Mentors can work in teams or individually
- Employee participation year-over-year is extremely high, and surveys of employee satisfaction note a very high level of interest and satisfaction in the program
12 Steps to City Jump-Start (1-4)

1. A full day of teacher training is scheduled in September to acquaint the school or district with the mission and goals of the program.

2. Beginning in October, monthly 2-hour-long meetings are held with teachers to focus on topic-specific support and grade-banded curricular activities that assist in teaching problem-solving techniques.

3. In early January, school-wide “Kick Off Programs” are staged to excite students and parents.

4. After that, students and teachers meet for 45 minutes, 2 - 3 times per week in-school or after school.
12 Steps to City Jump-Start (5-9)

5. In weeks 1 - 3, the teachers run introductory activities with their entire classes, fostering interest in the in-school, or after-school activity.

6. In weeks 4 - 6, students will work in teams on a single invention assigned by the teacher.

7. In weeks 7 - 10, students will work as individuals on their own invention.

8. In weeks 11 - 12, students will create their display boards, practice their pitches, and prepare for the local Invention Convention.

9. Judges and volunteers from the Sponsoring company, and from community partners such as Rotary, Economic Development Commissions, and Entrepreneurial organizations, are recruited to participate in the local school invention conventions as judges and mentors.
12 Steps to City Jump-Start (10-12)

10. In April, a city-wide Invention Convention is held, at which all participating students will present their inventions

11. The top 10%-20% of students are selected to continue on to participate in the State Finals, depending upon space available

12. In May - June, evaluation of the program is conducted and new schools are recruited to expand the program the following Fall
Sample Budgets for City Jump-Start

About $25,000-$50,000 per city per year, depending on the number of schools, grades, classes, teachers, and students

In some cases, a single sponsor will support the cost of a Jump-Start program alone, and in other instances, a coalition of players will combine their resources to launch the program

Either approach works as long as the employee participation follows the cash donation!
Why Adopt A City To Jump-Start?

- Jump starts teachers who otherwise could not afford to try this new program
- Jump starts kids on their path towards more creative problem-solving skills
- Jump starts parental involvement in helping their kids with projects they can all understand, and involves the entire, diverse community
- Jump starts sponsors, especially first time donors, in something that has tangible differential results
- Jump starts districts to get started on a program that is a no-brainer for their teachers, and can address new Next Generation Science Standards
- Jump starts a state Invention Convention program by making sure the program launches the first time correctly, and spreads the word organically across the state
Teacher Testimonials

“There are students who were not part of the Invention Convention this year that soooo want to be part of it next year!”

“The students loved the program. I have students that did inventions this year that can’t wait to do inventions next year. They are already thinking about it. One student said, ‘Ms. Greene, I know what I’m doing next year! I can’t wait to work on it!’”

“I was frankly not sure my students could do this, but they rose to the task and accomplished great things. I think this experience will give them a positive boost for years to come and it changed the lives of many.”
Student Testimonials

“I wish that I had started earlier. I had no idea how long the project was going to take. I learned that the magnets repel each other to the right amount they need to have a certain power on them. Had fun and really liked it.” - Michael

“I had fun. When the judges look at your project and they keep looking at it and ask you questions. I like that they sign their name and talk to you so you have a better chance at winning an award.” - Jourdan

“I think that we got how to learn how to make a robot and all of the parts you can use and all of the parts you can’t use. I liked that I got to choose my project and do it on my own.” - Gianni

“I liked how I connected the circuit in MR2. I learned that the battery needed to be connected to the motor and the battery needed to be connected to the light.” - Jomar
Hartford Public Schools, Director of STEM

“Hartford Public Schools strongly urges the continuation of the program into its second year, with our current teachers in schools, to further their preparation to teach CIC in the classroom and really bring science alive! Again, thank you!!!”
Contact Us To Jump-Start Your Community

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