

# MIT Licensing Office Statistics FY2021

- 54 staff (full-time employees)
- Invested \$24M in IP protection  
*(a reduction of \$2M from FY2020)*

## FY2021 FACT SHEET

**358**  
New U.S.  
Patents Filed



**435**  
U.S. Patents  
Issued

**421**  
International  
Patents Issued

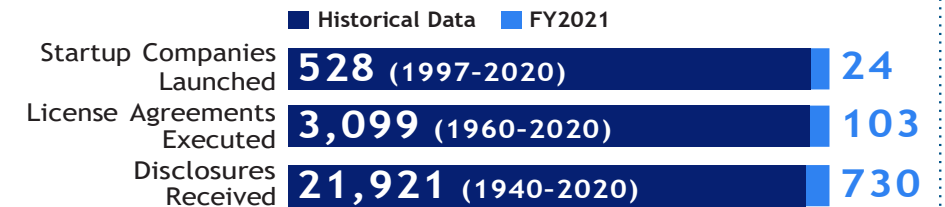


**1,265**  
Incoming Material  
Transfer Agreements



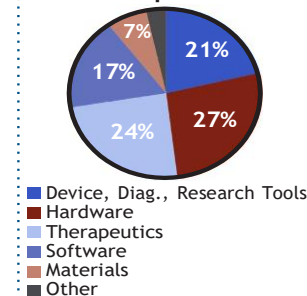
**3,543**  
Active  
U.S. Patents

## GROWTH THROUGH FY2021



**\$87.4**  
MILLION  
Total Licensing Revenue

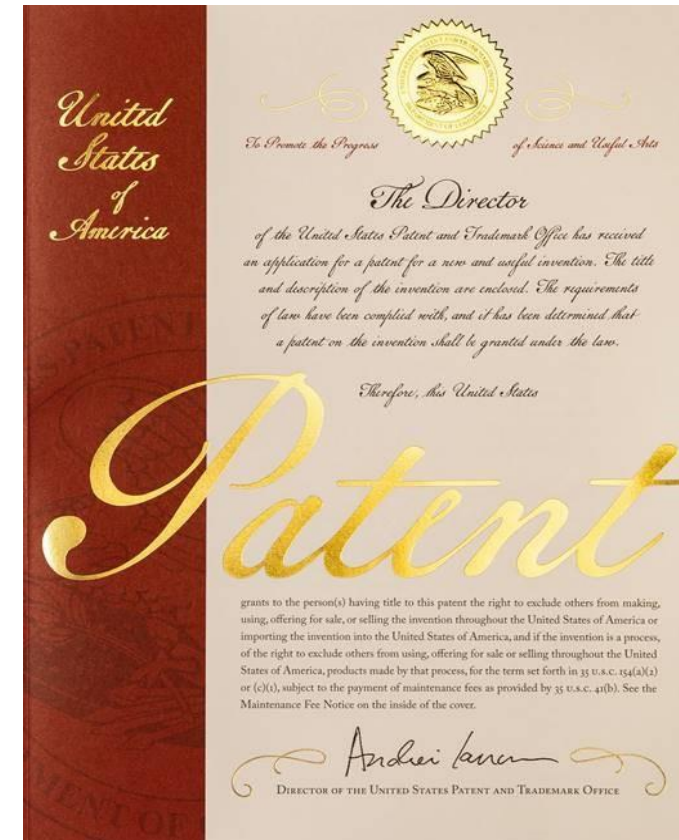
### Startup Sector



# What is a Patent?

A grant by the government that allows you to **exclude** others from “making, using, selling, offering for sale, or importing” your invention for a period of 20 years.

The US is now a First Inventor to File country.



# Types of US Granted Patent Rights

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## 1. Utility patent

- Machine – robot, motor, circuit
- Process – method of manufacturing
- Article of Manufacture – frying pan, hair comb
- Composition of Matter – chemical compound
- Length of patent term is 20 years from the filing date

## 2. Design patent

- Ornamental design, appearance
- Length of patent term is 15 years from the date of grant

## 3. Plant patent

- New and distinct variety of plant that can be asexually reproduced (excluding tubers)
- Length of patent term is 20 years from the filing date



# Provisional Application

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- Expires after 12 months from the filing date
- Establishes an early filing date
- The strength of the provisional application depends on the construction
- Limited in its use

# What's Required to Obtain a Patent?

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*The invention must be:*

## 1. Novel

- Cannot have been described in a printed publication, or in public use, on sale or otherwise available

## 2. Useful

- Solution to a problem

## 3. Not obvious

- Cannot have been obvious to one skilled in the art



# Requirements for Patentability

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## *Novelty*

The disclosure rules:

- **For the U.S.**
  - There is a 1 year grace period after a public disclosure by an inventor in which to file a patent.
- **For the rest of the world**
  - Absolute novelty is required
  - Must file before first public disclosure
  - Oral disclosure counts!

**\* Note: grace period under the Paris convention, 1883:** Once you have a US patent on file, it is okay to make public disclosures. The rest of the world gives us 12 months from the US filing date to file applications in other countries.

# Requirements for Patentability (Cont.)

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## *Usefulness*

- Usually not difficult to establish

## *Not Obvious*

- Subjective, often difficult to establish
- Would one skilled in the field of the invention who has not seen the invention find it obvious?

### **Factors to consider:**

- Commercial success attributable to inventive feature?
- Filling a long-felt need?
- Doing what others said could not be done or would not work?



# Non-US Patents

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## Paris Convention

- Twelve-month grace period is given following the US patent filing (it assumes novelty of US)

## Patent Cooperation Treaty (PCT)

- Covers most countries
- Buys time – delays expense
- Used to manage risk

## National filings (expensive)

- Translations
- Annuities





# Patenting Process @ MIT

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1. Invention report (Technology Disclosure Form)
  - Documents date of invention, provides no protection
2. Literature and patent search is performed
3. Patent application prepared and filed
4. Patent Office responds ("Office Action")
  - It may take well over a year to receive first "office action" rejecting most, if not all, claims
5. Reply to Patent Office
  - Usually results in additional "final office action" rejecting some of the claims

6. Patent allowed
7. Patent issued
  - Typically 3 years after application was filed

Duration: 20 years from the date the non-provisional application was filed

Note: There is no "patent protection" until the patent issues.



# Important Points

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- A patent permits the owner to prohibit someone from using the invention without a “license”
  - License sets the terms under which the licensee can practice the patented invention including upfront fees, royalties on sales, application limitations, geography, duration, etc.
- Having a patent doesn't necessarily allow the patent owner the right to use the invention
- The use of any invention may infringe someone else's patent



# Patent Example

## Stool

A piece of furniture intended to be used by a person for sitting comprising

a horizontal platform supported by three or more vertically disposed rods which fix the platform at a height more than 12 inches and less than 30 inches above a horizontal surface parallel to the horizontal platform.

## Chair

A piece of furniture intended to be used by a person for sitting comprising

a horizontal platform supported by three or more vertically disposed rods which fix the platform at a height more than 12 inches and less than 30 inches above a horizontal surface parallel to the horizontal platform, and

a vertical element attached to one side of the horizontal surface against which a seated person may place his/her back for comfort.


# Enforcement

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<b>Infringement</b>	<b>Defenses</b>
Unauthorized making, using, offer of sale, selling, or importing	That the entity does is not infringing, and/or invalidity of the patent
Patent owner may sue for:  ✓ an injunction ✓ damages (\$\$\$) ✓ ITC ban on imports	Common Defenses:  ✓ Invalidity defense ✓ Citing prior art (relating to the claim) * among others

# Kraft Snack 'n Seal Patent

- Kraft sued Kellogg for infringement
- Kellogg counterclaimed the invalidity of the Kraft patent for obviousness
- CAFC affirmed the invalidity for obviousness



US006918532B2

(12) **United States Patent**  
Sierra-Gomez et al.

(10) **Patent No.:** US 6,918,532 B2  
(45) **Date of Patent:** Jul. 19, 2005

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(54) **RESEALABLE FOOD CONTAINER** 3,235,165 A 2/1966 Jackson  
3,272,422 A 9/1966 Miller

(75) **Inventors:** Gladys Odette Sierra-Gomez, Woodbridge, NJ (US); Eva Marie Peters, Cedar Grove, NJ (US); Joseph Stienen, Warren, NJ (US); Charles Francis Flynn, IV, Oak Ridge, NJ (US); James Spencer Mandle, Woodcliff Lake, NJ (US)

(73) **Assignee:** Kraft Foods Holdings, Inc., Northfield, IL (US)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 119 days.

(21) **Appl. No.:** 10/414,502  
(22) **Filed:** Apr. 16, 2003  
(65) **Prior Publication Data**  
US 2004/0206637 A1 Oct. 21, 2004

(51) **Int. Cl.<sup>7</sup>** B65D 65/26; B65D 75/28; B65D 85/00; B65D 25/10  
(52) **U.S. Cl.** 229/87.08; 206/459.1; 229/87.05; 383/203; 383/205; 426/119  
(58) **Field of Search** 206/459.1, 807; 383/210-211, 203-206; 426/124, 122-123, 106, 119; 428/40.1, 41.7-41.8, 42.1; 229/87.05, 87.08

(56) **References Cited**  
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1,171,462 A \* 2/1916 Rice ..... 229/87.05

(Continued)

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EP 0 474 981 A1 3/1992  
FR 1327914 5/1963

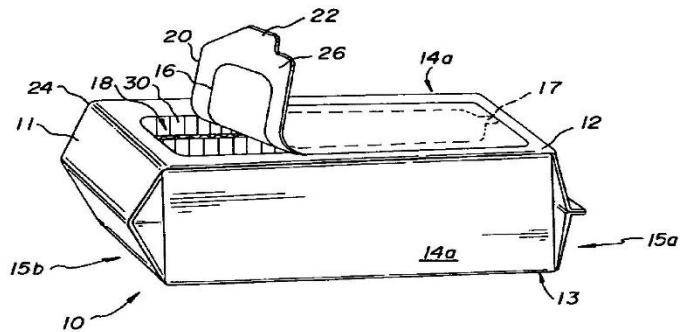
OTHER PUBLICATIONS

Patent Abstracts of Japan, vol. 1997, No. 10, Oct. 31, 1997 & JP 09 156677 A (Fuji Seal Co Ltd), (Jul. 6, 1997) abstract in English and 7 figures.

*Primary Examiner*—Bryon P. Gehman  
(74) *Attorney, Agent, or Firm*—Stites & Harbison PLLC; Marvin Petry

(57) **ABSTRACT**  
A container for a food product includes a wrapper which surrounds a frame. The container can be any polygonal shape which is defined by the shape of the frame. The wrapper forms a top of the container which has an access opening. A sealing layer is adhesively sealed to the top around the opening. The sealing layer is resealable when a tab of the sealing layer is pulled back. The sealing layer is resealable against the top layer to seal the opening when the sealing layer is moved back to a flat position on the top. Various tamper-evident structures are provided to indicate when the container has been initially opened or tampered with.

**25 Claims, 7 Drawing Sheets**



# Claim 1

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1. A polygonal shaped **food container** comprising:

**a frame** defining the polygonal shape of the container,

said container having a top, a bottom and sides connecting the top and bottom,  
the frame containing a food product comprised of discrete food articles;

**a wrapper** surrounding said frame,

said wrapper forming the top, sides and bottom of the container;

said top having an access opening sufficiently large to provide hand access to substantially all of the discrete food articles contained within the frame,

such that substantially any one of the discrete food articles can be accessed and removed individually through said access opening; and

**a sealing layer**, adhesively sealed to said top around said opening,

said sealing layer including a starter portion located near a side of the top which can be grasped by a user,

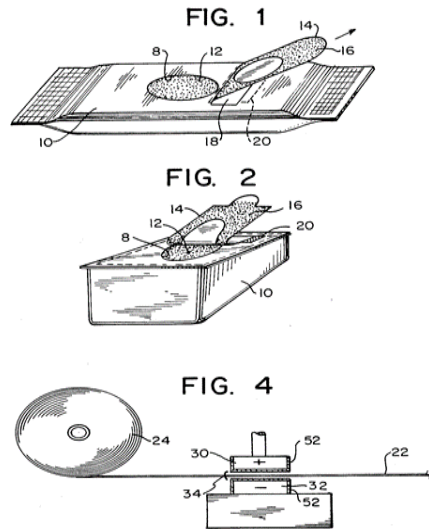
said sealing layer being releasable when said starter portion is pulled in a direction away from said side to in turn pull and thereby release at least a portion of said sealing layer to provide the hand access to said top access opening and

reclosable against said top to seal said opening when said sealing layer is moved back against the said top.



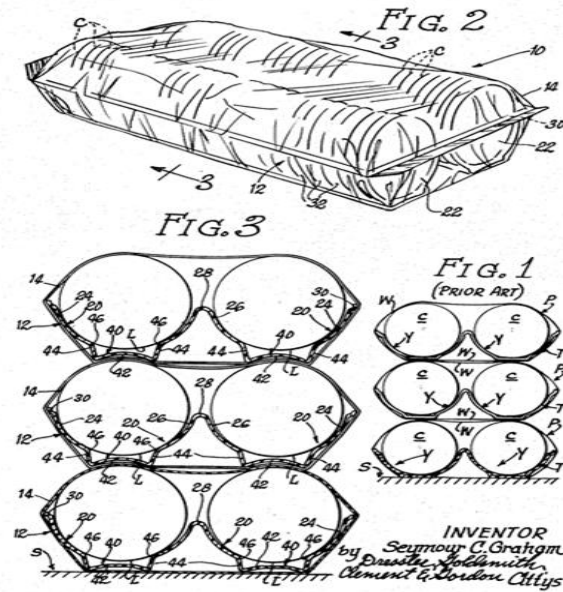
# Prior Art

U.S. Patent Jun. 20, 1989 Sheet 1 of 2 4,840,270



Resealable "Wet Wipe" Dispenser

June 19, 1973 S. C. GRAHAM 3,740,238  
STACKABLE COOKIE PACKAGE AND TRAY  
Filed Jan. 4, 1971 2 Sheets-Sheet 1



Cookie Package and Tray



# References ultimately used

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# MIT Policy

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## **MIT owns the patent or copyright except when:**

- Not invented under sponsored research, and
- No significant use of MIT administered funds or MIT facilities were made

## **If industrially sponsored, sponsor(s) has the right to request a license.**

- Non-exclusive license is essentially free; exclusive license, if available, is royalty-bearing

## **If government sponsored, MIT notifies sponsor of invention disclosure and MIT must decide if it will file a patent application within two years.**

- If “yes”, government gets a royalty-free, government-purposes license
- If “no”, MIT waives its ownership right to the government agency that sponsored research; the agency may decide to file a patent application on behalf of the US government

**After recovery of costs and 15% to fund the Technology Licensing Office (TLO), inventors receive one-third of the license revenue**



# MIT TLO Mission

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Our mission is to move innovations and discoveries from the lab to the marketplace for the benefit of the public and to amplify MIT's global impact. We cultivate an inclusive environment of scientific and entrepreneurial excellence, and bridge connections from MIT's research community to industry and startups, by **strategically evaluating**, **protecting**, and **licensing** technology.

# Strategically Evaluate

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**Primary objective: move innovations from lab to marketplace**

**Evaluate the invention:**

- Meet with inventors
- Ask for Prior Art search or patentability review from attorney
- Research the market/technology area

**Determine the best path to achieve the primary objective:**

- Seek patent protection
- Publish the work
- Keep the work “quiet” until further development
- Open Source
- Waive invention back to inventors
- Etc.

FY2021 Stats:

730 new invention disclosures



# Protect

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## Primary objective: move innovations from lab to marketplace

Best way to protect an invention is to seek patent protection!

- If TLO's goal is the primary objective above, why would TLO seek patent protection that allows MIT to prevent others from using the invention? Isn't that counterproductive?
- New product development is expensive
  - Cost to develop new drug ~\$1Billion
  - New battery startup estimates ~\$1.6Billion in development costs
- New product development is risky!
  - 90% of new startups fail
- Investors prefer investing in companies with patent protection
  - High risk, high reward

Patents = an advantage in the marketplace, which companies need in order to justify development costs

### FY2021 Stats:

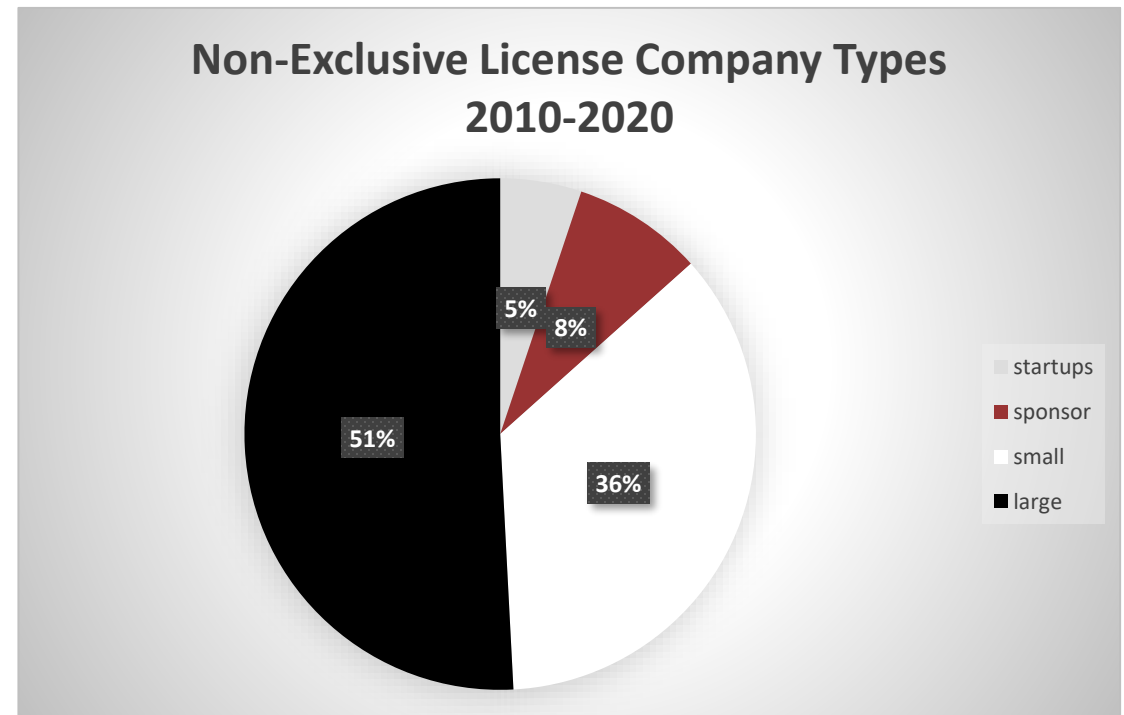
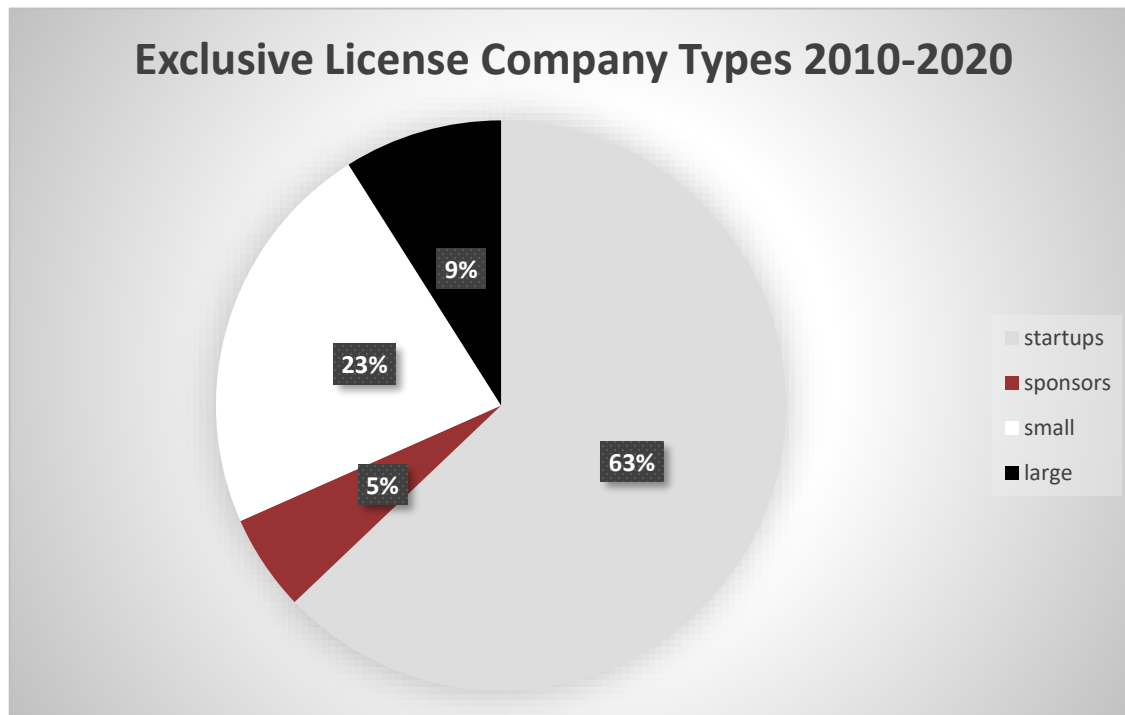
358 US patent applications filed  
435 US patents issued  
40% of issued US patents are licensed



# License

**Primary objective: move innovations from lab to marketplace**

- Types of companies TLO licenses to:



# License, cont.

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## Primary objective: move innovations from lab to marketplace

1. TLO requests business plan from ALL interested licensees
2. Negotiate term sheet (mostly financial terms)
3. Draft license, negotiate (often includes attorneys)
4. Execute license
5. Maintain license
  - Progress reports
  - Follow up on diligence items
  - Royalty reports
  - Amendments
  - Etc.
6. Termination (Voluntary termination by MIT or by Company, or natural expiration once patents expire)

### FY2021 Stats:

103 license agreements executed  
24 startup companies founded on MIT IP

# Example Elements of a License

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- Field of Use
- Exclusivity
- License Issue fee
- Royalty rate
- Sublicensing
- License maintenance fees
- Equity
- Milestone fees
- Patent cost reimbursement
- Diligence requirements

## FY2021 Stats:

\$87.4 M in gross licensing income  
\$35.3M in equity proceeds  
\$13.8M in patent reimbursements

519 active revenue generating licenses  
4 licenses generated >\$2M  
8 additional licenses generated >\$500K

# Where Does the Revenue Go?

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- 15% to TLO as administrative fee
- Retain unreimbursed patent expenses
- Of the remaining 85%:
  - 1/3 to Inventors
  - 1/3 to Departments
  - 1/3 to General Fund
- Depending on the situation, may share MIT revenue with joint owners, foundations, and sponsors

## FY2021 Stats:

\$25.7M was distributed to:  
1,291 inventors  
89 DLCs  
55 other entities



# Department Resource Example

Lincoln Labs uses their department share to support programs like this one

## Girls' Engineering Workshop

**OUTREACH TYPE:** STEM Program

**AUDIENCE:** Middle School (Grades 6-8)

**TOPIC:** [educational outreach](#)

Twice a year, 100 middle school girls visit Lincoln Laboratory for the day to explore engineering. They explore the contents of cellphones, cameras, and clocks to learn about the inner workings of various types of electronic devices.



Our "Wow! That's Engineering!" workshop for girls offers a reverse engineering station where the girls disassemble a variety of electronics to see how the parts of a machine are connected.



# Success Stories

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**Thank you**

# Contacts

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