

KIM VALERIO
PRODUCT DESIGN ENGINEER

PORTFOLIO

Brief Statement

The object of this design portfolio is to showcase the skills I have attained in the past couple years of doing projects at university and/or during my personal time.

I will showcase sketches, renders, ideations, engineering drawings and personal drawings and work.



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SketchFest

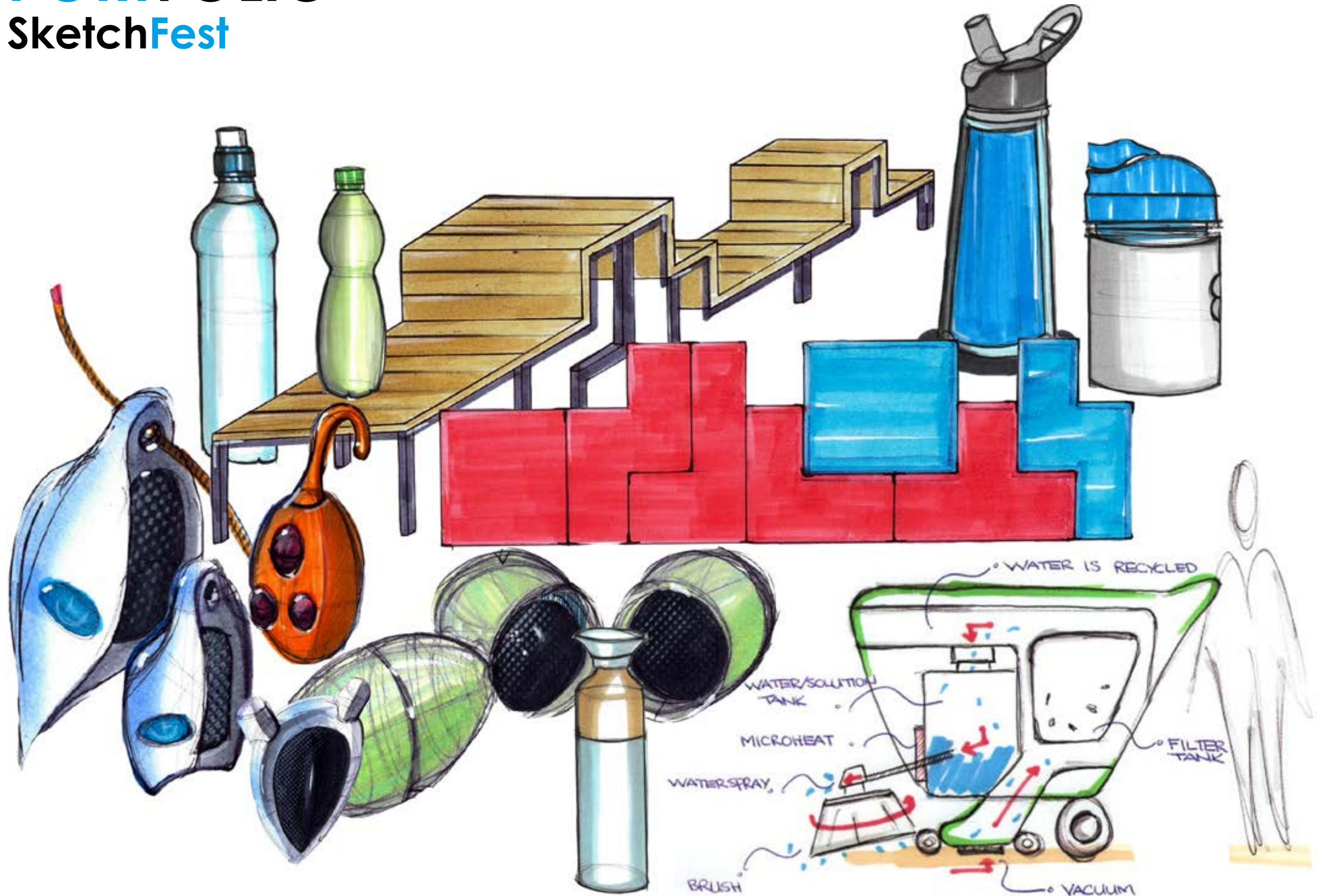
Example sketches from my time at university - from 1st year work to current work (4th year). From quick ideation pages to rendered sketches.



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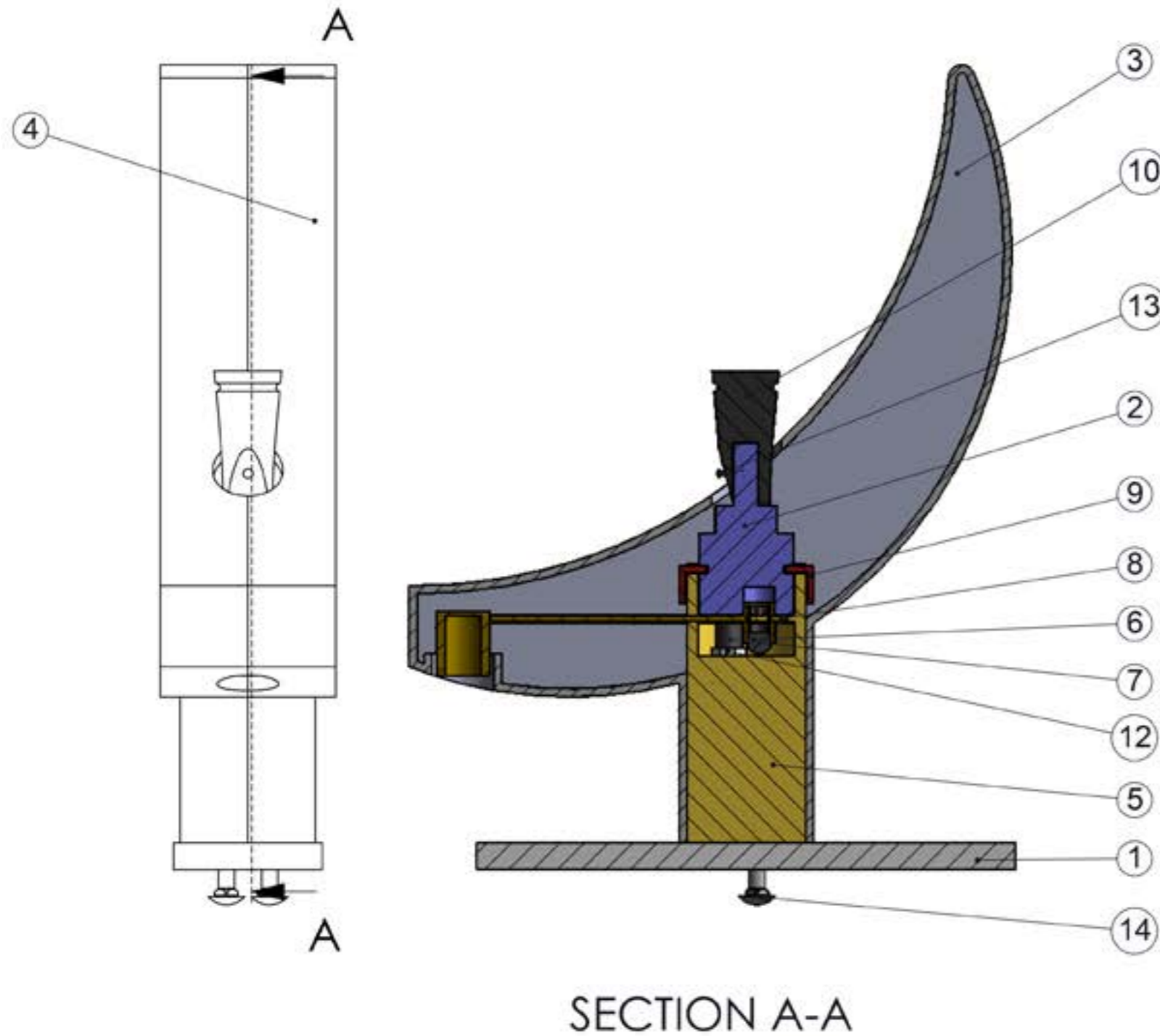
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Engineering Drawings

Example of my engineering drawings and details - from 1st year work to current work (4th year). This set of engineering drawing was for the *Tap Project (2013)* where we had to design the outer casing of the tap as well as how the components fit together.

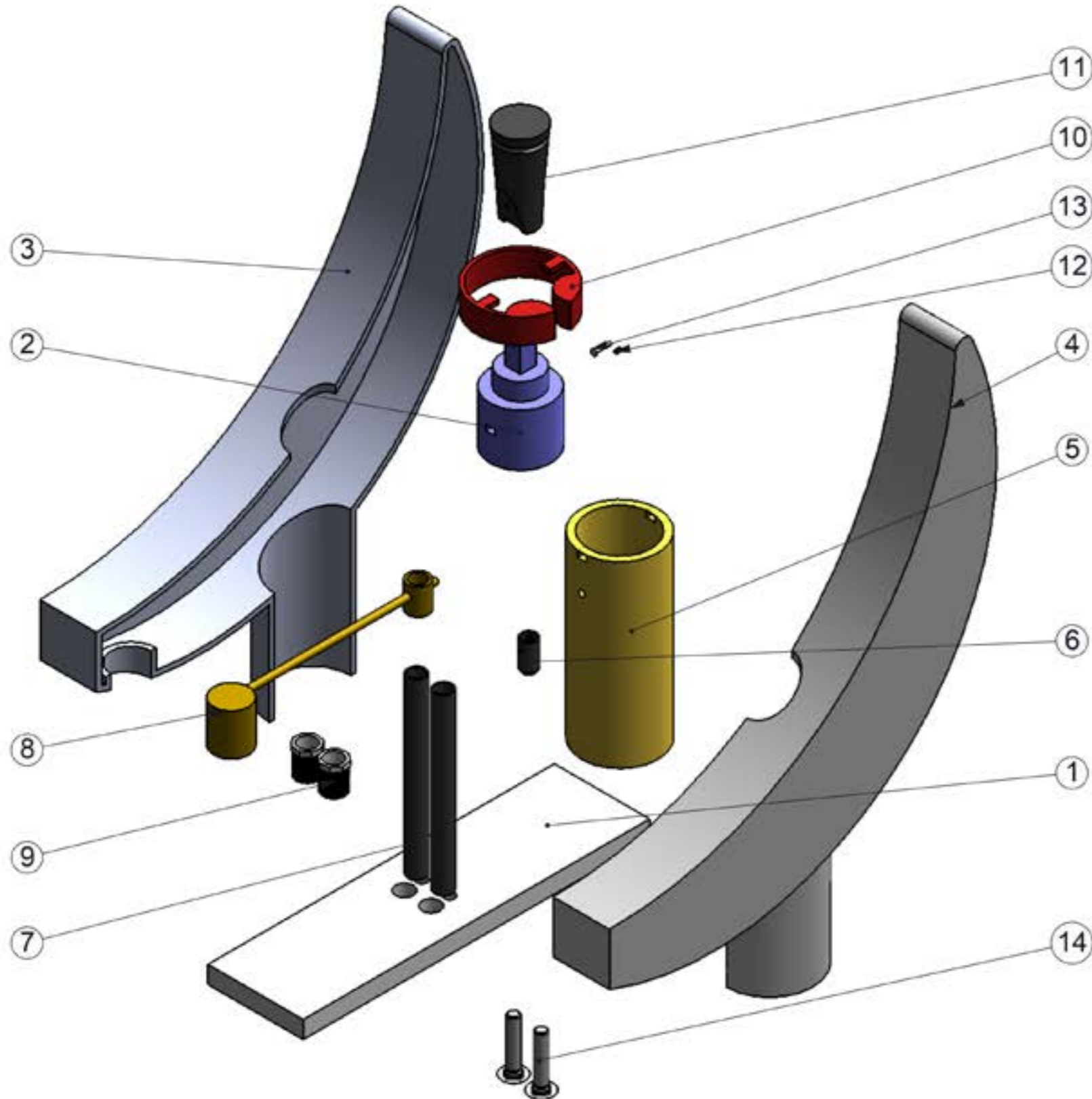


ITEM NUMBER	PART DESCRIPTION	QTY.	MATERIAL	MATERIAL PROCESS	FINISH
1	Basin	1	Ceramic	-	Gloss
2	Mixer Cartridge	1	Ceramic	Bought	NA
3	Body2	1	Chrome	Die-Cast	Chrome-Plating
4	Body1	1	Chrome	Die-Cast	Chrome-Plating
5	Brass Insert	1	Brass	Forging	NA
6	Mixed Pipe	1	-	-	-
7	Hot & Cold Pipe	2	-	-	-
8	Aerator/Piping	1	Brass	Forging	NA
9	Locking Ring	1	Carbon Steel	Edgewinding	NA
10	Handle	1	Chrome	Die-Cast	Chrome-Plating
11	Grub Screw	1	Brass	Plated, Hot-Dipped, Galvanized	NA
12	Thread	2	Brass	Plated, Hot-Dipped, Galvanized	NA
13	AS B118 Mushroom - 0.063 x 0.375	1	Aluminium	Bought	-
14	AS-NZS 1390 S - M6 x 30-N	2	Aluminium	Bought	-

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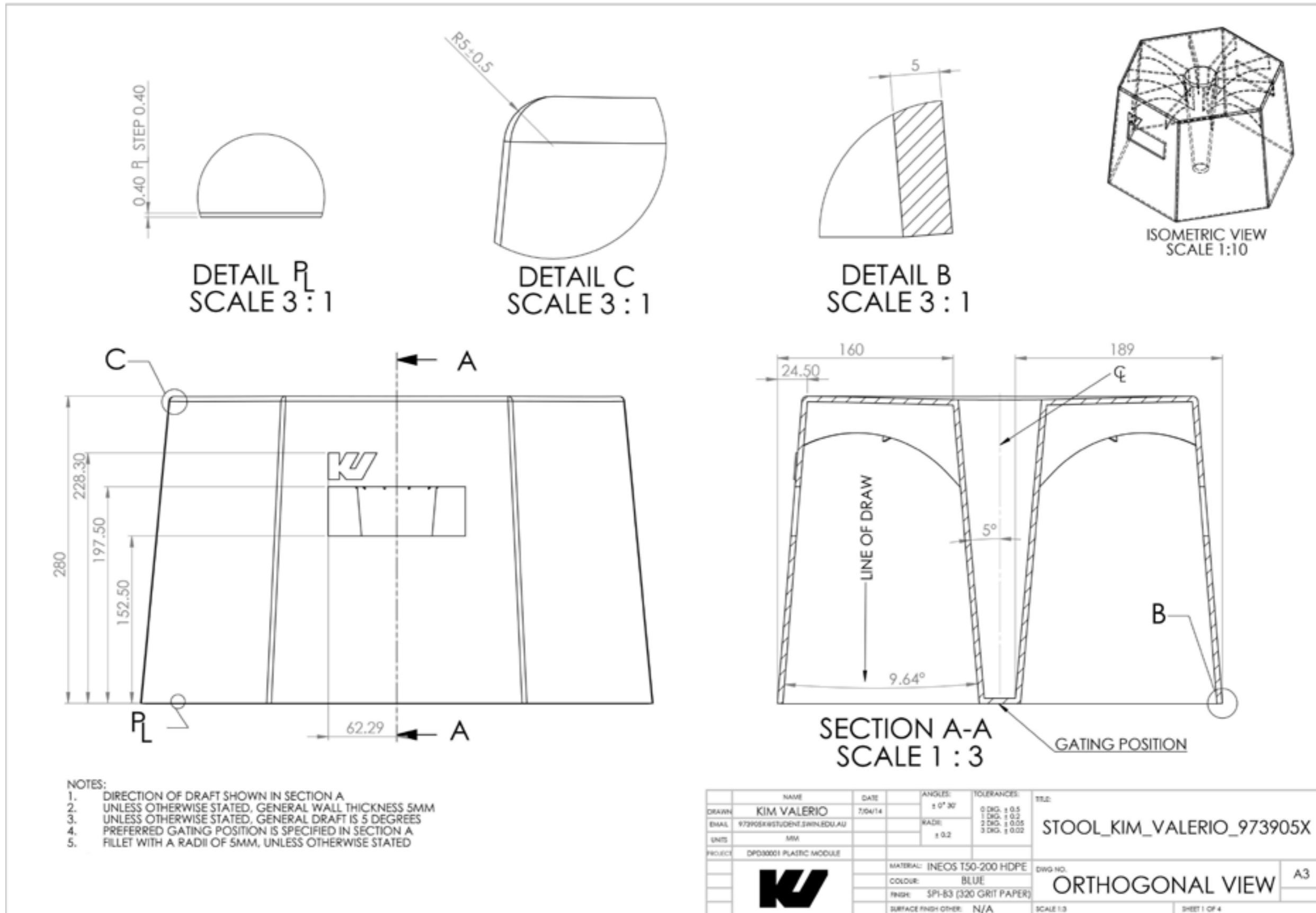


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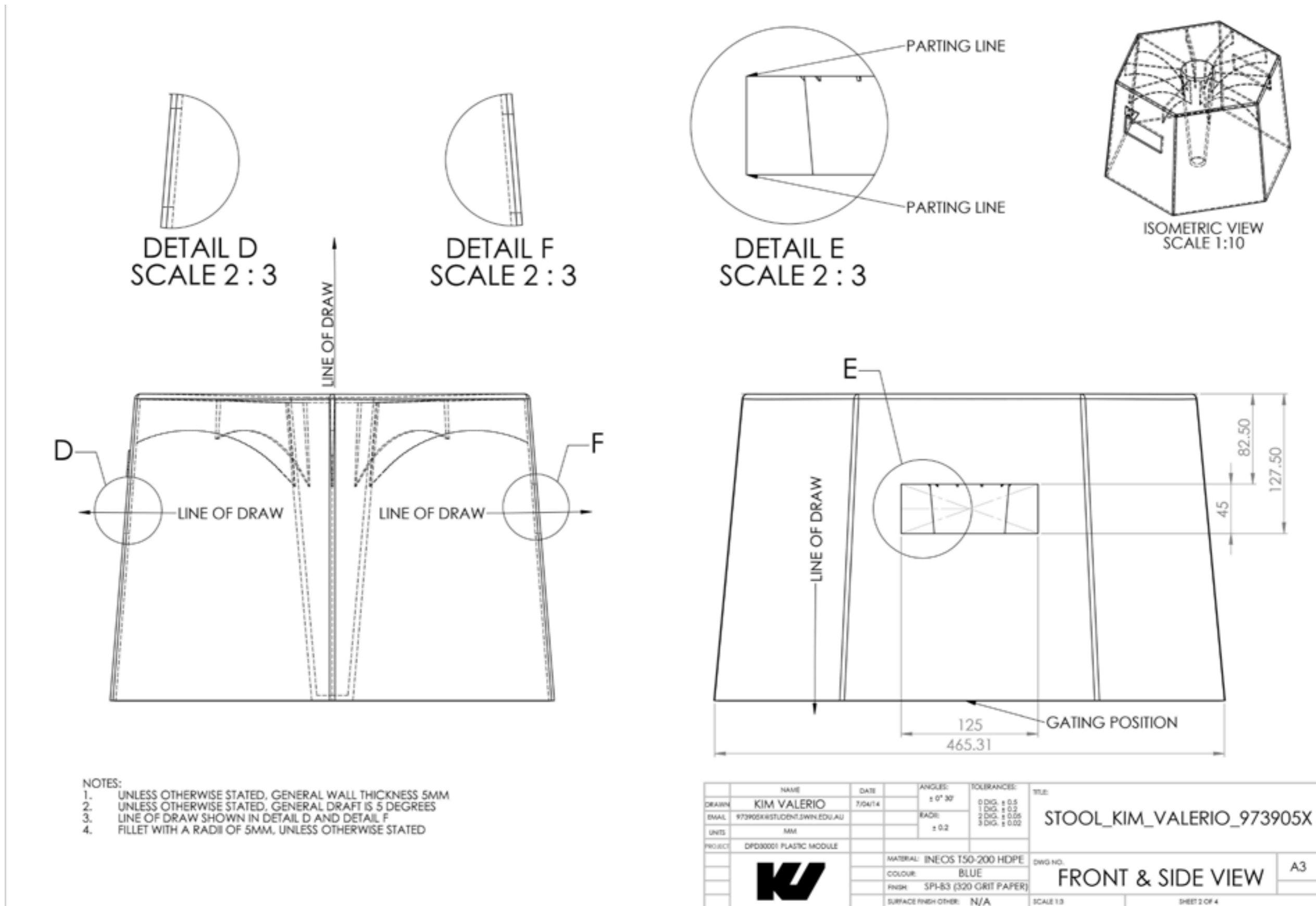
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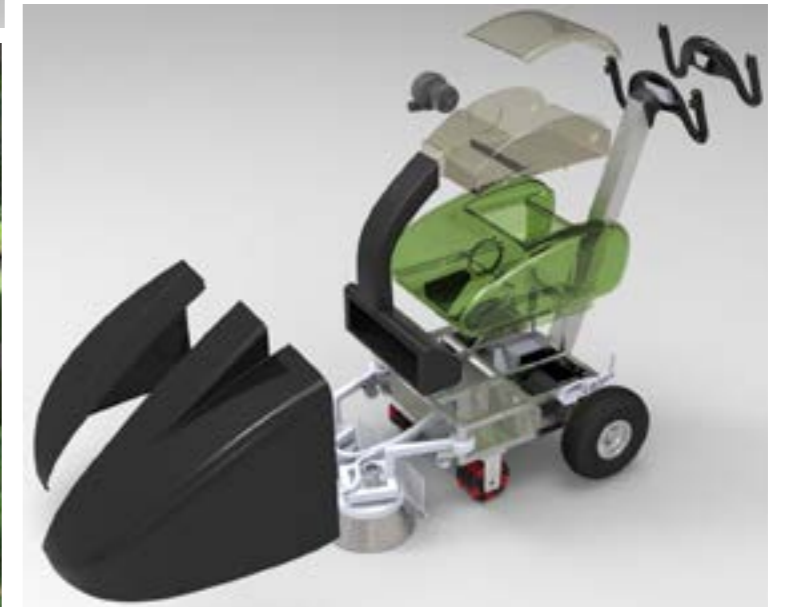
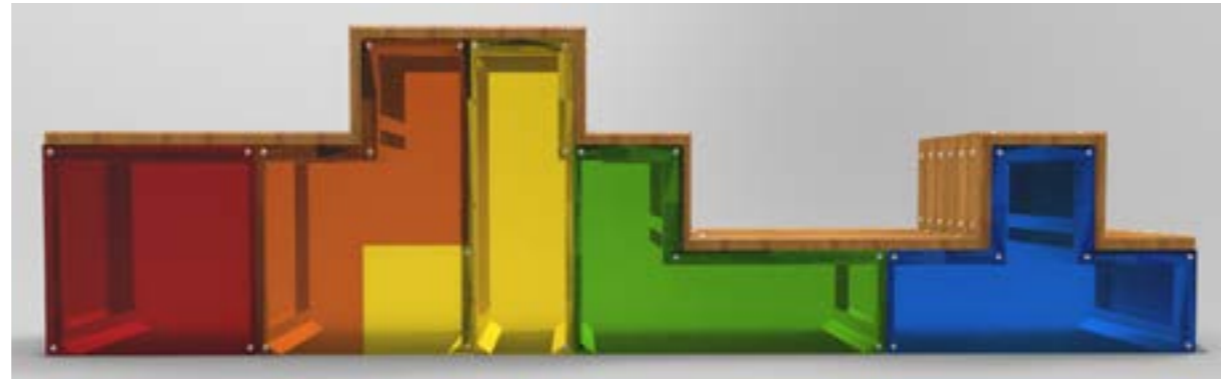
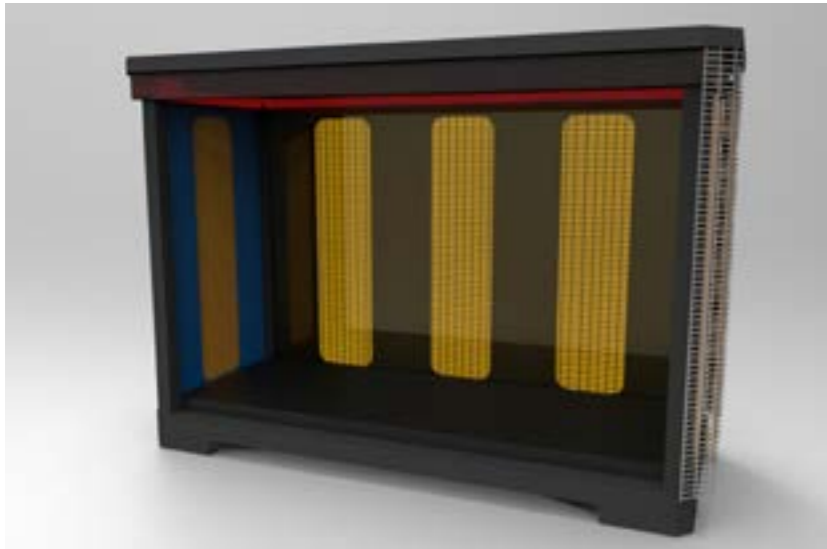
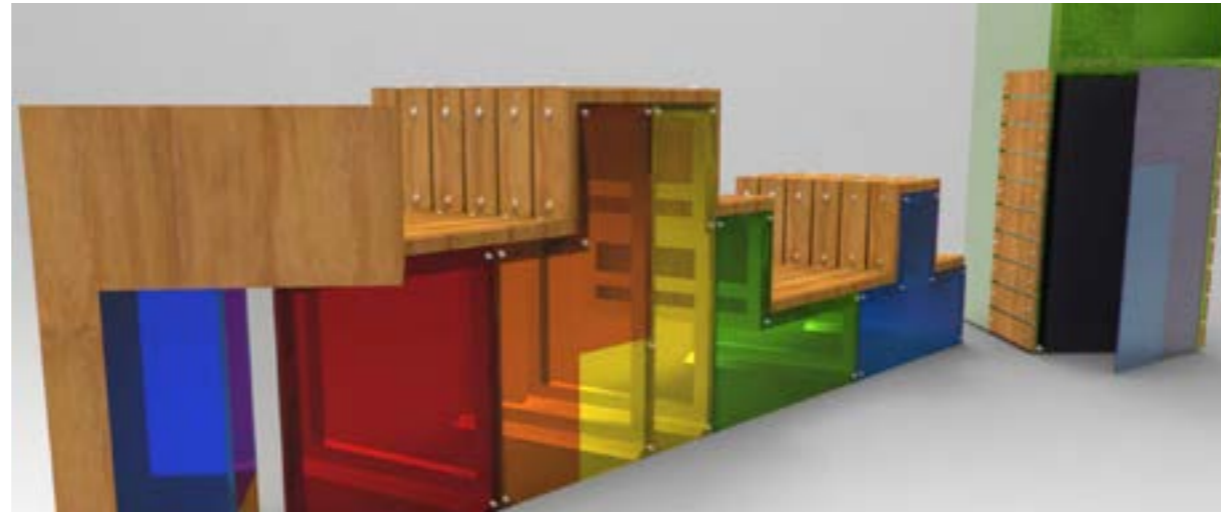
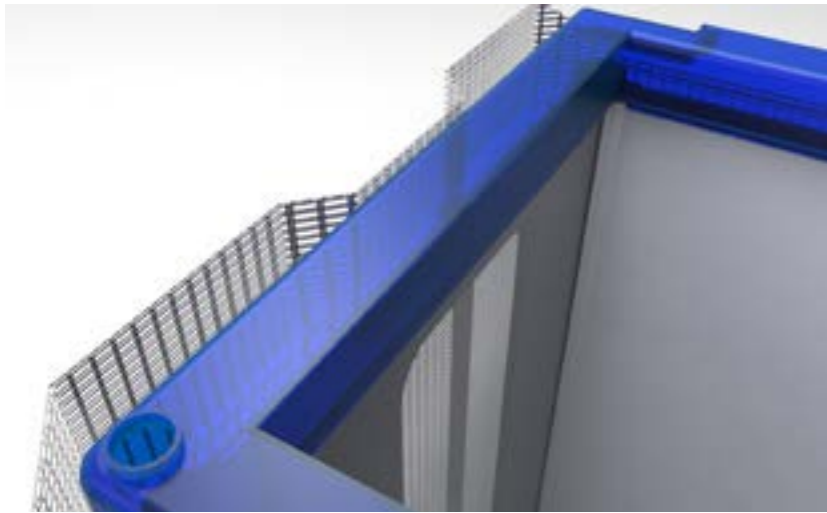
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Rendering

Example renders from my time at university - from 1st year work to current work (4th year). From simple renders to in-contexted renders. Keyshot was used to render these images.



Shelter+ Project (2015)
[group project] - main tasks: research, renders, video animation, presentation layout

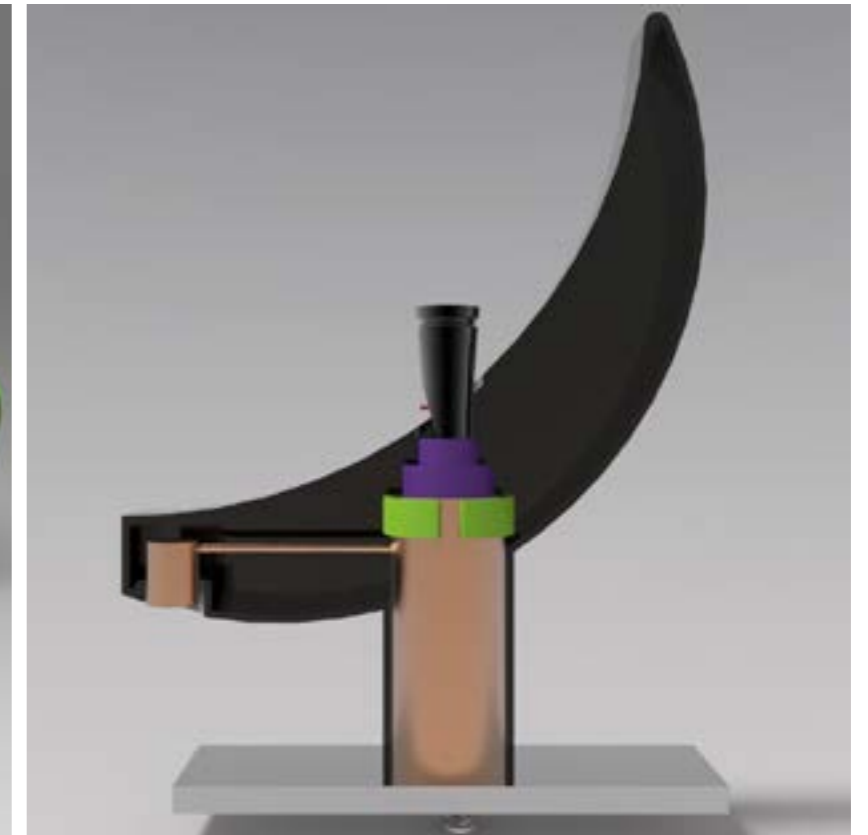
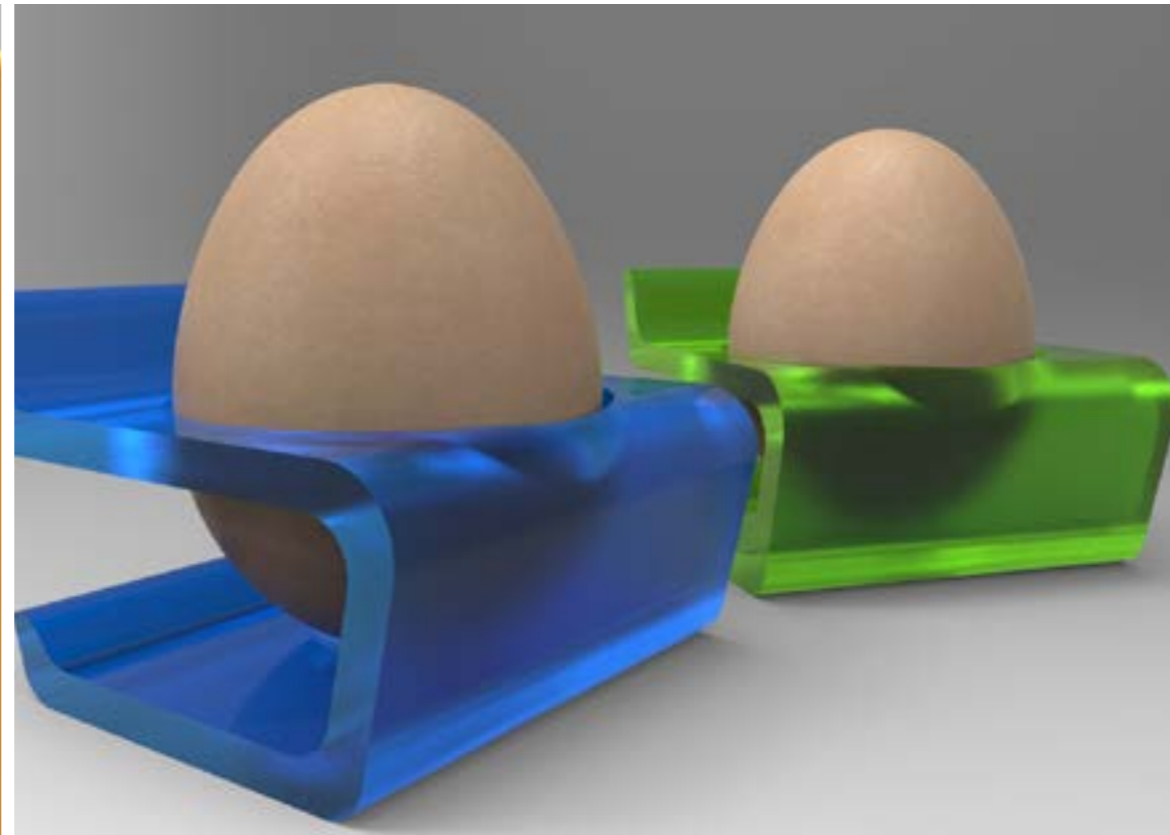
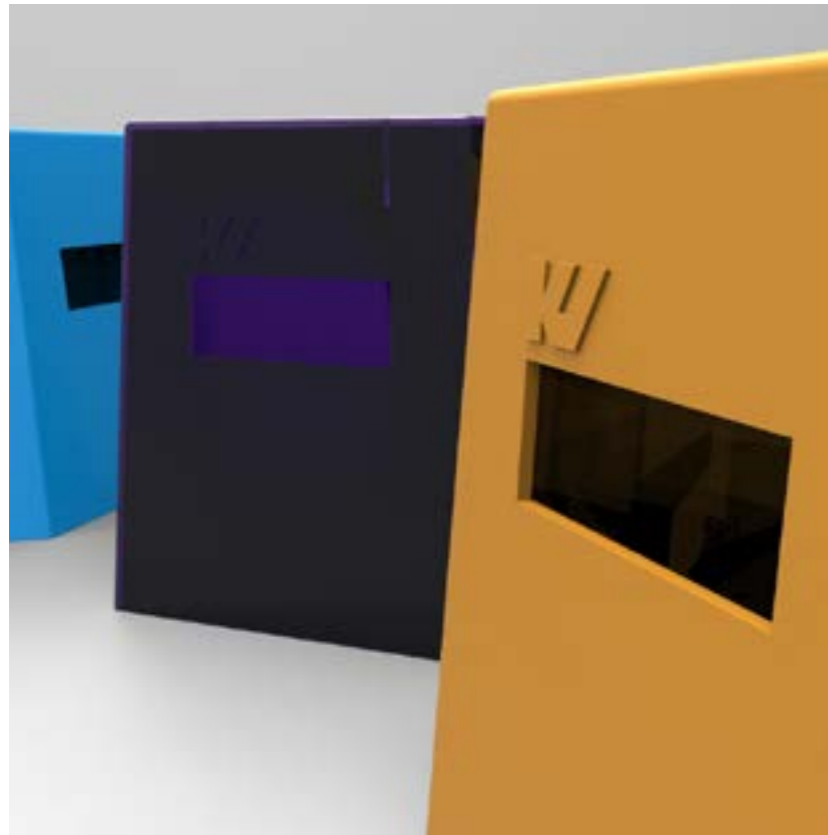
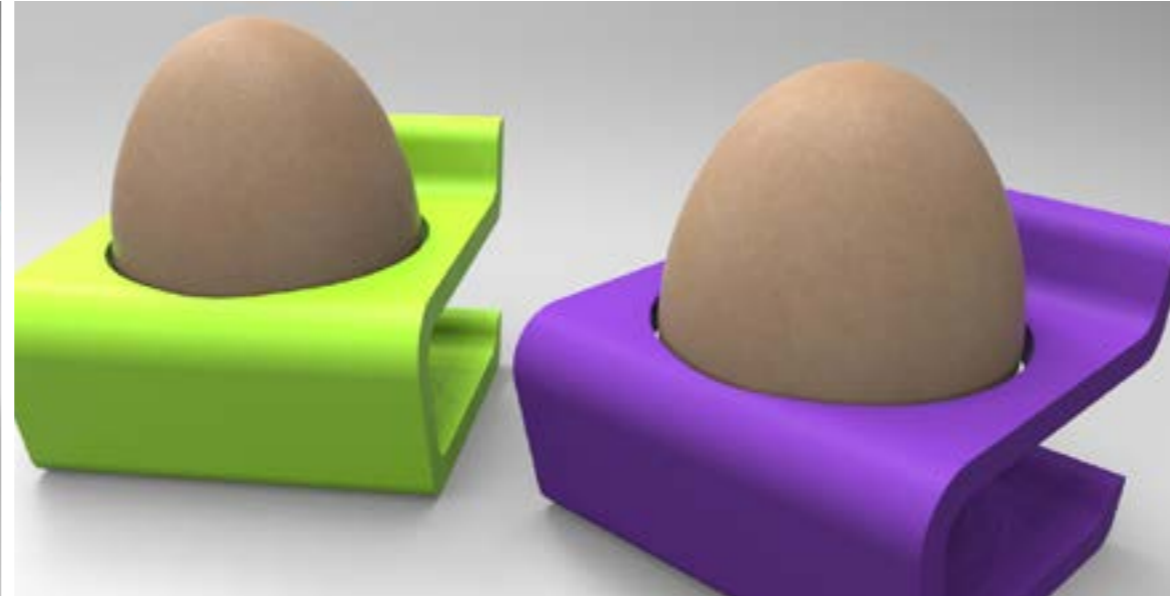
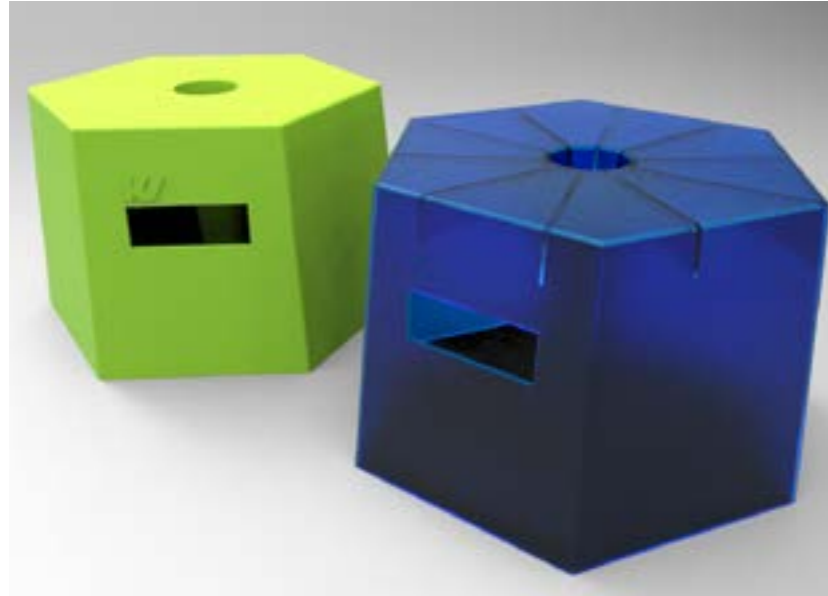
Town & Park Project (2015)

Microheat Project (2014)
[group project] - main tasks: research, calculations, renders, presentation layout

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Stool Project (2014)

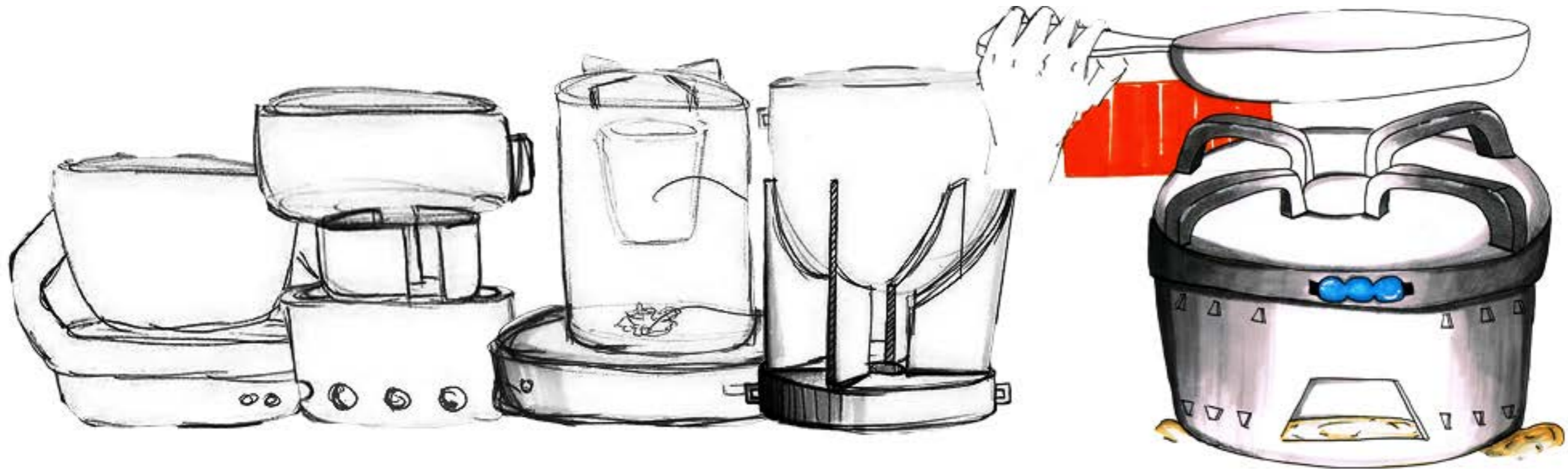
Egg Cup Project (2013)

Tap Project (2014)

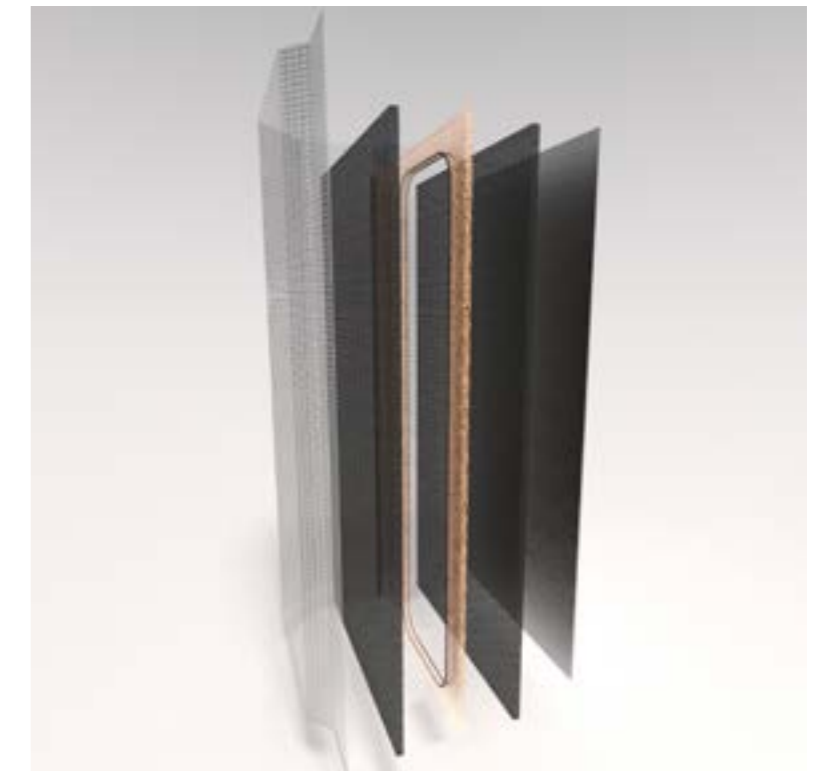
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Project: Shelter+

The goal of the *Shelter+ Project* is to design a product or device for disaster stricken areas. Our product aims to combat malnutrition in disaster stricken areas by providing food/vaccination preservation unit to the NGOs. This natural evaporative cooling is inexpensive and can withstand harsh environment due to it's robust design.



Through ideation and development, I focused on cooking devices. Above are some sketches and concept. But in the end, the group thought it was best to tackle the storage problems during these difficult times.

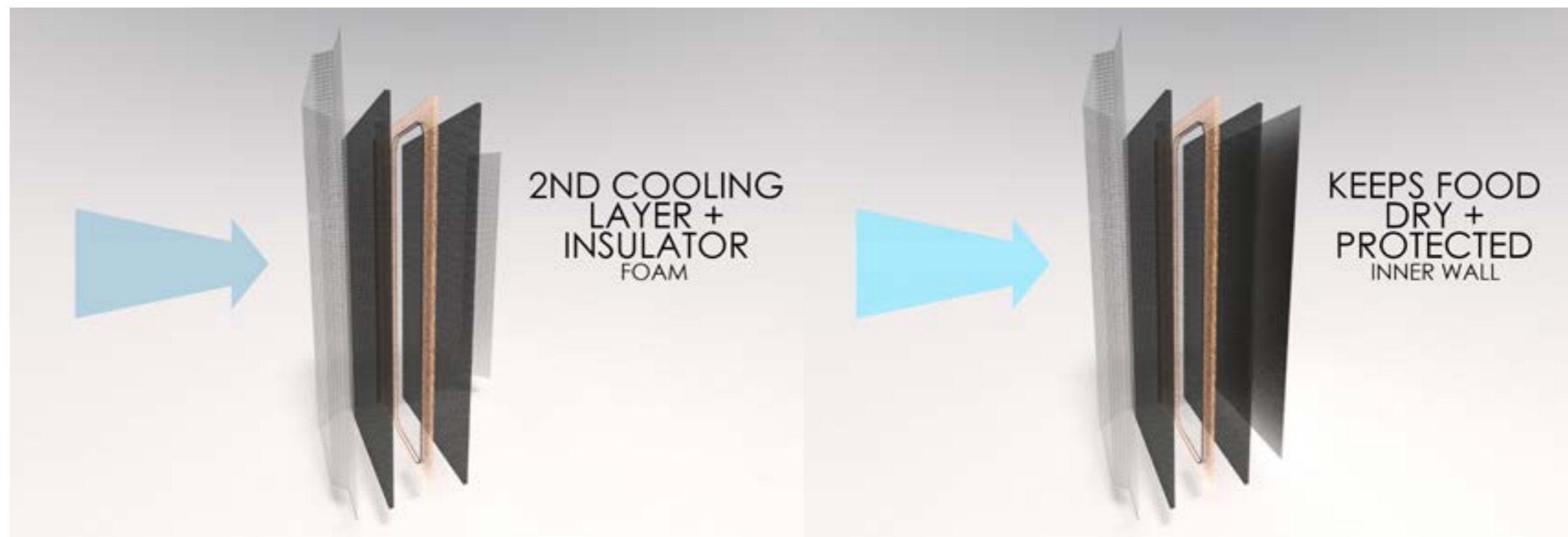
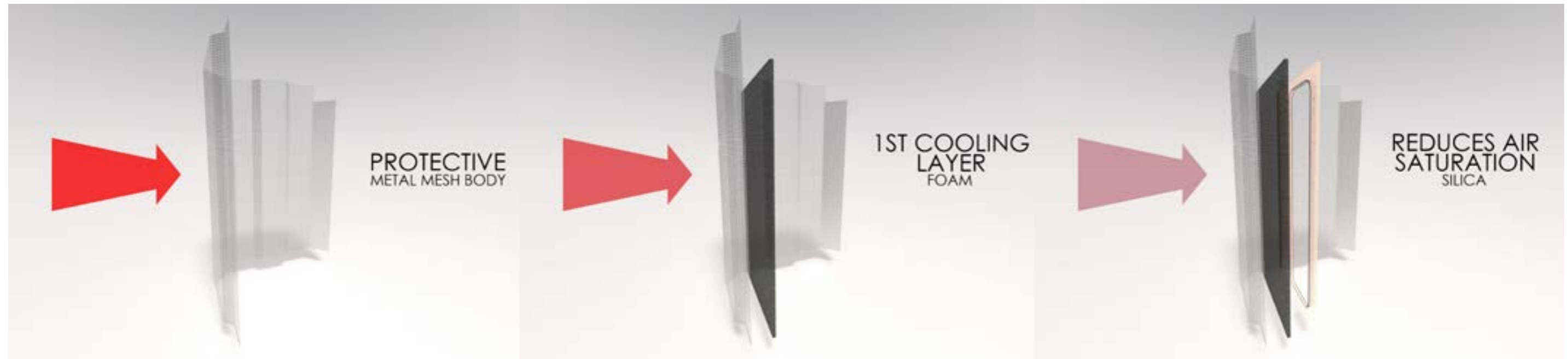


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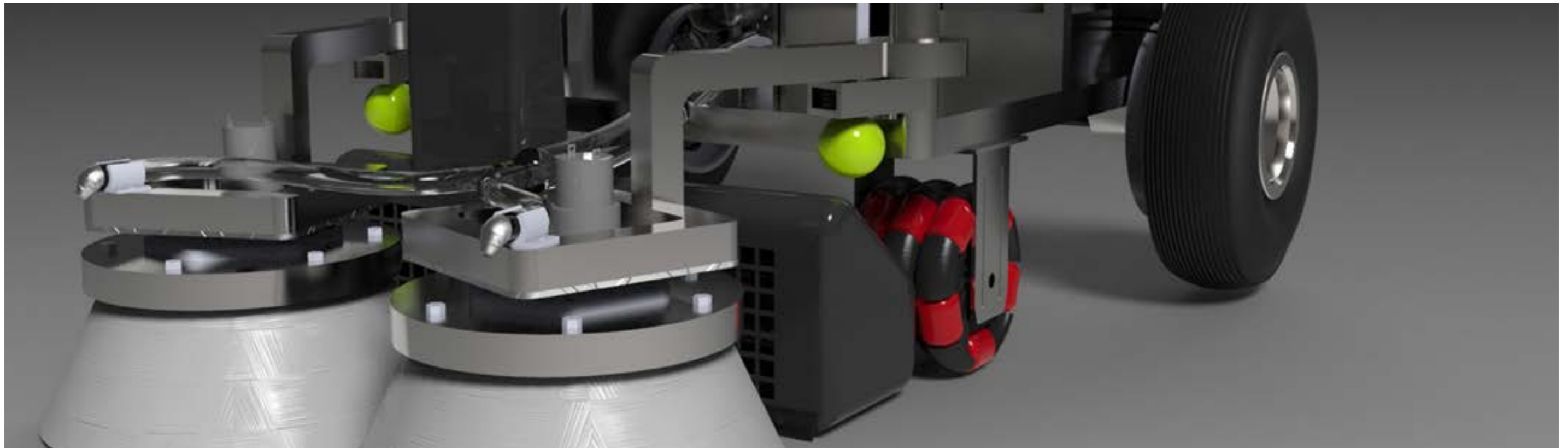
How It Works: [video presentation put together by me - video link - \(https://youtu.be/0fs_yDOfkRc\)](https://youtu.be/0fs_yDOfkRc)



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Project: *MicroHeat*

The aim was to produce a commercial application which incorporates the *MicroHeat* technology. So for this group project, the group decided to go with Street Cleaners and use *MicroHeat* to help with the tough cleaning out in the streets.



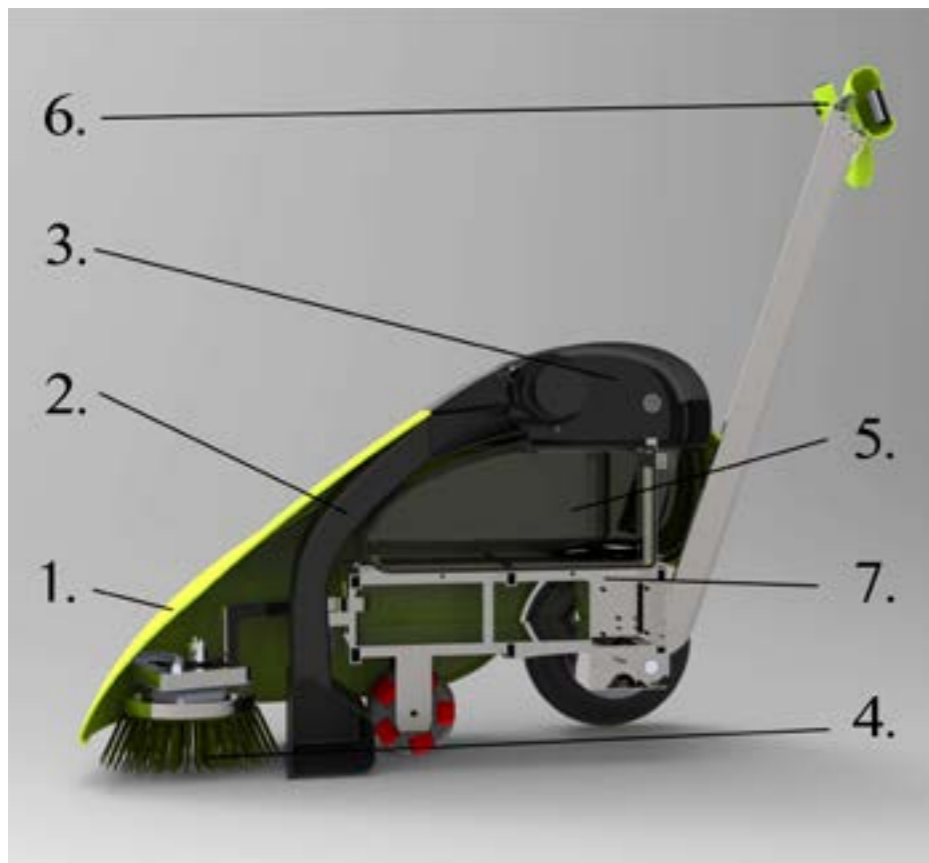
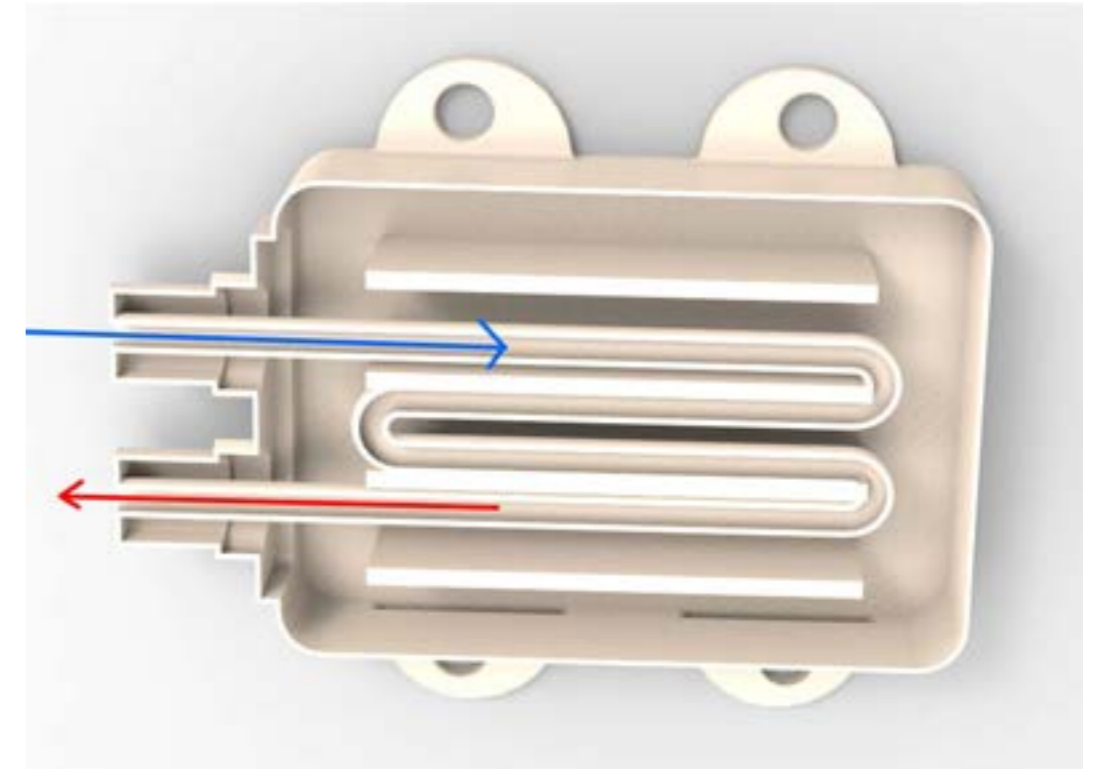
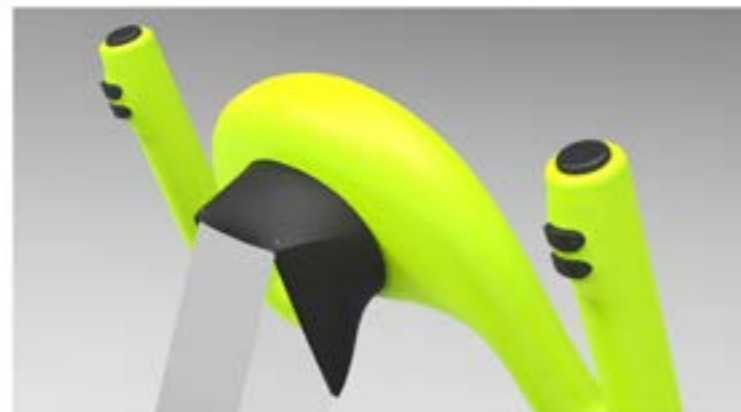
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Project: MicroHeat

What the street cleaner does is that the tank would be filled with room temperature water. It will then go through the *Microheat* technology that warms up the water using electrodes. With the ability to change the water temperature around, it makes cleaning the streets easier.



- battery life
- on/off indicator
- brush speed
- time
- water temperature
- water tank level



1. cover
2. vacuum
3. waste tank
4. brushes
5. water tank
6. handle
7. chassis



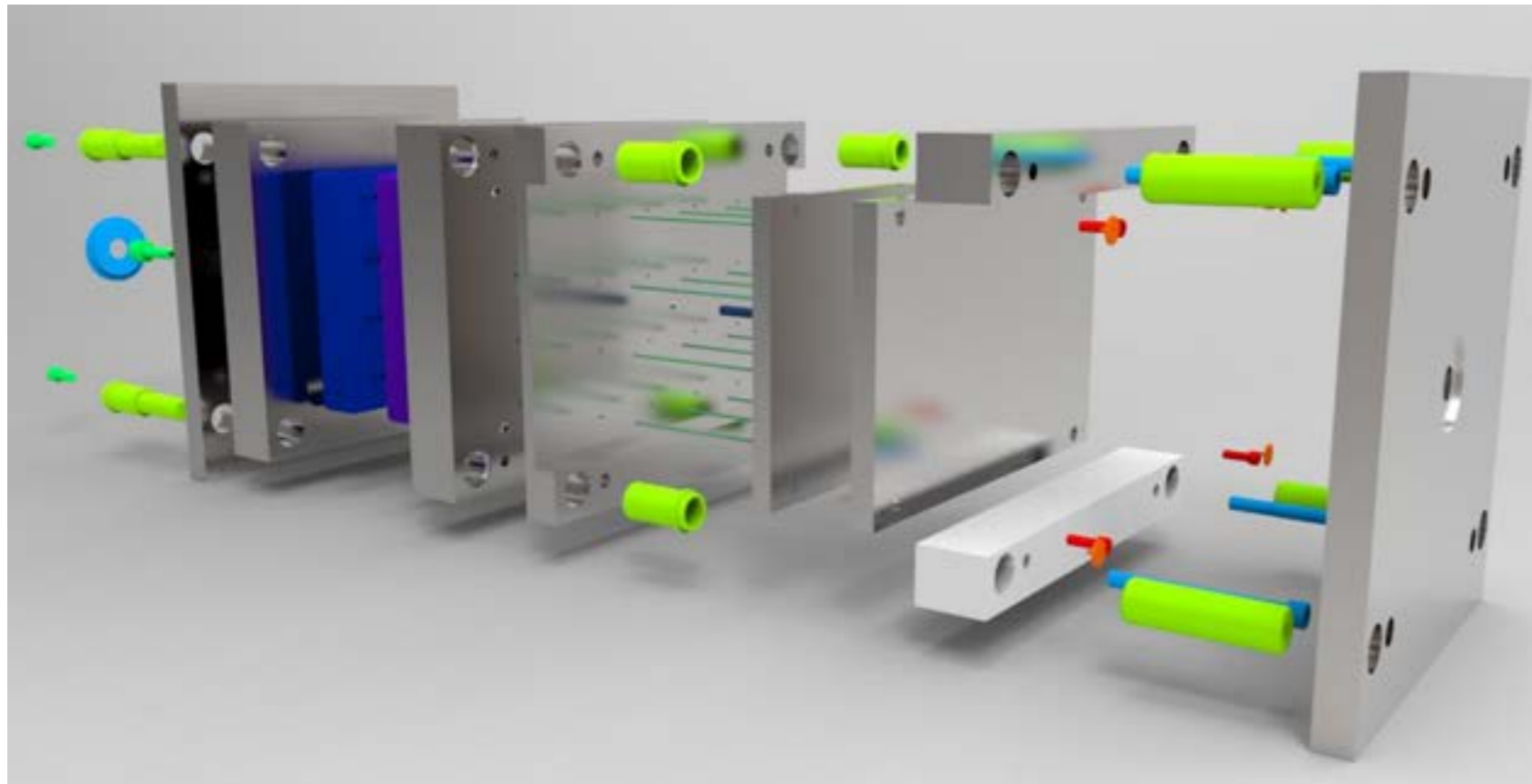
- Materials:
- PP plastic
 - nylon
 - aluminium alloy
 - HDPE

- Processes:
- arc welding
 - extrusion moulding
 - injection moulding
 - rotational moulding

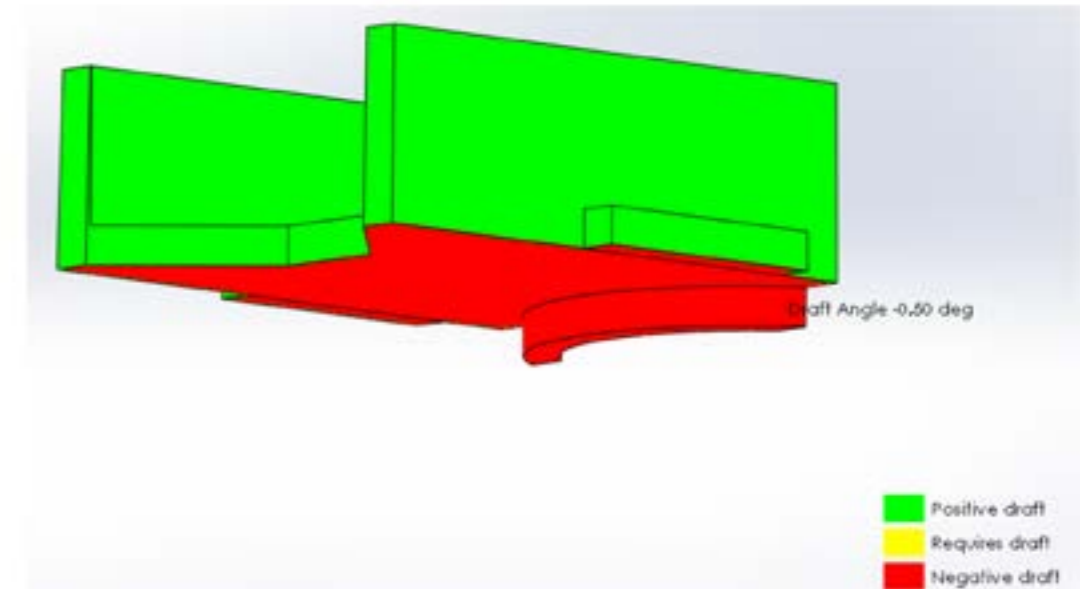
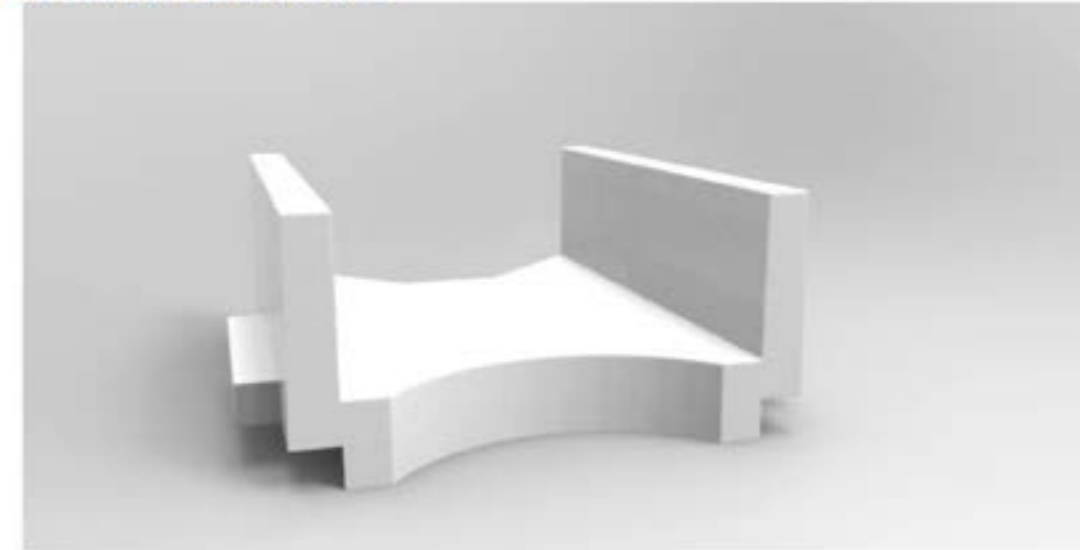
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Design For *Manufacture*

Design For Manufacture is a core subject in Product Design Engineering. I enjoyed studying different manufacturing techniques: plastic and sheet metal. For this project I had to focus on a plastic part and how to design the mould, the core - as well as choose the right machine and material for the part.



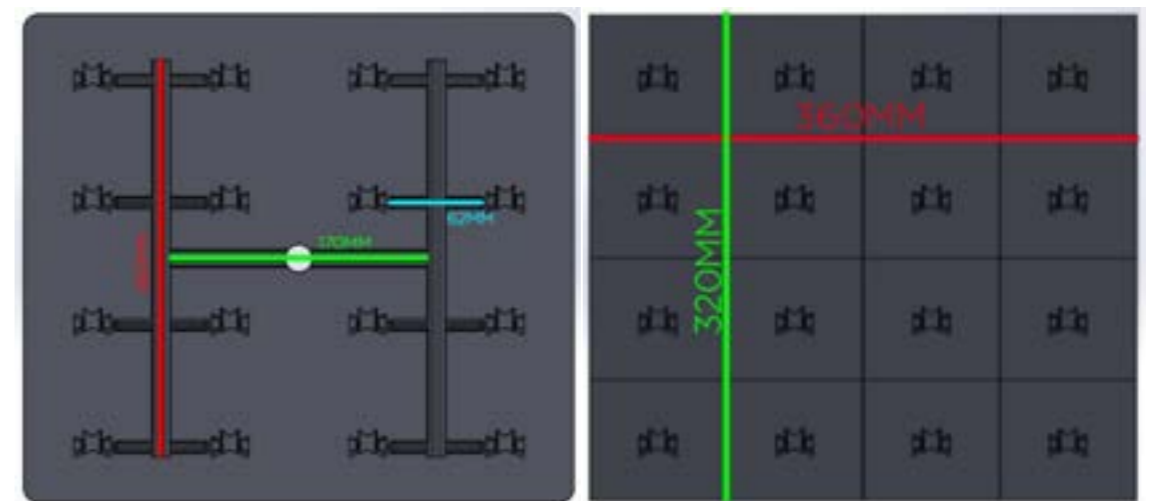
10.3 Mould/Die Calculations:



The Part:



The part is a small plastic of a stapler. It is an injection-moulded part; this was evident due to the parting line, sprue, gate marks and ejector pins. The aim of this project is to show the overall design process of a tow-part core and cavity mould, the features of the actual product were simplified.



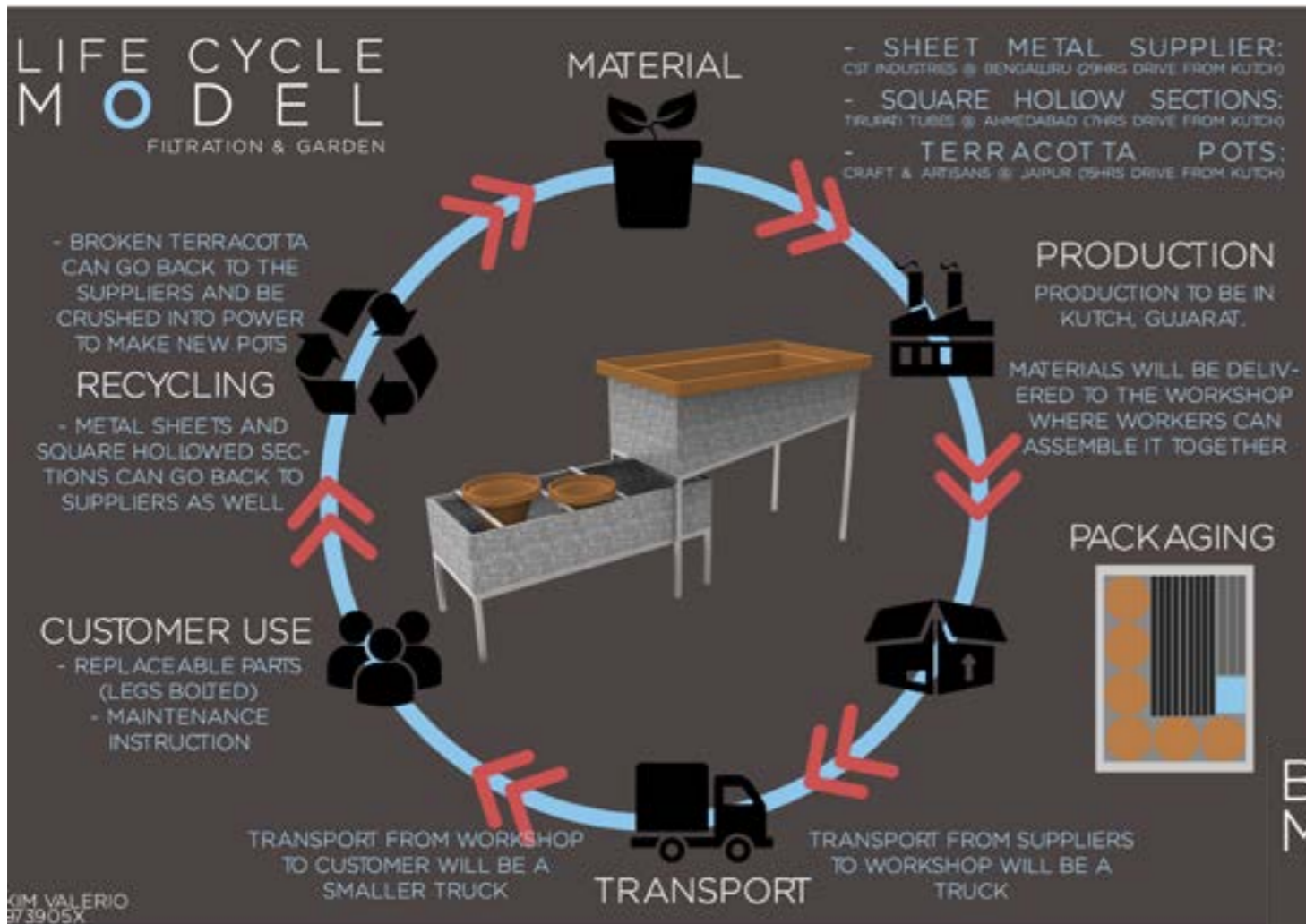
Runners and Gate System

360mm x 320mm x 50mm

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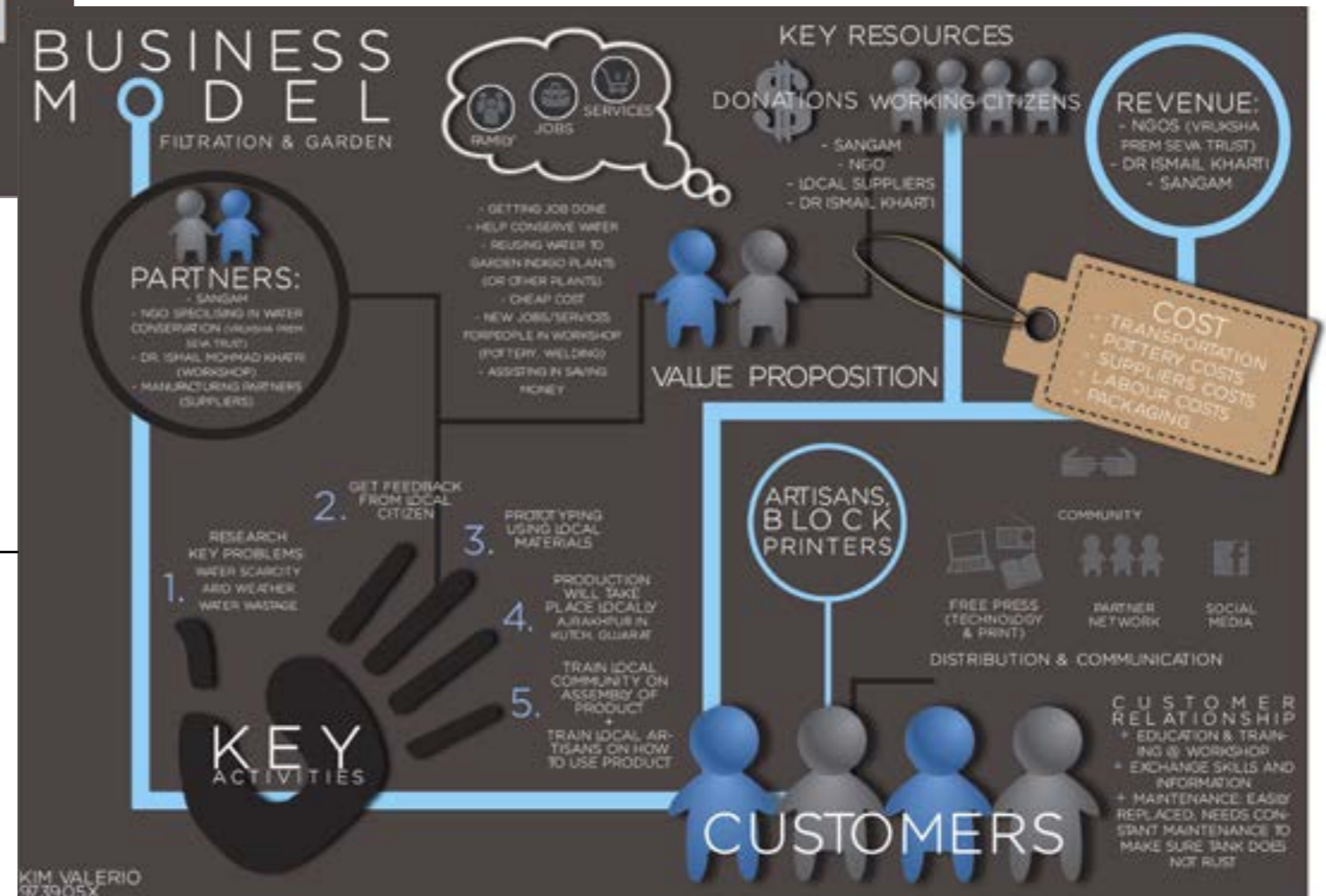
Boards & Presentations

Example of my mood boards and presentation pages - from 1st year work to current work (4th year). From simple research pages to final presentation pages.



This Life Cycle Model from the [Sangam Project \(2014\)](#). We had to present the life cycle of the product we have designed - from the raw materials to the end life use of the customers.

This Business Model was also from the [Sangam Project \(2014\)](#). For this one, we had to present how our product is being sent out to the customers and who our main partners are.



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Book Covers

I have been asked to do book covers. Two of them have been published and another one is on the way.

Five years in the making and this book is finally published. I wrote about dreaming again in my first book, "Destiny; moving into significance and meaning" and it has been on my heart to enlarge the topic by way of a book about dreaming forever.

Having been in ministry for the last thirteen years, the more I travelled and ministered across the globe, the more I realized how important it is for people to follow their dreams. A person without a dream or is unable to dream again is a vanquished soul.

Life is empowered by dreams; propelled by our constant desire to conceive, imagine and attempt our deepest longings and highest aspirations for the future. If people stop dreaming this world will stop progressing. It will languish and eventually stall.

I encourage you to read the entire book to draw out your faith in dreaming, to reinvent yourself, recover your broken dreams or revisit your forgotten dreams.

www.pssteventeo.com

Pastor Steven Teo has been in full-time global itinerant ministry for the last twelve years. He brings practical and inspirational insights from the Word, focusing on the gift of the Spirit. He is also involved in coaching and mentoring a generation of leaders across the globe.

DREAMS ARE FOREVER

STEVEN TEO

Dreams
ARE FOREVER

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Dreams Are Forever was published on 1st June 2008

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A Living Faith: Miracles Do Happen was published on 1st January 2008



Pastor Steven Teo has been in full-time global itinerant ministry for the last eleven years. He brings practical and inspirational insights from the Word, focusing on the gifts of the Spirit. He is also involved in coaching and mentoring a generation of leaders across the globe."

Have you ever wondered why others seem to have all the miraculous things happening in their lives? These people appear to be the favoured ones. They have inspiring stories to tell making them the envy of others. Have you ever asked yourself, "Why are the super specials not happening in my life?"

Our lack of a miracle may not be due to God's inability or unwillingness but it may be because we are not actively looking for one! We may have allowed the mundane and routine to so dominate our lives to the exclusion of the supernatural.

Miracles do happen. Start expecting God to do wonders in your life. This book will help you discover the joy of being thrilled with the little things in life, recognizing the small miracles. It will change your perspective and lead you on the road to a miracle-filled life.

A Living Faith: Miracles Do Happen

Steven Teo

A Living Faith: *Miracles Do Happen*



Steven Teo