



# Market Research & Maps

*Unit 3*

# Agenda

- [Share](#) App Ideas
- Customer [Development](#)
- Creating customer [interviews and surveys](#)
- Why [startups](#) fail and succeed
- Estimating [market share](#)
- App Inventor [Maps Tutorial](#)
- App Inventor [Blocks and Components](#)
- Wrap up, share surveys and challenges

# Check in: Share App Ideas

- What app ideas came out of your brainstorm session?
- Which one are you leaning towards and why?

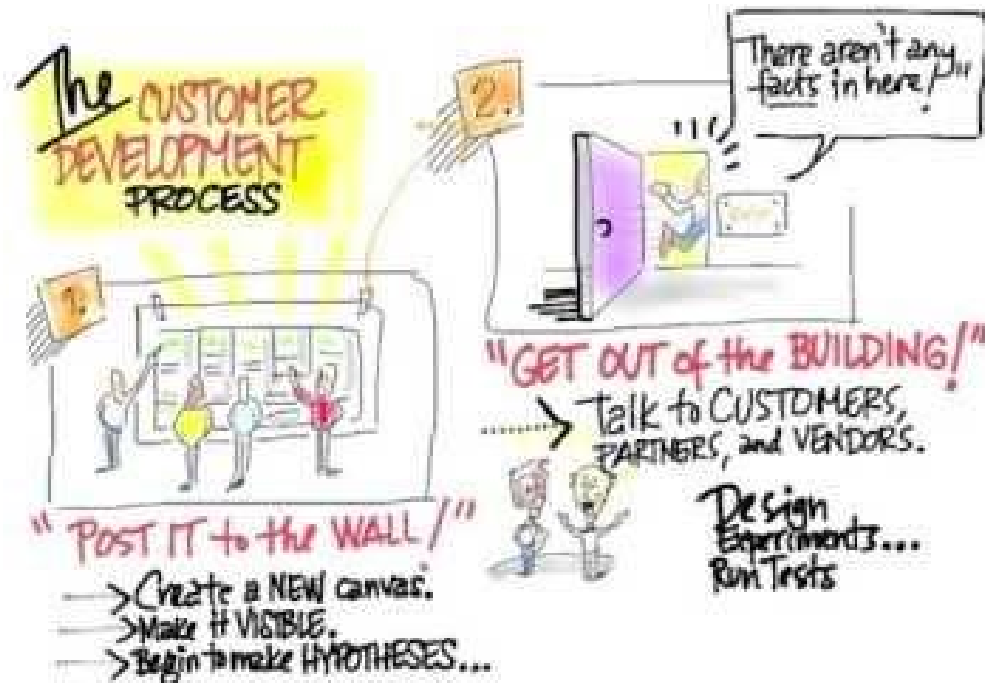


# Choose your team's app idea



- Ask everyone to vote on the app ideas you just shared
- Identify the top ideas
- Select the idea your team wants to work with. Allow time to talk about the decision
- Make sure that everyone feels included in the final decision

# Customer Development (discovery, validation)



# Understanding Customers

## ASK THE RIGHT QUESTIONS, BUILD THE RIGHT PRODUCTS

A Guide to Customer Development Interviews

From *WiseHunch* with love

### So you have an 'awesome' product idea, right?



Most likely it's based on assumptions, which more often than not are wrong. But the chances of building a product people want greatly improve by talking with potential customers early and often to find evidence to these questions:

- Does the problem (the product solves) exist?
- Who has this problem?
- Is the problem worth solving?
- Do your potential customers agree that the product solves the problem?

### Put your assumptions on paper.

Some of these are:

- The customer segment(s)
- The problem(s) they have and are eager to solve
- The solution (i.e. product's value proposition and key features)
- The channels through which customers can be reached
- The sources of income



*(Find all key assumptions in Alex Osterwalder's Business Model Canvas and Ash Maurya's Lean Canvas)*

### People know something you don't...

People don't know what they want but they are experts on the problems they have. This is what you can learn from them.



### Forget about surveys. Focus on people's stories!

At an early stage most of the learning comes from people's stories, their tone of voice and body language.



Surveys are useful only when we've learned enough to know which are the right questions to ask and their possible answers.

# Listing your assumptions about your customer

- 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: Preparing

## Beware of yourself!

- We are shy
- We are biased
- We fear rejection
- We are lazy
- We don't listen hard enough



At first you'll suck at it but that's OK

- Practice with friends/family/colleagues
- Test your questions
- Leave the most promising interviews for last

## Finding interviewees: Fish where fish swim

- Introductions from family, friends and colleagues
- Online interest groups
- Industry conferences
- Entrance/exit of events, bus stations, coffee shops, etc.
- Classified ads



## Stop when the feedback gets repetitive



- Keep doing interviews until you stop learning something new
- It could take 10 or 50 interviews
- If this doesn't happen your customer segment could be too broad, so narrow it down



# Conducting Interviews

## Set your objective and choose the right type of interview

Problem Interviews – validate your customer and problem assumptions.

Solution Interviews – validate your unique value proposition and key features assumptions.



## Become a learning machine!

- Interview one person at a time
- Record (audio, video) the session whenever possible
- Focus on listening
- Ask open-ended questions
- Dig deeper into the anecdotes to get the details and their meaning
- Avoid asking loaded questions (e.g. "Do you have problem X?")
- Avoid asking hypothetical questions (e.g. "Would you do Y if Z?")
- Take notes to describe what you hear and see, not to analyze (you'll do that later)
- Complete your notes immediately after the interview (more importantly if you didn't record it)

## Problem Interviews

aka "Listen to people's stories without mentioning your product idea"



### Permission

Get their contact details for future contact.

### Demographics

Gender, age, occupation, product ownership, past behavior, etc.

### Problem Context

**Kick-start question:**  
"Tell me about the last time you..."

**Follow up questions:**  
"What exactly...?", "When did that...?", "Where...?" "How did you...?", "Why did you...?"

### Current Workarounds

"How do you currently deal with the problem(s)?"

### Problem Rating

Summarize the problem(s) identified by the interviewee. Find out if these are "no need to solve", "nice to solve" or "must solve".

## Solution Interviews

aka "Demo your product and listen some more!"



### Demographics

Gender, age, occupation, product ownership, past behavior, etc.

### Problem Relevance

"Do you have problem X, Y, Z?"

### Prototype

Demo the product and ask "How does the product address the problem(s) you have?"

### Permission

Get their contact details for future contact.

# Sample interview questions

- 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?

# Analyzing Results, Finding Patterns

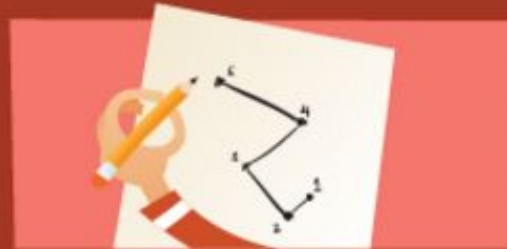


## Get a little help from a friend

- Analyze your findings with someone else to keep your bias in check and to see things from a fresh perspective
- Work from the interview recordings and field notes, not from your memory

## Connecting the dots

- With the demographic information build the customer persona(s)
- Identify patterns by looking at similarities, differences, frequencies, sequences
- Identify cause-effect relationships
- Compare findings against assumptions



## Take action and repeat

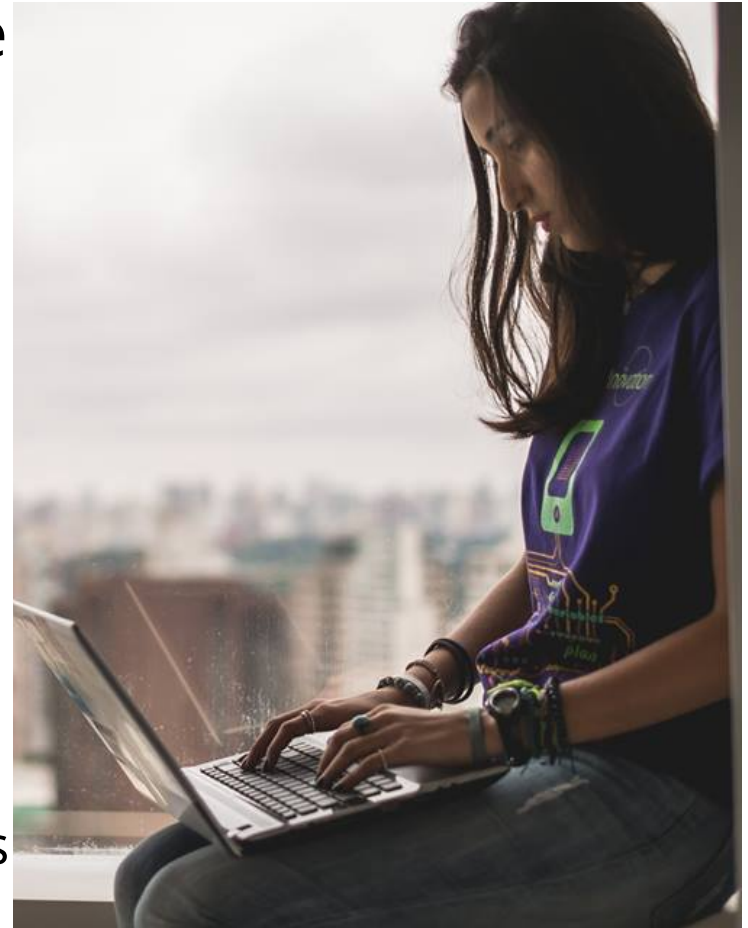
- Refine your assumptions
- Tweak (or totally change) your prototype
- Keep doing interviews and learning from potential customers

# Conducting Surveys

- Brainstorm questions you can ask your customers to determine their needs and interests.
- Narrow the list to 5-7 of the best ones that will test your product feasibility with your customers.

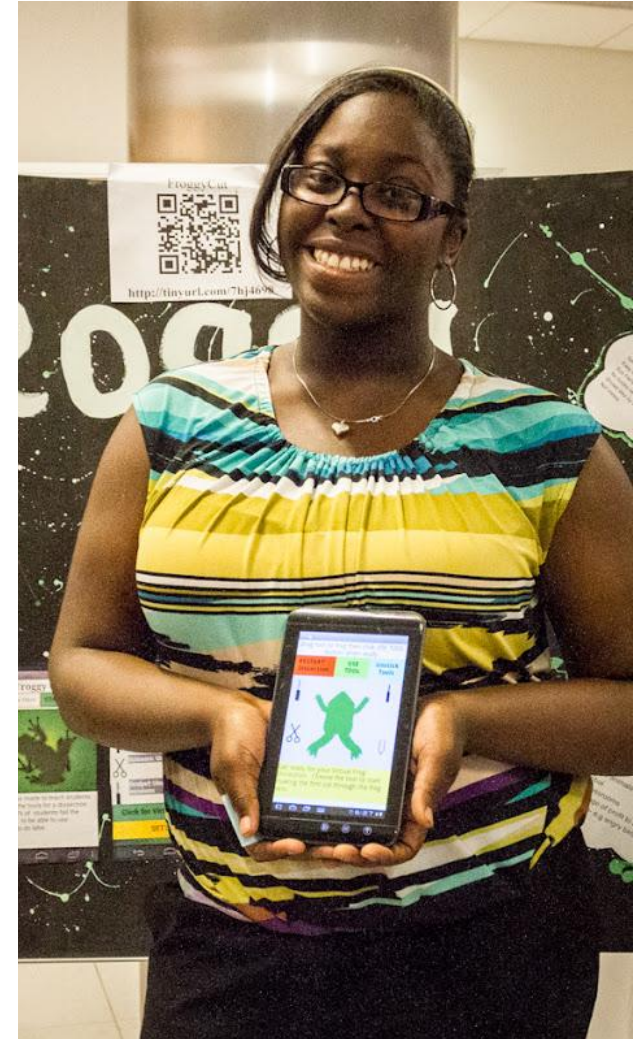
Tip: Think about who your ideal customer is, and what you would want to ask them

Inspiration: Check out the [sample surveys](#) for Angry Birds & Shazam on the next slides



# Tips for creating effective surveys

- Good surveys are short
- Survey a broad range of people to understand what potential users *and* non-users care about
- Multiple choice questions with checkboxes are easier to answer
- Remember to collect demographic information ([learn how here](#))



# Sample Survey: 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 (data we received):***

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

- 30/50 said yes, they enjoy puzzle games
- 12/30 reported a satisfaction level of less than 7
- 40/50 included at least one way to contact them

## ***What we learned:***

- We have a good size market for our app
- Most people are fairly satisfied with their options of mobile games
- People are interested in talking to us about it

# Sample Survey: 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 satisfied are you hearing music you like but you do not know the title of? (1= not satisfied, 10 = very satisfied)
- 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 completed the survey.

- 45/50 said yes, they enjoy listening to music
- 22/45 reported a satisfaction level of less than 4
- 40/50 included at least one way to contact them

## ***What we learned:***

- There is a large market size for our product
- Most people are not very satisfied listening to music that they don't know the title of
- People are interested in talking to us about it

# Distributing your Survey

Now, get your survey in front of the right people!

- Twitter
  - "@username Would like yr feedback on [product/problem/solution] – shd only take 2mins [URL] thanks!"
- Facebook
  - "Has anyone heard of an app that does \_\_\_\_?"
- Email
- Ask in person:
  - create survey forms for circulation among friends and family
- Online survey platforms:
  - try [www.surveymonkey.com](http://www.surveymonkey.com) or [google forms](https://www.google.com/forms) for creating free online surveys, or check out [other](#) polling tools.

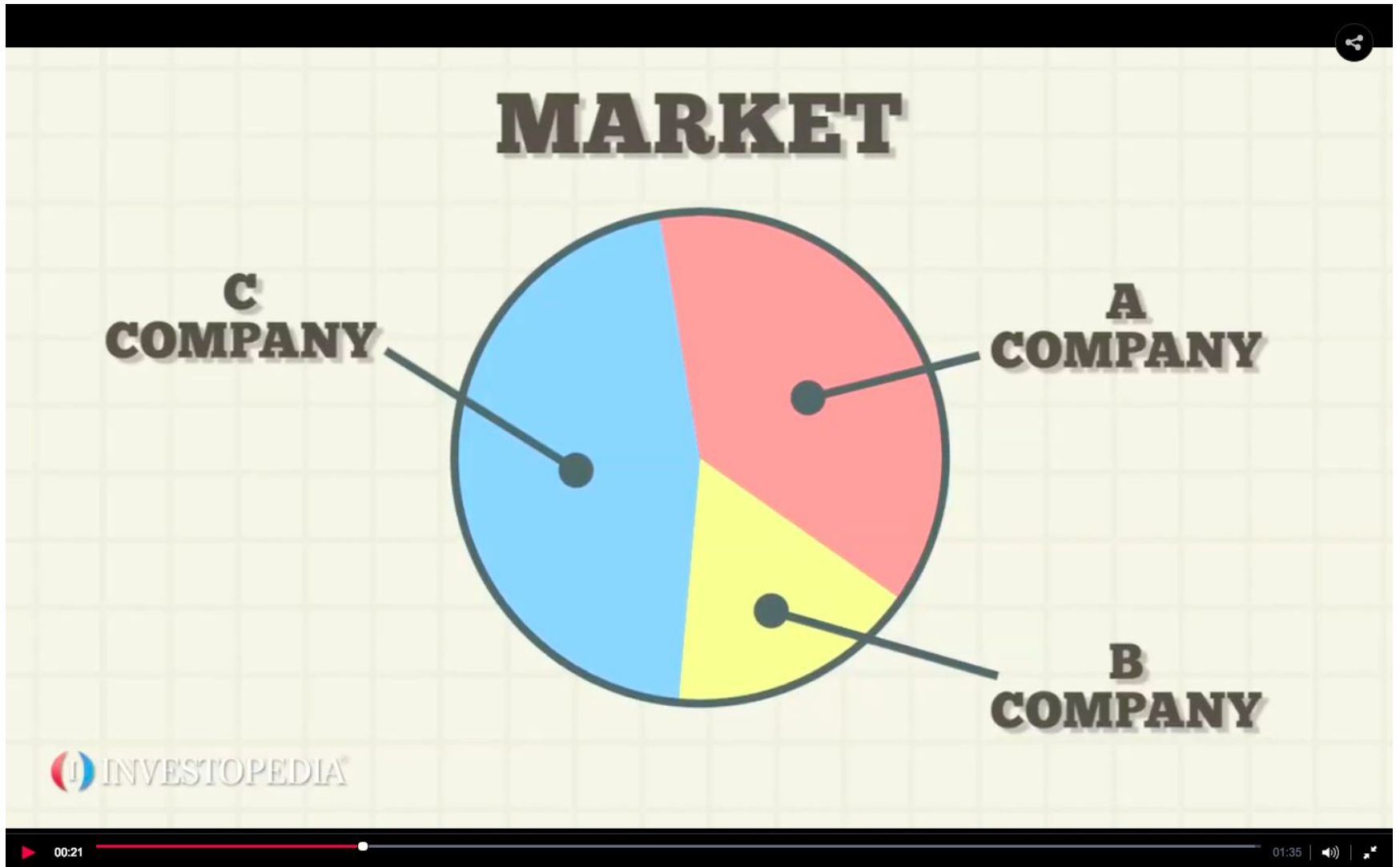
*Need feedback on your survey design? Share your survey on the [Technovation Facebook page](#) for feedback from Alumnae and the Technovation team*



# Why startups fail and succeed



# What is Market Share?



# Estimating Market Share & Total Available Market (TAM)

## Average Revenue Per User - ARPU

- **Average Revenue Per User – ARPU**
  - Product + Service revenue: (\$) per user
- Note: work with (or create) a variation of ARPU that fits your business model
  - Break it down into the different revenue components
  - For instance if you have a web-based advertising revenue model
  - $ARPU = AARPU + ASRPU + AFRPU + \dots$ , where
    - > AARPU = Average Advertising Revenue per User, or
    - > ASRPU = Subscription fees
    - > AFRPU = Finance transaction fees, etc.
- Ex Product = truck tailpipe exhaust to power
  - Retail Price: \$1,500 to \$2,500 (ave: \$2,000)
  - Services: \$100 to \$500 (ave: \$300)
  - ARPU: \$2,300

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# Market Size: Top Down vs. Bottoms-up

**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  $1.36\text{B people} \times \$1/\text{toothbrush} \times 40\% = \$540\text{M}/\text{year}$ .

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?

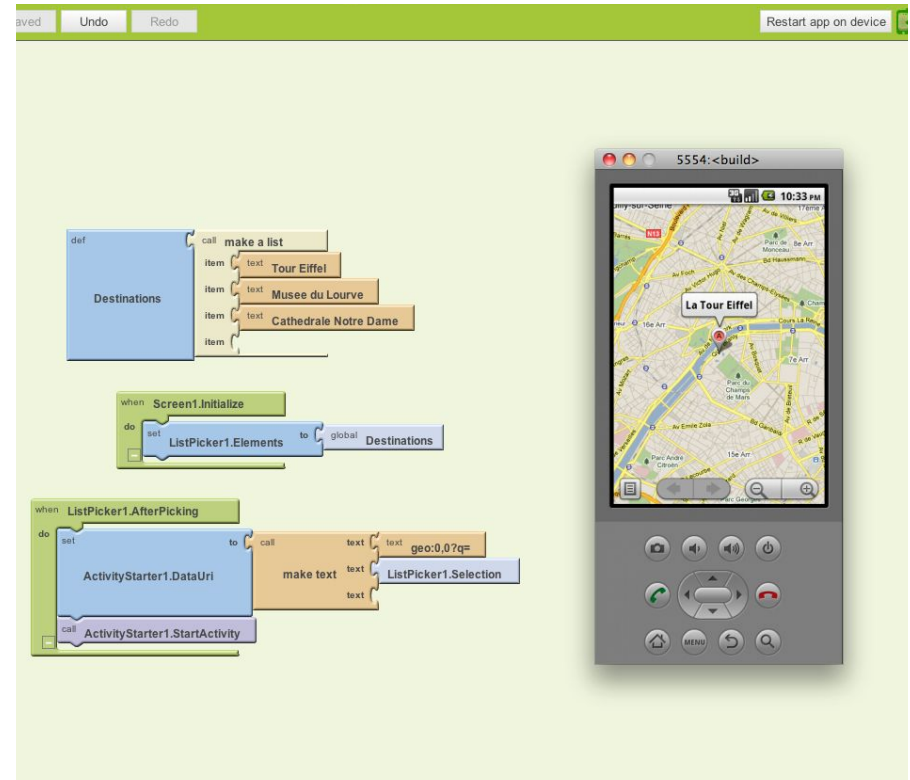
Meanwhile, the ***bottoms-up*** analysis would figure out TAM based on how many toothbrushes you'd sell each day/week/month/year through drugstores, grocery stores, corner mom-and-pop stores, and online stores.

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.

[Complete Primer, Using Google Keyword Searches to estimate demand, Ways to think about market size](#)

# AI: Maps Tutorial

- Learn how to start another app from your app (specifically the [maps](#)).
- Learn how to use layout arrangements to organize the components on your screen.
- Learn how to hide and show components based on other settings.



# Understanding different types of AI Language Blocks

Built-in blocks are available regardless of which components are in your project. In addition to these *language blocks*, each component in your project has its own set of blocks specific to its own events, methods, and properties.

- **Control blocks**
- **Logic blocks**
- **Math blocks**
- **Text blocks**
- **Lists blocks**
- **Colors blocks**
- **Variables blocks**
- **Procedures blocks**



# AI Components

Each component can have methods, events, and properties.

- **User Interface components** - [Button](#), [CheckBox](#), [DatePicker](#), [Image](#), [Label](#), [ListPicker](#), [ListView](#), [Notifier](#), [PasswordTextBox](#), [Screen](#), [Slider](#), [Spinner](#), [TextBox](#), [TimePicker](#), [WebView](#)
- **Layout components** - [HorizontalArrangement](#), [TableArrangement](#), [VerticalArrangement](#)
- **Media components** - [Camcorder](#), [Camera](#), [ImagePicker](#), [Player](#), [Sound](#), [SoundRecorder](#), [SpeechRecognizer](#), [TextToSpeech](#), [VideoPlayer](#), [YandexTranslate](#)
- **Drawing and Animation components** - [Ball](#), [Canvas](#), [ImageSprite](#)
- **Sensor components** - [AccelerometerSensor](#), [BarcodeScanner](#), [Clock](#), [LocationSensor](#), [NearField](#), [OrientationSensor](#), [ProximitySensor](#)
- **Social components** - [ContactPicker](#), [EmailPicker](#), [PhoneCall](#), [PhoneNumberPicker](#), [Sharing](#), [Texting](#), [Twitter](#)
- **Storage components** - [File](#), [FusionTablesControl](#), [TinyDB](#), [TinyWebDB](#)
- **Connectivity components** - [ActivityStarter](#), [BluetoothClient](#), [BluetoothServer](#), [Web](#)
- **LEGO® MINDSTORMS® components** - [NxtDirectCommands](#), [NxtColorSensor](#), [NxtLightSensor](#), [NxtSoundSensor](#), [NxtTouchSensor](#), [NxtUltrasonicSensor](#), [NxtDrive](#)

# Wrap-Up & Share

- Share a photo of your team on [Facebook](#) or [twitter](#))
- Complete the [survey](#)
- Post any questions or difficulties you may be encountering on the Technovation [Facebook](#) page, and we will help you!





**Congratulations!**  
**You are well on your way now!**

