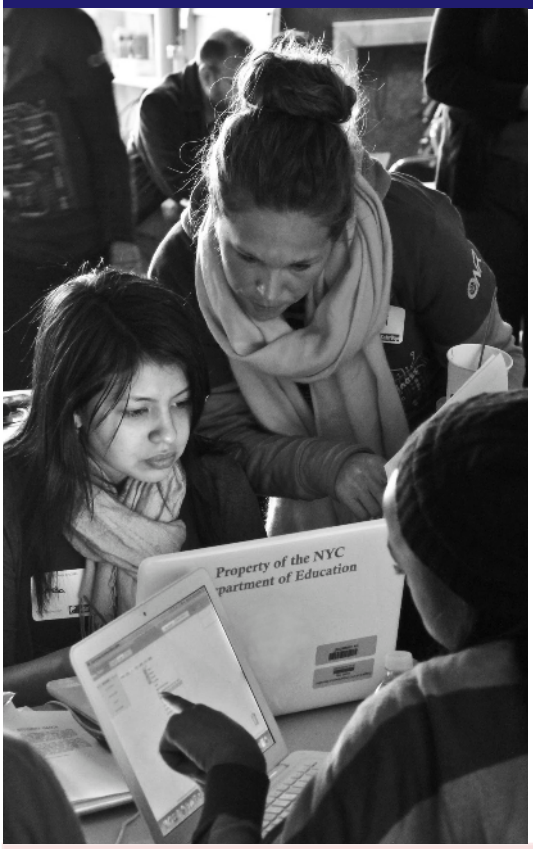
TECHNOVATION
three year app analysis



Technovation is

Every year, Technovation challenges girls all over the world to build mobile applications that address community problems. Since 2010, over 5,000 girls from 40+ countries have submitted over 1000 app prototypes to Technovation, thanks to support from dedicated volunteers around the world.

We are taking a look at apps from the last 3 years to identify trends and highlights from the Technovation competition.

Our Participants

The number of submissions to Technovation has grown every year. There were 117 submissions in 2013, 363 in 2014, and 395 in 2015. While most Technovation participants are from the United States, the proportion of international submissions has increased significantly from 28% of all submissions in 2013 to 47% in 2015.

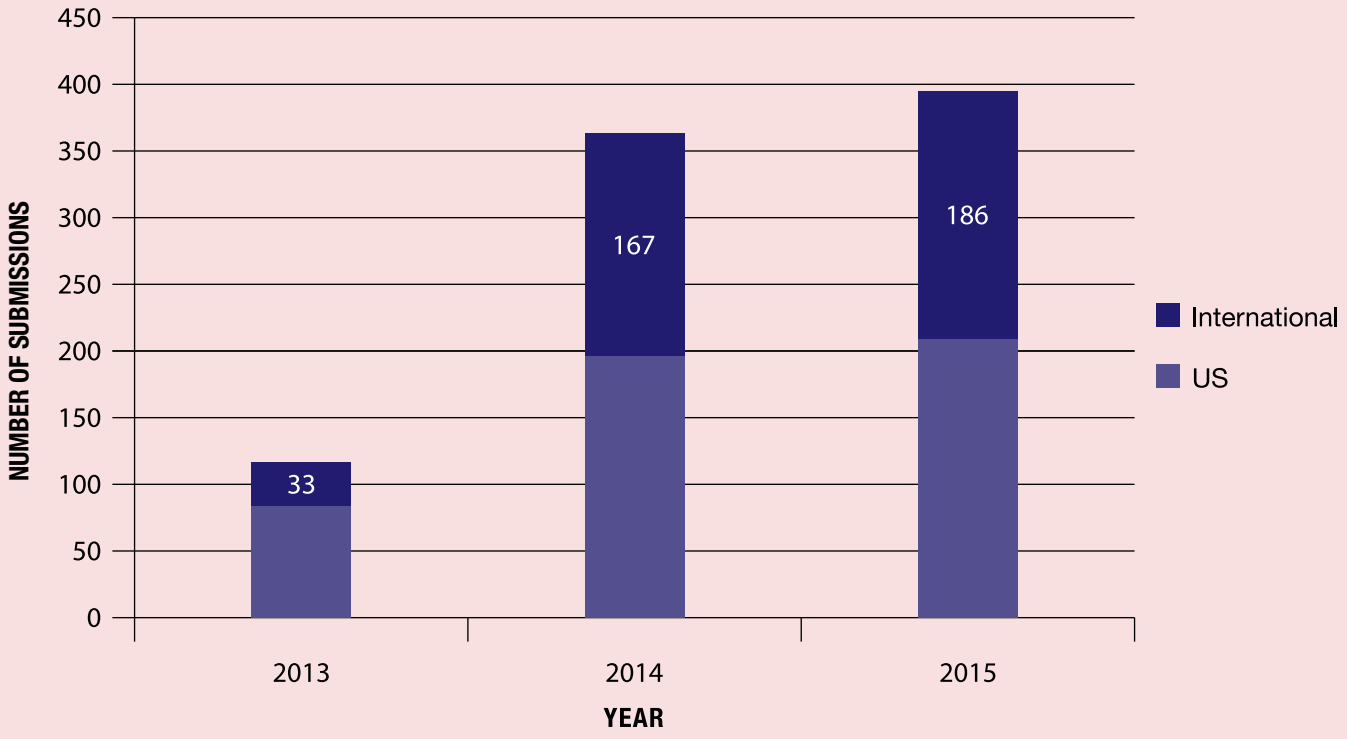
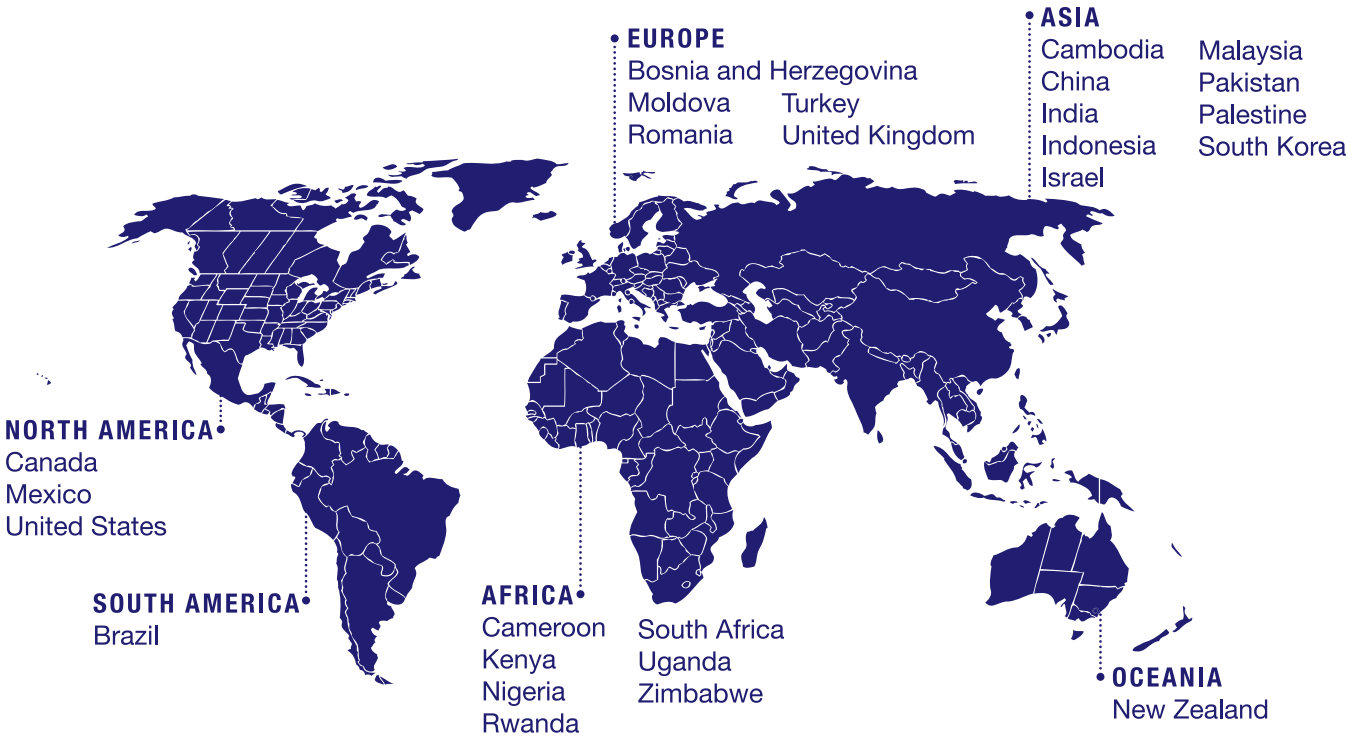


Table 1 shows the increase of International and US submissions.

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Geography

To date, Technovation participants have come from 5 continents and 26 countries. Every year participants join from more countries.

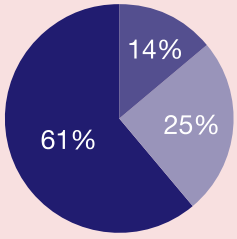




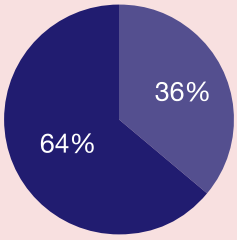
Grade Level

Technovation engages girls in primary school through university. The competition is broken into groups based on participants' grade levels.

High School Middle School University



2014



2015

App Themes (2013-2015)

Technovation participants build apps that address a wide variety of issues that they identify within their communities. The following are the top themes that emerged from 2013 to 2015:

- **Education/Learning** This was a popular theme for both US and international groups. However, there were some noticeable differences in the target groups for the apps. US-based teams created solutions to help students connect with their teachers and seek help with their studies online through tutors and peers. International apps, on the other hand, tended to engage marginalized groups in basic education.
- **Health/Fitness** This theme covers range of topics from allergies and dietary restrictions to more serious issues such as maternal health and malaria. One of the Kenyan winners, Quit Mosquito, was featured in several news outlets like **CIO East Africa** and UN Women's **Empower Women** website.
- **Community** Several apps connect citizens to resources that give them information on local events or public concerns such as announcements from the government. However, the most interesting apps are the ones that use the model of social networking to create a sense of community among users. An example is **Spectrum**, a social media network for LGBTQIA+.
- **Counseling** In all three years, most apps developed focused on providing support for women or young girls and students who are victims of bullying.
- **Nonprofit/Volunteerism** The main functions of nonprofit/volunteering apps are to aggregate data on nonprofits and create a database where users can view volunteering opportunities or give donations.

Several sub-themes were also explored in all three years. These include: women's issues, homelessness, student productivity, and LGBTQIA+. Women's issues, while tackled by some groups in 2013, was a more prevalent theme among apps in 2014 while LGBTQIA+ concerns were only tackled in 2015. It is also worth noting that 40% of all apps created from 2013-1015 were created for youth.

Geographical Themes

US Entries	International Entries
Education/Learning (17%)	Health/Fitness (18%)
Health/Fitness (16%)	Education/Learning (15%)
Nonprofit/Volunteering (16%)	Safety (6%)
Counseling (10%)	Environment (8%)
Community (8%)	Nonprofit/Volunteering (6%)

From 2013-2015, Education/Learning dominates as the most popular topic. For US entries, Community ranked second while International entries focused on Health/Fitness. Safety of individuals and citizens and the Environment were also concerns that girls from outside the US chose as pressing issues that needed to be addressed while girls from the US found that providing social support and guidance to peers (Counseling) was important to address self-esteem issues.

Some other general trends emerged when comparing submissions from the US versus international teams. US submissions were more likely to focus on productivity and employment, while international submissions were more likely to focus on persons with disabilities (PWDs), government, agriculture, and sanitation.

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Process/Approach (2013-2015)

While the themes and topics of the applications varied widely, many of the apps used a similar process or approach for the user to interact with the system. Some common approaches were:

- **Gaming** Students use games to promote learning in topics such as Environmental Awareness, Emergency Response, Medical Training, Nutrition and Healthy Eating, Coding, and Reading Comprehension, to name a few. These often take the form of quizzes or adventure games where users are assigned a character and are often described by the students to “make learning more fun”.
- **Reference/Resource** Certain applications address issues by acting as resources wherein users can pull information and learn more about a specific topic. In Technovation 2015, one app called Encyclopedia LGBT aims to educate users on the LGBT spectrum and provide them with resources to pursue the topic further.
- **Broadcasting** Many applications also act as a dashboard wherein users can view the latest information on their school or their communities. It’s also a platform for schools and government officials to post announcements and share information.
- **Cataloging** Applications aggregate data in order to provide a comprehensive database for users to search. This is especially applicable to applications categorized under Nonprofit wherein data on nonprofit opportunities are put into one place. They work similar to well-known applications like Yelp or iTunes.
- **Connecting People** Many apps have social aspects wherein users are connected to each other through a chat or messaging function. An example could be applications that connect patients to their doctors so that they can communicate remotely. Other applications connect parents with teachers so that they can be updated on their child’s school performance.



Highlighted Apps

We have reviewed 835 submissions since 2013. Some of the most inspiring outcomes were not necessarily from the groups that had the best technical coding skills. Here are some of the best apps from each year based on their potential social impact, exceptional creativity, and great presentation:

2015

Animal and Plant Health by AgriGenius
Category: Agriculture
Addresses the issue of managing plant and animal diseases. The application is specifically designed for farmers who may not have access to veterinary services.

Teacher Share by The Dark Llamas
Category: Environment
Description: Helps teachers at small schools share resources with other teachers.

Gold in Garbage by WOTE
Category: Environment
Mombasa has a long standing garbage problem. Gold in Garbage is designed to give people a chance to recycle materials they would ordinarily throw away.

T2V Edu-Share by Magical Gals
Category: Education/Learning
T2V Edu-Share, as a name stands for Town to Village Education Share. Helps to extend education from schools in modern centers to those in rural areas where quality education is scarce.

2014

BookOut by Intelligent and Courageous Huskies
Category: Business/Service
Enables users to buy and sell textbooks at reasonable prices.

c-Casualty by Shecodes
Category: Health/Fitness
Improves confidentiality and secures patients' medical records by storing them in the cloud so they are accessible to authorized individuals anytime in any location.

AgriZone by Eryclydon
Category: Agriculture
Alleviates problems faced by Zimbabwean farmers by providing information and facilitating communication between farmers, markets, and government.

TimeOut by SKARA
Category: Health/Fitness
Detects possible concussions. It requires athletes to take a baseline test every two weeks during the sport season and gathers data from those assessments.

MyNurse by Byte Me
Category: Health/Fitness
Hospital patients can request medical help through MyNurse. It helps nurses to arrive prepared, eliminating the unnecessary time that nurses spend walking up and down corridors.

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2013

Tag It! by EPA Chica_Squad
Category: Community
Primary purpose is for city beautification. Users can take a photo of areas they feel needs attention, post it in the app where other members of the community can plan clean-ups or join existing initiatives.

eFlow by Little Monsters
Category: Environment
Helps users manage their electricity bills and provides information on how they can save electricity and be eco-friendly.

CareSISSTM by Plug-N-Pkay MISSST
Category: Community
Helps take care of aged mothers and fathers. It helps caretakers provide for senior citizens with its shopping, delivery, and medication services.

Swap It by Lycee Francais Technovation Team
Category: Community
Promotes lending within a community. Users are allowed to borrow items posted in the app from other people in the neighborhood.

PocKit by Little Monsters
Category: Health/Fitness
PocKit is targeted towards students and can be used to supplement first aid education, including visual instructions and scenario practice.



Appendix

2015 Submissions by Theme

Theme	Actual (Percentage)	International	US
Health/Fitness	71 (18.0%)	32	39
Education/Learning	60 (15.2%)	22	38
Nonprofit/Volunteering	36 (9.1%)	15	21
Environment	31 (7.8%)	22	9
Lifestyle	24 (6.1%)	7	17
Safety	20 (5.1%)	8	12
Community	20 (5.1%)	8	12
Productivity	16 (4.1%)	3	13
Entertainment	12 (3.0%)	4	8
Employment	10 (2.5%)	5	5
Counseling	10 (2.5%)	3	7
Business	10 (2.5%)	5	5
Transport	10 (2.5%)	6	4
Travel	8 (2.0%)	4	4
Social Justice	7 (1.8%)	6	1
Agriculture	6 (1.5%)	5	1
Career Planning	6 (1.5%)	3	3
Persons with Disabilities	6 (1.5%)	5	1
Government	3 (0.8%)	2	1
Disaster Risk Reduction	1 (0.3%)	0	1
Others	28 (7.2%)	21	7

2014 Submissions by Theme

Theme	Actual (Percentage)	International	US
Health/Fitness	60 (16.5%)	33	26
Education/Learning	59 (16.3%)	27	32
Counseling	39 (10.7%)	12	28
Safety	32 (8.8%)	15	17
Community	24 (6.6%)	9	15
Nonprofit/Volunteering	23 (6.3%)	6	17
Productivity	21 (5.8%)	4	17
Environment	15 (4.1%)	6	9
Transport	11 (3.0%)	7	4
Business/Service	10 (2.8%)	9	1
Career Planning	8 (2.2%)	2	6
Lifestyle	8 (2.2%)	6	2

Theme	Actual (Percentage)	International	US
Beauty	6 (1.7%)	3	3
Persons with Disabilities	6 (1.7%)	3	3
Travel	5 (1.4%)	4	1
Sanitation	4 (1.1%)	4	0
Employment	3 (0.8%)	0	3
Agriculture	2 (0.6%)	2	0
Government	1 (0.3%)	1	0
Others	26 (7.2%)	4	1

2013 Submissions by Theme

Theme	Actual (Percentage)	International	US
Education/Learning	19 (16.2%)	5	14
Community	13 (11.1%)	0	13
Health/Fitness	13 (11.1%)	3	10
Nonprofit/Volunteering	12 (10.3%)	2	10
Productivity	9 (7.7%)	2	7
Lifestyle	8 (6.8%)	2	6
Counseling	6 (5.1%)	2	4
Safety	6 (5.1%)	1	5
Career Planning	4 (4.3%)	1	3
Entertainment	4 (4.3%)	1	3
Transport	3 (2.6%)	1	2
Environment	3 (2.6%)	2	1
Employment	2 (1.7%)	1	1
Persons with Disabilities	2 (1.7%)	2	0
Travel	2 (1.7%)	2	0
Business	1 (0.9%)	0	1
Disaster Risk Reduction	1 (0.9%)	0	1
Government	1 (0.9%)	1	0
Others	8 (6.9%)	6	2

Glossary of Themes

Agriculture Resources for farmers that can help them become more productive or help them distribute their goods at a fair price point.

Beauty Focused on fashion and providing information on what clothes best suit an individual.

Business/Services Market-based applications meant to help businesses or provide a service to specific market. These aim to help businesses make their processes more efficient or to provide services to nonprofits and communities.

Career Planning Resources for students seeking guidance on where they should go to university and what career path should they take. Includes quiz apps that determines which field a student excels in.

Community Address local concerns and aimed to foster a sense of community in a neighborhood. This category also includes applications that work in cooperation with the local government to aid development in an area. Topics in this category included community beautification, responsible pet ownership, and recreation.

Counseling Focused on helping individuals overcome personal challenges by giving advice. Includes apps that address self-esteem issues and anxiety, and prevent or mitigate bullying.

Disaster Risk Reduction Aims to provide support during natural disasters and emergencies.

Education/Learning Focused on the education of students. Includes apps about literacy, early childhood learning, access for low-income students, language proficiency, spelling, and e-learning. It also includes platforms for parents, tutors and teachers that will help them monitor a student's performance. Other apps were created to facilitate better communication and collaboration between students and teachers as well as student groups and clubs.

Employment Aim to provide job seekers the necessary resources to find employment. Several apps function similar to a dating site wherein a job seeker is matched to a potential employer.

Entertainment These are applications that are used for leisure, such book apps similar to Kindle as well as games.

Environment Apps used to create awareness about environmental issues as well as educate users about recycling methods and proper waste disposal.

Government Deals with issues in transparency and better communication with the government. These mostly take the form of reporting apps wherein users can directly be in contact with public officials.

Health/Fitness Focused on promoting healthy lifestyles. These applications provide information and act as a resource to learn about issues relating to nutrition, mental health, obesity, allergies, and diabetes. Included in this category are applications that ensure patients take their medicine on time.

Lifestyle Tools for everyday use. These applications are for personal use and do not necessarily address any societal issue. Examples include: grocery shopping, budgeting, alarm clocks, memo pads, and restaurant rating and locating.

Nonprofit/Volunteering Applications under this category are mostly platforms where volunteers and interested individuals can seek out opportunities to be involved in nonprofit work. Many groups focused on linking to NGOs that are seeking volunteers or are in need of donations.

Sanitation Focused on water management and water systems in communities.

Productivity Task Management and Planning Systems to help individuals accomplish tasks. Many entries focused on student productivity, in particular. Some apps focused on helping students become organized and manage their time well. Others focused on time management, creating systems that will address problems like cramming, forgetting homework and bad habits around studying.

Persons with Disabilities Apps that either help to do certain tasks more effectively or reduce the difficulty of other tasks in their daily life.

Safety Apps that ensure public safety. These include ensuring that drivers do not drive drunk or text, creating a platform to ensure safety among citizens and females who are at risk of harassment.

Transport Apps that ensure transport systems are efficient. It includes platforms for carpooling, seeking parking, road and traffic management.

Travel Any app that informs users about a place or helps them effectively communicate with locals.

Recommendations

One challenge encountered was the lack of clarity in the app descriptions about what the team was trying to achieve with the app. Ask groups to identify the specific issue their app addresses and provide pre-set categories that they can choose from.

Technovation focuses on solving community problems. When submitting their apps, participants should clearly state how they aim to address the problem with their application and who they help with their application or their beneficiary:

Action-based System Determine the specific action the application proposes to address the problem. This will help determine the "how" of the application.

Beneficiary System Determine who benefits from the use of the application. This could also be related to who is the specific user they had in mind when creating the application.

Media Mentions

Technovation Mentions

Technovation Article by Ventureburn, **The Technovation Challenge: supporting young girls to become technology entrepreneurs** (Bettina Moss, 2015 Oct 12)

Codegirl Article by Cambio, **This Movie is Going to Change the Way You Think About Coding** (Christina Pellegrini, 2015 Dec 12)

Team Mentions for Technovation 2015

Bengaluru Girls Win at Global Technovation Challenge (The Times of India)

City Girls Win at Technovation 2015 (The New Indian Express)

Winchester High School Seniors Create App for Town (Wickedlocal)

Two Mass. Teams Were Named Finalists in the International Technovation Challenge (BostInno)

Nigeria Wins Technovation Challenge in America (Naij.com)

PM Narendra Modi meets prize winners of Technovation Challenge 2015 (OneIndia.com)