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INTERNATIONAL MASTER OF SCIENCE ON CYBER PHYSICAL SYSTEMS



Turning an IoT idea into a Proof of Concept

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Content

-
- InventionLand and ELM organization.
 - ELM organization and Aura
 - 9 steps Methodology
 - Examples
 - Skills

What is inventionland

Idea incubator where projects are brought to life through creativity and innovation.

- About 300 products are produced every month
- From 2000 to 3000 products are produced annually
- 60,000 square foot immersive work environment
- Hosts roughly 15,000 students, educators, designers, business professionals and inventors every year



INVENTIONLAND®

ELM Organization

Enlightening Learning Mind

- Partner of Inventionland,
- Provides a project-based learning system.
- Innovative courses and resources provide the framework to create positive outcomes for students, teachers, and learning communities.
 - 9-Step Method for invention
- AURA company is one of ELM teams
 - 23 employees



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9 steps overview

This method teaches you how to :

- Turn an idea into a working product sample
- Present the product to a corporation or manufacturer.

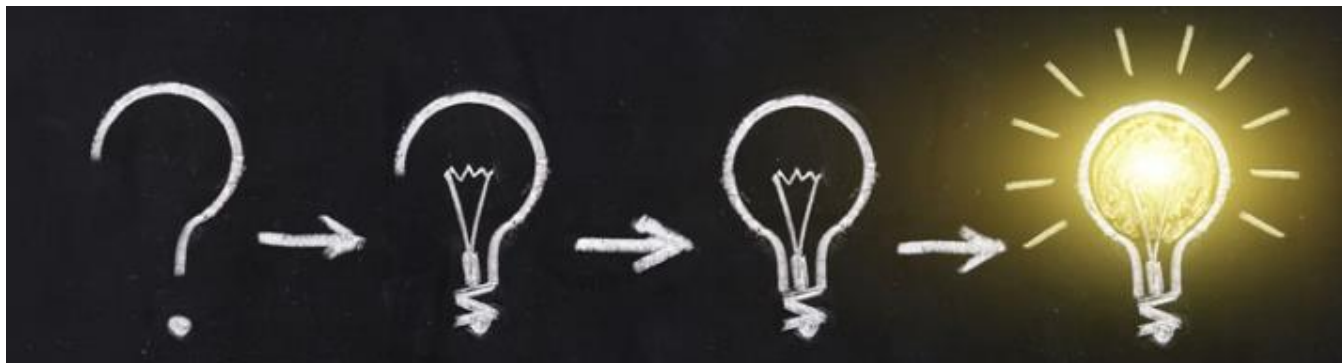


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Step1

Create and Protect Your Idea

- Define the problem that you are trying to solve
- Find the solution
- Sign a paperwork to maintain confidentiality between all parties involved



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Step2 Research Your Idea

- Similar products research
- Patent search
- Target corporation search



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Step3 Brainstorming

- Try to find many ways to solve the problem.
- Make sketches of your ideas.
- Talk the ideas over with someone you trust and get their opinions



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Step4 Sketch Your Idea

- Simple drawings to communicate the basics about your idea
 - How your product works
 - What it can do
 - Who might use it and in what situations



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Step5 Model Your Idea

- Build your model
 - What the product will look like
 - How it will work



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Step 6

Draft Your Idea

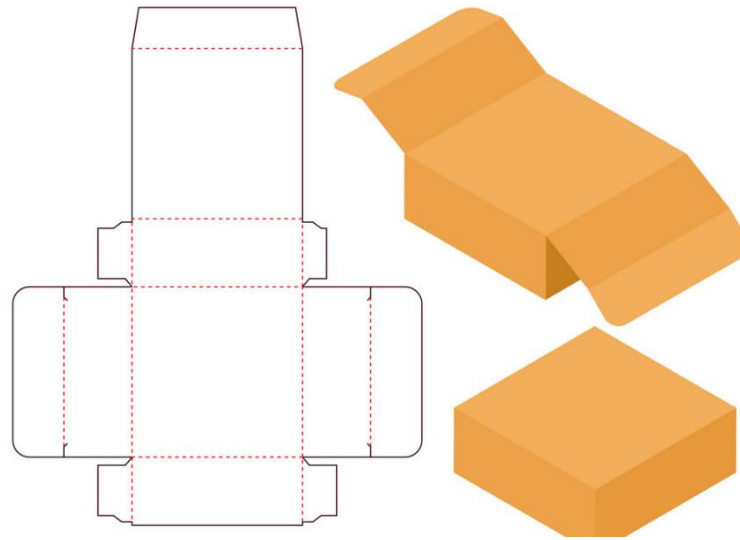
- Make a CAD of your product
 - Solidwork



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Step 7 Package Your Idea

- Make the design of the physical package that the product comes in



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Step 8 Communicate Your Idea

- Design of the visual appeal of the package
 - Product name
 - LOGO
 - Graphic design
 - Colors and figures



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Step 9 Put It All Together

- The assembly of the final product



Example

- BagStor
 - One of the most simple and successful products
 - More than a million products have been sold



Example - BagStor

- Step1
Create and Protect Your Idea

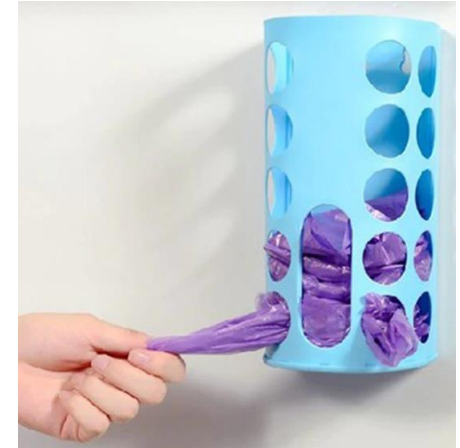
Problem:
Plastic bags mess



Example - BagStor

- **Step2:**
Research Your Idea

Related Products

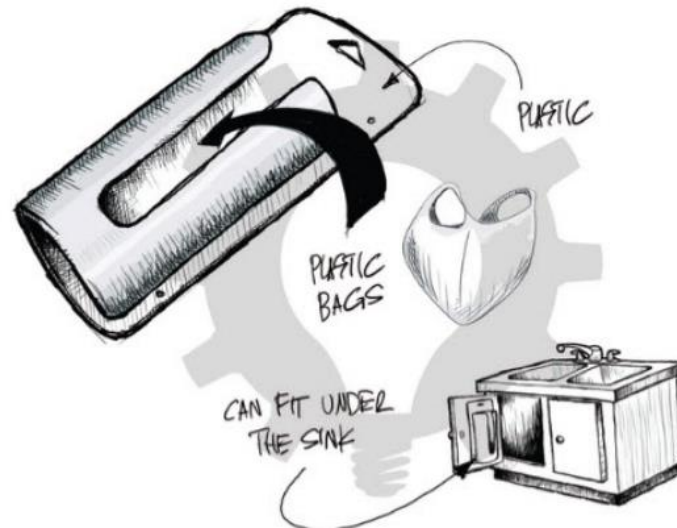


- **Step3**
Brainstorming



Example - BagStor

- Step 4
Sketch your idea

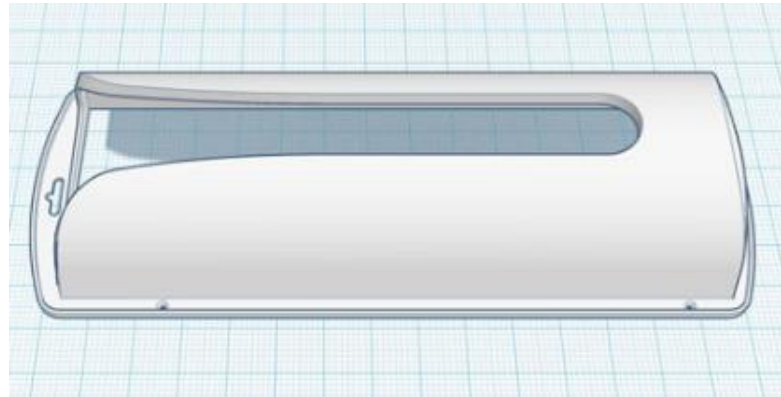


- Step 5
Model your idea



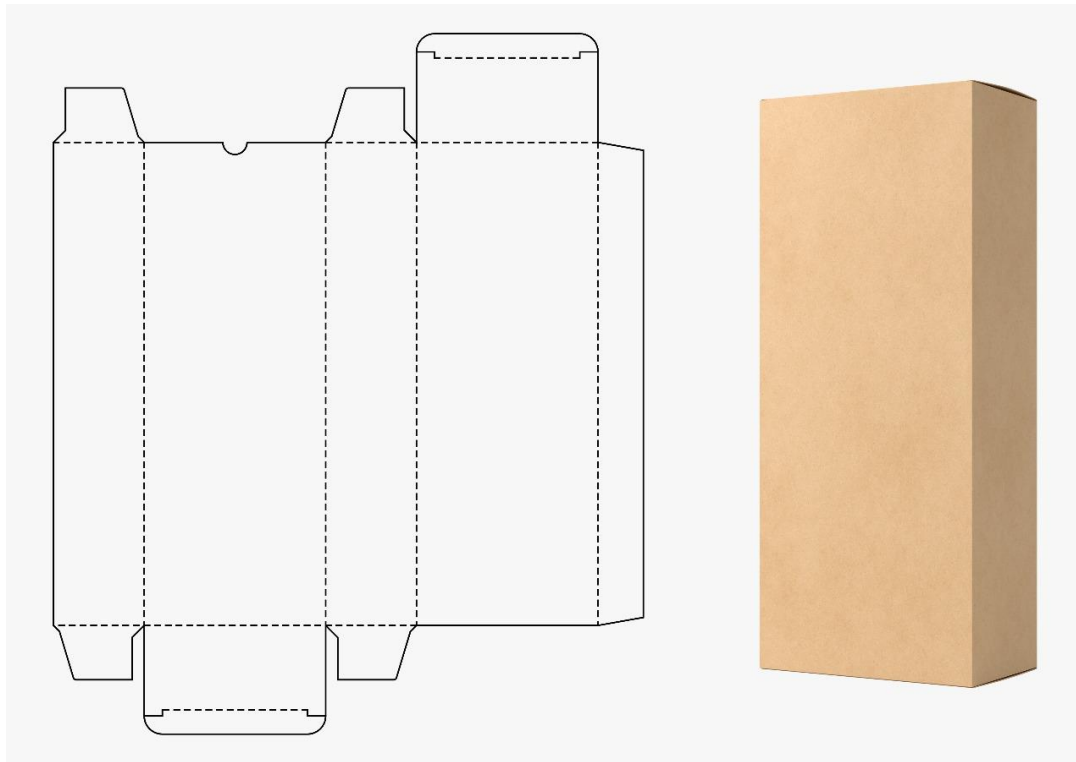
Example - BagStor

- Step 6
Draft your idea



Example - BagStor

- Step 7
Package your idea



Example - BagStor

- Step 8
communicate your idea



- Step 9
Put it all together



Example –Bottle toss

- Throw the bottle so that it does one complete flip or more and lands upright
- Play with friends and record the no. of flips



Example – Bottle toss



Bottle Toss

Design Approved By

Print Name _____

Signature _____



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- Methodological Skills:
 - Understand how to identify problems we experience in our daily lives.
 - Know how to carry out product research, R&D
 - Understand the value of brainstorming and how to do it effectively.
 - Understand the purpose of making a concept model and how one is made
- Technical Skills:
 - Know common manufacturing processes, 3D printing
 - Know how to use computer-aided design (CAD) software – 3D Modeling
 - IoT skills: microcontrollers, sensors, actuators, communication and wireless techniques, security issues, programming, firebase, websockets, Cloud Computing and electronic modules,
 - ..

Contact Us

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Thank You



AURA
FOR INTEGRATED SOLUTIONS