



**PROJECT INVENT**  
ANNUAL REPORT



**2021-2022**

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## PROJECT INVENT | 2021-2022 ANNUAL REPORT

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## LETTER FROM THE BOARD PRESIDENT

This past year I have had the pleasure of serving another year as Project Invent's Board President, to work closely with its exceptional and passionate team, and watch its growth from milestone to milestone.

I was introduced to Project Invent four years ago at its very early beginnings, when our Founder, Connie Liu was still a high school teacher and she saw the impact that projects like ours could make on students, educators, and our communities. We built Project Invent to bring invention to every student in America, all in service of our vision of a world of fearless, compassionate problem solvers.

I am so amazed by the young inventors that embody our mission and are making this world a better place. As I reflect on the impact that Project Invent has made thus far, I am even more inspired for the future that Project Invent is building year over year.

Gratefully,

Aragon Burlingham  
Board President



## LETTER FROM THE FOUNDER

I am so proud of the more than 500 students across 19 states that we impacted this past year. These young inventors have shared their journeys with us, many had never engineered before or started a company, but through Project Invent they were inspired to become the bold inventors they are today.

Since founding Project Invent 4 years ago, we've already impacted the lives of over 1,000 students. But we still have so much more work to do. There are 3 million students who graduate from high school every year and our goal is to make sure all 3 million of those students graduate empowered and ready to change the world.

Each year we learn something new about how to best reach all 3 million of those students, and with each lesson learned we adapt to meet those needs. This past year we've developed three new initiatives. We've responded to Fellow feedback nationwide requesting a semester model of Project Invent, to better serve our Title I schools. We strengthened our efforts in diversity, equity, and inclusion by developing a steering committee of educator fellows to advise us on the strategic direction of our program. We also are excited to have expanded our program to middle schools this school year to answer teacher demand.

2022 marked the close of my role as the Executive Director but I continue to proudly serve as Project Invent's Founder. I know the organization is in great hands under our fearless new leader, Jax Chaudhry. Project Invent is entering a new chapter of growth and I cannot wait to see what lies ahead!

Gratefully,

Connie Liu  
Founder



# LETTER FROM THE EXECUTIVE DIRECTOR

Dear Readers,

My first 90 days as Executive Director was spent meeting and connecting with students, Fellows, board members, donors and our broader Project Invent community. One of those meetings was with Team Umbrella at our Project Invent staff retreat. I asked Team Umbrella students what they might change or hope to see in the next chapter of Project Invent. One student yelled enthusiastically, "Nothing, I love Project Invent! Everyone should do it!" The other students shared how much they had learned through Project Invent and what they enjoyed about working with community partners and industry partners over the year. They hoped to see Project Invent continue to offer that to students.

The world needs more compassionate, fearless problem solvers. The stories of impact from Fellows to students to our community partners this year, are windows to a tangible future where Project Invent students have agency and can impact the world around them for social good.

Our impact begins with Project Invent Fellows and this year 94% report improving their ability to foster empathy in their students. This is the crux of our theory of change that every Fellow will grow their teacher practice to support the development of 21st century mindsets and skills in students.

As Project Invent grows from 500 students across 19 states to 1,000 students and 150 student teams by school year 2022-23, we look forward to bringing Project Invent to every student in middle schools and high schools across the nation!

Gratefully,

A handwritten signature in black ink that reads "Jax". The signature is stylized and cursive.

**Jax Chaudhry**  
Executive Director





Project Invent empowers students with the 21st-century skills to succeed individually and impact globally through invention.

**OUR VISION** To create a generation of fearless, compassionate problem solvers.

# THEORY OF CHANGE



- We...**
- TRAIN & SUPPORT teachers.
  - PROVIDE curriculum.
  - HOST Demo Day.

- Teachers..**
- EMPOWER students.
  - INSPIRE impactful projects.
  - CONTINUE empowerment work throughout their teaching career.

- Students..**
- GAIN 21st-century skills.
  - DEVELOP transformative mindsets.
  - CHANGE the world.

# WHAT WE DO.

Imagine a school where students don't just take tests and read textbooks, they go out into the world to identify meaningful problems and build innovative solutions. Instead of solving problems that already have an answer in the back of a book, **students solve problems that can change lives.**

Project Invent's **fellowship** program empowers educators to re-energize their teaching through design thinking, innovation, and social impact. Our educators adopt our program to build a classroom environment that is about tackling unsolved problems in the community, not just test-taking.

Our program provides 5 critical components to support educators in leading learning experiences that focus on real-world problem-solving:

1

educator training and professional development,

2

a project-based invention curriculum,

3

community connections,

4

access to volunteers in the tech industry, and

5

national opportunities for students to be celebrated and recognized for their successes.

# TRAINING & CURRICULUM



Our **educator training** is a weeklong immersive for teachers to experience invention for themselves. From July 26 -29, 2021 **we trained 61 teachers** who learned how to apply our 6 teacher practices: *make failure ok, push to the next level, be a co-learner, let students take the wheel, leave room for exploration, challenge assumptions* in order to bring Project Invent principles into their own classrooms.

Educators were additionally supported throughout their fellowship with **professional development** in the form of regular 1:1 advisory meetings with Project Invent Program Managers, drop-in workshops, and quarterly cohort meetings amongst a national network of Project Invent educators.

***"I am impressed with the level of coordination, forethought, and structure brought to the workshop and to the planning of the year's activities. Many of the seminars and trainings I have attended kind of leave you to your own devices. There is a real backbone of support that I wasn't expecting"***

**- Fellow Survey**



Our **curriculum** is a resource to guide students through the invention process. Our curriculum has received **2,000+ downloads across the globe**. This included the teachers we trained, along with educators all over the world who are interested in bringing real-world problem solving into their classrooms.

Our curriculum integrates **design thinking, engineering, and entrepreneurship** to help students move from idea to prototype to pitch.



# COMMUNITY PARTNERS

***“It’s great to see students learning to use their compassion to make a difference. The idea that the students came up with blew me away. They helped me solve a problem I never thought someone could solve.”***

***- Abigayil, Community Partner***

Students were connected with a community partner, a person experiencing a challenge that can be supported through tech-based solutions: examples included veterans, visually impaired individuals, and firefighters. Through monthly interviews and visits throughout the school year, students worked to understand the challenges their community partner faced, and used their empathy and creativity to come up with impactful technology solutions.

At the heart of Project Invent are the strong relationships students build with their community partners, who help to give authentic meaning to their work.

Last year we connected 65 student teams each with **community partners.**

To ensure our students are able to identify and connect with their community partners, we partnered with organizations such as:







# INDUSTRY VOLUNTEERS

***“What I will remember most about my Idea Review volunteer experience is being able to hear all the wonderful ideas and innovations that high school students were able to create!”***

***- Volunteer Survey***

Throughout the school year students received multiple opportunities to interface with **industry professionals who volunteered** to host tech office hours, review student ideas, and provide coaching for their pitches.

Students met with diverse role models and built the important mentorship connections that help them move into STEM careers. We had volunteers with backgrounds in engineering, design, business, marketing and entrepreneurship who offered invaluable knowledge/ expertise throughout our students’ invention journeys.

## **Our volunteer touch points included:**

**DEC:** “Idea Review” when students have just begun ideating their projects for their clients, we match professionals to help refine and strengthen their ideas;

**FEB-APR:** “Prototype Support” professionals offer technical support with student’s prototypes;

**MAR-APR:** “Pitch Coaching” professionals support students as they develop product pitches in preparation for Demo Day X;

**MAY:** “Demo Day X” is our culminating event that celebrates and recognizes students after their year-long journey of creating social impact. Students pitch for the chance at funding, so they can further their inventions after the program’s end - volunteers serve as judges or as keynote speakers.

Last year we matched **222 volunteers** with student teams from companies such as **Google Design & Google Hardware, Adobe, Toyota Research Institute, PayPal, and IBM.**

We **grew our volunteer base by 67%** since the prior year.



NATIONAL OPPORTUNITIES TO CELEBRATE & RECOGNIZE SUCCESS

# DEMO DAY X


The year of invention culminated in our first ever **Demo Day X series**, from March 31st to April 10th, 2022, a virtual or in-person opportunity where students across the country pitched their prototypes to investors for the chance at funding. In this way, students were empowered to become entrepreneurs in their own right!


**65 teams participated** in Demo Day X last year.

**An in-person Demo Day X event** in San Diego and **6 Demo Day X virtual events** were hosted across the nation in regions: California, Texas, North Carolina, and New York.


**166% growth** of DDX since the previous year.

At each Demo Day X we give out Awards:

 **Explorer Award**  
prioritized learning.  
Awarded to 7 teams

 **Product Pivot Award**  
overcame many obstacles.  
Awarded to 5 teams

 **Needfinder Award**  
really listened to their user.  
Awarded to 8 teams

 **Moonshot Award**  
notably novel or impactful idea. Awarded to 7 teams

Students presented all kinds of prototypes from (Example 1) a plug-in device that allows visually impaired users to hear what they type as they are typing, to (Example 2) a device that bridges the communication gap between civilians and first responders to reduce nearby civilians' stress and assist first responders to get to their destination quicker.

Example 1:



Example 2:





NATIONAL OPPORTUNITIES TO CELEBRATE & RECOGNIZE SUCCESS

# FUTUREFEST

***“For many of our students, this will be their first time leaving the state.”***

***- Matt Strine, Fellow***

***“During my FutureFest, my students pitched in front of everyone and connected with some big names who seemed interested in their product and development.”***

***- Elizabeth Luna, Fellow***

7 teams of students across the nation were also flown to Silicon Valley to join us during our inaugural weekend long **FutureFest** event from May 19 - 22, 2022 where they met tech companies, built their network, and presented on a live stage.

Teams flew out from Raleigh, North Carolina; Los Angeles & Oakland, California; Monessen, Pennsylvania; Flanders, New Jersey; White Salmon & Olympia, Washington; Henrico, Virginia

**71% of teams** that participated in FutureFest were from **Title 1 Schools.**



Click here to watch our highlight reel from FutureFest!





FutureFest was also an opportunity for us to recognize and celebrate the key individuals that support our students in their success.

### Our **Community Partner of the Year**, Jimmy Uharriet:

Jimmy Uharriet has been with us since the very beginning. Even before Project Invent even began, our Founder, Connie Liu, a high school teacher at the time, emailed Jimmy to ask if he'd be willing to talk to a group of high school students about his experience being blind. He said yes, and we're so glad he did. **That moment became the start of Project Invent.**

Jimmy worked with our inaugural Project Invent students at Nueva High School to invent the Stria Belt, a belt that helps blind individuals from veering as they cross the street. Through this, Jimmy showed us how **communities and classrooms can work together** to create powerful learning opportunities that go beyond the classroom walls. As long as there were more **compassionate, bold** people like him who were willing to share their stories, a program like Project Invent could exist.



### Our **Volunteer of the Year**, Mike Cahill:

Mike Cahill is a Chief Technology Officer who continuously invests so much of his time to mentor Project Invent teams. Through his mentorship, he has provided students with invaluable feedback to help strengthen their invention ideas and take them from napkin to prototype. Mike has also served as a connector by helping recruit other talented volunteers to join our community and support our students.



### Our **Fellow of the Year**, Sean Glantz:

Sean Glantz is a computer science teacher at Da Vinci Junior High School in Davis, CA. In his tenure as a Project Invent Fellow, Sean has gained state-wide approval for Project Invent to be offered as an official CTE course in California. In addition, he has strengthened Project Invent programming and committed himself to deepening program innovation even farther than the Fellowship itself.





# WHERE WE WORK.

Last fiscal year, we extended our reach to more states, schools, teachers, and students than ever before.

- > Our milestone event, Idea Review, saw its highest number of students, at 514.
- > Our culminating event, Demo Day X, saw a record-high of 65 teams of 412 total students, 50%+ of which were from Title I schools.
- > Our inaugural FutureFest event brought 7 teams of 39 total students in celebration. 71% of which were from Title I schools.

### FAST FACTS

- 19 states represented
- 514 students nationwide
- 52% Title I schools
- 61 Fellows trained

## 2021-2022 TEAMS



# OUR IMPACT.

*"Project Invent will give teachers and students resources to get them using design thinking in a real and authentic way through giving back to the community. That's very important."*

*- Emily Burk, Fellow*

## TEACHER IMPACT



**94%**

report improving their ability to foster empathy in their students

**96%**

report Project Invent improves student concern and engagement in world problems

**91%**

report Project Invent improves student ability to manage open-ended student projects

## STUDENT IMPACT



**95%**

believe they are a more creative problem solver.

**94%**

believe they are more passionate about social good.

**72%**

feel that they have what it takes to succeed in a STEM-related job

## COMMUNITY PARTNER IMPACT



**86%**

say the final prototype produced by student teams were clearly influenced by and informed by their insights and feedback.

**82%**

felt a connection to their student team and hope their relationships will continue to develop.

**86%**

report that their students made them feel like a valued member of the invention team.

# STORIES OF US.

## FELLOW OF THE YEAR SEAN GLANTZ

Davis, CA | Da Vinci Junior High School

Sean Glantz has been one of Project Invent's strongest champions since he joined the Fellowship during the 2020-2021 school year.

As a computer science teacher at Da Vinci Junior High School in Davis, CA, Sean has advocated for Project Invent not only within his school and district, but also on the state level by working to gain approval for Project Invent to be recognized as an official Career and Technical Education (CTE) course in the state of California.

In addition to supporting two invention teams through the Project Invent program, Team Hermes & Team Pals for Pals, Sean has served as a Demo Day X host, provided leadership on Project Invent's Teacher Advisory Committee, was a founding member of our Steering Committee, and hosted several workshops on topics such as Agile Project Management.

Sean's continued leadership and dedication to invention education extends to his teaching practice, where his students have commended him for strongly exhibiting the teacher practices of *Letting Students Take the Wheel*, *Leaving Room for Exploration*, and *Pushing Students to the Next Level*.



When it comes to failure, Sean always emphasizes that, ***“everything is a learning opportunity, and even failure is a step in the right direction, getting one step closer to understanding.”*** said one student from Da Vinci High School.

When nominating Sean as Fellow of the Year, another one of his student's wrote, ***“Mr. Glantz, it's been an honor working with you this year, I believe that you deserve this award for all the effort you've put into the class...You've set the framework for how computer science courses will work in our school and I don't think that any of my class or the classes that come after me, will ever forget that. So thank you!”***

We thank Sean for his tireless dedication to supporting the next generation of fearless, compassionate problem solvers!



# TEAM UBRELLA

Los Angeles, CA | Girls Academic Leadership Academy (GALA)

When educator Stacey Thomas discovered Project Invent, she knew that it could be the spark to engage a new population of students who never saw themselves as innovators.



Stacey, who teaches architecture and engineering at GALA noticed that her juniors and seniors weren't signing up for engineering classes as often as she hoped they would. Partnering with Project Invent gave her an opportunity to introduce the concepts of engineering and design thinking in an accessible way that could engage her 9th and 10th grade students, with the goal of eventually growing the pipeline of young girls choosing to enroll in advanced engineering courses, and enter into STEM careers.



Ubrella is one of Stacey's invention teams that had the opportunity not only to build an incredible invention, but also share their innovations & reflections as part of Project Invent's inaugural FutureFest event.

***"Before joining Project Invent, inventing a product design seemed far-fetched and unattainable...but Project Invent is unlike anything I've done before. Normally in school, they ask you, "What would you do?" Project Invent forced us to wonder, "What can you do?" This pushed us out of our comfort zone to try something we've never tried before, and it was both nerve racking and exciting." - Student from GALA***



Throughout the 2021-2022 school year, Team Ubrella partnered with Selena, a Community Partner that works at a local homeless shelter, to speak with and learn from people experiencing homelessness. Through this partnership, students learned about the dangers of severe weather exposure and developed a unique umbrella with both heating and cooling functions, which their Community Partner noted: ***"would be innovative and very much needed."***



While the team faced many challenges in developing their product, one student reflected, ***"Project Invent has taught our whole team that if you want to succeed, you have to fail first, and possibly many, many times. Project Invent...not only strengthens students' creative & strategic thinking, but also their mindset of failure."*** This mindset of perseverance through failure led Team Ubrella to great success at Demo Day X, where they were awarded The Moonshot award for an exceptionally innovative idea with the potential for widespread impact. Congratulations Team Ubrella!





## TEAM A.M.P.

Freeport, NY | Freeport High School



Click to hear directly from Team A.M.P.'s students and Fellow on their Project Invent journey.

The students of Team A.M.P. (“Any Means Possible”) at Freeport High School partnered with Robert Rodriguez, a Community Partner at the Limb Kind Foundation, to invent unique modifications for prosthetic limbs. Through interviewing Robert, they learned that he is not only a leader and advocate for people with limb differences in his community, but he is also a successful business owner and paralympic athlete. Robert noted that when playing sports, his prosthetic limb frequently loosened, or even sometimes fell off during athletic activities. To address this, students worked on several invention designs to create a prosthetic limb that would stay on during intense athletic activity. This process ultimately led to the team’s creation of a new modified prosthetic. However, the road to their invention wasn’t always easy.

When tasked to pivot invention ideas, one student noted, ***“it’s definitely discouraging to throw away all of the work that you’ve been [working on] for the last few months. [However,] not only thinking about Robert specifically, but also thinking about how people around the world with prosthetics could be impacted and helped, inspired us to keep going.”***

Team A.M.P. demonstrates that the power of invention lies in the process of developing new mindsets that support students’ development as innovative, compassionate problem solvers. For example, Team A.M.P.’s Project Invent Fellow, LaShonda Gardenhire, noted that ***“there was a shift that happened with the students where they didn’t see a shift in the invention design as failure, but as evolution - as progress. Seeing them build that confidence - as a teacher, that’s what you hope and dream for.”***



## TEAM ALERTRA

Flanders, NJ | Mount Olive High School



Click to hear directly from Team Alertra's students and Fellow on their Project Invent journey.

Project Invent Fellow, David Bodmer, noticed that a group of his students had a strong interest in engineering and entrepreneurship, but never had the opportunity to apply those skills in a way that truly mattered. In the words of one student on Team Alertra, Project Invent taught them about ***“using all of their various skills to create something that’s going to change lives and actually help people in the future.”*** At Project Invent, Team Alertra unleashed their creativity to develop an early fire-detection device in partnership with firefighters from the Leary Firefighter Foundation. Through their conversations, students learned that early fire detection is one of the most critical aspects of saving lives and that few resources exist to alert hearing-impaired individuals when there is a fire.

Using this research, the team created the Alertra device, which connects to home fire alarms to alert users of a fire via vibrations on a wristband. Project Invent Fellow, Dave Bodmer, noted that the team eventually ***“realized that their product had a wider scope than they had originally thought. It wasn’t just helping [their Community Partner] get people safely out of a burning building. It was now also helping people who have issues with hearing. This got them really excited about pushing forward with their overall product.”***

The process of inventing for a real-world challenge and working with real users at the Leary Firefighter Foundation helped students push through difficult challenges, and eventually, take home The Explorer award at Demo Day X, which recognizes a team for exceptionally demonstrating not only deep learning but also application of their insights to create an innovative product idea.

# FINANCIALS

FY22 (JULY 2021 - JUNE 2022)

## STATEMENT OF ACTIVITY

### REVENUE

Events	\$ 3,801
Earned Revenue	\$ 70,835
Grants & Foundations	\$ 366,876
Individual Donations	\$ 581,455

**TOTAL REVENUE** \$ 1,022,968

### EXPENDITURES

Fundraising	\$ 106,097
Management & General Programs	\$ 133,273
	\$ 627,773

**TOTAL EXPENDITURES** \$ 867,143

### OTHER REVENUE

Interest	\$ 1,382
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**NET REVENUE** \$ 157,206

## STATEMENT OF FINANCIAL POSITION

### ASSETS

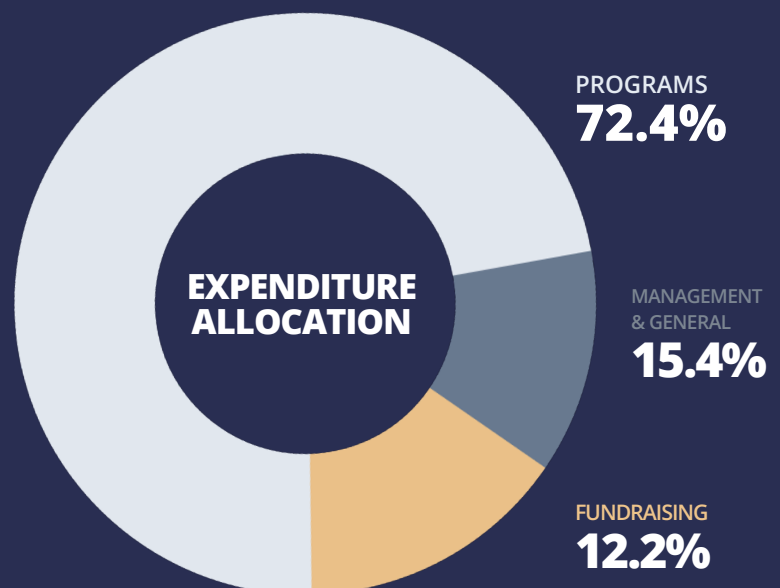
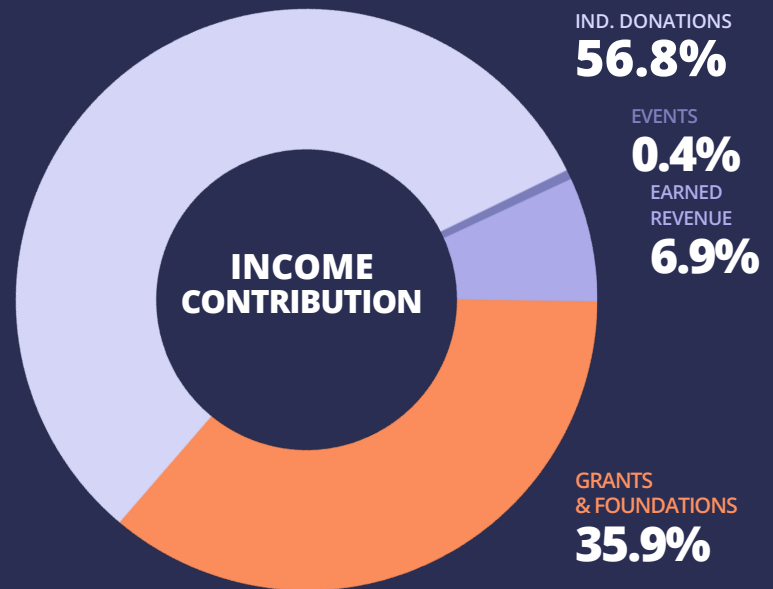
Bank Accounts	\$ 514,845
Accounts Receivable	\$ 54,210
Other Current Assets	\$ 1,079

**TOTAL ASSETS** \$ 570,135

### LIABILITIES AND EQUITY

Liabilities	\$ 14,961
Equity	\$ 555,173

**TOTAL LIABILITIES & EQUITY** \$ 570,135



# WHAT'S NEXT?

In FY23, we are:

- > designing a Train the Trainer model to support continued leadership opportunities for Project Invent Fellows
- > growing the team from 6 to 9
- > expanding Fellow Institute trainings from 1 to 3
- > offering full-year and semester-length program implementation options
- > expanding our program to middle schools

After a successful FY22, we enter FY23 with even higher ambitions for our impact. In FY23, we aim to make Project Invent even more accessible, impactful, and sustainable. We're **growing the team** so we can support even more impact, and we're creating our first **Train the Trainer program** to prepare experienced Project Invent Fellows to facilitate Fellow Institute Trainings. This new offering will also allow us to expand our Fellow Institutes through **two Summer Institute trainings**, as well as our first ever **Fall Institute training**.

We're also launching new initiatives to help our program reach even more students. One that we're most excited about is the expansion to **serve middle school educators**, who are excited to introduce empathy building and community partnership to students at a critical time of development. We're also excited to introduce Project Invent to students on a **full-year and a semester-length model** to better meet the needs of the diverse student teams we serve.

We are confident FY23 will be a pivotal year at Project Invent, and invite you to join us in our movement to support the next generation of fearless, compassionate problem solvers!



# OUR DONORS.

## CHAMPION \$100K+

Barbara & Bill Heil  
Best Buy Foundation

## INVESTOR \$25K+

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Steelcase  
Google  
Julia Heil

## SUPPORTER \$5K+

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**PROJECT INVENT**