

Welcome Lead Mentors

The first session is to be used as a settling in evening, where teams are formed, ideas and interests shared and a problem--for which there could be a solution--identified. That's the gist of it.

For those who have done these ideation sessions before with us, do what you find works best. But, as advice, we recommend you hone your 'devil's advocate' skills by asking questions and questions and questions again of the girls. Is the problem they want to solve relevant to them? Is it something that really matters to them or just in the news alot? Is a solution achievable?

Sometimes the best projects come from thinking *small*. For example, when they say they want to solve global warming, ask them if they think that is something they really can do, can they realistically cut global emissions and convert large energy users to clean sources? Ask them what is possible for a young person to do...have them whittle their *big* idea down to something specific, identifiable, *doable* then pursue it further by asking how it can be done.

Teen-Turn After School Session One - Running Order

You should have materials for this week.

We either posted to or will have available at your respective sites post-its and sharpies. Dublin, Cork and Limerick sites will have **In Case of Emergency Forms** and **Mentor Code of Conduct Forms** already printed out for them for the session. We ask the Lead Mentors in Galway, Longford, Carlow and Tipperary as well as the Ringsend group to print your own. A few copies of the **Parent/Guardian Consent Forms**, too, if forgotten by the participants, should be made available at the sessions. Keep completed documentation in a folder for collection by us at a later date.

No participant can return to the next session without having provided you parental/guardian consent. Volunteers must provide you the signed code of conduct on the day, even if only attending one session. We'll start a shared google sheet with each site to track the volunteer mentors attending.

1. Everyone needs to arrive with their consent forms signed, if participants, and code of conduct forms, if mentors. For those who do not bring their own, please be certain to give them the relevant form.
2. The first thing you do after the introduction (where you can improv as you see fit, note exits and toilets, etc) is have the girls fill in and give to you the In Case of Emergency forms (have pens, so few have pens these days...).
3. No one should log into Technovation yet (although some may have already started); you, as Lead Mentor, however, should go

to <https://technovationchallenge.org/> and sign-up as a mentor. Do **not** ask the volunteer mentors to sign-up.

The note on this last point is that Teen-Turn would like that:

(A) the girls have a clear sense of what their project is before registering online (we ask they wait until session four)

(B) **only** Lead Mentors should sign-up; we want to control who is interacting with the girls online

(C) by the 4th session, drop outs will have reduced your attendee numbers, which is why it is a good time to add teams

It's important to be able facilitate submissions when that time comes around. Be certain to complete the registration process as soon as you are able, specifically: mentor training; consent waiver; personal summary; background check (not required online, but those of you who are not Garda Vetted will be processed through us). After session four, when the girls themselves have registered, you can 'find' their teams and add them to your mentor profile.

Session One

Pick a problem to solve, be it a pet peeve or something which affects your community. Ideate then write a problem statement.

For the actual activities, to save printing, project/share the powerpoint slide show. Give the girls blank paper and markers or use white boards if there are any. Ideally, they'd have lots of colors of Post-It Notes to create their 'maps' but scrap paper works just as well if the imagination is flowing.

Try, as best as you can, to have the girls focus on solving a problem, not creating an app. If they start with 'let's make an app to...' they'll limit themselves. Tell them to forget about the app part and to focus on the ideation.

At today's session individuals or teams will (1) consider their own challenges or those affecting their community, (2) identify a problem to address, (3) start to think about a solution, (4) produce a problem statement and conclude how that solution to that problem can be achieved with an app. We recommend 15-20 minutes for each of the 4.

After the session, when you have time, please send us an email with the names of whomever showed up this session.

- the girls
- the mentors

If you are in Cork, leave documents with Hays. If you are in Dublin, leave documents in our cabinet at The Digital Hub. If you are in Limerick, leave documents with Griffith. Galway, Longford, Carlow, Tipperary and the Ringsend group hold onto your documents until the end of the 12 weeks.

Week Two

What is happening in session two is as follows, times are suggested. Be sure you have paper and pens available (just in case the girls haven't any--never be surprised by what they don't have with them).

[arrival]

mentors any new mentors arriving at each session will need to sign a copy of the Mentor Code of Conduct form, every one of which you will need to keep for us to collect from you; we will *always* advise you when mentors are to be there and ask that you keep track of who is attending and when (some sites use google sheets which they share with us while others just keep a running list)

participants any participants, who haven't done so already, need to provide a signed copy of the parental/guardian consent form and complete an In Case of Emergency (until you have one from every participant, have to hand printed versions of all of these documents); while you may have an attendance /participant information sheet for your own site, please update the [shared Technovation 2020 google sheet](#) so we can have a sense of numbers as the season progresses

materials some post-its and sharpies were delivered to your sites - use these as you need, as ideation never really ends and it can be helpful to continue to 'map' during other sessions

Session

We've **four** requirements for session two: (1) completing *on site* and Lead Mentor registration - 5 minutes; (2) organizing team details - 10 minutes; (3) solution-ing with an app / writing a Mission Statement - 45 minutes *accompanied by powerpoint*; (4) thinking about the App components *using handout* * - 30 minutes.

*handouts - UCC, The Digital Hub and Griffith Limerick sites will have each week's handouts printed for them; school sites in Cloghan's Hill, Colaiste Mhuire, Ringsend, and Templemichael are being asked, for now, to print these themselves

(1) completing registration 5 minutes

All **Lead** Mentors should have [registered](#) online (again, only Lead Mentors). The participants, however, should not do so yet. Patience! Although some *are* already on

there, we do realize. Try to persuade them to wait until they've a little more sorted out, because some changes actually require a request into Technovation HQ (like swapping teammates, etc).

Below find a table identifying documentation for your team. Follow up and/or hound the team until all documents, other than the Technovation Online form, are in. Whenever those of you who have received these documents have left them with Hays/Griffith/The Digital Hub, do advise us. We are also sharing a [Technovation 2020 google sheet](#) with you. Note, use only first names and (if necessary to distinguish girls with the same name) the first letter of surnames for GDPR purposes.

Name of Participant	Parent Consent	Image Consent	In Case of Emergency	Team Name or Number (if no name yet, identify as 'Longford 1' etc.)

(2) organizing team details 10 minutes

The girls should think about the following:

- Team Name
- Summary--a 'get to know us' paragraph about the team
- Photo they want to represent them online--it doesn't have to be a group photo with their faces, just try for something unique about who they are or where they are working on this

(3A) solution-ing (30 minutes)

Last week, the girls would have produced a Problem Statement where they identified a problem or need, determined who is affected and why the problem is important to solve.

Silly Example Problem Statement

Sea lovers in Ireland need sandy beaches where they can enjoy a stroll either barefoot or in flip flops because they are otherwise likely to never exercise and, as a

result, become obese and become expensive healthcare problems for the medical system.

Now it's time to think about what could be the solution, as delivered by a mobile app. Keep it very general! We'll get to the details during the next session. This time around think *what* not *how*. Try--using scrap paper or post-its--to map out solutions. Eventually they'll arrive with a solution sentence, like the one below. Ideally some indication of what functions or components are required to deliver the app-solution.

A mobile app, based on a user's location picked up via GPS, alerts the user of the closest sandy beach and provides details about how to get there via flip flop friendly routes. Like Tinder, but for accessible sandy beaches.

(3B) writing a Mission Statement (15 minutes)

Got the solution sentence, then? Time for a Mission Statement.

The Mission Statement marks the point in the team's development where they are now to see themselves really as a business.

The Mission Statement identifies the business purpose, how it pursues this purpose, and why (ethos). Wording: Our company's aim is to _____ that _____ to _____.

Real-life Example: Patagonia "Build the best product, cause no unnecessary harm, use business to inspire and implement solutions to the environmental crisis."

Real-life Example: Starbuck's "To inspire and nurture the human spirit – one person, one cup and one neighborhood at a time."

A Mission Statement is not a sales motto. Nike's "Just Do it" is a motto. Nike's Mission Statement is "To bring inspiration and innovation to every athlete in the world." See the difference?

Encourage the girls to use the computers available to look online for examples and 'how to' articles. Go to these links for [wikihow](#) & [examples](#) & [mission, vision, values](#).

Silly Example Mission Statement

To give sea lovers reassurance that there is always a place to walk in comfort to collect their thoughts, enjoy fresh air, and invigorate their senses by providing notifications of nearby beaches.

As a result, the team should have a sense of what community challenge they are trying to tackle, how they plan to approach this with an app and their business purpose. Have them write the final Mission Statement down in big bold letters.

(4) identifying App components 30 minutes

By creating a list of components, we can make certain that there will be enough time and assistance made available to the team to produce a minimum viable product. The rationale behind this is to plan out what they think they might need to learn in order for their app to work.

Use the below questions to help the brainstorming. There are no final decisions being made at this point. See this as jotting down directions to get around, not a detailed map. Again, for those at UCC, Griffith or The Digital Hub locations, print-outs of the attached PDF will be provided.

What will the user need to do to 'get around' your app?

Tap buttons?
Enter Text?
Swipe?

What will the user see or interact with?

Photos/images?
Video?
Audio?

Will the user be connected with anything?

Social Media sharing?
Website?
Other apps?

What information will you need from the user?

Numbers?
Text?
Y or N? / True or False? Statements
Personal details, like age or gender?
How many times a user does something?

Will their phone collect any information from the user?

Location, using GPS?
Timer?
Pedometer or Accelerometer?

Will any of that information change?

Is it location based? age based? mood based? date based? etc.

What information will you store about the user?

How will you store information you receive from the user?

By categories?

By score?

Using a web database?

Using a table?

Are there any conditions to your user's experience?

Do certain answers/choices prompt certain results?

Will there be anything your user consistently experiences if he/she does something?

Music?

Scoring?

Animation?

Will the app need to collect/send data elsewhere for the user?

From a website, like for the weather forecast?

By sending a text?

If, once the girls finish their component list, you could share some key points with us, that would greatly help when securing mentors with the relevant app development skills.

Thanks!

Week Three

[arrival]

materials For this session, they will need the handouts attached (pdfs), scrap paper, pens, maybe post-its if they want to think out their tables and canvases, and access to the internet to do research.

tables Lotta tables today. Call this first one a 'mini-scrum' or just simply a 'to do' list, but we've the below to tackle before the February school holidays (17 Feb - 21 Feb).

Status (Not Started, Started, Completed)

Consent & In Case of Emergency Forms	
Problem Statement	
Mission Statement	
App Components	
Team Name & Description/Photo	
Market Research	Today (and part of Session Five)
Branding Canvas	Today (and part of Session Five)
App Inventor Setup	Session Four
Online Registration	Session Four
Business Model Canvas	Session Five

Don't let the table freak you out. Be one with the table. Wax on, wax off. Email us one for each team or as a spreadsheet of your own device after your session five.

Session

(1) review 15 minutes

By May 9th, the day of the Regional Pitch finals, the teams should be able to recite the below information like a mantra. Today is the day to write it down, by having the girls organize what they produced during sessions one and two. For those teams where 'focus' is a bit of a challenge, now is the time to assign one team member the responsibility of collecting this information and keeping it to hand.

Description (2-3 Sentences)

Team Name	
Problem Statement	
Mission Statement	
App Description	

After today, the 'Team Name' will be described as 'Company Name' because the girls are forming enterprises and should see what they are doing as such. So, if the team name is not one they want to see go public on the New York Stock Exchange, change it! Mind you, it didn't stop and/or slow down Twitter, Hulu, Zillow, Etsy, and Grooveshark!

For 'App Description', see the attached from the 2018 teams' final presentations for a sense of the general wording. The better ones include details on approach, ie. how the app will do what it is claiming to do. Today they needn't concern themselves with the visual presentation--just the wording.

(2) market research 30 minutes

This week the focus will be on users. It's important to narrow down to whom the app will be targeted. "Everyone" is not an answer! Key questions to answer are below.

Who will be using this app? Include size and demographics. Identify key characteristics.

Example: There is an estimated 30,000 secondary school aged persons with ADHD in Ireland. If 54% are likely to use their mobile phones for school-related apps, there are nearly 15,000 potential users. Sufferers have trouble concentrating, remembering, and keeping track of thoughts and time.

What is already on the market? Highlight strengths and weaknesses. Check out reviews online about apps that would be in the same space or even direct competitors.

Example: There are very easy to use and well designed apps available Evernote and Mindnode that can help sufferers be more productive and keep track of tasks, but they're boring for teenagers. Other apps, with brain training type exercises, are not ADHD specific or too game-y.

Competitor Analysis						
Name of Product/Company	What's it like to use?	Number of users/is it popular?	Same target group?	Cost? If free, how do they make money?	Strengths?	Weaknesses?

How will the app be different from similar products? Indicate what is going to set it apart.

Example: Our app will feature fun exercises which will appeal to teens but also incorporate a system of reminders to help them stay on top of their to-do lists.

(3A) brand 30 minutes

There is a Branding canvas attached to this email. Filling in the Branding canvas will organize the company's thoughts and approach in a concise and clear manner. Today, using the market research and brand identity exercises, participants should complete the "Story" section.

If they've time, they can begin the "Symbols" section. Although part of the Branding canvas, it is not recommended to spend a lot of time on logo design, given what other work needs to be prioritized. No mention of the logo is made in the Technovation Judges Rubric, so while they do need a logo or something to symbolize their company, it isn't to where they should direct a lot of their energy.

(3B) brand identity 15 minutes

Now that the market research and some branding has been done, look at the table from the start of the session again! Does the Company Name complement/work with the Mission Statement? Is the Problem Statement answered by the App Description?

There should be continuity to the overall messaging--and is it all in keeping with the branding? If not, make those changes now.

Team/Company Name	
Problem Statement	
Mission Statement	
App Description	

Happy Social-enterprise-ing!

Week Four

[arrival]

materials For this session, they will need access to the internet, laptops/desktops and, if possible, either tablets or Android phones.

tables For Lead Mentors it is important to keep track of where the participants are, in terms of group progression, before they begin to project manage and delegate tasks to individuals.

Status (Not Started, Started, Completed)

Consent & In Case of Emergency Forms	
Problem Statement	
Mission Statement	
App Components	
Team Name & Description/Photo	
Market Research	revisit for part of Session Five
Branding Canvas	revisit for part of Session Five
App Inventor Setup	Session Four
Online Registration	Session Four
Business Model Canvas	Session Five

We'll ask about these tables before the school holidays (17 Feb - 21 Feb).

Session

(1) setting up App Inventor 15 minutes

Them

Because of time constraints, we are going to dedicate today to learning how to navigate App Inventor. For those who aren't fans of App Inventor, we have tried Thinkable (the only other option for Technovation without learning Java in a few weeks) and, believe or not, App Inventor will produce something that actually works with less hair-tearing.

The girls need to have gmail accounts/gmail affiliate accounts (many schools and universities use gmail within their own systems). The steps thereafter are

- Log into gmail account (or set it up if email account does not prove to work with App Inventor, follow steps to see) - only one account should be opened at a time per computer so **sign out** after each person if sharing.
- Open App Inventor by going to <http://ai2.appinventor.mit.edu/>
- When 'An application is requesting permission to access your Google Account.' appears, allow.
- Go to the **Connect Menu** and click the **Start new project** option. Save as 'invaders' or 'test'.

- Should see a screen with a 'phone' in the center featuring 'palette' 'viewer' 'components' and 'properties' sections.

You

Make certain they can test their apps. If you have an Android phone available, then download the companion app <http://appinventor.mit.edu/explore/ai2/setup-device-wifi.html>. If you haven't one, let us know and we can send you a junk one for testing-purposes going forward.

Tip: Be certain the phone and the computer are on the **same** wifi connection when testing (not the phone's mobile data plan if the computer is on the site's connection, etc.)

The alternative is using App Inventor's emulator (which works well on Macs, for some reason). Do not spend time installing the emulator on every computer. Get it working on one computer, while the girls are setting up their accounts or working on the exercise, and use that computer as the 'tester'. <http://appinventor.mit.edu/explore/ai2/setup-emulator.html>

Tip: In all likelihood you will have to run the emulator a few times to click through all the updates it requires. Be patient, you will eventually get it running, but it can be a nuisance.

IMPORTANT If you have only one phone or computer on which to test the app today and there are several teams on your site, ask the girls to wait until the end of the exercise to test their app rather than after each section of code!!

(2) learning about App Inventor 60 minutes

The activity today is to give everyone a chance to set up and look around App Inventor. Getting a sense for it now should inform decision making going forward when delegating tasks.

Even if some team members aren't planning to do any of the app build, they should complete today's exercise to better understand what can and cannot be asked of a programmer using App Inventor. This is as much for future working relationships as it is for practicing the coding.

For those App Inventor aficionados for whom creating Space Invaders is a ten minute task, ask them to add a second level with new 'characters' to which the player goes after reaching a certain score. Or, by tackling the Quiz App, attached here, where they can sharpen up what they know about lists using their own questions and images.

Depending on the set up, you will either print the instructions or have the girls follow them online.

If printing out, the instructions are attached, with the necessary image files (put onto a usb and share with your participants/place on their computers/have them download from <http://www.teen-turn.com/spring>).

If asking them to follow the instructions online, on a different tab, then they are on <http://www.teen-turn.com/spring> and here <http://appinventor.mit.edu/explore/ai2/space-invaders.html>

You might also want to take them step by step through it, in which case there is a powerpoint version attached. Or you can try to do it live (godspeed).

Tip: Slide 3 will get a few revisits.

The Space Invaders app exercise is to work out any bugs with the computers on site, make certain the most recent version of App Inventor Companion App / App Inventor Emulator is installed on a phone or a computer for testing use, and for the participants to become familiar with drag-and-drop coding. Today the girls will learn by doing. The concepts to which they'll be exposed include **loops** and **conditionals**, where code will repeat (loop) *while* a condition is still true (conditional). But we won't 'instruct' on these. We'll identify, next week, what those blocks of codes signify and to what other potential uses they can be applied.

A worthwhile item to show, if you can bring it up on a projector, is a previous year's app, which began as the Space Invaders app exercise <https://vimeo.com/266139209>

(3) online registration 15 minutes

Remember session two and three? Time to revisit. Prepare the following:

- Summary--a 'get to know us' paragraph about the team/company
- Photo they want to represent them online--it doesn't have to be a group photo with their faces, just try for something unique about who they are or where they are working on this

Now that these companies have names and visions, as well as commitment, it's time to join Technovation online. Instructions are on the slide provided. It consists of three steps: (1) registration; (2) parental/guardian consent; (3) team/company creation and mentor addition.

This is a two part task as it will require a parent/guardian to 'okay' the registration. For some girls, their registration might be instantly approved during the session. For others, they will have to remind their parent/guardian to provide approval and team/company creation and mentor addition might have to be done at Session Five.

If anyone hasn't a parent/guardian with an email address or needs the hard copy version of the Technovation parental/guardian consent form, let us know so that we can process it as quickly as possible.

TEEN-TURN's TECHNOVATION ONLINE CHILD WELFARE POLICY

*A few teams/companies are already on the Technovation System. Make certain your site's add you, their Lead Mentor, to their profile. **IMPORTANT** There are a lot of mentors signed up on there--not all of whom are known--be certain the girls **ONLY** have you, the Lead Mentor, or an agreed alternative as their mentor. No matter how friendly or enthusiastic or legitimate an online approach may seem, make certain the girls do not add whomever this is. We feel it is best practice to limit those who can interact with the girls online to the Lead Mentors or Facilitators at each site.*

(4) t-shirts

We're getting Technovation 2020 t-shirts. Let us know what sizes to send to your site.

Happy App-ing!

Week Five

[arrival]

materials For this session, they will need the handouts, access to the internet, via laptops/desktops/tablets, and scrap paper or Post-Its & pens. As always, handouts are also available at <http://www.teen-turn.com/spring>

t-shirts We're getting Technovation 2020 t-shirts. Let us know what sizes to send to your site.

tables For Lead Mentors it is important to keep track of where the participants are, in terms of group progression, before they begin to project manage and delegate tasks to individuals.

Status (Not Started, Started, Completed)

Consent & In Case of Emergency Forms	
Problem Statement	
Mission Statement	
App Components	
Team Name & Description/Photo	
Market Research	revisit for part of Session Five

Branding Canvas	revisit for part of Session Five
App Inventor Setup	
Online Registration	
Business Model Canvas	Session Five

We'll start to harass you about whether the girls at your site have completed the above after today's session!

(1) scheduling

We're going to focus on the business model and branding today as well as completing online registrations. Next session, then, we'll combine the database and sensor exercise with the paper prototyping work--in other words, session six will focus heavily on the app build.

Week of	Session	Topic
3-Feb-20	5	Start and finalize business model. Keep working on brand. Complete online registration.
10-Feb-20	6	Make a paper prototype/wireframe. Learn about databases and sensors. Project Management for the six sessions from 7-12.

(2) business model 45 minutes

Today they will be filling in the attached **Lean Business Model canvas**. It will help them organize their thoughts for the business plan as well as put to paper the go-to-market strategy and operating costs.

This will require revisiting the work from previous weeks, particularly the market research, the competitor analysis and the story panel identifying what is driving the business from the branding canvas.

An example to use is Santa.

The problem is that children are unhappy. An alternative is for parents to buy them presents. But the solution is, no matter what, that they get presents. Key Performance Indicators include numbers of children in good standing for presents who are reached.

The Unique Value Proposition is that Santa can fly around the world in one night to deliver to so many; like free FedEx for elf produced toys. In fact, he has an Unfair Advantage in that he actually knows where every child lives. The toys come to him from an on site elf factory and reach the children by magical reindeer.

The customer segments are kids and babies, with the early adopters being the primary school aged recipients of toys because they actively interact with them and pass on their likes and dislikes to babies as they are sibling-influencers.

Santa will always have to pay for reindeer food, to keep them alive, even if toy demand decreases in favor of video games. But the amount of materials required to make the toys fluctuates from year to year, dependent on whether plastic is more popular than wood, etc., and some of the elf workforce could be let go if no longer needed.

Santa's primary revenue comes from cookies and milk left for him, as he does not charge for his services, and these he passes on to the reindeer and elves as salary. He also sells data on his toy recipients' likes and dislikes, including insights into geographical toy trends and where there are outbreaks of the common cold--both of interest to retailers like Smyths and Boots. The cash from that he uses on promotions and PR.

(3) branding strategy 30 minutes

Building from the business model, the companies can **return to their Branding Canvas** and complete the symbols and strategy sections. Strategy is particularly important, delineating between advertising, access, presentation and feedback.

- *advertising* - brand awareness, how will users know the app and company exist?
- *access* - how will users get to the app, where will it be on sale and/or made available? (example: in schools? Google Play?)
- *presentation* - how will the app deliver the company's mission and messaging?
- *feedback* - how will the users provide feedback about their experience to you as well as their community?

(4) online registration 15 minutes

Taking up from where the participants left off last week, they should go online and finalize their Technovation Registrations. Forming their teams, making certain they are happy with their online profile, and **adding their site's Lead Mentor**. Please reiterate the advice that no one should be adding 'virtual' mentors - no matter how friendly and/or sincere they may seem.

TEEN-TURN'S TECHNOVATION ONLINE CHILD WELFARE POLICY

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those who can interact with the girls online to the Lead Mentors or Facilitators at each site.

News

Gaisce

Teen-Turn is a Gaisce President's Award Challenge Partner. Technovation activities, therefore, count towards the Gaisce Bronze Award (or other levels, if already started). We're also permitted to backdate the weeks to the start of the Technovation curriculum. And, there is no fee for Teen-Turn participants. If any of the girls are interested, please let us know so that we can process a record sheet and sign them up. Teen-Turn's PALs are Nicole Ryan and Margaret Malone.

Instagram

Be sure to share your scenes-from-the-sessions with Nicole, who is starting up our insta - <https://www.instagram.com/teenturn>

Regional Pitch Event

For your calendars -- The Technovation Ireland Regional Pitch Final will take place at Microsoft EMEA HQ in Dublin on Saturday May 9th from 10-4pm. We'll provide the transport for all sites. In addition to prizes, winners at this event will be sent on to the global semi-finals for Technovation, from which the finalists who go "all expenses paid" to the USA to compete for scholarship money are chosen.

Week Six

[arrival]

materials For those who kit out their own sites, you will want to make certain you've computers as well as phones/tablets available. Also, if able, large sheets of paper and markers/sharpies for the wireframing is recommended. A3 is a good size. As always, the handouts are also available at <http://www.teen-turn.com/spring>

t-shirts We're getting Technovation 2020 t-shirts. Let us know what sizes to send to your site, if you haven't already done so.

registration It is important to be added to your participants' teams. Please make certain that, as soon as they have formed a team on my.technovationchallenge.org, you are added as their mentor. A google sheet is being shared, showing where the teams are in terms of online registration.

tables New table! Where are they now? They're on the road to submission!

Status (Not Started, Started, Completed)

Project Mgmt Plan	
Wireframe	
App Development	
Storyboard Video	
Business Plan	All teams should incorporate into their pitch videos & presentations. But senior teams must also submit a 5-page document.
Pitch & Demo Video	
Pitch Presentation	
	Submission

After the holiday break, we'll contact each site to get a sense of where your participants are in terms of progress. We're arranging to have videographers visit every site for at least one or more sessions to facilitate filming. We've also some super sessions in the works, for March 28th, to provide extra help for participants. We'll provide transport to any partner company holding a super session where there will be plenty of mentor assistance available.

1) databases 30 minutes

Many apps will require the use of a database in one way or another. The most common of which is a local database for user profiles at login or keeping track of previous scores for games.

Another function for a database is to store information, online, that can be retrieved by the app company, to determine patterns in user behavior or derive insights that may be of benefit or, even, for sale to interested parties. Last year, one of the teams created a quiz app to determine bias in teens. The answers that the users provided were stored on an online database from which the app developers could generate reports they could then share with organizations interested in social behavior, like researchers and educational agencies.

<https://www.youtube.com/watch?v=Xfyz6ZVTGZ0&feature=youtu.be>

Databases are found in Storage on the Palette in App Inventor. If your users' data does not need to be shared with others or with you, the app company, then that data can be stored in a local database on the user's phone with TinyDB. Otherwise, you will need to use TinyWebDB. Keep in mind that TinyWebDB, although online, has usage limits and is suitable for prototypes only.

As a reminder of what App Inventor can and cannot do, we've a challenge today that will introduce how to add a database function to an app. Rather than spell out how to create this, step-by-step, we're going to provide some of the [Block Coding](#) and the company members can put their heads together to see if they can get a 'sign in' function working.

T

hey can design their screens any way they like, as long as they have the components that are required. They will have to create three screens for this project. Many open source programming for App Inventor does not show the design screen, so it's important to understand how to work from the code only to build a function. It is also important for those who plan to work on the business side, to consider alternative sources of income through the sharing of or analysis of user data.

*Tip: use the names as shown, ie. 'newuser' 'newpass'.

(2) wireframing 30 minutes

Keeping in mind the general purpose of the app, its users in mind, and what is out there that works, it's time to wireframe the app. Use either a large piece of paper or cut-out and organize the [Paper Prototype Worksheet](#).

What's a wireframe? It's a visual schematic that sketches out elements of information (display, prompts, prioritization, instruction), interface (buttons, menus, text entry), and navigation (movement/flow from screen to screen). This is all part of what's found in Lean/Agile development practices.

See example. Begin with a home screen. Include what is necessary to display on it, how a user will interact with it to progress into/through the app, and identify to where the various options it offers direct the user. Repeat for each screen to create, as a result, what will look like a flowchart.

Remember, a wireframe demonstrates basic functionalities, not visual details like colors, fonts, style, etc. Work as a company on this, as 'business' input is important for developers and vice versa. We'll talk about user interface in other sessions. As a rule of thumb, **you should not have more than 10 screens in any single app**, and App Inventor will warn you when you attempt to exceed this limit.

Wireframes are important - they serve as the app developers' blueprint.

(3) project management 30 minutes

The Steves. Steve Jobs is often known as the man behind Apple. But Steve Wozniak is the man who made that vision a reality. Steve Jobs did not know how to build a computer. He did not know how to program a computer. When Apple began, Jobs took on the role of meeting with investors and selling the product. Wozniak was responsible for the build. Together they discussed design. Without both, however much they disagreed or even might have not liked each other, Apple wouldn't exist today. They are the co-founders of Apple.

The girls' companies have arrived at the stage where they must delegate work according to strengths in order to succeed.

The team must now look at the next six weeks and determine how it will go about completing the challenge. This is a very important step, as it will inform the team's decision making on what to focus on and what simply can't be done this iteration.

One way this is approached by businesses is by creating a [Gantt Chart](#). A Gantt chart uses a timeline to show when phases of a project are to be done and lists milestones and deliverables. It also identifies who on the team is responsible for those deliverables. For the team to do its own Gantt Chart, see the examples. A table style approach is highly recommended.

Draw up a table where the company

- a. lists tasks ("deliverables") by category ("milestones")
- b. determines when these are to be done against the timeline and
- c. identifies who is responsible (use first names, initials or color coding)

Tips

- Use the categories from [Submission Guidelines](#) to outline milestones to achieve.
- Use the [Minimum Viable Product Worksheet](#) and wireframe to help identify the individual tasks for app development deliverables.
- Use the [Business Plan Checklist](#) to breakdown that category's tasks
- Junior team members, as much of what goes into the business plan can be useful for the pitch presentation, use the general categories from the "Business Plan Checklist" to organize your work on your pitch's powerpoint and the information you'll need to prepare.

Happy Gal-entines Week! (It's a thing, really.)

Week Seven

[arrival]

materials Wireframes and storyboards benefit from A3 paper and sharpies. A package of A3 paper has been sent to every site. Handouts can be printed or downloaded/reviewed online via <http://www.teen-turn.com/spring>

t-shirts We're posting out our Technovation 2020 t-shirts this week. If you haven't already done so, PLEASE let us know what sizes to send to your site.

registration Make certain that, as soon as your site's participants have formed a team on my.technovationchallenge.org, you are added as mentor. Also, we can see that a few of the girls still haven't complete profiles, as their parental/guardian consent is outstanding. Check out the shared google sheet to see where your participants are in the process. Registrations close in March so get them done!

tables New table! Where are they now? They're on the road to submission!

Status (Not Started, Started, Completed)

Project Mgmt Plan	
-------------------	--

Wireframe	
App Development	
Storyboard	
Video/Presentation	
Business Plan	All teams should incorporate a business plan into their pitch videos & presentations. But senior teams must also submit a 5-page document.
Pitch & Demo Video (with subtitles)	
Pitch Presentation	
	Submission

videos We've contracted videographers for every site to work with the girls on their videos. Schedules as below. Limerick and Thurles are still being organized by Nicole.

Cork (Brian Sheehan, Studio Plus Video)
March 25th & April 1st

Galway (James Ryan, Lovestruck Films)
March 12th, March 19th & 26th

Longford (Anthony Gaffey, Gaffey Productions)
9th March & 23rd March

Dublin (Renate Canga, Freelance Filmmaker)
Ringsend Feb 26th, Mar 4th, Mar 11th, Mar 18th, Mar 25th, Apr 1st
The Digital Hub Feb 28th, Mar 6th, Mar 13th, Mar 20th, Mar 27th, Apr 3rd

1) App Time Optional - Team members working on the app, using App Inventor

Week Seven Priority It is very important to make progress on the app building. Let us know if you require an Android phone or tablet if the emulator is a problem. Unfortunately, we can only provide support for App Inventor or Java.

Initially focus on making the app's screens, adding all the components firstly then coding them. Remember that component list from session two? Get it out. Also have a look at your wireframes. Nothing will be finished in one session. You should plan your sessions, per the Gantt, to have a goal to complete each week.

Remember **it just has to be navigable for a demo**. Perfect, commercial ready apps are not the aim this iteration. These are proof of concept / early prototypes. App products go from proof of concept to pre-commercial prototype to a customer-ready version for early adopters to a larger roll-out and/or deployment upon receiving feedback and making changes. ([See POC to Production, attached](#))

For teams with one or more coders, you can work on separate App Inventor accounts and then combine the work later. The most successful way to do this is to work on the screens that *most relate/interact with* one another, each. An example would be one coder works on the home, sign in, user account screens, while another works on the first level of the game. Etc. Note - you can only have one "screen 1", so be certain to name all of the screens in a way that do not overlap/can be combined later.

Keep in mind the colors and images from your Branding Canvas when designing these screens, so that they have a cohesive look in keeping with the brand when completed.

If anyone is having trouble with the programming, look in "Gallery" when in App Inventor (next to "My Projects") where there are tutorials as well as other apps. Sometimes it is possible to look at the coding in another app that is doing what you want to do with yours. Replicate it for your own use. The Apps that are available are sharing their code for this purpose, in the spirit of Open Source. It can save a lot of time.

Tips for 'blocking' (using the blocks in App Inventor to programming the app)

- o Google, yes, Google 'setting up a database in App Inventor' or whatever is relevant and there will be many many tutorials and examples

- o look at similar apps that are shared on App Inventor and identify what ones might have similar programming or pieces of similar programming -- using what's open-source code can save a lot of time; see <http://appinventor.mit.edu/explore/app-month-gallery.html> click on what interests, agree to open the app and then look at the blocks

- o look at the App Inventor tutorials, even those offered from inside App Inventor in

- 'Guide' <http://appinventor.mit.edu/explore/ai2/tutorials.html>

- o and from Technovation

<http://technovationchallenge.org/curriculum/code-1/>

<http://technovationchallenge.org/curriculum/code-2/>

<http://technovationchallenge.org/curriculum/code-3/>

<http://technovationchallenge.org/curriculum/code-4/>

<http://technovationchallenge.org/curriculum/code-5/>

<http://technovationchallenge.org/curriculum/code-6/>

<http://technovationchallenge.org/curriculum/code-7/>

(2) Business Plan Time Optional - Team members working on the Business Plan, using Microsoft Word (or similar)

Week Seven Priority Your market research should be complete, including a competitor analysis. Building from your Lean and Branding Canvas work, develop a marketing plan and business model.

An exercise that will prove a useful place to start is looking at your Lean Canvas. It will help you organize your thoughts for the business plan as well as put to paper your go-to-market strategy and financial projections. Eventually you will have to go into detail by providing operating cost projections.

To get a sense of how much work goes into a business plan, [attached find one from Technovation finalist "CoCo"](#). No need to be scared off, but to be realistic about the length of time it will take and the number of sessions it will require, look it over. Fortunately, unlike previous years where the business plans ran into 20-30 pages, this year Technovation is recommending **5 PAGES MAXIMUM**.

- **Executive summary** - A short and concise description of the business.
- **Company description** - Information on what the business does, how the business is different from others, and who the business serves.
- **Products and/or service description** - Define what products and/or services the business sells, explain why it benefits customers, and how the mobile app will be developed.
- **Market analysis** - Give background on the market that the business plans on entering. Include Market Research, like consumer research and competitive analysis. ([See Market Research, attached](#)) Use
- **Strategy & implementation** - Here, explain how the business will run, or operate, and what's the plan to introduce the product and/or services to the market. Use Branding Canvas and Lean Canvas work that's been completed. ([See Marketing Plan Breakdown & Marketing Canvas attached](#))
- **Financial plan & projections** - Summary of how the business will be spending money, making money, and using the money for the future, which is information that can be developed on the Business Model Operating Costs worksheet with the help of mentors. ([See Business Model Operating Costs & Operating Costs Breakdown, attached](#))

One section to keep in mind as work is being done on these apps is "Product Development". See last week's Business Plan Checklist. Be sure you update your Gantt and Wireframes as you progress, because these can be submitted with your business plan to demonstrate your grasp of how long it takes/it will take to bring the product from proof of concept to pre-commercial prototype to a customer-ready version for early adopters to a larger roll-out and/or deployment upon receiving feedback and making changes. ([See POC to Production, attached](#))

(3) Pitch Time Optional - Team members working on the pitch presentation, using Powerpoint (or similar) and filmmaking

Week Seven Priority Gather and organize the information your team will need to convey. The pitch is important to start now as the pitch video and presentation will rely on the same information.

Similar to those doing Business Plans, the team members responsible for the pitch will have to write. The key difference is that a business plan is *read* and a pitch is *heard*. Pitch writing, therefore, is like a script rather than a report.

Note, also, that this year, points will be awarded to videos with subtitles and are accessible to those for whom English is not a native language.

Remember the problem statement from the first week? Well, here we are looking at it again. To create the pitch, a lot of planning is required to be as effective and economical with time.

Organize the following information, which will give a narrative to the business, highlight the best-selling points, and identify what might hold back an investor while explaining why the product is the best bet for their money. Your Lean Canvas might be of use.

- **Problem:** Identify the problem and community. Give some background and compelling reasons why it is worth solving. You should be able to describe or show the problem you are solving in one or two sentences.
 - Problem statement including statistics about the problem in your community
- **Solution:** Describe your solution by explaining how your app solves the problem that you previously stated.
- **Target market:** Define who is affected by this problem and give some background on your target market (also known as target customer). Here, you'd want to refer to some facts and figures that you/your teammates gathered for Market Research. ([See Market Research, attached](#))
- **Competition:** Explain why your app is the best solution compared to any other solutions. If there are no direct competitors, explain how and why your app will solve the problem. Describe how you did your competitor analysis.
 - Competitor analysis
 - User research and evidence for why this app will be used by your target audience
- **Demo**
 - Demonstrate how the app functions - *be sure to include different screens, sensors, and any functions or components such as database or API integration*
 - Explain how you tested and refined the app
- **Financial & Milestones:** Briefly review your business model on how you plan on making revenue to support your business and what next steps you are planning. If it is a non-profit, explain how and why you chose that approach. Ask your teammates for their Marketing Plan. ([See Marketing Plan Breakdown & Marketing Canvas attached](#))
 - Share the future plans and impact your idea will have
- **Team:** Tell us about who is building this business and what role they play. You might even want to explain why the team is passionate about solving this particular problem. Your audience will want to know who is behind all this great work and what motivates them!
 - Credit how each of your team members contributed and how your team dealt with any challenges

Storyboard the presentation with a delivery time limitation of **4 minutes** in mind-- that is it'll take 4 minutes to present it. 4 minutes is a long time and will take weeks to prepare. Do not underestimate the work! ([See Story Board Pitch, attached](#))

Scrap paper is a good start before creating a powerpoint or filming. Sketching out what will be on slides or said. Use one slide per concept, move around/order to suit the storytelling.

Attached find an example from Technovation finalist "UHouse" for presentation slide reference. For a pitch video, see Technovation finalist "Praise Pop" on YouTube <https://www.youtube.com/watch?v=OnoCWfNUtMA>

Welcome back from the break!

Week Eight

1) online

All of the girls have to be **signed up to the online Technovation site** and

with their teams formed by **March 16th**. So this week's session is really the one to get that team created *and* lead mentor linked in *and* profiles completed (make certain there aren't any parental/guardian consents outstanding).

2) in session

Work!!! There's no way around it! This week, the girls have to get stuck in. They have their "working group" handouts from last week as guiding materials. You, as Lead Mentors, can review the attached Judges' Rubric to get a sense of how to best guide the participants with whom you are working and ensure their progress meets requirements.

3) external communications

The t-shirts have been posted to every site. Please **send a photo with your teams to us by email or via twitter** - we're looking for content to share with Technovation HQ in the US!

You can do this!

Week Nine

1) video pitches [3 handouts attached]

Most of the sites will have their videographers coming this week, schedule below. **We strongly recommend that every participant on every team**

reviews Technovation video requirements and the judges' rubric before filming. (see attached)

	Week 9	Week 10	Week 11	Week 12
Monday	Longford March 9		Longford March 23	
Wednesday	Ringsend March 11	Ringsend March 18	Ringsend March 25	Ringsend April 1
Wednesday			Cork March 25	Cork April 1
Thursday	Galway March 12	Galway March 19	Galway March 26	
Thursday	Thurles March 12			
Friday	Limerick March 13			
Friday	DigitalHub March 13	DigitalHub March 20	DigitalHub March 27	DigitalHub April 3

Be certain that whatever finished product the videographer delivers:

- (1) is emailed/shared with you (no adult other than a Lead Mentor should be interacting with the girls 'unsupervised');
- (2) does not have their company name, watermark, etc. as an advert for their services in the videos;
- (3) does not include any Teen-Turn logos, etc. as this is a global competition and the videos are for the girls to pitch *their* companies (not us);
- (4) has **subtitles** - this is *strongly* recommended by Technovation and will improve how participants are received by the judges;
- (5) is fully available to you, the Lead Mentor, in case you are the one who has to upload it into the online submission via YouTube/Vimeo.

important **uploading** tips:

- if the girls want to upload to their own youtube channel, we highly recommend they do it as 'unlisted' for their own privacy yet still with the ability to share (see attached)
- we are happy to upload videos to our unlisted site and provide the link, you need only put the video into our dropbox, for which you will receive an invite today
- make certain, whatever your approach, you **get the link for the video**

* it's only ONE video this year -- for those who participated last year -- so the demo *and* the pitch are in the same video for the 2020 season submission requirements

2) in session

Business plans need writing. Apps need building. So **work!!!**

3) additional sessions

More likely than not, the girls will need extra sessions. At the moment, we are organizing, in partnership with Tech Week, **Super Saturday** sessions for **March 28th**, with a location for the Galway, Longford and Limerick teams, a location for the Tipperary and Cork teams, and a location for the Dublin teams. We'll contact each site directly to organize details and to cover transportation costs.

We'd also like to propose a **Super Saturday Submission** session. With the deadline being April 20th, we traditionally have a 'last chance saloon' session with mentors to get as many submissions completed as possible. How does Saturday, **April 18th** suit? It's after Easter but before they return to school from holidays. *Let us know if it would be of value and/or interest to you.*

Keep app it! (pun intended)

Week Ten & Eleven (COVID combined two)

You can do this!
You've got this!

Yes, the weekly email has returned! Well, we are almost *there*. Almost. Below and attached please find information about these weeks and the run-up to the final submission deadline. We had planned on sessions ending April 3rd. But, for those willing and able, we'd gladly support you as well as extend stipends another month, until May 1st, to accommodate your virtual mentoring. Let us know!

* note: there are two separate BlueJeans channels on the Teen-Turn account; attached find the schedules for both

submission discussion from 5 up to 30 minutes - screen share the attached pdf (with links to all of the supporting docs)

A. Technovation Online - *5 minutes max* - slide 2 [Submissions Checklist Link](#)

All teams should have all members linked in and with completed parental consent on the online site. All teams should also have started their submission by, at the very least, completing details about their location, general app description, honor code agreement and group photo. They cannot continue after March 30th if the submission isn't underway.

B. Scoring - *5 minutes max* - slide 3 [Judges Rubric Link](#)

Remind the girls that it isn't only the tech but also the overall story, business plan and pitch that earns the judges' points. The criteria by which the girls will be judged is in the rubric.

C. Business Plan - *5 minutes max* - slides 4-7 [Business Plan Checklist Link](#)

The business plans should be well on their way by now. One point to emphasize is that they'll need their financial projections. It's also good to include screen shots from the actual app, so the app development team members should provide these. 5 pages maximum and uploaded as a PDF, please!

By way of example, on <http://www.teen-turn.com/spring> is another world finalist business plan, which was also used as a presentation slide deck, see 'Concussion Checker'.

D. App - *5 minutes max* - slides 8-11 [App Checklist & Code Upload Link](#)

The girls should have their screens done. They should also have the means to navigate from screen to screen - even if the functionality of the individual screens' tasks aren't complete. In this way, they can at the very least click through the app for a demo in the video and talk through the capabilities. This also means screen shots can be provided.

One way to spruce up the design, as app inventor isn't the prettiest, is to use powerpoint or paint or photoshop or online vector images as backgrounds, buttons, labels, animation sprites etc.

There is also a coding checklist. We've modified it to explain which each item is - most apps will have the ten points in some capacity or another. Never underestimate what looking at the code that works on other apps in App Inventor or Thinkable can do to help troubleshoot coding challenges. Open source, baby.

E. Presentation - *10 minutes max* - 12-15 [Pitch Video Doc & Video Upload Link](#)

These slides have a few links, including a 'telling your story' business video (not a necessity, but shows how the Lean & Branding Canvases can structure a pitch). Depending on the time you have, show what you think would help most. At the very least, show one pitch video (4 minutes) from slide 13.

The team members responsible for the pitch videos can film it in sections and then edit it together. We've a few videographers on hand to help with this. Additionally, some of our seasoned Technovation-ers have helpfully contributed webinars as well here: teen-turn/webinars.

Possibly a perilous rabbit hole to go down, but there is an app gallery of participants from previous years, featuring demo and pitch videos here: <https://technovationchallenge.org/app-gallery/>

attendance we expect more girls will begin to come online once the novelty of being off school wears off; we've also asked their teachers to give them a nudge :)

Week Twelve

Work. Work. Work.

1) materials <http://www.teen-turn.com/spring>

We have curated and collated and consolidated the information participants need to get their work into submission-able order. It's all on the materials page of our website.

A recent addition is [SCRIPTING & EDITING YOUR PITCH VIDEO](#) by Athaliah, Lead Mentor at The Digital Hub and last year's Regional Pitch Event winner in the senior category.

2) webinars <https://teen-turn.com/webinars/>

Webinars are being posted as they come in. Again, there is a dedicated page on our website. For those who have a hankering to do one, send it on, preferably less than 150 MB and in mp4 format.

The latest and greatest is [HOW TO EDIT YOUR PITCH VIDEO FOR TECHNOVATION](#) by Nicole, our Munster Projects Coordinator.

3) questions contact@teen-turn.com

Have a question? Do you participants have a question? Send it on to us at contact@teen-turn.com and we'll source answers from our network. Whether it is a coding conundrum or a request for someone to review a business plan or help with a video upload or edit, we are ready, willing and able!

Happy app-ing!

Curriculum +1, 2 & 3

Submissions

Now is the time to identify those teams who are at risk of dropping out and/or not submitting. If we can source additional help or a guest mentor, including even video editing work, let us know now. When you have a moment, please complete the below. In addition to the benefits of completing the work they have started and competing in the global competition, only those who submit to my.technovation will be invited to attend the event this summer at Microsoft.

Team Name	App Name	Site Location	Currently Working On	Needs Help With	Likely to Complete Submission?

Information Available

materials <http://www.teen-turn.com/spring>

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Happy app-ing!

The message this week is **get those submissions in! Deadline is in 14 days.**

For those who have teams that are struggling, two approaches that we advise are:

(1) complete what needs to be done incrementally, with deadlines every two to three days ie. finish 30 seconds of video on the business model, complete the executive summary, company and product descriptions for the business plan, finish the design side of the their apps' screens;

(2) remind them that they can really benefit and/or gain an advantage by receiving feedback from judges by submitting in order to take these projects further to, say, BT Young Scientist or even re-enter and improve their chances for reaching the

finals at Technovation next year (there's a dispensation for repeat entries due to COVID-19).

If you / they **need anything, please ask**, and we'll move mountains to make it happen, get the help, review the code, read the document, edit the video, you name it!