USDA Course 4

Agricultural Innovation and Entrepreneurship Toolkit

Things You Should Know About Your Toolkit

This toolkit is designed to help you think like an entrepreneur and be innovative in your product design and prototype development, and will guide you through the 7 topic areas that you will need to focus on for your pitch. Video links are included for additional information to help you focus on each topic area. The rubric is located at the back of the toolkit.

You will be creating a product, or a service, centered around agriculture – it is up to you what you come up with.

First, think about the overall theme – agriculture. Throughout this course thus far, we have explored some agricultural innovations and the problems they can help solve. Think of some ideas for problems and solutions that fit this theme. Now brainstorm some product/service ideas. Write down every single idea you come up with – even the silly ones.

Use this space to write down some early ideas.

Next, narrow it down to the top three ideas and write them here:

1.

2.

3.

Don't be afraid to change your idea as you get into the rest of the toolkit. Often a business needs to "pivot" or change their idea as they get into the details.

Once you have a few ideas, do some research to see if they already exist or ways you can improve your product idea. Which of your product ideas seems the most innovative and different?

Finally, narrow down your idea list to one final selection.

Describe your product idea:

Sketch your product:

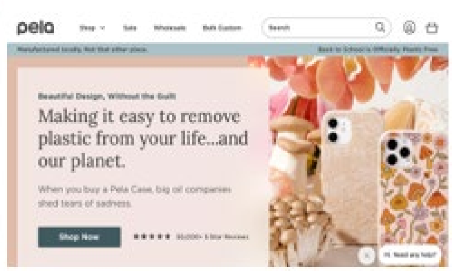
A sample theme is included if you have not thought of a product or service for your hypothetical business.

Theme: Value-Added Agricultural Products

Value-added agriculture entails changing a raw agricultural product into something new through packaging, process, cooling, drying, extracting or any other type of process that differentiates the product from the original raw commodity.

Take an agricultural by-product and prototype a new product. Some examples are below:

Remember your product can be inspired by existing items but it must be unique and cannot be a direct copy, that is plagiarism.



Prototype Approved Items List

If you are creating a physical prototype, these are the guidelines to follow:

For building your prototype, there is a wide range of items you can use. Ideally, these items can be sourced for free or very little cost, just by looking around your classroom or home. You are expected to build the best prototype you can without spending money. If you have questions regarding a possible prototype material or item, please ask.

If you want to create a digital prototype, these are some options:

- CAD Designs
- Minecraft
- Paint
- Adobe
- Digital sketch tools

Approved Items for Your Prototype

While store-bought items may be used as props for demonstrating the prototype, and used/found items may be deconstructed to use their components, whole off-the-shelf items should not be used for their intended purpose as part of the prototype. For example, including a working flashlight as a flashlight in a product is not approved, but using the round plastic lens from a flashlight as a component of a product is fine.

- Cardboard: boxes, tubes, etc.
- Recyclable plastics: bottles, containers, lids, etc.
- Plastic utensils, straws, cups, etc.
- Tape – any kind
- Metal fasteners: screws, nails, nuts, bolts, washers, etc.
- PVC pipe
- Plywood
- String, ribbon, yarn, fabric, felt
- Paper: colored, newspaper, cardstock, etc.
- Rope, Velcro, twine, wire ties
- Glue – any kind
- Wood craft materials: popsicle sticks, wooden dowels, etc.
- Paint
- Decorative items

Topic Area 1: Identifying Your Target Market

This topic area is all about your customer. For a business to be successful, they need to identify who their target customers are and who will purchase their product.

We might be tempted to think that everyone is our target customer, but this is not true. Each product has a first market, or initial customer group that you will want to go after first. You should be able to imagine exactly who that customer is.

Knowing your customer will help you determine how you will get information to your customer, where you will sell your product and what marketing (advertising) methods your will use. Your target market determines many things for your business.

Here are some questions to consider when thinking about your target customers.

- What age is your customer (example – teen, young adult, senior citizen, etc.)
- What are the interests of the intended audience?
- What are the lifestyles of the intended audience?
- What is the income of your target customer?

Watch the video and complete the activity to help you figure out who your target customers will be. If it helps, draw a picture of your customer. You should be able to clearly imagine who they are in your mind.

Identifying Your Target Market Video Link

Identifying Your Target Market

In your own words, describe what a target market is:

____

____

List three things to consider when thinking about your target market:

1.

2.

3.

Why is understanding who the target market is important for a business?

Target Practice

Directions: Select three products that interest you. Determine the target customer for that product and three characteristics (age, gender, income level, family size, occupation, education level, etc.) for the target customer.

Product 1: ____

Target Customer: ____

Characteristics of Target Customer: _____________________________________

Product 2: ____

Target Customer: ____

What are the characteristics you think your company's customers will have? Describe your target market's age, gender, income, needs, wants, and spending habits.

What do you think are the lifestyles and interests of your customers? What do they value in the things they buy? Do they value image (how cool it is), price (how expensive/inexpensive it is), function (how it works), appearance (what it looks like), quality (how long it may last), etc.? Make a list of what you think your target market wants out of a product.

Be sure to keep this worksheet to help you with ideas when you make your video pitch!

Topic Area 2: Value Added

Products add value to the customer. Here, you will need to think about what value your product is providing to customers and how that can be a strong selling point.

Value Provided/Added Video Link

Why would people spend their money on this item?

____

____

What value does your product provide to the customer?

____

____

Describe the benefits a customer can expect from your product. This can be done by listing what your product offers – think physical, financial and digital.

____

____

Think about customer's "pain points." Pain points are problems that customers experience or obstacles that get in the way when using current products. How does your product relieve pain points for your customer? What is the problem your products will help them solve?

____

____

Why would people spend their money on this item?

____

____

What makes your product unique compared to other similar products?

____

____

How will your company work to make sure you are creating a quality product?

____

____

Topic Area 3: Pricing Your Product and Profits

A wise person once said, "Something is only worth as much as someone will pay for it." This topic area will help your team decide how much to sell your product for and how to use the profits your business makes from selling your product.

You will need to conduct some research into what items would cost if you were to build this product. These can be general numbers and do not have to be exact – make them your best guess. You can do some internet research to find potential options for purchasing parts.

You will also need to research the competition. Businesses often ground their pricing to be similar to their competitors. You will need to do some research to look at similar products on the market and what price point their price point is.

Our competitors are:

____

____

Pricing Your Product Video Link

Once you have an idea of how much you want to charge, you need to calculate your potential profits.

Some questions to work through:

How many units (products) do you plan to make in year 1? What about in year 5?

How much profit do you need to pay each member of your team?

How much profit do you need to make in order to sustain your business?

What will your product cost?

What is your net income?

What will your potential profit be after 1 year? 5 years?

How will your business use its profits?

All of these go into consideration for how you will identify a price for your product and give a detailed explanation. Use the worksheets as a guide.

Pricing Your Product

Inventory Costs

Think about the different components of your prototype and list them below. After you have listed the components of your prototype, think about what materials you would use to make a *fully functioning* version of your product.

List each part of your prototype and the materials that would be used to make that component. We have provided an example for you.

Example:

Component= Well pump handle Material= 9 inches of PVC pipe

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Component________________________________ Material = _________________________________

Materials Research

Next, do some in-person or online research to determine the cost of these materials. Remember, sometimes materials can be less expensive if you buy them in bulk from a manufacturer rather than a store like Walmart, Home Depot or Lowes, so be sure to do your research!

List each material and it's cost in one unit of your product. For example, if you find copper wire at $5.00 for 75 ft., but you need 1.5 ft. for each unit of your product, how much will your cost per unit be for copper wire?

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Material=___________________________ Cost=________________________________

Operating Expenses

Operating expenses are the costs to keep your business running after you have started it.

The expenses could include:

- Paying yourselves and any employees
- Equipment maintenance
- Rent
- Utilities

Estimate your operating expenses for your business below.

Expense: ______________________ Cost=______________________________

Expense: ______________________ Cost=______________________________

Expense: ______________________ Cost=______________________________

Expense: ______________________ Cost=______________________________

Expense: ______________________ Cost=______________________________

Figuring the total cost of one item

Add your annual materials cost (p. 2) to your annual operating expenses (p. 3).

__________Materials + ___________ Operating = ___________ Total expenses

Divide the total expenses by the estimated number of units per year (from part 2) to get the real cost per item.

____________________ ÷ ___________________ = ________________________

(Total expenses) (Estimated units) (cost to make one item)

Researching the Competition

Now that you know about how much it will cost you to make each unit of your product, you must decide how much profit you hope to make. Profit is the customer price minus the cost per unit – basically, it's how much money your company will make, allowing it to grow.

Businesses often price their products to be similar to their competitors. Do some research to see what similar products are out there and what the price is for these products. Compare this to your price per unit. How much profit can you build into your price and still remain competitive with other companies?

Our competitors are:

______________________________ and the price of their product is____________________

______________________________ and the price of their product is____________________

______________________________ and the price of their product is____________________

The sales price of our product:

____

Now think about what you want to do with your profit. Will you invest it back into your company in the form of more employees, better materials, or better equipment? Will you expand to a new location? Will you split the profits among your investors? Describe your plans:

____

____

____

____

____

Topic Area 4: Marketing Your Product

Marketing is how people connect to your product and business, how they learn about it, and how they tell others about you. The four P's of marketing since the 1950s are product, price, place and promotion.

Marketing tactics are the specific things you do to sell to your customers. An important thing to remember in marketing is that you don't sell a product, you sell a benefit.

A famous marketing says is, "Don't sell the steak, sell the sizzle."

You need to consider how your company will market your product and business.

Your marketing plan should include:

How will you connect with your potential customers?

Where is one place your company will run an advertisement?

How will you get the word out?

Marketing Your Product Video Link

Product name vs. Business name

Naming a company is an important step to take as you move forward with your business. It helps your customers identify you and it is how you will be known in the marketplace. Good names are memorable and stay in a customer's mind. The business name is the first contact you have with your customers.

It should be catchy and easy to remember
It should be short (1-3 words)
It should be easy to pronounce
It should project a positive image

Example: Apple is a business and they have products that are named iPhone or iPad. Nike is the business and brand, but their shoes have different names, like Air Jordan or Nike Zoom.

Business Name:

Not only does your business need a name, but many businesses also name their products. Having a product with a name will make it easier for customers to identify what they are buying. It allows customers to easily tell others about the product and company. Your product name needs to be different from your business name.

Brainstorm a few product name ideas.

____

____

____

Narrow it down to your favorite product name idea.

Final product name:

____

Why did you choose this one?

____

Some other areas to consider when marketing your business are defining your company's values and its mission. These are not included in the evaluation criteria but may be included in your pitch.

Defining Your Company's Values

Values are what drive a company. You have your personal values that you have learned from your family, at school, while on a sports team, etc. that inspire you and help you when you are facing a challenge, Similarly, businesses have values that keep them focused on their goals and help send the right message to their customers.

Mission Statement

One way to show your product value and your company's value is through a mission statement.

A business mission statement helps to tell people what your business is all about.

You'll want to tell potential customers some key things about your business.

- What do we do?
- Why do we do it?
- How do we do it?
- For whom do we do it?

Mission statements should be short and focused (try for 25 words or less).

Mission statement examples:

IKEA: To create a better everyday life for many people.

Tesla: To accelerate the world's transition to sustainable energy.

Walmart: To save people money so they can live better.

Defining Your Company's Values Video Link

Note: A slogan is a simple and memorable motto or catchphrase that's often used in commercial advertising in a repetitive manner. It is not the same as a mission statement.

Defining Your Company's Values

Values: important beliefs or principles held by a person or group

Brainstorm some of the values you want your company to have:

1.

2.

3.

4.

Write your mission statement here:

____

____

____

____

____

____

____

____

____

A few examples of company core values include:

Accountability

Boldness

Collaboration

Continuous improvement

Curiosity

Customer commitment

Diversity

Honesty

Humility

Inclusion

Innovation

Integrity

Making a difference

Passion

Persistence

Self-improvement

Sustainability

Teamwork

Transparency

Trust

Vulnerability

Topic Area 5: Logo

Part of good marketing is having a good logo. Logos are visual representations of everything your business stands for. A strong logo can help your customers easily identify your business. Your company logo enhances potential customers' and partners' crucial first impression of your business. Logos are used on stationery, business cards, flyers, social media and websites. They can even appear on the final product. You'll want to think of your logo as part of your branding.

Logos fall into seven categories:

Font-based	Abstract mark	Mascot	Combination mark

Emblem	Pictorial	Wordmark

Use the space on the next page (or your own paper) for a first draft sketch of your logo!

Logo

Topic Area 6: Distribution Plan

Market Distribution Plan: **Where will you sell your product?**

The final piece of the marketing puzzle is to figure out where you will sell your product. Most products don't start out on the shelves of a huge store like Walmart – they begin somewhere else, on a smaller scale. Decide as a group where you will start selling your product. Remember to keep your potential customers in mind. Think about the kind of customers you want and how you plan to reach those specific customers.

Some questions to consider:

Are you partnering with a local business to sell your product? ______________________________

Where's the first place your product will be sold? ____

Why did you choose this place? ____

Where will you be selling in 3 months? ____

Where will you be selling in 6 months? ____

[Defining Your Company's Distribution Channels]

Topic Area 7: Your Prototype

Your prototype

Create a prototype of your product that will help you demonstrate how it works and tell the story of how you conceived and developed it. Your prototype does not have to work – but you should use it to explain how it *would* work. So, if it has moving parts, describe how they would be powered. If it's made of cardboard, explain what materials you would use in the final product. Do your best to show and describe the science and engineering concepts that would go into your product. Your prototype is a powerful tool to help potential investors understand your product when they're viewing your video. Be sure to give a great view of your prototype in your video – show it close to the camera when you are describing and demonstrating it!

If you are creating a digital prototype, make sure that it is displayed full screen.

Pitch Video Guidelines

You did it! Now it's time to grab your topic worksheets and put together your Pitch Video!

Things to Include and Cover

- Introductions: Who are you, your role(s) in your business, your business name and any other basic info you want to share.
- What is your product/service? Show the prototype and what it does. Really make sure it is visible – hold it close to the camera and demonstrate how it works.
- Who is your target market? Describe who will use your product and how you designed it with them in mind.
- What is your value provided/added? Describe how your product is useful, innovative and needed – how will it improve the lives of your customers? What makes it different and better than other options on the market?
- Pricing and profits: How much will you sell your product for? If you were building a working prototype, how much would it cost?
- What is your marketing plan? How will you let customers know about your product and convince them to buy it?
- Showcase your logo and explain what is represents.
- Describe your distribution plan for your product.

Want to create an engaging video? Check out these tips!

Map Out Your Presentation

- Write a script for your video pitch.
- Think about what you want the video to look like and where you want to film it.
- Practice! You will feel silly the first few times you talk to the camera. Practice in front of a mirror or a friend to get those jitters out.
- Look and act professional – this video is your chance to make an impression. Giggling and goofing around will make it harder for the judges to take your product seriously.

Keep Your Video Short and on Topic

- Don’t go over the time allotted, but be sure to cover the requirements in detail.
- Keep your points easy to understand.

Conduct a sound check

- Ensure audio level is not too high or too low.
- Eliminate background noise; it can overpower your message.
- Find a quiet place where you won’t get distracted.
- If adding music, make sure it isn’t overpowering and doesn’t distract from your pitch.

Make it your own

- Showcase your unique point of view to help your team stand out.
- Avoid getting too carried away with camera angles and trying to make your pitch too over the top.

Edit for a finished product

- Make your presentation professional and exciting by using a video editing program, if desired.
- Ask students at your school (especially the tech savvy ones) for simple ways you can enhance your video presentation.
- Check your final upload to make sure it looks clear and the quality is good.

EVALUATION CRITERIA

Evaluation will be based on how well each topic area was addressed.

Demonstrates product using prototype.

5	4	3	2	1
Explains and demonstrates how product functions. Prototype is innovative and uses sound engineering concepts.	Explains and demonstrates how product functions. Prototype is uses sound engineering concepts.	Explains and demonstrates how product functions, but more details are needed. Prototype uses some engineering concepts.	Explains how product functions. Prototype is not innovative and engineering concepts are lacking.	Does not explain how product functions. Prototype is not innovative and shows little awareness of engineering concepts.

Explains value added for product.

5	4	3	2	1
Necessity of product is clear. Conducted extensive research and demonstrates why product is necessary.	Necessity of product is clear. Conducted some research and demonstrates why product is necessary.	Necessity of product is mostly clear. Conducted some research and demonstrates why product is necessary.	Necessity of product is somewhat clear. Conducted limited research and struggles to demonstrates why product is necessary.	Necessity of product is unclear. Have not conducted research or demonstrated why product is necessary.

Identifies target market.

5	4	3	2	1
Demand for product is showcased and a target market has been identified based on extensive research.	Demand for product is clear and a target market has been identified based on some research.	Demand for product is mostly clear and a target market has been identified based on some research.	Demand for product is somewhat clear and a target market has been identified based on limited research.	Demand for product is unclear or a target market has not been clearly identified through research.

Identifies a price for product.

5	3	1
Discusses price point for product and gives a detailed explanation of how they developed price point.	Discusses price point for product and gives limited explanation of how they developed price point.	Discusses price point but does not explain how they determined price point.

Identifies distribution plan for product.

5	4	3	2	1
Identifies modes of distribution for their product and provides a detailed explanation of why they have selected modes.	Identifies modes of distribution for their product and explains why they have selected modes.	Identifies modes of distribution for their product and gives limited explanation of why they have selected modes.	Identifies modes of distribution, but struggles to give an explanation of how they have selected modes.	Identifies modes of distribution, but does not give explanation behind selection.

Explains how product will be marketed.

5	4	3	2	1
Identifies more than one method for product marketing and provides a detailed explanation of why they have selected modes of promotion.	Identifies more than one method for product marketing and provides some explanation of why they have selected modes of promotion.	Identifies one method for product marketing and provides an explanation of why they have selected the mode of promotion.	Identifies one method for product marketing and provides a limited explanation of why they have selected the mode of promotion.	Identifies one method for product marketing, but does not explain why they have selected mode.

Explains thinking behind logo for their product/company.

5	4	3	2	1
Has a skillfully designed logo for product or company. Detailed explanation of aspects of the product or company that are illustrated through logo are given.	Has a skillfully designed logo for product or company. An explanation of aspects of the product or company that is illustrated through logo is given.	Has designed a logo for product or company. An explanation of aspects of the product or company that is illustrated through logo is given, but more information is needed.	Has a poorly designed logo for product or company. Gives limited explanation of logo.	Has no logo for product or company.