



**2016 Season  
Student Workbook**

# About Technovation

**Mission:** Our mission is to promote women in technology by giving them the confidence and skills they need to succeed in computer science and entrepreneurship

**Vision:** Our vision is to empower every young woman who wants to have a career in technology entrepreneurship.

**Goal:** Our goal is to teach young women the basic skills that will allow them to understand the opportunities in technology and

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## Overview of Lessons

Determine your class meeting schedule and write the dates in below.

Unit	Date	Topics	✓
1		<b>Introduction to Technovation</b> Review Curriculum, Deliverables, Judging Rubric App Inventor: Talk to Me tutorial ( <i>See presentation for more</i> )	
2		<b>Defining the Problem: Ideation/Brainstorming</b> App Inventor Building Games Tutorial Review App Inventor Goodies/functionality	
3		<b>Market Research &amp; Maps</b> Customer Development Customer Interviews & Customer Surveys <b>Estimating Potential Market Size</b> App Inventor: Maps Tutorial	
4		<b>Paper Prototyping &amp; App Design</b> User-centered Design Prototyping App Inventor: Tiny DB and Colored Dots	
5		<b>Competitor Analysis and Databases</b> Collecting Feedback on Prototype & Transfer to App Inventor Competitor Analysis Data and Databases	
6		<b>Branding</b> <b>Branding &amp; Logo Design</b> 100-word app description Promoting your app	
7		<b>Revenue Models and Product Pricing</b> Cost structures and product pricing Brainstorm costs, revenue sources	
8		<b>Pitch &amp; Video Guidelines</b> Pitch Requirements Pitch Video Tips & Planning Review: Submission Process	
9		<b>Business Plan &amp; Demo video guidelines</b> Demo video guidelines Business Plan – definition and potential audiences Business Model Guide	

10		<b>User Feedback</b> Continue working on deliverables Solicit User Feedback	
11		<b>Review of Deliverables</b> Make final touches to your app, business plan and videos	
12		<b>Submission &amp; Next Steps</b> Review Submission process Fill out survey Celebrate & Keep on working on your app!	

## 2016 Final Deliverables

- App prototype source code
- 3-5 Screenshots of your app prototype
- Pitch Video on YouTube under 4 minutes (+/- a few seconds)
- 100-word app description
- Demo Video on YouTube under 2 minutes (+/- a few seconds)
- Business plan – typed and in PDF format

# Judging Rubric

**DIRECTIONS:** The judging rubric for Technovation 2016 contains objective and subjective parts. Evaluate these items objectively to the extent that you can. It is ok for every team to gain the highest score in each of these items.

Ideation Score		0	1	3	5	SCORE	
Objective Score	Did the team identify a real problem in their community?	No	The problem identified is more of a nuisance, and does not have larger social implications.	The problem seems to be real, but could use a little more detail.	Yes		
	Does the app address the problem that they identified?	No	The app addresses a tangential problem.	The app addresses some parts of the problem.	Yes		
						10 maximum possible points	
	Technical Score		0	1	3	5	SCORE
	Is the prototype they submitted fully functional? (All buttons and links functional and no obvious bugs.)	No	Only superficial functionality. (i.e. screen transitions)	Mostly, except for a few minor issues. I can still get the general idea.	Yes, no bugs that I could see.		
	Does the prototype go beyond static information? (e.g. calls another app on the phone, saves information to an external server to coordinate multiple users, etc)	No, only information stored directly in the app is used.	The app uses other resources, but it seems unnecessary for the purpose of the app.	Mostly, but there are one or two other places where the app could have used an external service to be more effective.	Yes, the app uses multiple resources and does so effectively.		
	Does the prototype match the feature list defined in their product description?	No	Less than half of the features listed are in the prototype and minimal explanation for why features are missing.	More than half of the features are in the prototype, and there's a reasonable explanation for the missing features.	Yes		
	User Interface. Is the UI intuitive and easy to use?	No	All the functionality is there, but I had to watch the demo video to and read the product description to understand the app.	The app was obvious after thoroughly reading the product description.	A quick skim of the defined problem and product description was enough to understand how to use the app.		
						20 maximum possible points	
	Entrepreneurial score		0	1	2	3	SCORE
Product Description	None	A short and vague description.	Describes the app, but no sense of overall value of the app.	Describes app and value added.			
Potential Market Size	None	Groups of people mentioned, but no estimates done.	Estimates done and some groups defined. Could have been more thorough.	Estimates done and groups defined. Estimates clearly explained.			
Competitive Analysis	None	Competitors are named, but explanations are sparse or nonexistent.	Competitors are named, and explanations are provided. Could have been more thorough.	Analysis is exhaustive.			
Potential Revenue	None	Calculations are suspect, and explanations are unclear.	Calculations exist, but basis of the calculations could use more explanation.	Calculations and explanations are thorough and believable.			
Branding and Promotion	None	A logo or promotional sources are included, but explanations are sparse or nonexistent.	Logo and limited promotional sources are included. Explanations for promotional plan could be more thorough.	Logo and promotional plans are included, well explained and exhaustive.			
					15 maximum possible points		
Subjective Score	Overall Impression - Award points based on which ones gave the best pitch in your batch.	0	2	5	10		
	Overall Pitch Quality. Is the Pitch compelling? Can you see this app being used by consumers?	Not at all. Argument was flawed and difficult to follow.	I understand their argument, but I'm not sold.	Compelling arguments were made, and a small following may form.	Yes! The argument was compelling enough to think this app has true growth potential.		
						10 Maximum total points	
Total Score	Deliverables (subtract 1 point for each item missing)	Pitch Video	Demo Video	Prototype Source code	Screenshots	100-word app description	Business plan
	<b>TOTAL SCORE</b>					<b>55 maximum total points</b>	

# Career Exploration

A major step in career exploration is an informational interview of people who are in your field of interest. Here are some questions you can ask your mentors.

- Describe a typical day at work.
- How many hours do you normally work in a week?
- What do you see as the potential for growth in this field?
- What can I do now to help me find employment in this field?
- What do you like about your career and what don't you like about it?

What other questions do you want to ask? List them here:

**NETWORKING:** Did you meet or learn about anyone you want to follow up with? Write their name and email here.

Name: \_\_\_\_\_ Email: \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_

**FOLLOW UP:** Sending thank you emails or cards is a great way to let people know that you appreciate their time. We encourage you to stay connected with your mentors and women you meet through Technovation. Here is a sample email or card you can send. Put your own touch on it!

Dear Ms. \_\_\_\_\_,

Thank you for [insert experience you share with them]. I am interested in the field of \_\_\_\_\_ and appreciate your time sharing your experiences with our team. I hope we can stay connected in the future.

Thank you,  
(YOURNAME)

# **Brainstorming**

Brainstorming is a **process for generating creative ideas and solutions through freewheeling group discussion.**

**Step 1:** Every participant is encouraged to think aloud and suggest as many ideas as possible, no matter how useful or crazy they may seem. There are no right or wrong ideas - brainstorming is meant to generate many ideas without judging them. The analysis of the ideas comes after.

**Step 2:** Analysis, discussion, and refining of the ideas should not occur until after everyone's ideas have been shared.

## **Brainstorming Rules**

- **Defer judgment.** All ideas are important and useful. Make everyone feel like they can share their idea and allow others to build on it.
- **Encourage wild ideas.** Wild ideas can often give rise to creative leaps.
- **Build on the ideas of others.** Being positive and building on the ideas of others takes some skill. In conversation, we try to use "and" instead of "but."
- **Stay focused.** Try to keep the discussion on target.
- **One conversation at a time.** Your team is far more likely to build on an idea and make a creative leap if everyone is paying full attention to whoever is sharing a new idea.
- **Be visual.** Write down your ideas on Post-it notes and put them on a wall. Nothing gets an idea across faster than drawing it.
- **Go for quantity.** Aim for as many ideas as possible. In a good session, up to 100 ideas are generated in 60 minutes!

## **Brainstorming Activity Notes:**



## App Inventor Functions & Goodies

It's important to know everything you can do with App Inventor early on in your brainstorming and planning stages. Take some time to get to know App Inventor (and its forums) as a team. We've picked out some simple apps that you can incorporate into your app prototype, but you aren't limited to these.

- Date and Time: This piece of code creates a Clock instance, and saves it in a variable.
- Foreach: Use a foreach block to turn a list into a single string of list elements. This pattern is especially useful for creating strings with sequences of latitude and longitude coordinates for Google map URLs.
- Distance Calculation: how to calculate distances using latitude/longitude coordinates.
- Take and Show Pictures: Creating a simple list-picker-based gallery of pictures taken with the App Inventor Camera component.
- TinyDB: An example of using TinyDB to store time-annotated list entries, including handling the case where no list has yet been stored.
- Restaurant App: A fairly extensive app that uses Google Fusion Tables. It talks to two tables, one that has restaurant information, and one that has comments about the restaurants. Contains examples of up-voting down-voting.
- TinyWebDB Services: Specialized AppEngine web services and simple apps for testing them.

## Customer Development

You have to ask the right questions to build the right products! Interview or survey your prospective customers, and find out if your assumptions to the question below are true:

- Does your target audience have the problem that you think they have?
- Do they agree that they have this problem?
- Is your solution (your app) the only solution to the problem?
- Would your target market pay for a solution like yours? How much?

You can never be sure until you **ASK!** (through surveys or interviews)

## Customer Interviews

Interviews can be intimidating, but it helps if you're prepared with some good questions. Find some example questions below, but customize them for your ideas and your customer base. Include your own questions in the open space below.

- Where is there a need for [describe what your app does]?
- What currently fills that need?
- If your app existed, would people use it? How often?
- How much would people pay for it?
- Which features are most important for your app to have?

# Customer Surveys: Example Surveys

## Example Survey 1: Shazam

Shazam is a mobile app based music identification service

### *Survey Questions:*

The goal of this survey is to find a group of people that can give you information about your idea/ product / market opportunity

Do you enjoy listening to music? (yes or no) \_\_\_\_\_

How often do you find yourself wondering the name of a song that you hear? (1= never, 10 = all the time) \_\_\_\_\_

How can we contact you to talk further about this? \_\_\_\_\_

### *Resulting Metrics (data we received):*

Divide the number of people who responded in a selected way by the number of people who took the survey.

45/50 said yes, they enjoy listening to music

22/30 reported a 5 or greater about not knowing names of songs

40/50 included at least one way to contact them

### What we learned:

There is a large market size for our product

Most people wonder the name of the a song they hear

People are interested in talking to us about it

## Example Survey 2: Angry Birds

Angry Birds is a mobile app game

### *Survey Questions:*

The goal of this survey is to find a group of people that can give you information about your idea/ product / market opportunity

Do you enjoy puzzle games? (yes or no) \_\_\_\_\_

How satisfied are you with your options of mobile phone games? (1= not satisfied, 10 = very satisfied) \_\_\_\_\_

How can we contact you to talk further about this? \_\_\_\_\_

### *Resulting Metrics:*

Divide the number of people who responded in a selected way by the number of people who took the survey.

30/50 said yes, they enjoy puzzle games

12/30 reported a satisfaction rate of less than 7

40/50 included at least one way to contact them

### *What we learned:*

We have a good market size for our app

Most people are fairly satisfied with their options of mobile games

People are interested in talking to us about it

## **Market Research Survey**

When creating your survey think about the following:

- What do you want to know about your target user?
- What problem does your app solve?
- What groups of people have these problems?
- How big is this group(s) of people (i.e. your market)?
- Where is there a need for your app?
- What currently fills that need?
- If your app existed, would people use it? How often?
- Who would be willing to pay for it and how much would they pay?
- Which features are most important for your app to have?
- Does your target audience have the problem that you think they have?
- Is your solution (your app) the only solution to the problem?

## **Brainstorm Survey Questions**

**Tip:** If you had your customer in front of you, what questions would you ask them? How would you find out what they need from an app, or how they would use it? List your ideas and questions here. Make sure your final survey is typed when you give it to people.

## Write your Final Survey Questions and Results Here:

Survey Question	Summary of Survey Results
1.	
2.	
3.	
4.	
5.	
6.	
7.	

## **Market Size: Top Down vs. Bottoms-up**

There are multiple ways to estimate market size. For Technovation, you'll want to calculate the more concrete version – often referred to as Bottoms-Up analysis.

**Let's say you're selling toothbrushes to China.** The top-down calculation would go something like this: If I can sell a \$1 toothbrush every year to 40% of the people in China, my TAM is 1.36B people x \$1/toothbrush x 40% = \$540M/year.

This analysis not only tends to overstate market size (why 40%?), it completely ignores the difficult (and expensive!) reality of getting your toothbrush into the hands of 540M toothbrush buyers: How would they learn about your product? Where do people buy toothbrushes? What are the alternatives?

Meanwhile, the **bottoms-up analysis** would figure out TAM based on how many toothbrushes you'd sell each day/week/month/year through drugstores, grocery stores, corner mom-and-pop stores, and online stores.

This type of analysis forces you to think about the shape and skillsets of your sales and marketing teams — required to execute on a market opportunity — in a far more concrete way.

**Additional Resources** to help you calculate your available Market:

Complete Primer, MIT: [http://gsl.mit.edu/media/programs/india-bms-summer-2013/materials/step\\_4\\_calculate\\_the\\_tam\\_---trepreneurship\\_101.pdf](http://gsl.mit.edu/media/programs/india-bms-summer-2013/materials/step_4_calculate_the_tam_---trepreneurship_101.pdf)

Google Keyword Searches: <http://andrewchen.co/when-has-a-consumer-startup-hit-productmarket-fit/>

On Market Size: <http://ben-evans.com/benedictevans/2015/2/28/market-size>

## **Estimating Total Available Market**

- Who has the need for my products or services, the financial ability to purchase my products, and the ability to find my products?
- How many of these people or businesses exist today?
- How much money does each person or business currently spend every year solving the problem that my product or service also solves?
- Who else do I share this market with?

**Do some rough calculations here to determine your potential market size.**



## **User-Centered Design**

User-centered design means designing things with the user in mind. This means remembering you are not always the user.

**A User Interface** is a link between the user and the technology.

The touchscreen on a phone, tablet or a computer etc. is an example of a user interface – and so are the buttons on a remote control.

**User Interface Design** is designing technology that makes sense to the user, and should ideally be intuitive, so the user is comfortable and each screen and action to take makes sense to the user.

DesignMantic made a beautiful infographic called **The 10 Commandments of User Interface Design**:

1. Create a Story
2. Streamline Navigation
3. Make it Responsive
4. Ensure Accessibility
5. Form follows function
6. Use pleasant color tones
7. Define font families
8. Boost optimized images
9. Master Minimalism
10. Eliminate Errors.

See the full infographic here: <http://www.designmantic.com/blog/infographics/the-10-commandments-of-ui-design/>

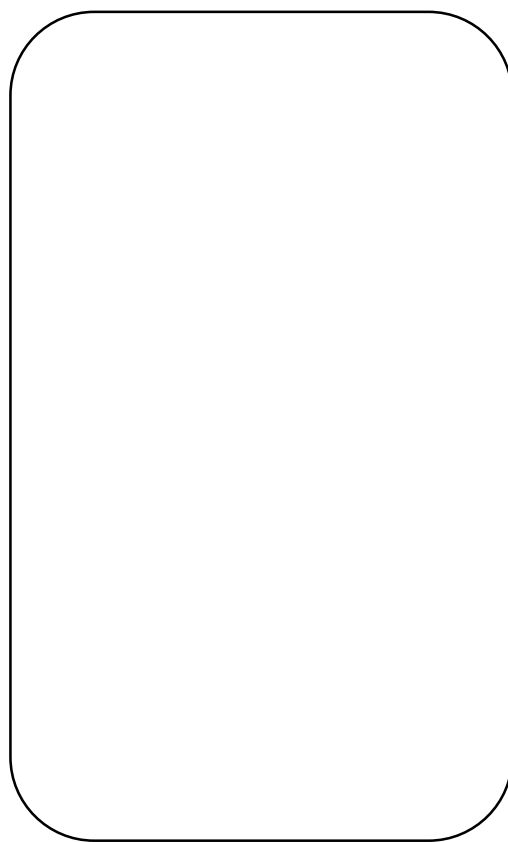
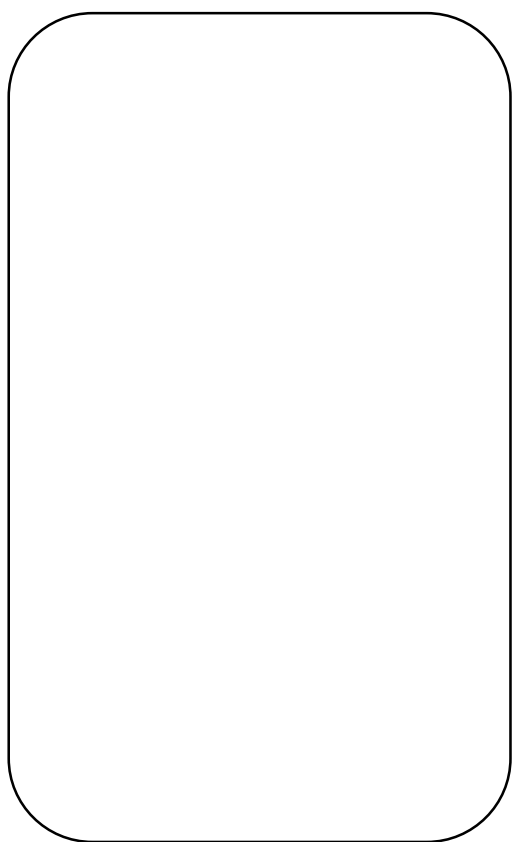
## **Activity: Usability testing of competitor apps**

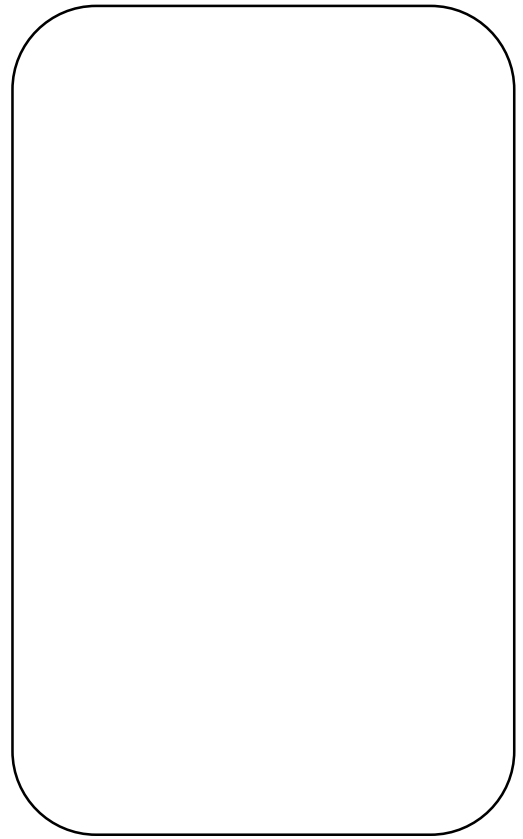
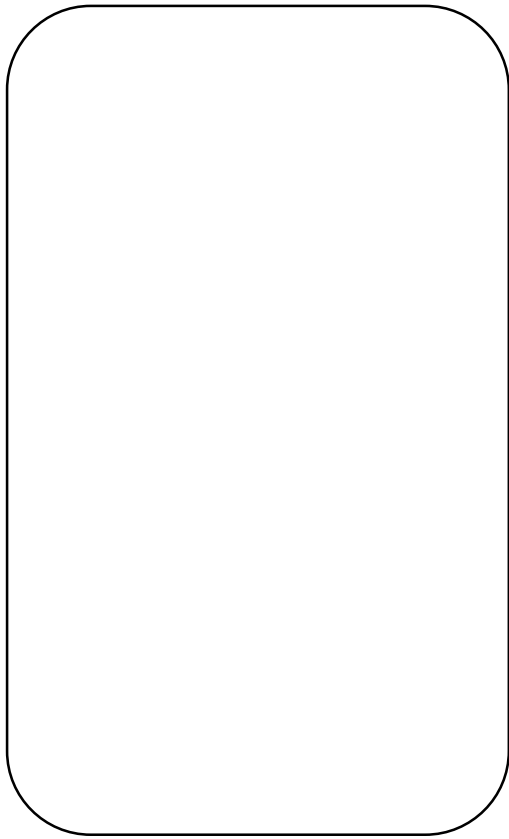
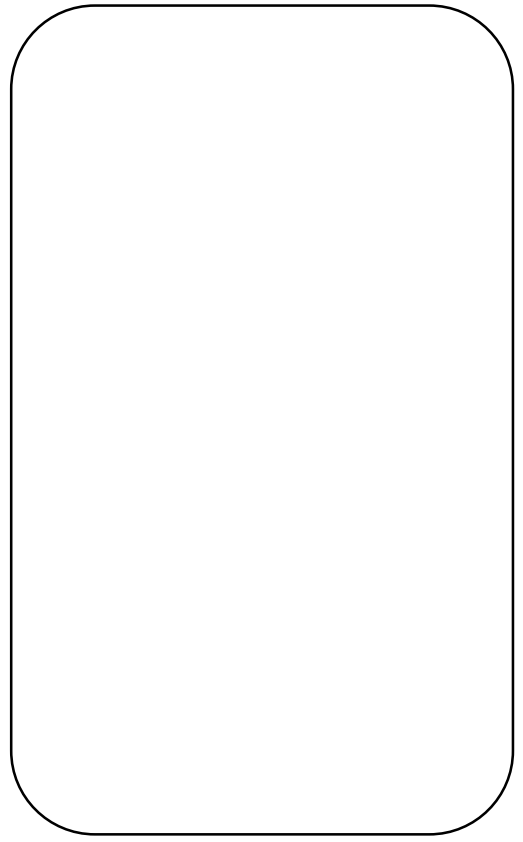
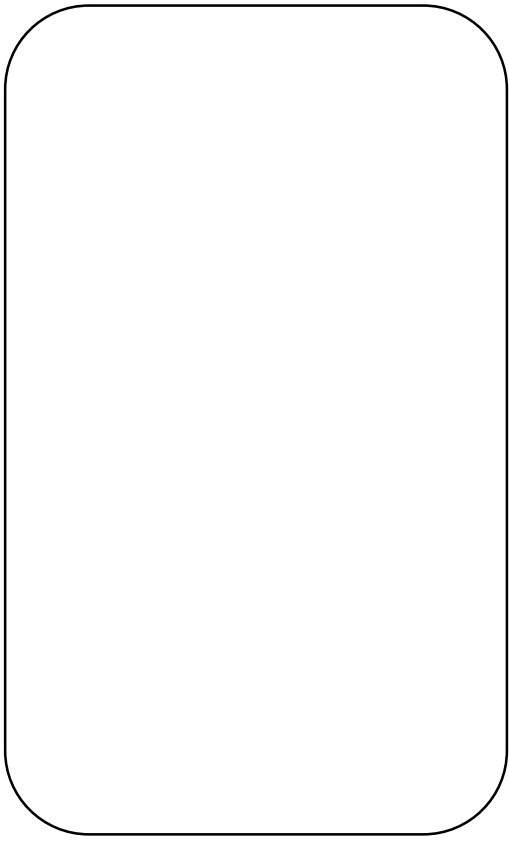
A great way to understand the ideas of Interface and Interface design is to evaluate existing apps. Select a few competitor apps and identify strengths and weaknesses. Remember these when it comes time to prototype your own app design.

<b>Name of competitor</b>	<b>What does it do well?</b>	<b>What could it do better?</b>	<b>How will your app be different?</b>

## **Activity: Paper Prototyping**

Draw out each of your screens here or use index cards. Think about how your screens will interact with each other, and draw arrows to indicate the flow of your app.





## **Project Planning:**

Create a plan for how you will complete your prototype. Figure out what basic features or components your app will need (text-to-speech, accelerometer, lists, etc.) and then research videos or tutorials that will teach you how to implement those features. Finally, make a plan for when you will work on each component.

<b>Feature</b>	<b>Resources to learn how to use</b>	<b>Timeframe</b>	<b>Priority</b>

## Collecting Feedback on your prototype: User Testing

Take notes on the feedback you receive here. Answer the Usability Testing questions and add some of your own before you begin if needed. Consider asking your peers (or mentor) to complete the table below as well. Consider this feedback before you start.

<b>Questions</b>	<b>Notes</b>	<b>Changes that need to be made by the team</b>
<b>Is there anything that is unclear or confusing in the user-interface?</b>		
<b>Would you prefer the app look or behave differently?</b>		
<b>Which features of the app interface and usability are of highest value?</b>		
<b>Are there any missing buttons or other content from the app?</b>		
<b>Did your expectations differ from the intent of the app?</b>		

## **Competitive Analysis**

Write up a summary of your analysis here. Keep your final analysis, you'll need to submit it! It should include the following:

- What features does your app that other apps do not?
- Use the chart you filled in on page 18 to help you here.

# Logo and App Color Development

The colors you use on your app screen and in your logo can set the mood for what people will feel when they interact with your app. Take some time to strategically think about what colors you want to use depending on what you plan your app to do for your consumer.

## **Color Wheel:**

- ❑ The first color diagram was developed by Sir Isaac Newton in 1666.
- ❑ 12 colors on the color wheel:
  - Primary: red, yellow, and blue (no other colors can be mixed to make these colors.)
  - Secondary: green, orange and purple (created by mixing the primary colors)
  - Tertiary: yellow-orange, red-orange, red-purple, blue-purple, blue-green, and yellow-green



## **Color tips:**

- ❑ Check out your competition and how they use colors
- ❑ Ask yourself what reactions you want your apps to inspire in your consumers
- ❑ Don't be afraid to get bold with clashing colors, or to stick to different shades of the same color!

## **Know what each color signifies!**

Red: love, energy, intensity

Yellow: joy, intellect, attention

Green: freshness, safety, growth

Blue: stability, trust, serenity

Purple: Royalty, Wealth, Femininity

Research the colors you are thinking of using to learn more about how people react to them. These websites are a good place to start:

[Colormatters.com](http://Colormatters.com), [tigercolor.com](http://tigercolor.com), [color-wheel-pro.com](http://color-wheel-pro.com)



# The 10 Commandments of Color Theory (via DesignMantic)

## THE 10 COMMANDMENTS OF COLOR THEORY

1	KNOW THE COLOR WHEEL WELL! DO YOU KNOW WHAT EACH COLOR SIGNIFIES?		<b>RED</b> LOVE, ENERGY, INTENSITY.	<b>YELLOW</b> AN INTELLECT, A JOYFUL.	<b>GREEN</b> FRESHNESS, SAFETY, GROWTH.	<b>BLUE</b> STABILITY, JUST, SERENE.	<b>PURPLE</b> ROYALTY, HEALTH, FEMININE.
2	MATCH IT. DO NOT OVERLOOK THE AUSTERITY OF ANALOG COLORS!						
3	CAN'T MATCH IT? CLASH IT WITH COMPLEMENTARY COLORS!						
4	IS CONTRAST TOO INTENSE? THEN, SPLIT IT!						
5	NEED MORE VARIATIONS? GO DOUBLE COMPLEMENTARY!						
6	GO TRIAD WITH 3 DIFFERENT HUES... CHOOSE FROM A GREATER VARIETY!						
7	SOMETIMES, MONOCHROME IS THE WAY TO GO...						
8	OTHER TIMES, AN ACHROMATIC SCHEME SERVES BEST!						
9	KNOW YOUR HUES, TINTS, SHADES AND TONES... WHAT WORKS WHERE?						
10	AND LASTLY, RGB, CMYK AND PANTONE ARE NOT THE SAME!						

dm | Designmantic

For Full Size infographic: <http://www.designmantic.com/blog/wp-content/uploads/2014/05/Color-Theory->

## Logo Design

Although it might be small, your logo is really important, as it will play a key role in helping consumers recognize your brand and your product.

We love these 5 keys for designing a good logo from StartupCamp.

1. Simplicity
2. Memorability
3. Timelessness
4. Versatility (how will it look on different size screens? On printed materials?)
5. Appropriateness (is it relevant to what your app does and to your community?)

Read the full StartupCamp article here: <http://startupcamp.com/how-to-create-an-incredible-logo-that-will-propel-your-startup/>

**We also recommend using SquareSpace's Logo Tool**, for inspiration or to turn your sketches into a digital design: <http://www.squarespace.com/logo/>

Or you can sketch your design ideas below:

## **100-Word App Description:**

Use this space to write your 100-word app description. You can start with a longer Product Description and then trim it down to 100 words or less. This description should be fun, catchy, and entice someone to buy your app. Check out the activity on the next page to see another team's app description. Remember to type up your final draft, count the words, and have it saved and ready by the submission date.

### Brainstorming Questions:

1. What is the product/service your app provides?
2. What does it do?
3. Who is it for?
4. What is the unique value that your app provides?

### **Final Description:**

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## **Activity: Review a Technovation app description**

Review the 100-description from a former Technovation team below. Provide feedback – what do you like? What would you do differently?

### App description:

SafeGuard Driving addresses the issue of impaired driving by evaluating whether a subject might be either under the influence or excessively tired, and therefore unfit to drive. The test is comprised of two cognitive components: reaction and balance. Points are accumulated by successfully completing tasks. If the subject fails, options for getting home safely will be provided via direct message to a family member, friend, or driving service. We hope to partner with automobile companies for ignition interlocks if a user fails. Our primary focus is teens, but we have the potential to expand to adults or the elderly.

## **Branding and Promotion:**

**Write your strategy for promoting your app here.**

- Messaging – How will you describe the app to consumers?
- Channels – What methods will you use to get the message to consumers?
- List the actions you will take to launch your product or service.
- How will you bring the product or service to the market?
- How do you plan to grow the number of users over time?

# Cost Structures & Potential Revenue:

## Cost structures

What are the important costs in your business?

**Fixed costs:** Costs that remain the same despite the volume of goods or services produced. Examples include salaries, rents, and physical manufacturing facilities. Some businesses, such as manufacturing companies, are characterized by a high proportion of fixed costs.

**Variable costs:** Costs that vary proportionally with the volume of goods or services produced. Some businesses, such as music festivals, are characterized by a high proportion of variable costs.

**Economies of scale:** Cost advantages that a business enjoys as its output expands. Larger companies, for instance, benefit from lower bulk purchase rates. This and other factors cause average cost per unit to fall as output rises.

**Economies of scope:** Cost advantages that a business enjoys due to a larger scope of operations. In a large enterprise, for example, the same marketing activities or Distribution Channels may support multiple products.

## Mobile App Revenue

Mashable put together a good guide on your options for generating revenue from your app.

**Freemium or Lite:** Offering both a free version of your app and a higher-priced version that is more advanced.

**In-App Purchases:** very popular in games, offering features that users can buy within the app

**Advertising:** selling ad space to other companies within your app. Generates ongoing revenue (in contrast to only getting paid once for a download of the app).

See full article here: [http://mashable.com/2011/08/17/price-mobile-app/#rqqgMkma\\_sqN](http://mashable.com/2011/08/17/price-mobile-app/#rqqgMkma_sqN)

## Pricing your product

Check out this amazing guide from **Sequoia Capital** on how to price your product, how to increase the size of the market your product addresses and more. There's an additional PDF worksheet linked at the bottom of the guide as well!:

<https://www.sequoiacap.com/article/pricing-your-product/>

Also check out Mashable's guide to What to Charge in that earlier article as well:

[http://mashable.com/2011/08/17/price-mobile-app/#rqqgMkma\\_sqN](http://mashable.com/2011/08/17/price-mobile-app/#rqqgMkma_sqN)

Things to consider (via Mashable):

- What are competitors charging?
- You can experiment with app prices over time (dropping them to grow your user base, or increasing them to test your market)
- How much will the app store take as a commission?

## **Activity: Potential Revenue Brainstorm**

**Use this space to write what your potential revenue may be. Keep this because you'll need to submit it! It should include at least the following:**

- How much does your product or service cost?
- Based on the market size you already calculated, how much money will your app make in the first year?



# The Pitch

## Pitch Video Requirements

- All members of the team must speak
- Video can be up to 4 minutes long
- The video can be any format the team wants
  - Possible formats include: Skits, Slide Presentations, Testimonials from users
- The video must be uploaded to youtube or vimeo, and the link must be shared through the Technovation submission platform

## Tips for making a great video pitch:

- Make sure everyone is loud and clear. [Good audio](#) is critical to understanding your pitch. Make sure there is minimum noise.
- Have a strong opening or “hook”
- Speak clearly and confidently.
- Use open body language, large gestures (more [tips on body language](#)).
- *Show* us the problem (and your solution). Don't just tell.
- Make eye contact with the camera.
- Use a script if possible. Instead of using "um" and other filler words, try pausing or taking a breath instead.
- Please don't chew gum or candy when speaking.
- Dress for success. Make sure your outfits are appropriate.  
**SMILE!** Be proud of your work.

## Video & Editing Tips:

- Sound Quality
  - Be sure to select a quiet space to record your video. This is very important as it affects the quality of the entire video.
  - If you can, use a separate audio recorder, as it will probably be better than the camera's built-in audio (If your phone has an audio-recorder, try it out!)
- Lighting
  - Use multiple sources of light ( table lamps, natural light from a window, overhead lights etc.)
  - Remember to turn all the lights on if your surroundings are dark

*Give yourself enough time to fully test your video set-up -- film a practice pitch, or a test shot or two. Try to give yourself enough time to practice film editing as well.*

## **Activity: Drafting the Pitch:**

Your Hook (quote, statistic, photo, skit, question, etc):

*TELL THE STORY*

Who:

What:

When:

Why:

How:

Remember that all team members must speak in the pitch. Assign team members to the different parts of the presentation:

Hook:

Beginning:

Middle:

End:

## **2016 Final Deliverables**

Your team will be judged on the following items. Assign a team member to finish anything that still needs work.

### **A complete submission from a team consists of the following deliverables:**

- **App source code** (Java, Objective-C, Swift, C#, or .aia file accepted)
  - If developed in App Inventor, please follow the [instructions listed](#) to export the appropriate .aia file.
  - Please upload your code to Google Drive or [GitHub](#) and share the link to your repository rather than uploading the file.
- **4-minute video pitch** (+/- 10 seconds, upload to YouTube or Vimeo and share the link)
- **2-minute app demo video** (+/- 10 seconds upload to YouTube/Vimeo, share link)
- **Business plan** (PDF format), consisting of the following components:
  - Product Description
  - Potential Market Size
  - Competitive Analysis
  - Branding and Promotion
  - Potential Revenue
  - What features did the team originally plan for and what was actually built into the prototype?
  - What does the team plan to build in the future and why?
- **Team photo** (with mentor and teacher included, if possible) for each team
- **100-word app description**
- **Completion of post-survey** (link will be available in each individual registrant's dashboard upon login)

**Deliverables are due on April 21, 2016 at 5pm PST.**

## **Demo Video Guidelines**

Your demo video highlights the functions of your app. This video should be no more than 2 minutes long. Because of this tight timeline, we recommend focusing on the functions that are unique to your app.

### **Your demo video should:**

- Be under 2 minutes long
- Clearly demonstrate the functionality of your app
- Highlight the unique features of your app
- Focus on the user interface

The demo video is one of your deliverables, and must be uploaded to youtube or vimeo by the time you submit.

## **Business Plans**

A **business plan** is a tool used by entrepreneurs to organize and communicate business ideas to external parties.

A business plan is usually written in a **narrative** form and contains a series of sections outlining your idea and future plans. An entrepreneur may also develop a presentation (or “pitch deck”) with visual imagery for use in pitches.

The contents of a business plan are often kept confidential; that is, not posted publicly and only shared with select parties, since many entrepreneurs want to prevent other companies from using their ideas.

**The Technovation business plan includes 5 sections. You’ve been working on it in previous units, and will put those pieces together into one plan.**

- Product Description
- Potential Market Size
- Competitive Analysis
- Potential Revenue
- Branding and Promotion

## **Business Plan Audiences**

The audience of your plan for Technovation will be the Technovation judges (industry professionals who volunteer their time with Technovation). They will evaluate your plan on the rubric on page 6 of this starter kit.

The business plan is also key to pitching your business to investors. There are many people who might be interested in supporting your venture, including:

There are many types of investors who may be interested in supporting your venture, including:

- **Venture capitalists**, (“VCs”) lend money in exchange for taking stock in a company to share in potential future profits. VCs typically invest in early stage ventures, involving high risk but potentially high returns from their share of future earnings.
- **Banks** make loans to be repaid in the future with interest on a defined schedule. Banks typically lend to companies with established revenues and existing assets (e.g., land, machines, inventory) to be used as collateral.
- **Foundations, nonprofits, and government agencies** may provide grants or low-cost loans for certain activities which align with their organizational mission.
- **Crowdfunding** is a newer source of start up funding, involving websites with platforms where many people can contribute small amounts of funding to a project or idea posted by an entrepreneur.

Examples: [Kickstarter](#) and [Indiegogo](#)

## **Business Model Guide**

Use this guide to organize your business model in a logical way. Your plan should answer all of these questions.

### **BUSINESS MODEL GUIDE & QUESTIONS**

What problem in the community is your app solving?

How are you defining your community?

Describe your app in 3 sentences max.

**Value Propositions:** What value does your app idea add to a customer? Why is your app idea something that people will want to use? What stands out about your app idea from others? What is special about your app idea?

**Market Size:** Who are you trying to sell your app to? How many people do you plan to sell your app to? There needs to be enough people who will buy your app to make money.

**Revenue Streams:** What are the different ways that you will make money? Will you charge people to use your app? If so, how much and how often (monthly subscription, yearly, or daily)?

**Cost Structure:** What are the expenses for your team? Where would you work out of if you started your own business and how much would it cost? Do you have employees? Who will you need to hire, if anyone?

**Distribution Channels:** How are you getting your app to customers? How are you increasing your market size? Will you use social media, sell to people in person, sell your app to schools or other business? Where will you advertise?

Is there anything that your team will have to find out (or needs more information on) in order to build your app? What would you ask investors for to take your app to market?

## Glossary

**Cost Structure:** What are the important costs in your business?

**Customer development:** Understanding your customer's needs even better than they do, and making sure customers will use your product.

**Economies of scale:** Cost advantages that a business enjoys as its output expands. Larger companies, for instance, benefit from lower bulk purchase rates. This and other factors cause average cost per unit to fall as output rises.

**Economies of scope:** Cost advantages that a business enjoys due to a larger scope of operations. In a large enterprise, for example, the same marketing activities or Distribution Channels may support multiple products.

**Distribution Channels:** How are you reaching your customers? Which method works best? Which are the most cost-efficient?

**Fixed costs:** Costs that remain the same despite the volume of goods or services produced. Examples include salaries, rents, and physical manufacturing facilities. Some businesses, such as manufacturing companies, are characterized by a high proportion of fixed costs.

**Lean Startup Methodology:** Talking to your customers early and often, testing your product with potential customers as early as possible even if the product is imperfect, and learning as much as you can about your market and business quickly, before pouring resources into it. Developed by Eric Ries.

**Market Research:** Figuring out what your market wants. What problem is your customer interested in solving and does your product/service solve this problem in the customers' eyes?

**Market Size:** Who are all the people and organizations for which you are creating value? There must be enough people who would buy your product/service to make a profit.

**Pivot:** Changing your business strategy/app idea to suit either a new customer or the same customer... for example, making your app a solution to a problem that your customer indicates as a problem, rather than the one you originally intended to solve.

**Profit:** The extra money that you have made, subtracting any costs incurred, at the end of the day. Profit = Revenue – Cost.

**Revenue Streams:** How will you make money and from whom? Paid apps? In-app purchases?

**User-Centered Design:** Designing with the user in mind (*You* are not necessarily the user!)

**User Interface:** Way of interacting between person and product, especially in software.

**User Interface Design:** Designing things that will make sense for the end user, by thinking about how the user will interface with the product.

**Value Propositions:** What value do we deliver to the customer? Low Price/Accessibility/Convenience?

**Variable costs:** Costs that vary proportionally with the volume of goods or services produced. Some businesses, such as music festivals, are characterized by a high proportion of variable costs.