

VEGETABLE VENDING MACHINE

Design statement [Initial]

To design a vegetable vending machine for middle class & upper middle class society of India

It should be

- Easy to use
- Easy to refill
- 24 x 7 service
- Enough space for branding
- Dispense packed vegetables in rectangular boxes
- Carry bag option
- Payment options- Credit card
 - Debit card
 - Store value card

Secondary research

Why vegetable vending machine?

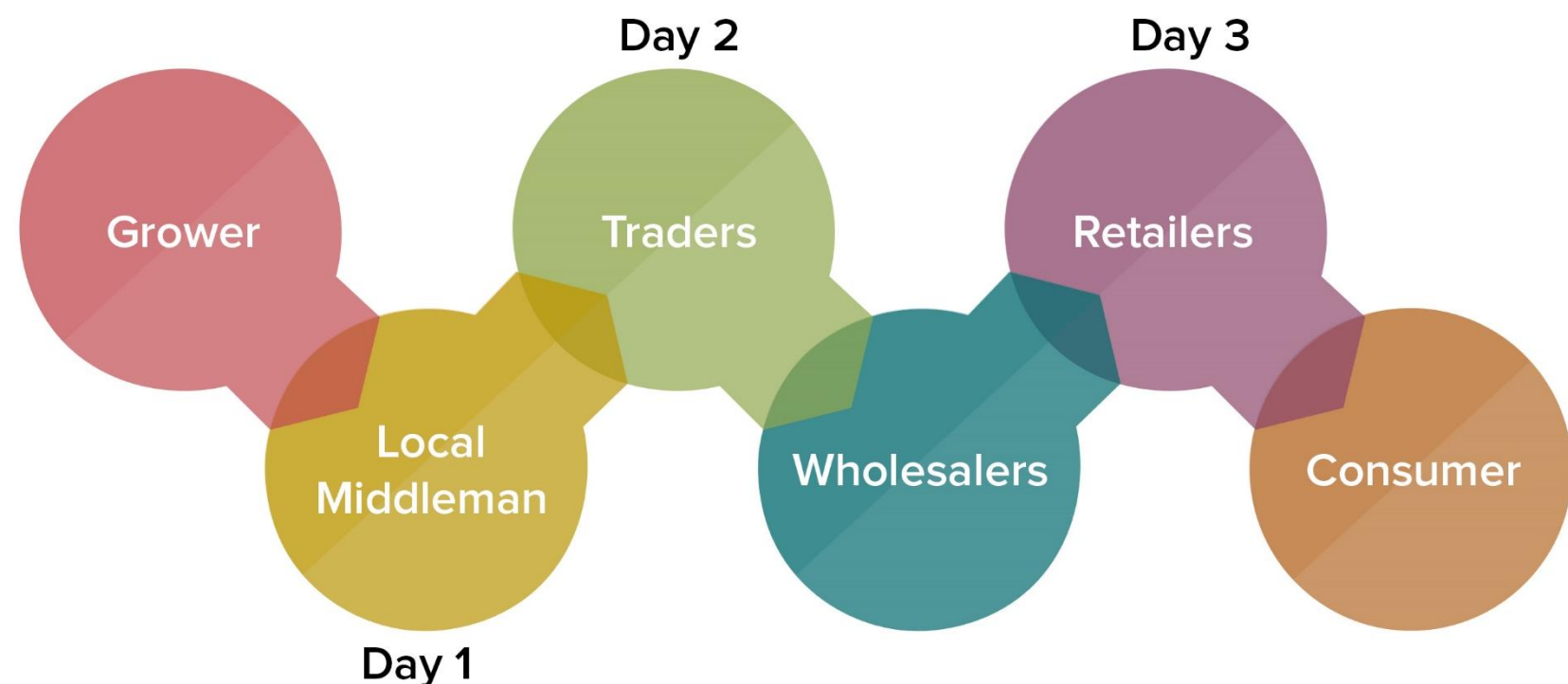
- India- 2nd largest producer & consumer of vegetables in the world
- 60 % quality gets lost in supply chain
- 24 % vegetables wastage in supply chain [USA- 4-6 %]
- Farmers get only 30 % of money paid by end customer [USA- 70 %]

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- Long supply chain- Price goes high

Traditional supply chain



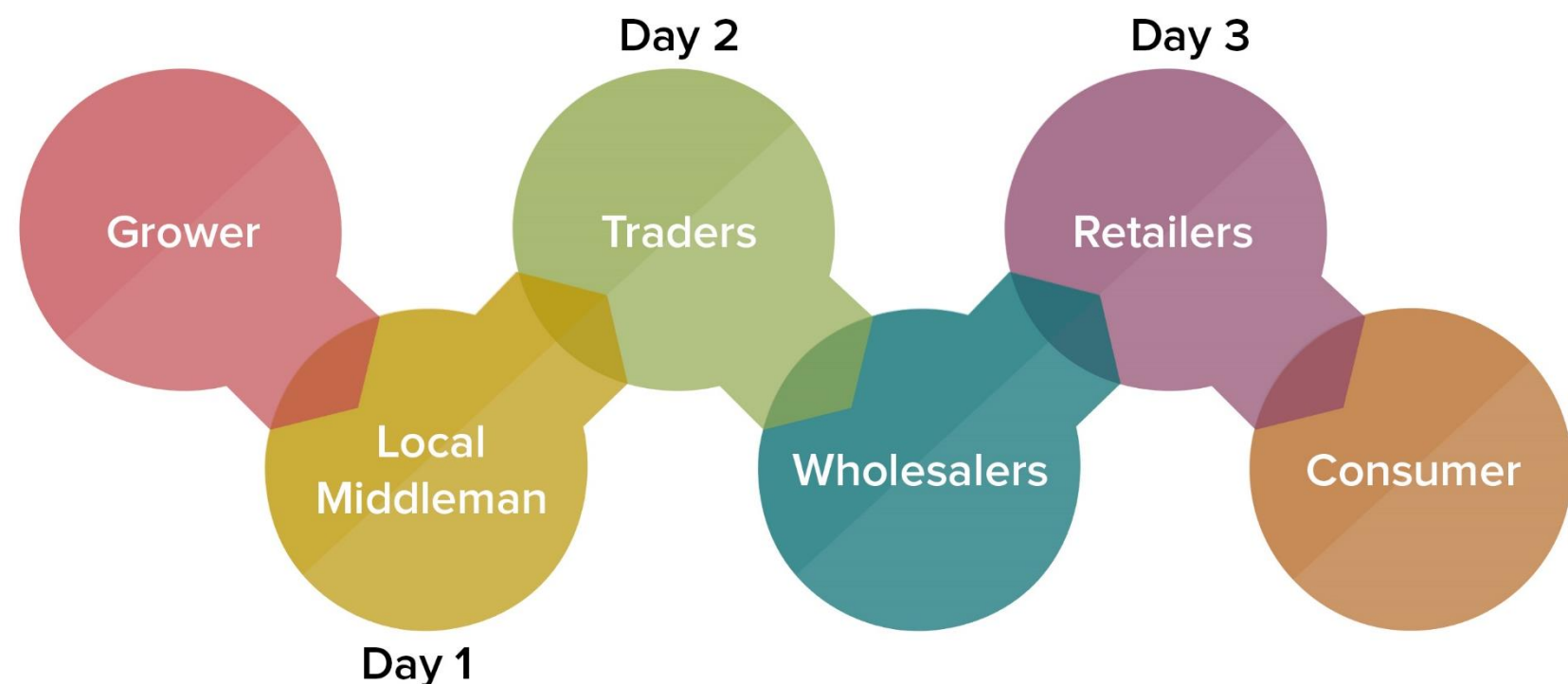
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**Need to improve
supply chain**

Traditional supply chain



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**Need to improve
supply chain**

- People - More health conscious
- Prefer to eat fresh, nutritious & healthy food
- Introduction of IT sector & MNCs- Tight schedule
- No time to go to market & buy fresh vegetables everyday

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**Need to supply healthy
vegetables at convenient place**

Primary research

Field study [Farmers & middle men]

Field study at Kesnand & Kolawadi, Pune

Visit- Market yard, Pune

Insights

- Use chemical fertilizers- To get instant effect
- Small farmers- Sell goods in the local market- lower price
- Big farmers- Big central market- Price not predictable
- Risk of zero profit
- Lack of proper storage system- Quality loss- lower price
- Margin of 1st middleman varies from 5% to 20%

Primary research

Field study [Customer]

Visited- Central vegetable market, local markets & Reliance fresh, Haiko & Spencer's
Questionnaire of about 10 questions

Insights

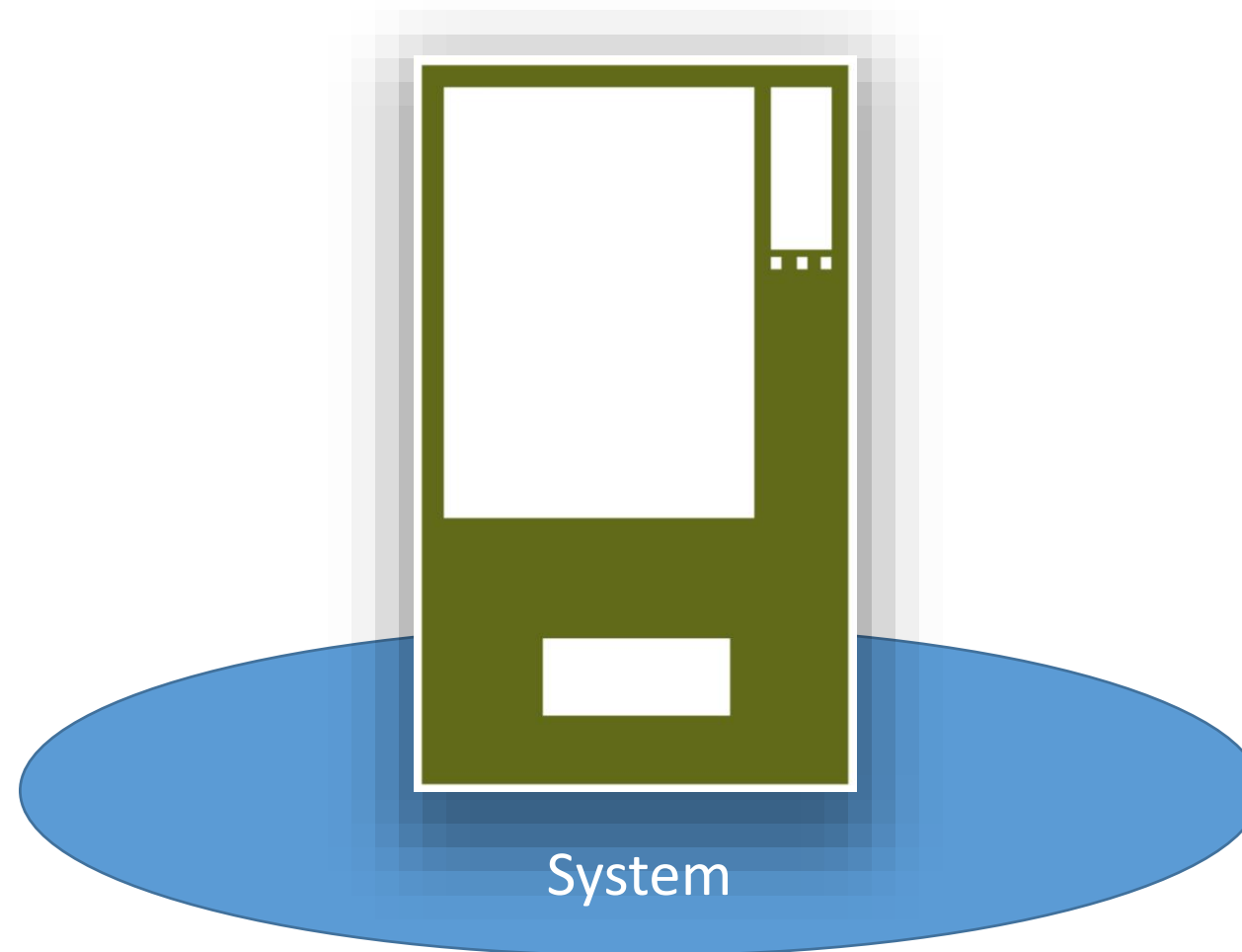
- House wife & elderly people buy vegetables everyday or thrice a week
- Prefer to buy from nearby market
- Local market places- Unhygienic
- Arrogance of subjiwala
- Unavailability of carry bag
- Elderly people- Difficult to carry heavy bags
- Unavailability of vegetables in odd time
- Difficult to find some particular vegetable
- No trust on local vendors- use destruction analysis to check quality
- No assurance about quality & quantity
- Monopoly- High price
- Rainy season- Major problem
- Multiple handling- quality loss
- People prefer to buy vegetables from vegetable malls ; as quality & quantity is assured

Need

- To eliminate / reduce middle men chain
- To encourage farmers to use organic fertilizers
- To assure farmers about the price they will receive for their goods
- To provide better transportation & storage facility
- To provide customers fresh & healthy vegetables at convenient place

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Parallel product study

- Coffee vending machine
- Cold food vending machine
- Snack vending machine
- Soft drinks vending machine
- Non perishable product vending machine



Coffee vending machine

<http://n3.sdlcdn.com/imgs/a/h/8/Cafe-Desire-Coffee-Tea-Vending-SDL765171084-1-46cba.jpg> as on 1st Feb, 2015



Cold food vending machine

http://i.huffpost.com/gadgets/slideshows/359769/slide_359769_4016170_free.jpg as on 1st Feb, 2015



Snack vending machine

http://oldguyhockey.com/wp-content/uploads/2012/05/AMS_Snack.jpg as on 1st Feb, 2014



Soft drinks vending machine

<http://letstalkpayments.com/wp-content/uploads/2013/09/Vending-machine.jpg> as on 1st Feb, 2014



Stilettoes vending machine

<https://fixturescloseup.files.wordpress.com/2012/10/fashion-shoe-vending-machine.jpg> as on 1st Feb, 2014

Parallel product study

Problems in the current vending machines



Vegetable vending machine

<https://fixturescloseup.files.wordpress.com/2012/10/fashion-shoe-vending-machine.jpg> as on 1st Feb, 2014



Trick to steal from vending machine

<https://www.youtube.com/watch?v=ml7iieEBwZ4> as on 23rd April, 2015

- Mostly designed for non perishable products
- Only one piece of each vegetable
- Refrigeration problem for Potato & Onion.
- Set price manually
- Security problems
- Difficult loading
- Interlocking with adjacent packets
- No provision of carry bag option.
- Interaction through physical buttons
- Inappropriate labeling system
- Does not provide statistical data
- No real time information transfer

Design statement [Final]

To design a vegetable vending machine for middle class & upper middle class society of India

Design brief

1] Usability –

- Clear visibility of vegetables
- Accommodate multiple packets of vegetables
- Easy to use for customers & service person
- Fresh interface
- 24 x 7 service
- Clear indication of price & weight
- Centralized online price change
- Payment options- Credit card,
Debit card
Store value card

2] Appeal-

- Slightly futuristic & fresh design
- Enough space for branding

3] Mechanism-

- Real time information transfer
- Provide carry bag on demand
- Separate provision for refrigerated & Non- refrigerated vegetables
- Mechanism to dispense vegetables packaged in rectangular boxes.

4] Safety-

- CCTV cameras

User study

Persona



Mr. Kulkarni [65 years]
Retired person
Mrs. Kulkarni [61 years]
House wife
Grandson [8 years]

- Avoid to go long distances
- Can not lift heavy bags
- Grand son is quite small. He can not go out of the residential area

Mr. Jadhav [27 years]
IT Engineer
Cook [41 years]

- Working hours
9:00AM to 7:00PM
- No time to buy vegetables daily
- Market place much away from home, so, can not choose his daily menu

Mr. Deshpande [41 years]
Govt officer
Mrs. Deshpande [38 years]
Job

- Working hours
10:00AM to 6:00PM
- Mrs. Deshpande is health conscious; so prefer everyday fresh food

User study

User scenario

Daily-use scenarios:

- People buy fresh vegetables
- Service person re-fills the machine

Necessary-use scenarios:

- Send inventory data to centralized system.
- Provide complete information about the sell & inventory

Edge-case scenarios:

- Service person has refilled the machine, but left door open
- Replacement of expired vegetable packets
- People stick advertisement posters on it

User study

Cultural issues, habits & mentality

- People use their senses effectively while buying vegetables
- People use destructive testing technique to check quality of vegetable
E.g. People break bhendi to check freshness
- People have more trust on vegetable malls.
As quality & quantity is maintained [Complaint - 1 in 5000 (approx.)]

Area of installation

Open places

Easily accessible

No security

- Road side shops
- Subji mandi
- Jogging track
- Bus stops, Railway stations
- Over bridges, Sub-ways
- Signal squares
- Gardens
- Foot path

Close places

Limited access

With security

- Schools, colleges
- Hotels
- Temples
- Shopping malls
- Parking of multi-storied apartments
- Govt & corporate offices
- Multiplexes, theaters

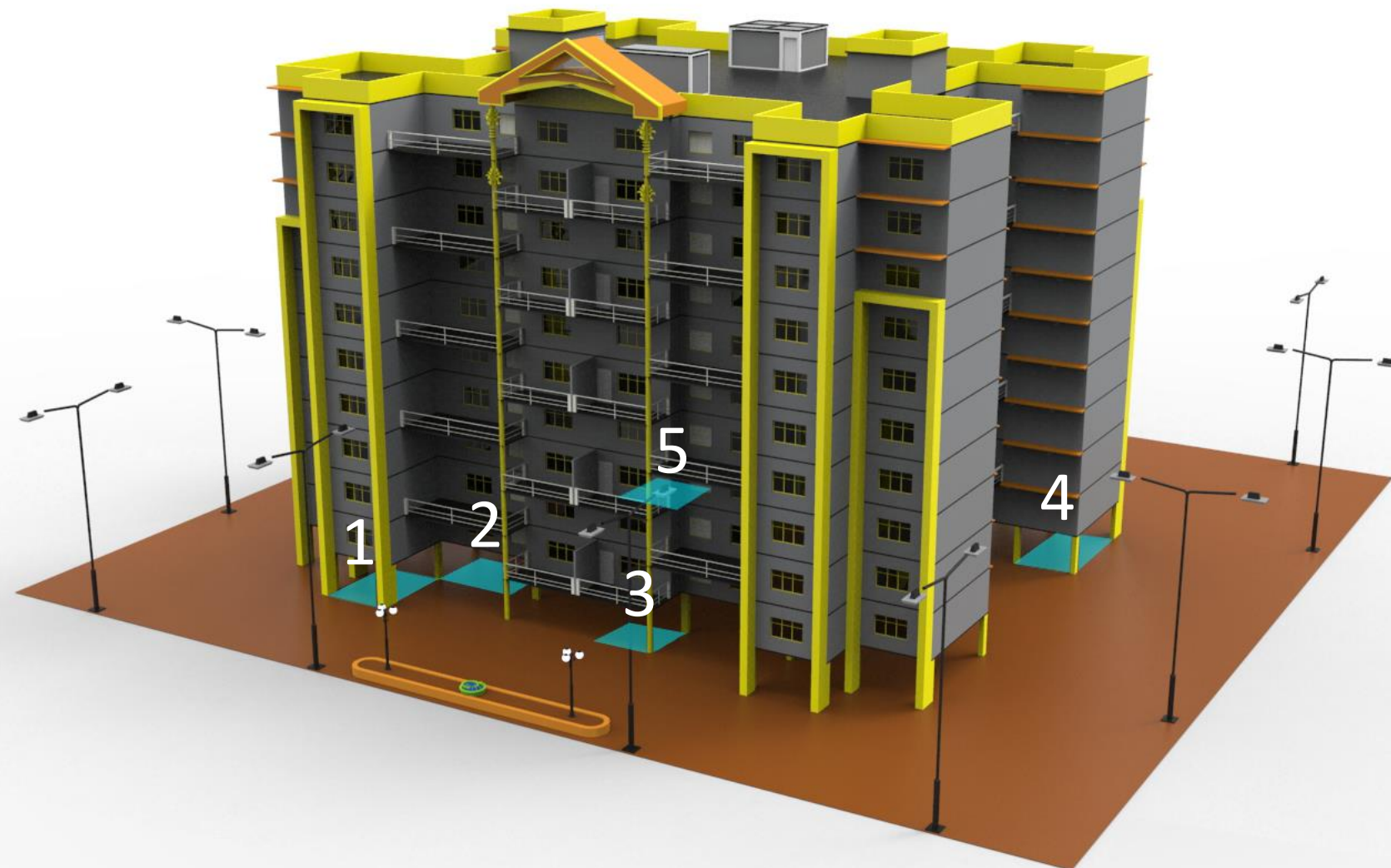
Area of installation

Evaluation Criteria	Weightage	Roadside, Footpath, Signals	Over bridge, Subways	Jogging track	Bus stops, Railway & Metro stns	Vending carts	Subji Mandi	Hotels, Theatres, Shopping malls	Society parking	Schools, Colleges, Offices
Security	8	4	4	6	5	8	4	8	6	6
24x7 service	9	9	9	0	9	0	9	0	9	0
Dust/ pollution	4	0	2	4	2	2	2	3	3	3
Sunlight contact	4	0	4	0	4	0	0	4	4	4
Convenience of refilling	9	7	5	4	3	9	8	2	9	4
Installation cost	8	4	4	4	4	8	4	2	7	4
Buying Experience	6	3	4	3	4	4	4	5	5	4
Accessibility to young children [8-12 years]	4	2	2	2	1	2	2	0	4	0
Accessibility to bachelors	10	10	10	8	10	6	10	6	10	10
Accessibility to working couples	16	16	16	12	16	9	16	9	16	16
Accessibility to old people	12	12	12	8	8	12	12	7	12	0
Accessibility to home servant / cook	10	10	10	7	10	10	10	6	10	0
	100	77	82	58	76	70	81	52	95	51

Evaluation- possible area

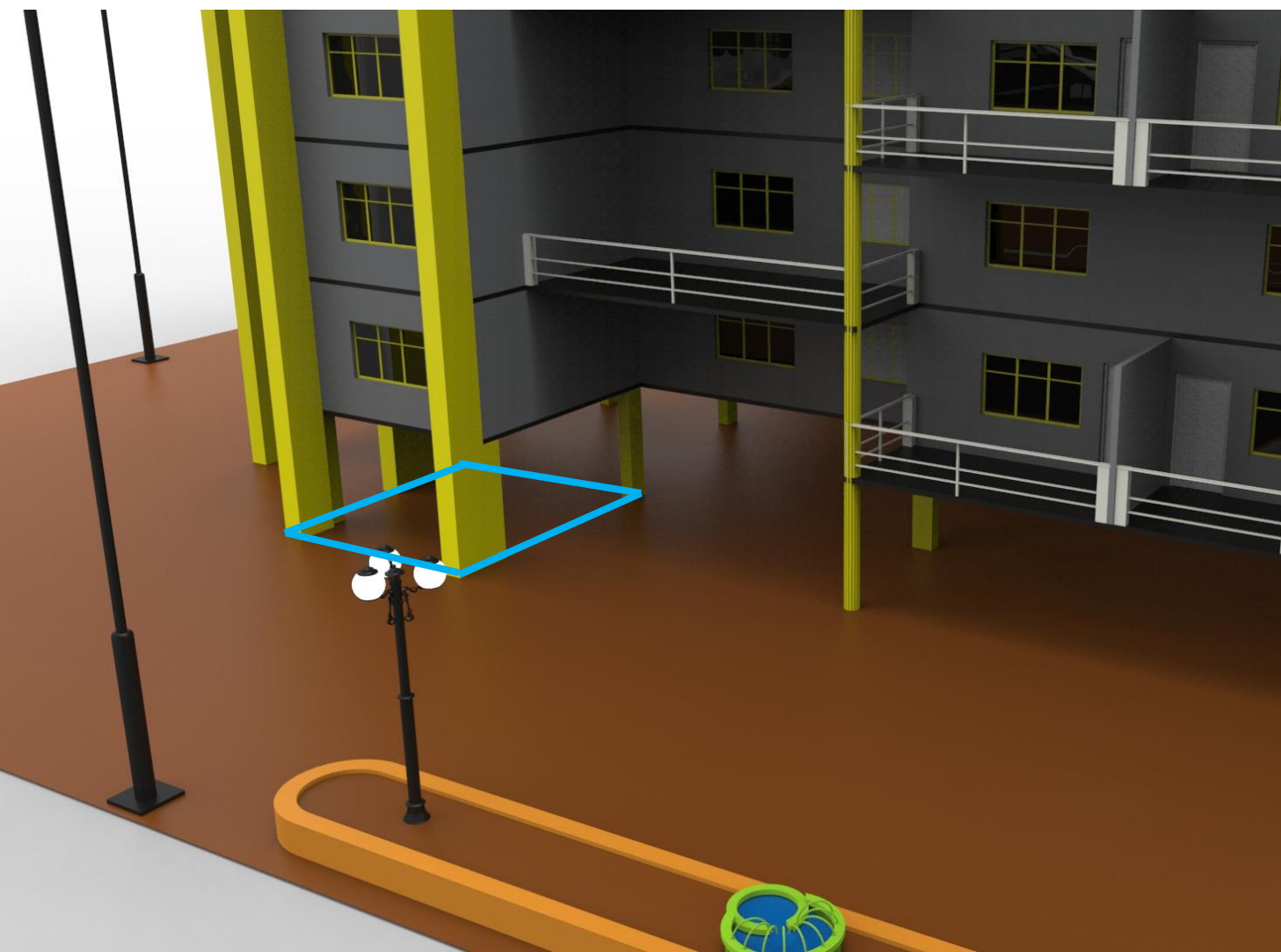
Area of installation

1. In the front part of the parking area near to lift
2. Comparatively inner part of the parking area
3. In the central front part of the parking area
4. In the back part of the parking area
5. In the central part of the parking area



Area of installation

- Good security as it is in comparatively open area
- Low chances of damage by Children playing cricket
- No direct contact with sunlight; less energy required for cooling
- Easily accessible for customers, as it is in the frontal part of building
- Easily accessible for service person, as he can park his vehicle close to it
- Near to the lift area, so that customers don't need to carry heavy bags for long distances



Vegetables on rack

Interviewed around 30 people

No	Vegetable	Wt	L	W	H
1	Potato	1000 gm	200	150	50
2	Onion	1000 gm	200	150	50
3	Tomato	1000 gm	200	150	50
4	Curry leaves		200	150	20
5	Cucumber	500 gm	200	150	50
6	Chilly	250 gm	150	150	20
7	Coriander	250 gm	200	200	40
8	Bhendi	250 gm	200	150	30
9	Cauliflower	380 gm	190	140	50
10	Pumpkin Cubes	500 gm	190	140	50
11	Gavar	250 gm	280	150	30
12	Capsicum	300 gm	200	150	60
13	Brinjal	500 gm	250	150	40
14	Drumstick	250 gm	200	100	40
15	Mushrooms	200 gm	165	130	30
16	Methi	250 gm	200	200	40

Assumption-

An apartment of 50 flats with 50 families

1 family- 1 kg potato- 9 days
 50 families- 50 kg potato, 9 days
 So, per day this apartment requires 55 kgs
 [6 packets] of potato everyday.

1 Family- every day- 2 Subjis
 50 Families- every day- 100 subjis
 So, $100/9 = 11.11$ packets are required

Clearance factor: 40%

Vegetables on rack

No	Vegetable	Wt (gm)	L (cm)	W (cm)	H (cm)	Days use	Calculated packets	Actual packets	Vol/bag (cubic cm)	total vol (Cubic cm)
1	Potato	1000 gm	200	150	50	9	6	4	1500	6000
2	Onion	1000 gm	200	150	50	30	3	2	1500	3000
3	Tomato	1000 gm	200	150	50	9	6	4	1500	6000
4	Curry leaves		200	150	20	4	12	7	600	4200
5	Cucumber	500 gm	200	150	50	4	12	7	1500	10500
6	Chilly	250 gm	150	150	20	9	6	4	450	1800
7	Coriander	250 gm	200	200	40	9	6	4	1600	6400
8	Bhendi	250 gm	200	150	30	-	12	7	900	6300
9	Cauliflower	380 gm	190	140	50	-	12	7	1330	9310
10	Pumpkin Cubes	500 gm	190	140	50	-	12	7	1330	9310
11	Gavar	250 gm	280	150	30	-	12	7	1260	8820
12	Capsicum	300 gm	200	150	60	-	12	7	1800	12600
13	Brinjal	500 gm	250	150	40	-	12	7	1500	10500
14	Drumstick	250 gm	200	100	40	-	12	7	800	5600
15	Mushrooms	200 gm	165	130	30	-	12	7	624	4368
16	Methi	250 gm	200	200	40		12	7	1600	11200
									Total	1,15,908 cubic cm

Actual packets = Calculated packets x (100 - Clearance factor)

Vegetables on rack

Volume of vending machine

Vegetables volume

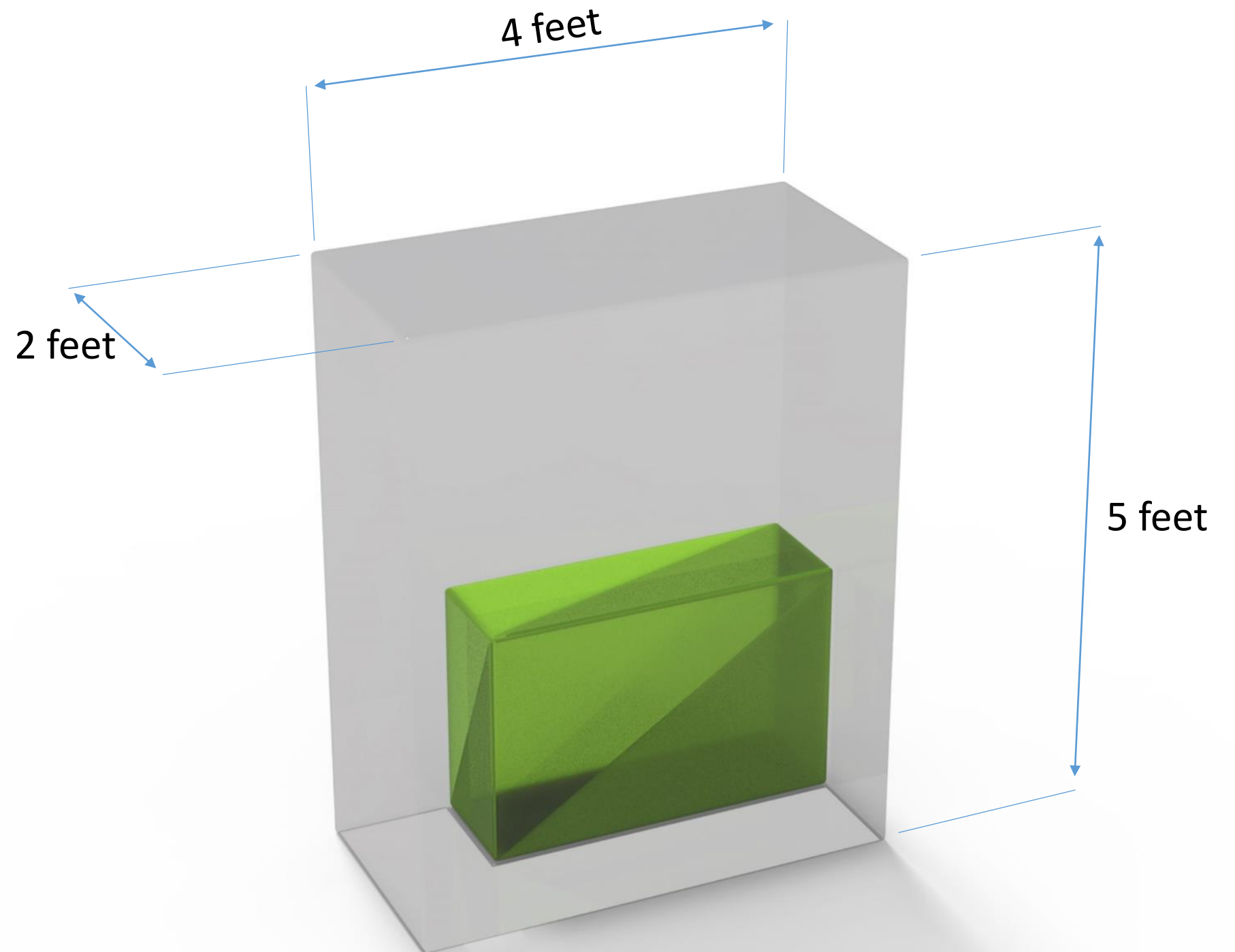
2.3 ft x 1 ft x 1.8 ft

700 mm x 300 mm x 550 mm

Machine volume

4 ft x 2 ft x 5 ft

1200 mm x 600 mm x 1500 mm
(Approx.)



Human factor

- Lower 2 ft (610 mm) height is not accessible.
- Convenient display height :
 - For 5th percentile person 4 ft 2 inches (Approx. 1270 mm)
 - For 50th percentile person 4 ft 6 inches (Approx. 1370 mm)
 - For 95th percentile person 4 ft 8 inches (Approx. 1420 mm)
- The width of the vending machine should not be more than 6 ft (Approx. 1830 mm)
- The upper most rack should be below 4 ft 6 inches (Approx. 1370 mm) from ground level.



5th percentile person

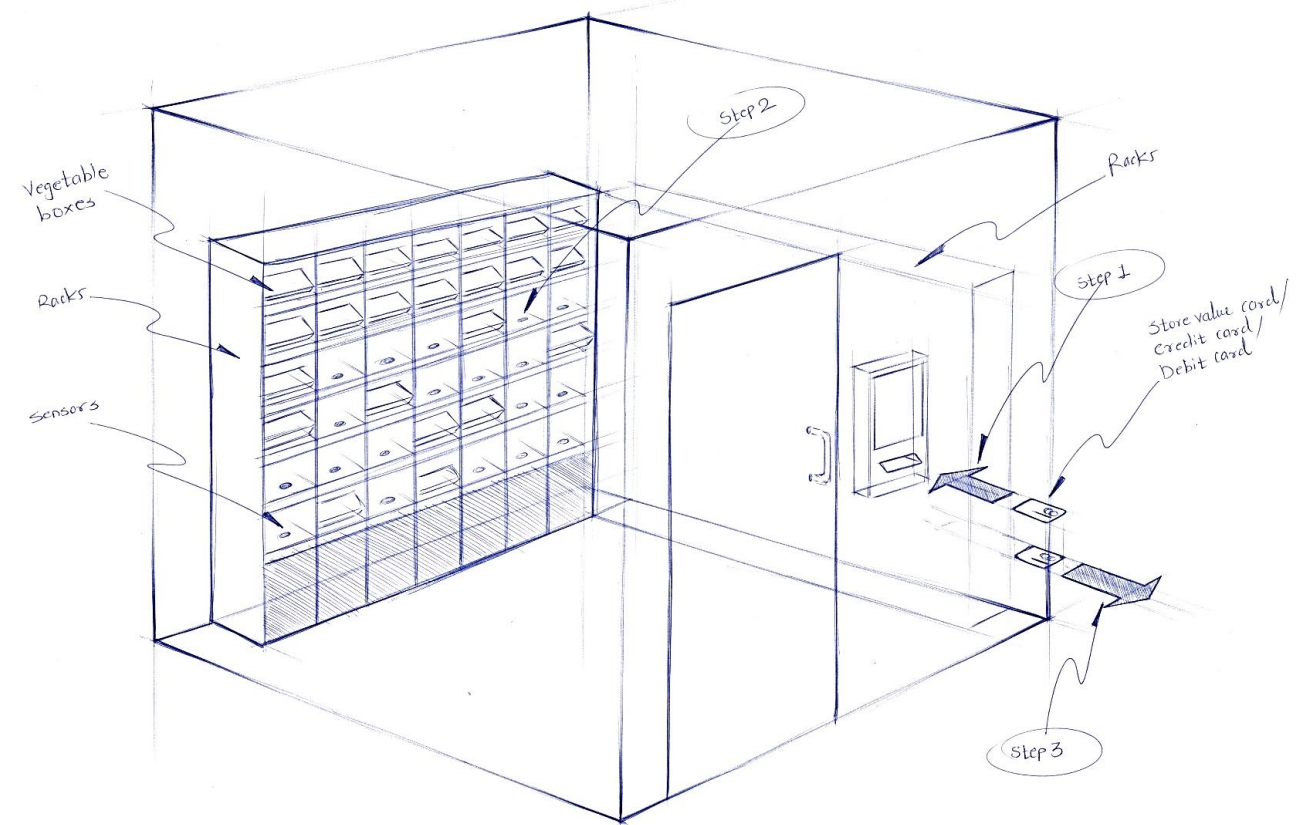
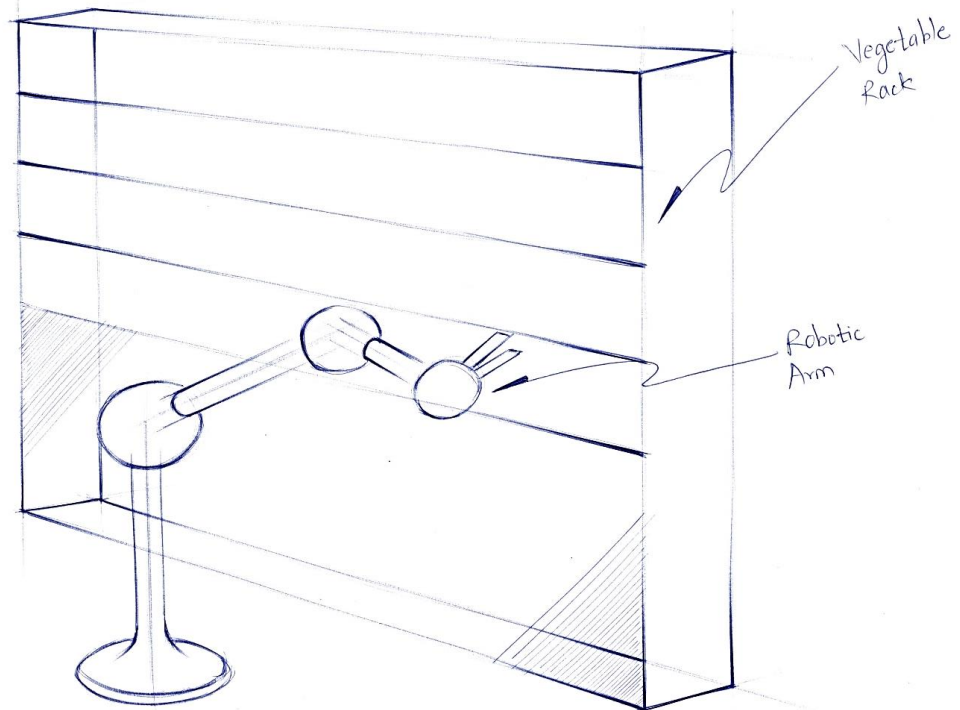
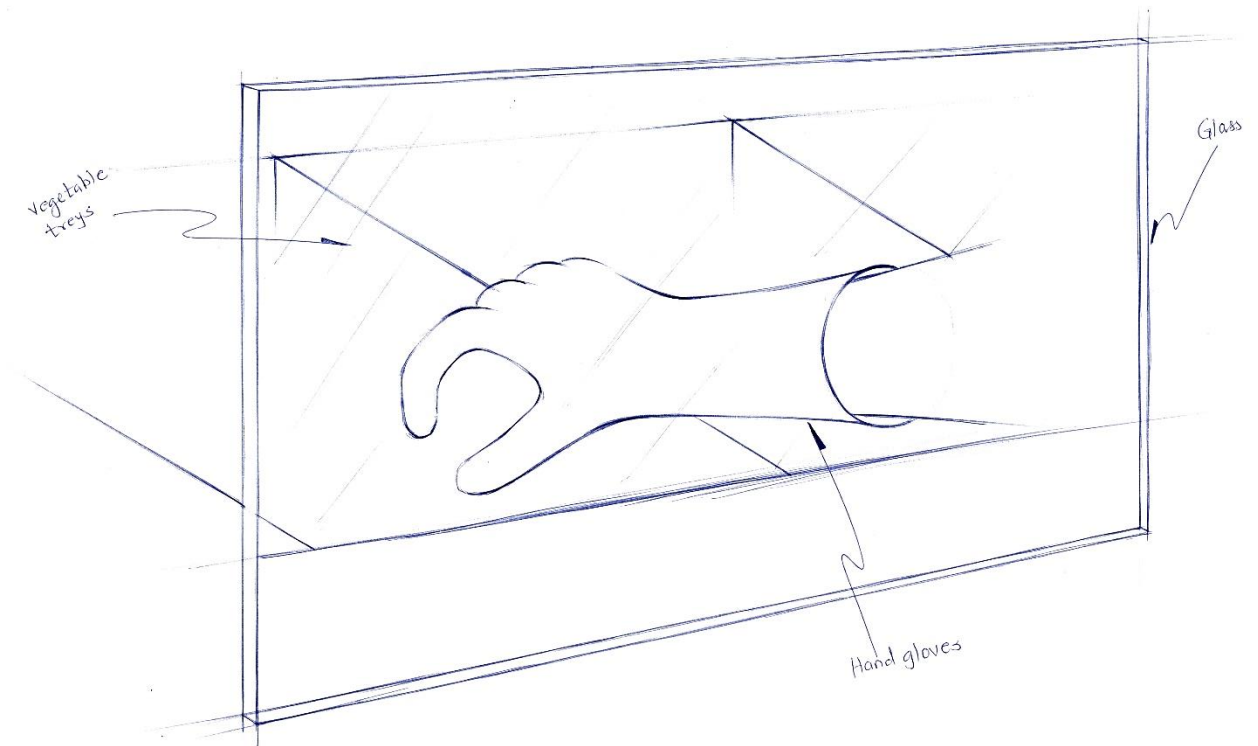
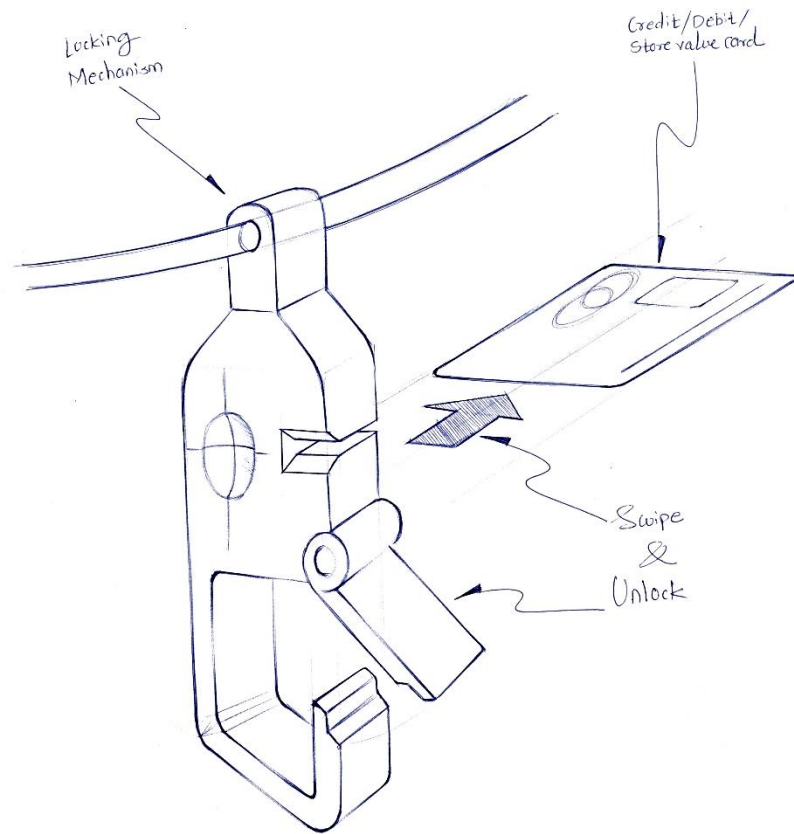
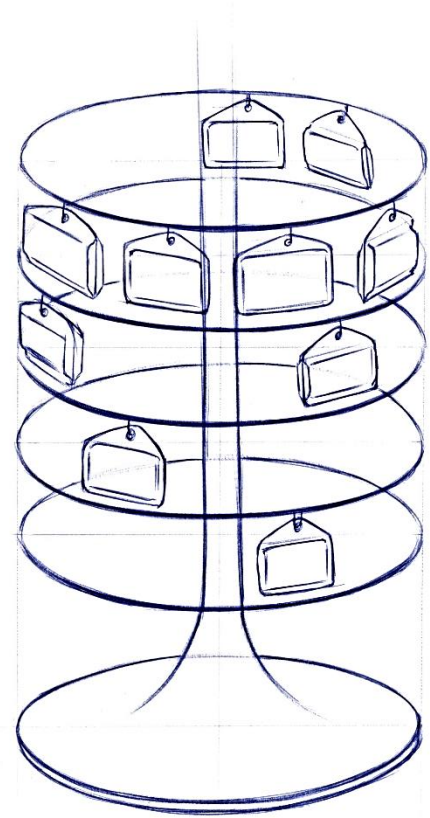


50th percentile person

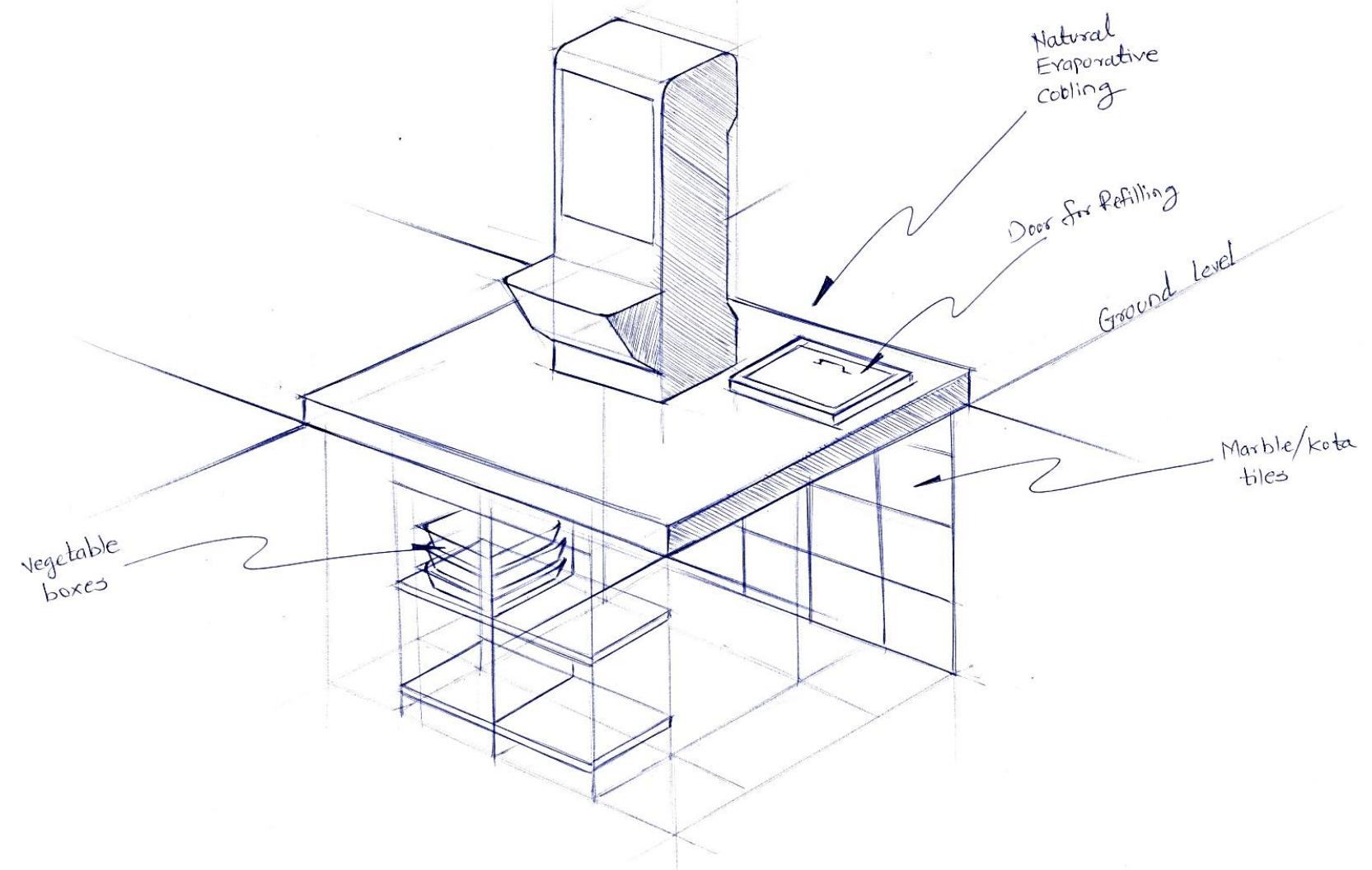
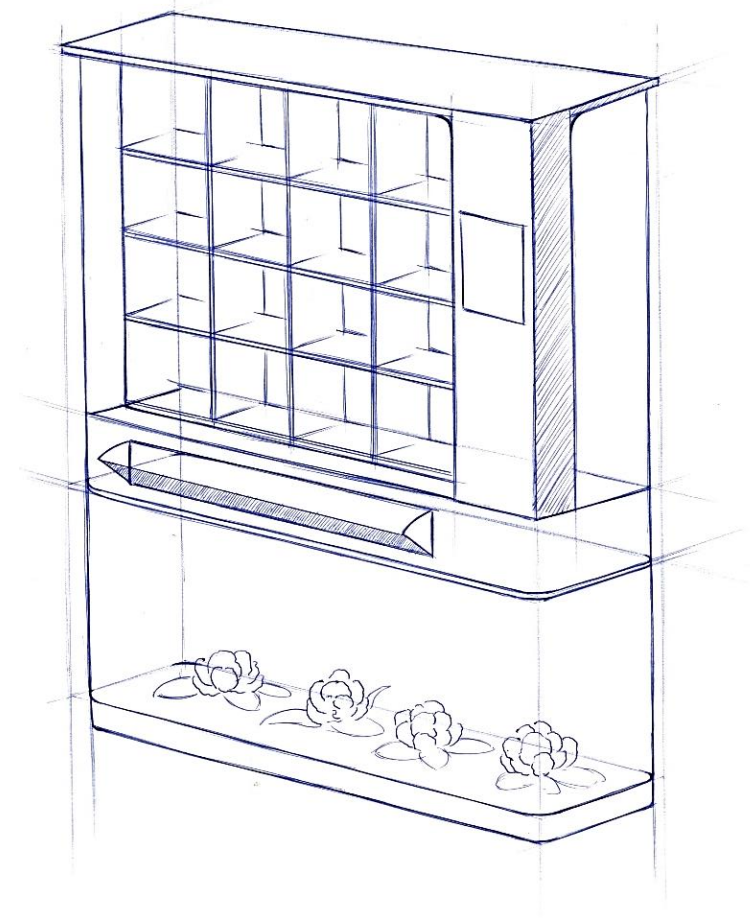
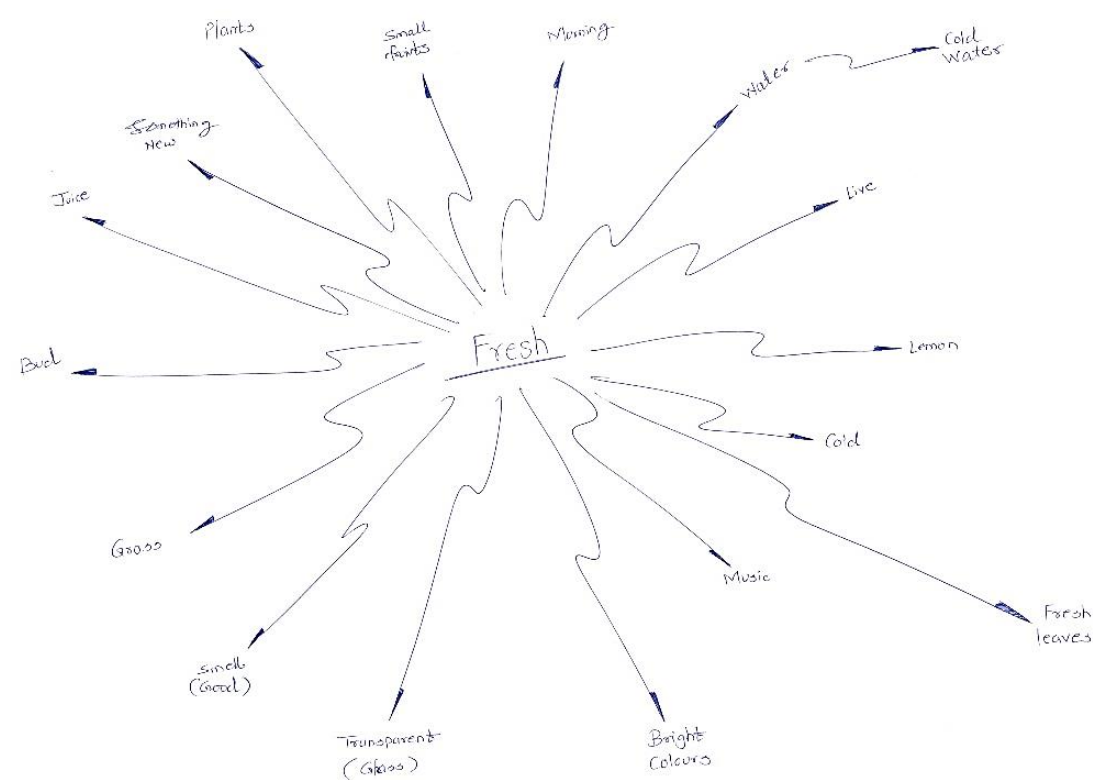
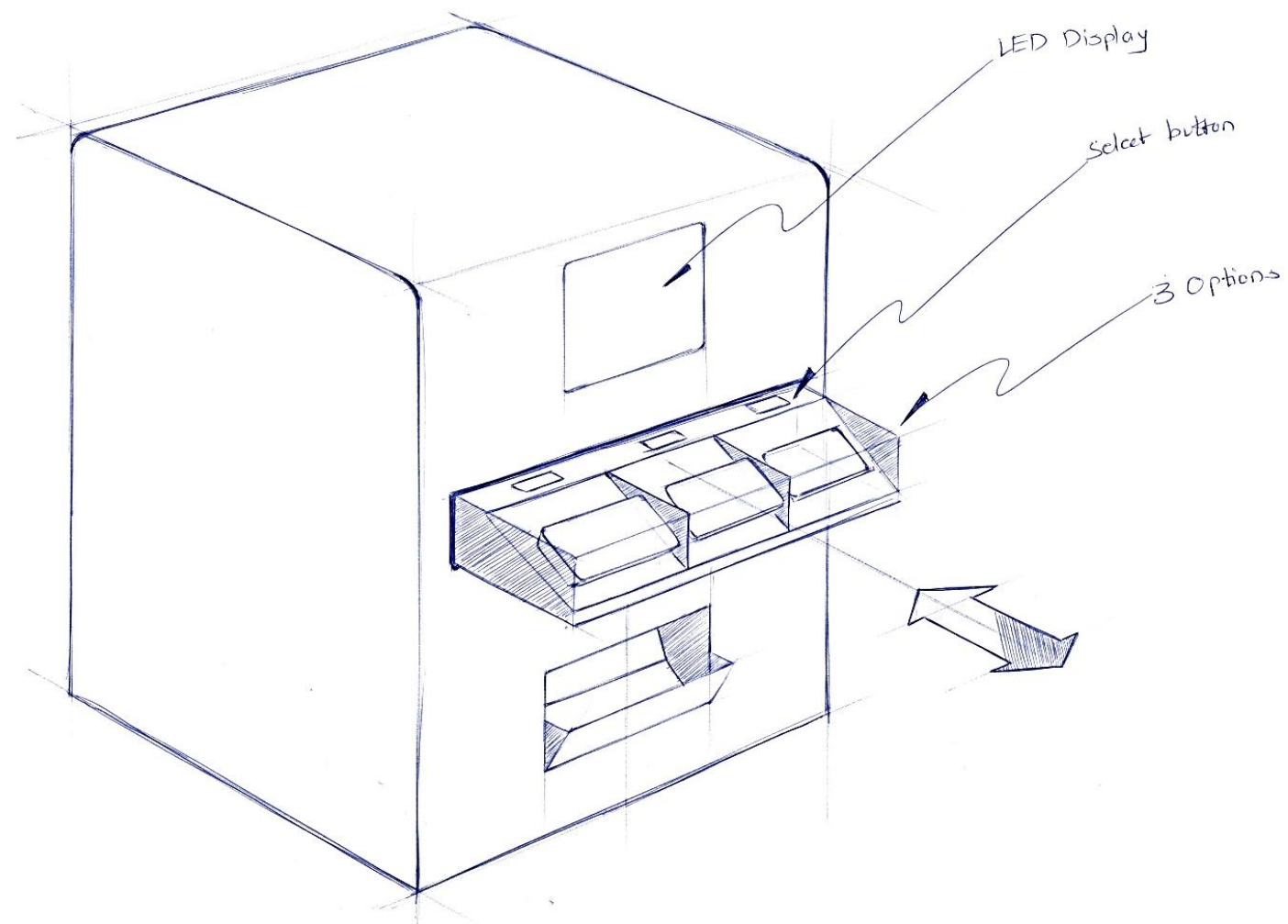


95th percentile person

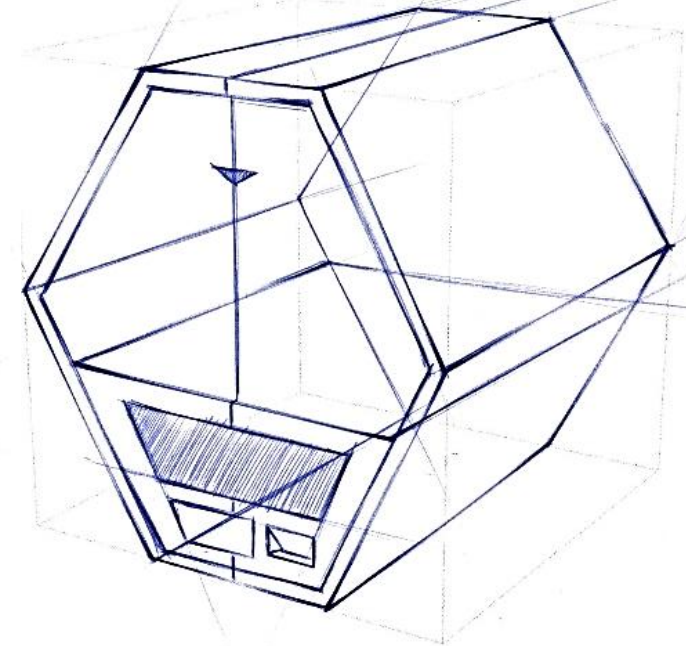
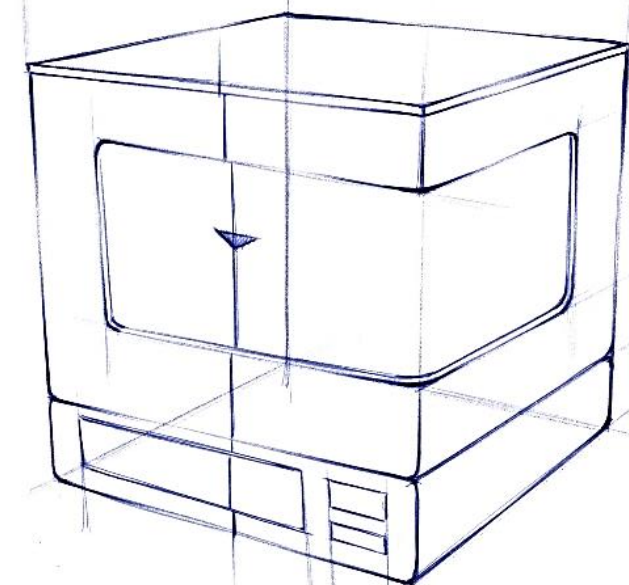
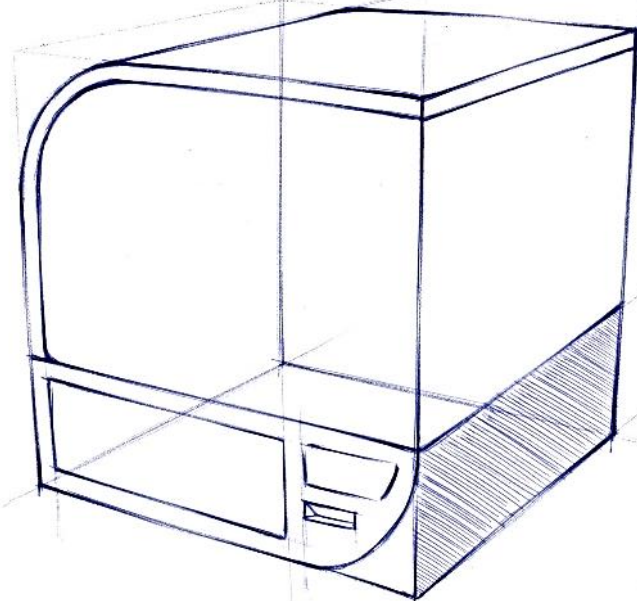
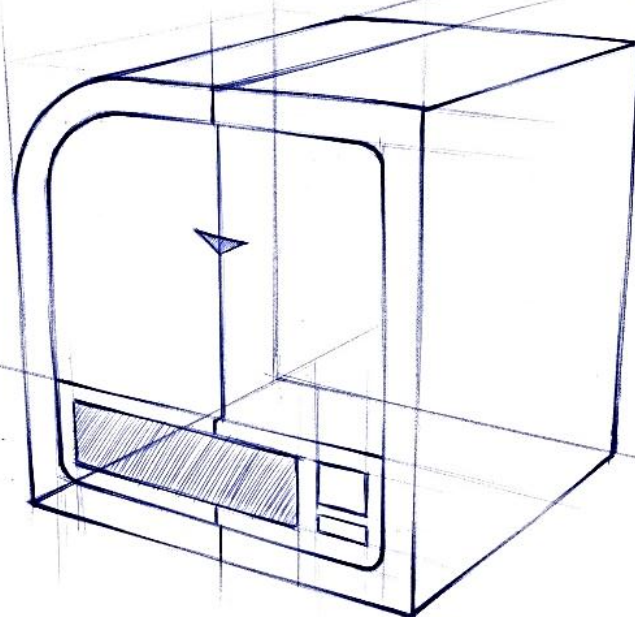
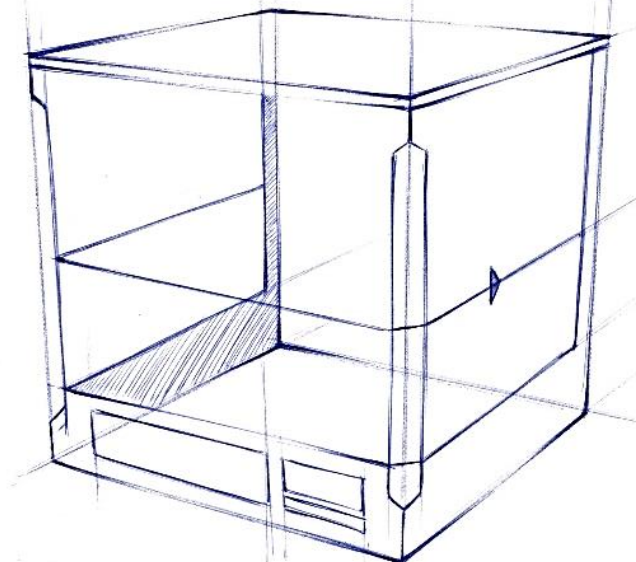
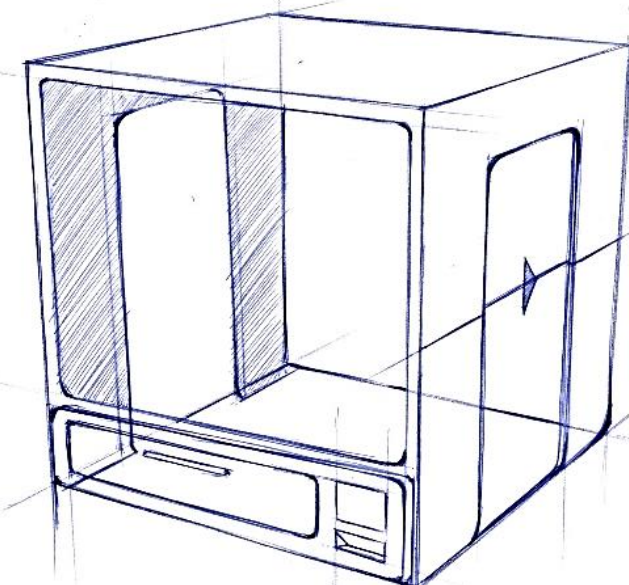
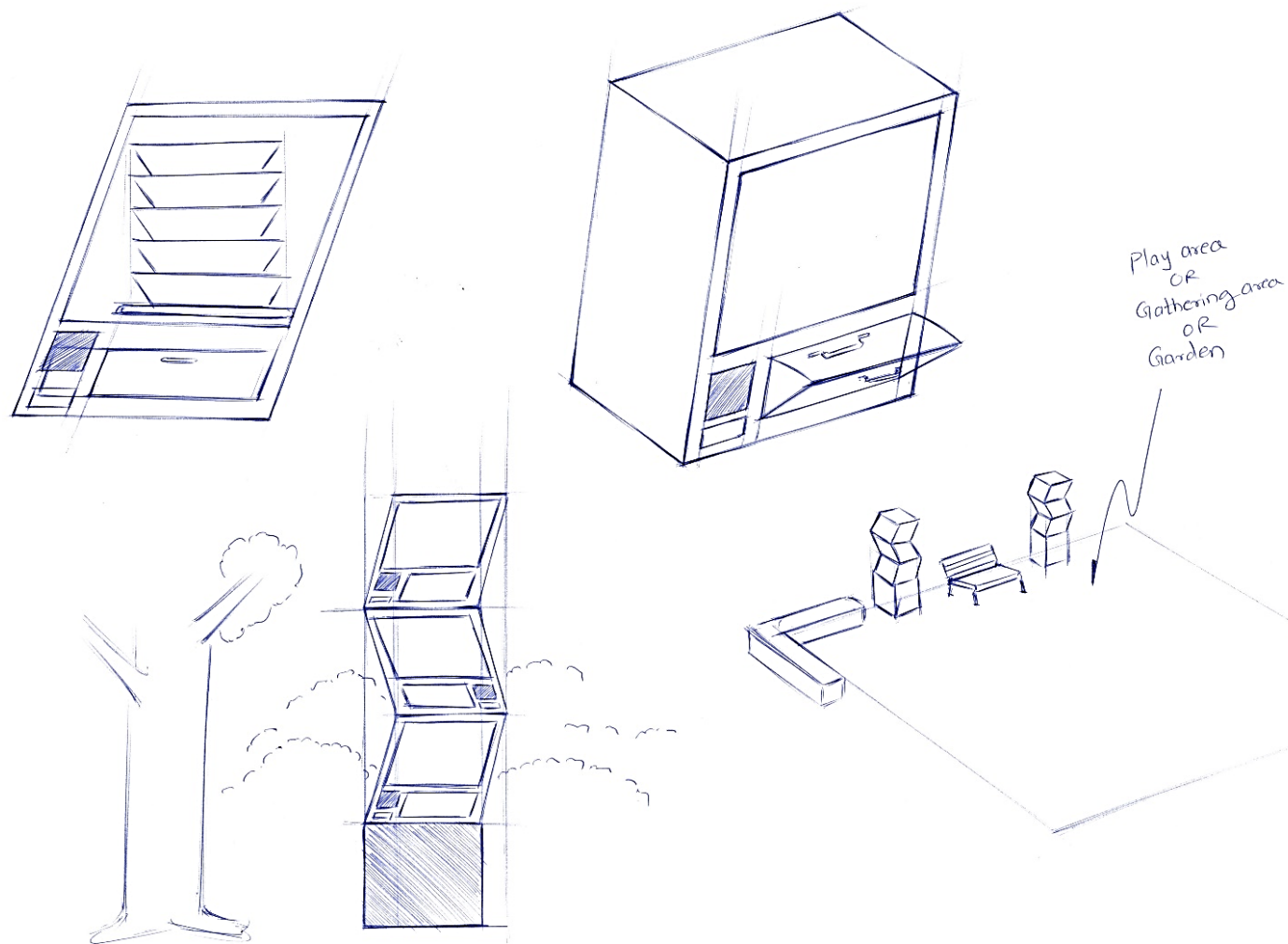
Concept generation [Phase 1]



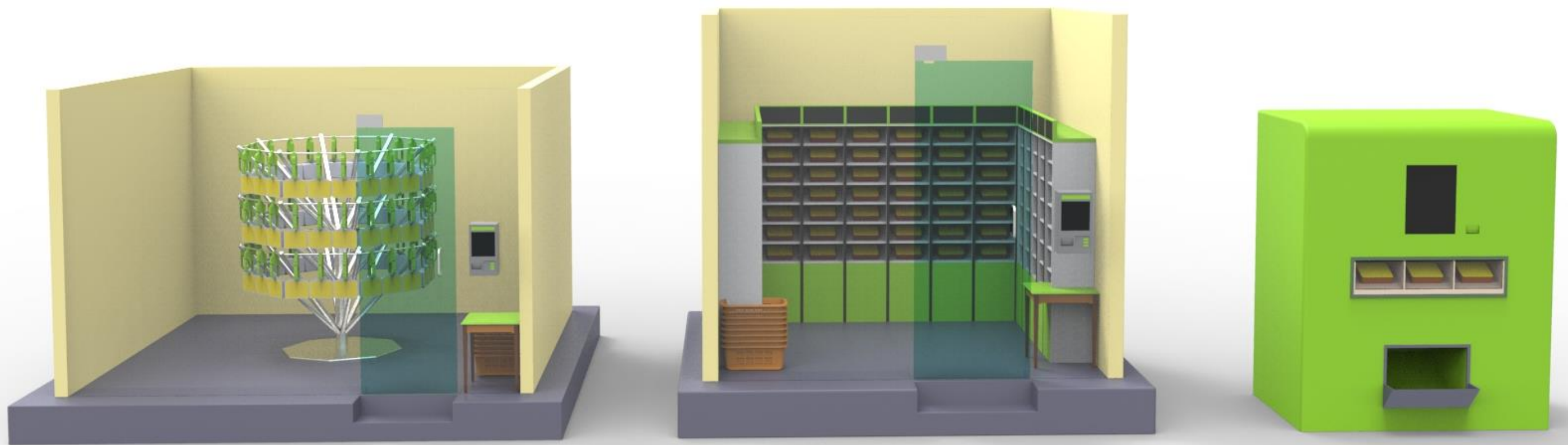
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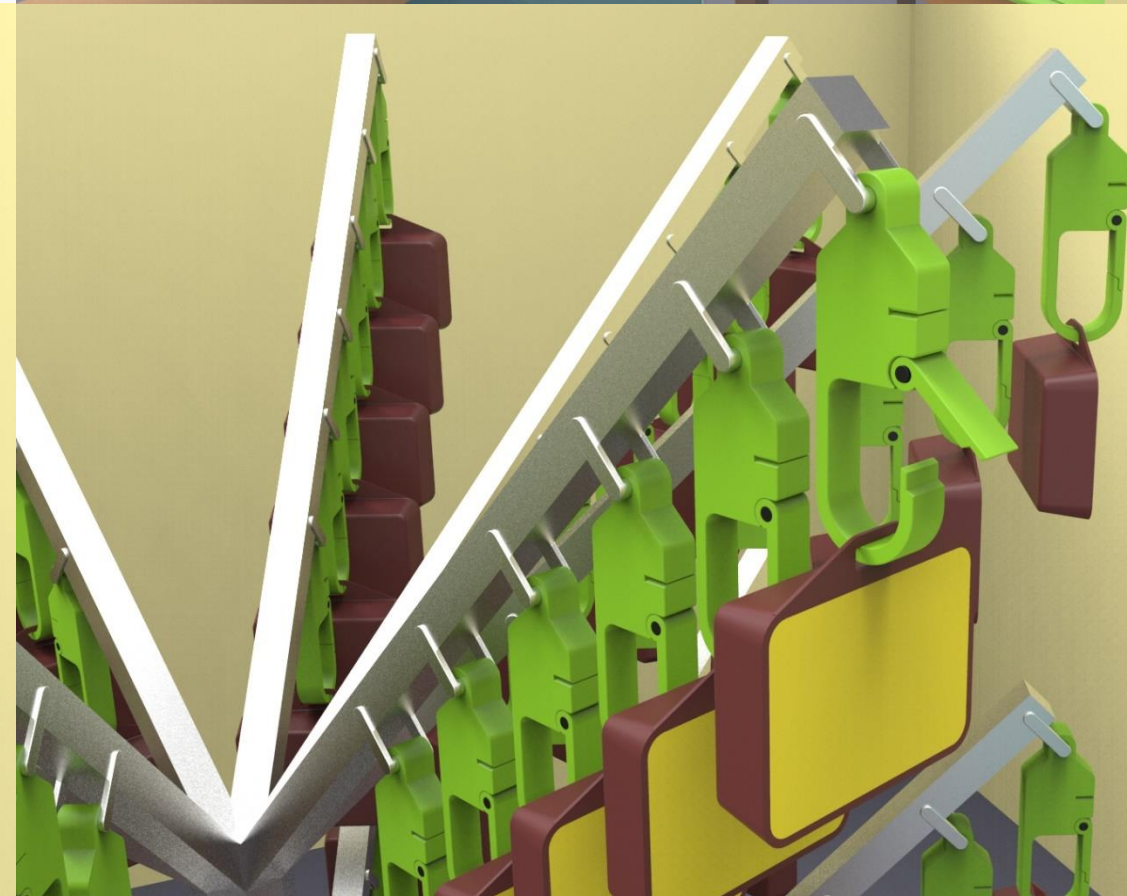
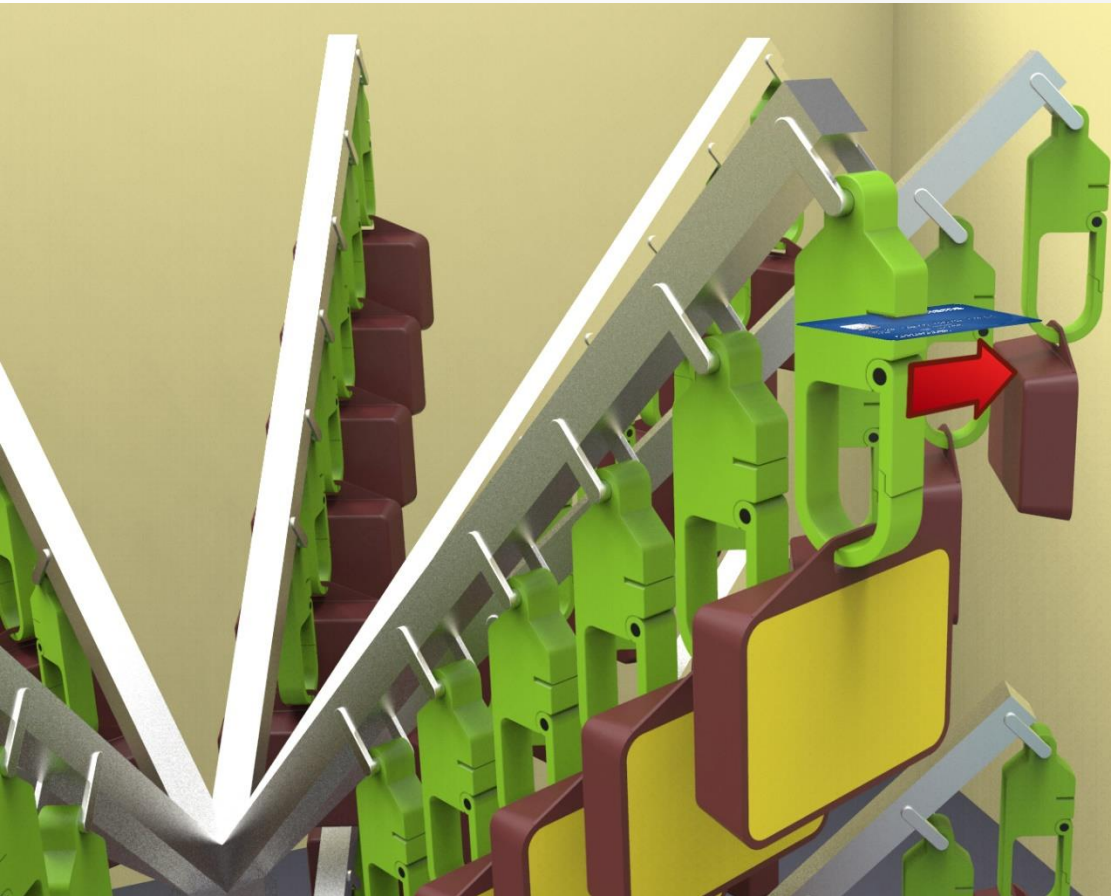
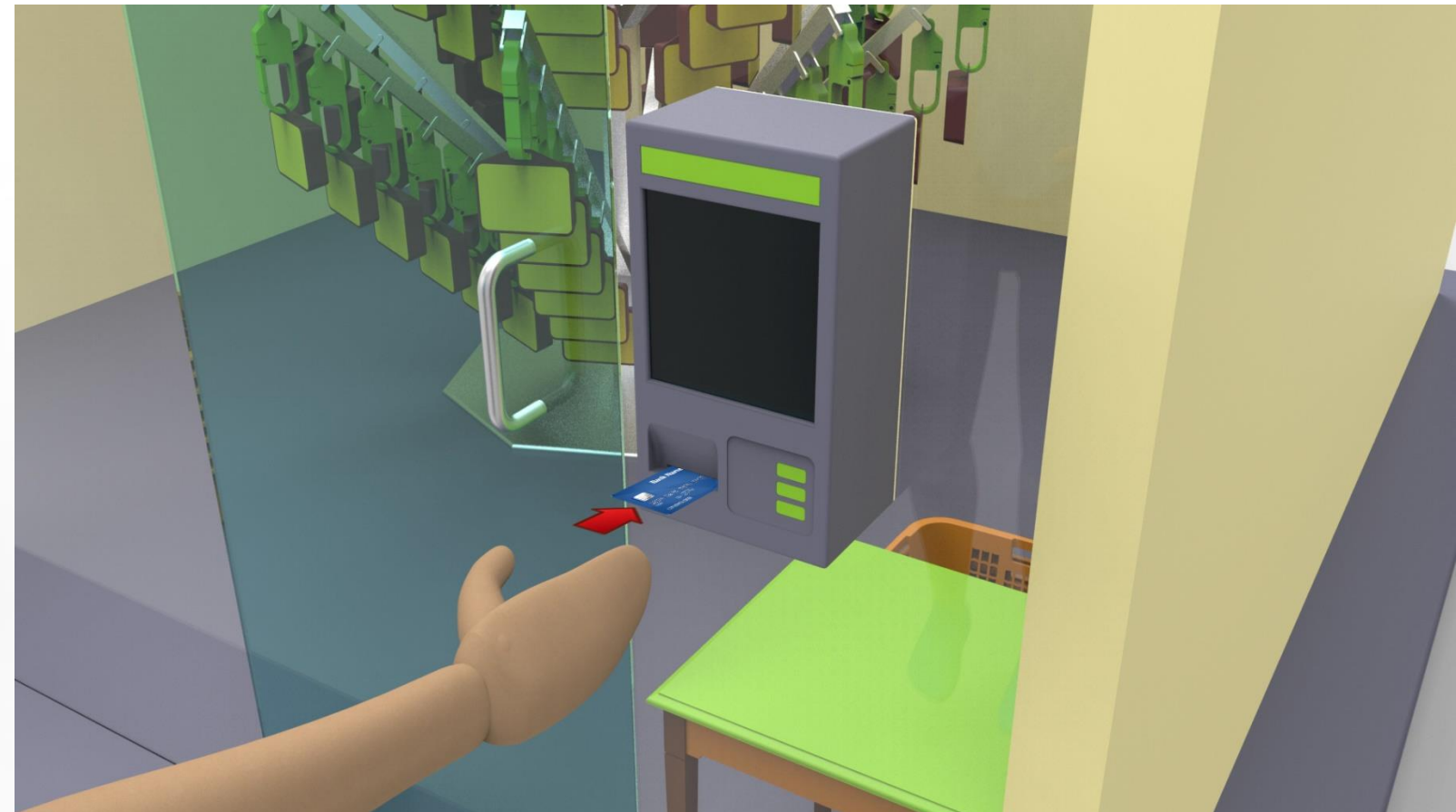
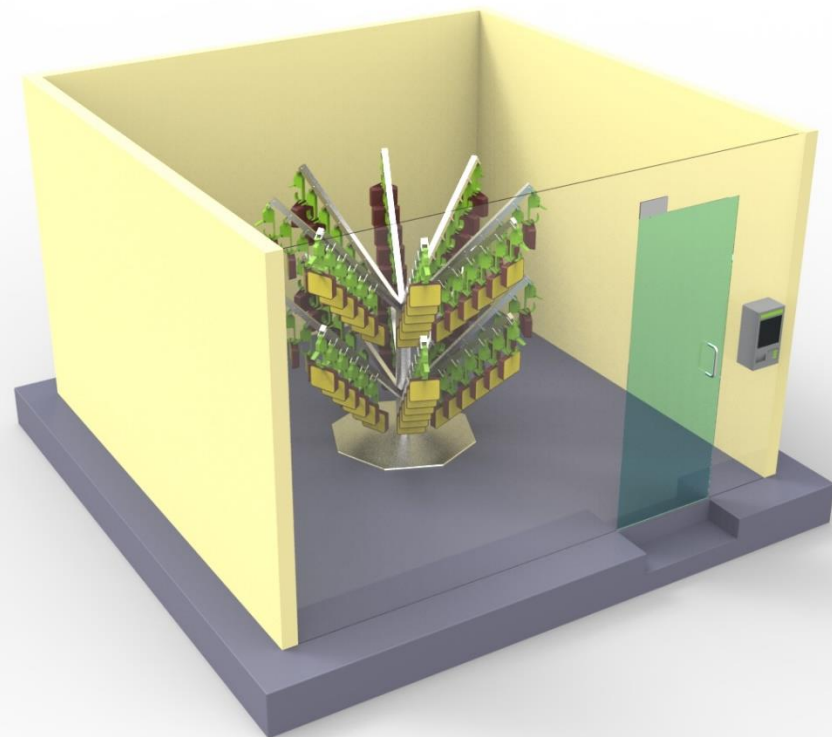


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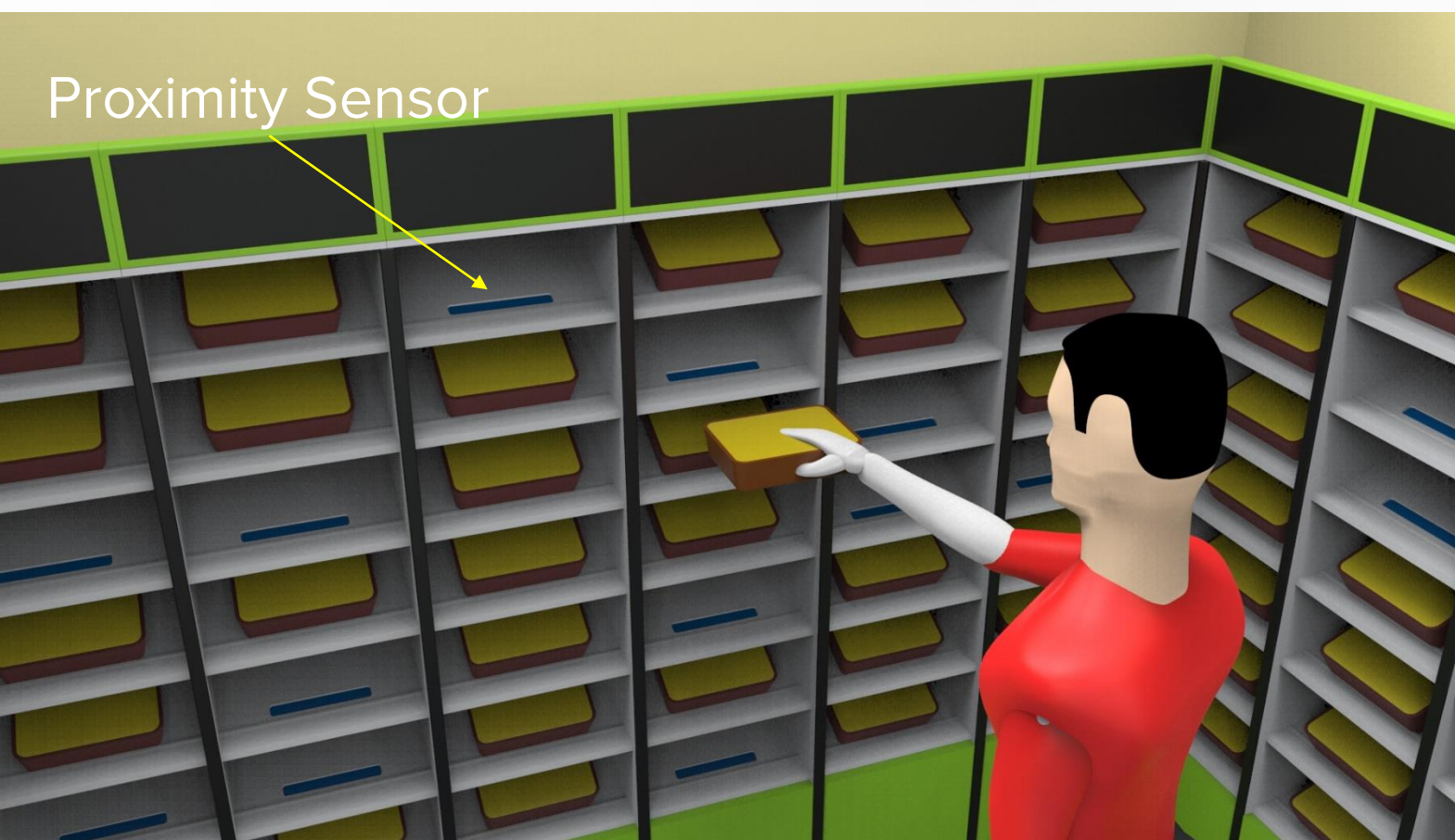
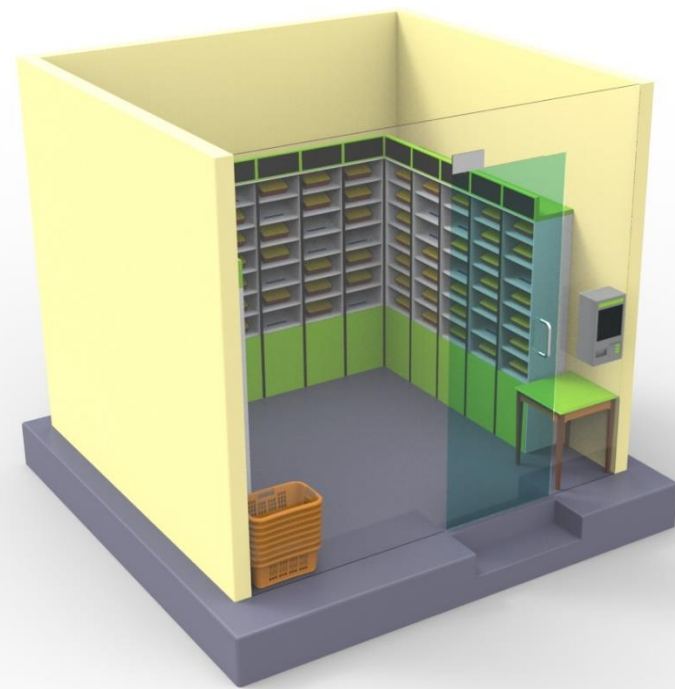
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Concept 1



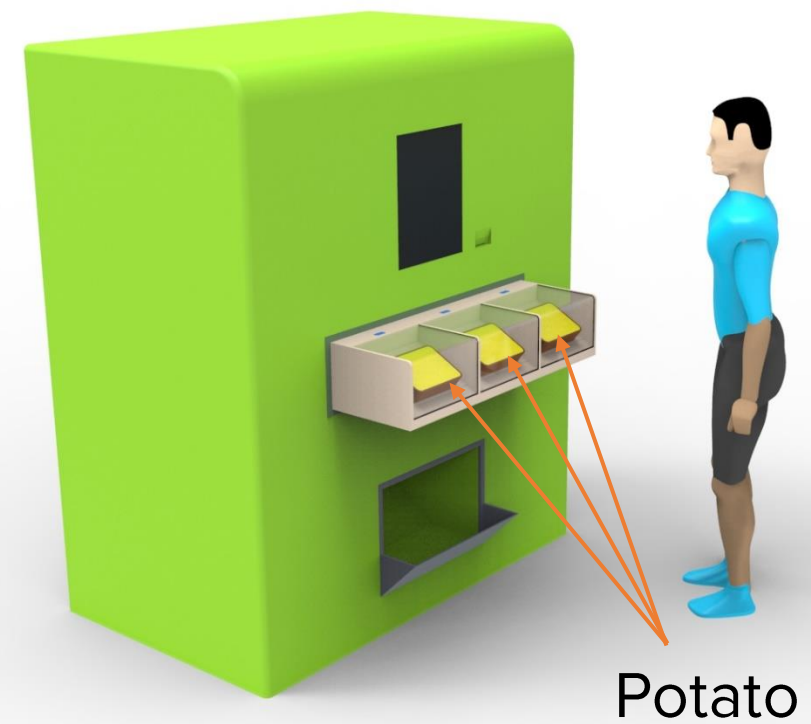
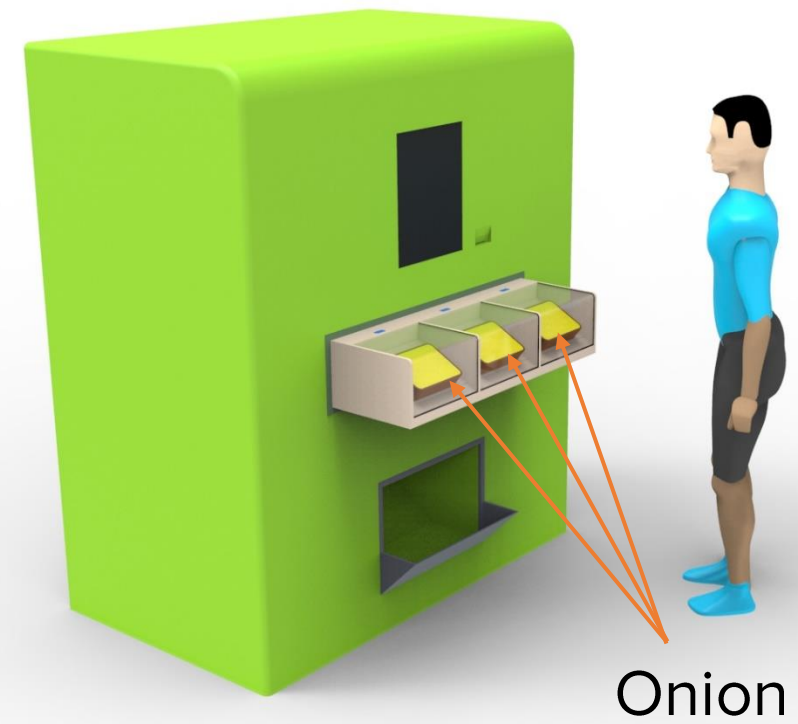
Concept generation [Phase 1]

Concept 2

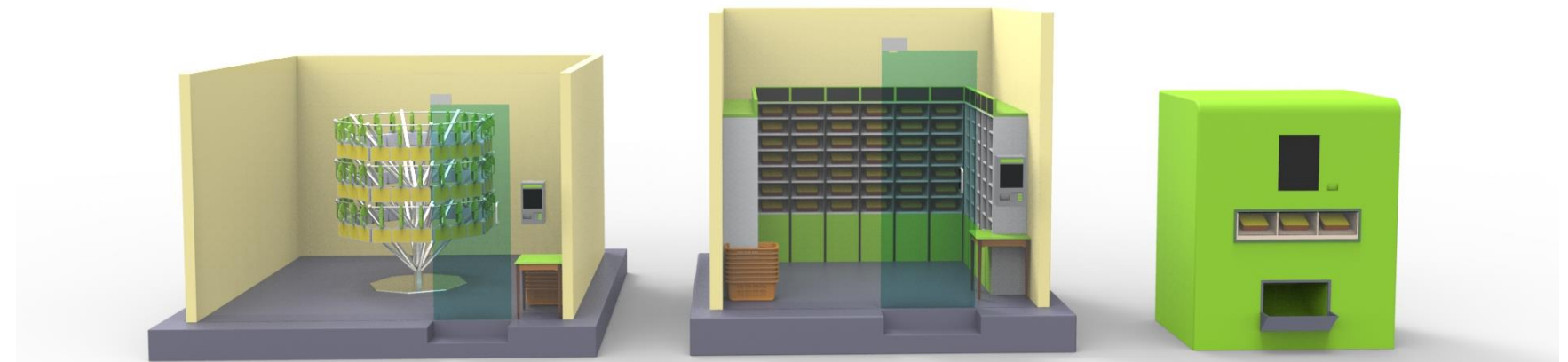


Concept generation [Phase 1]

Concept 3



Concept evaluation



No	Criteria	WTG	Concept 1	Concept 2	Concept 3
1	Uniqueness	14	14	10	14
2	Experience	14	14	10	14
3	Convenience	12	8	12	12
4	Ground area required	12	8	8	12
5	Visibility	10	8	10	5
6	Durability	10	5	10	8
7	Minimum step interface	8	8	6	4
8	Fast operation	8	4	5	8
9	Security	8	6	6	8
10	Use by multi-people at a time	4	4	0	0
		100	79	77	85

Concept evaluation

Feedback from

Customers

Constriction company,
fabrication & manufacturing company

Insights

- Minimum carpet area
- It should be compact
- People have enough trust on vegetables in malls. E.g. Haiko, reliance fresh, etc.
(No need of selection)
- People [mostly elderly people] find it easy to adopt new things if they are similar to some existing system.

Concept evaluation

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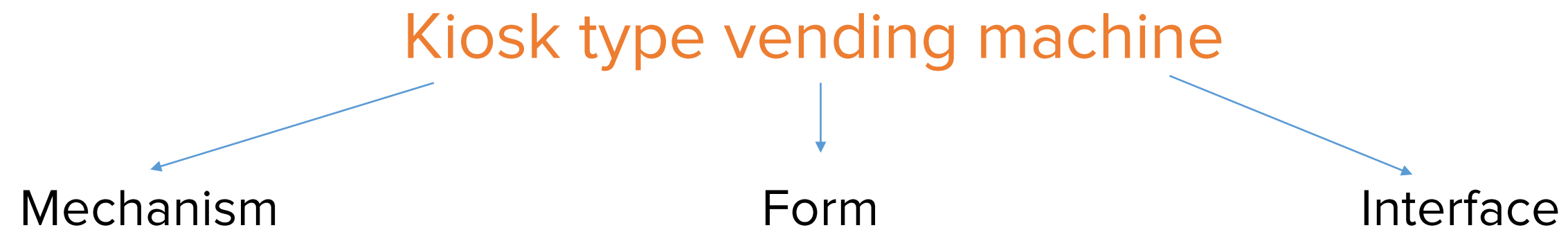
Kiosk type vending machine

Compact

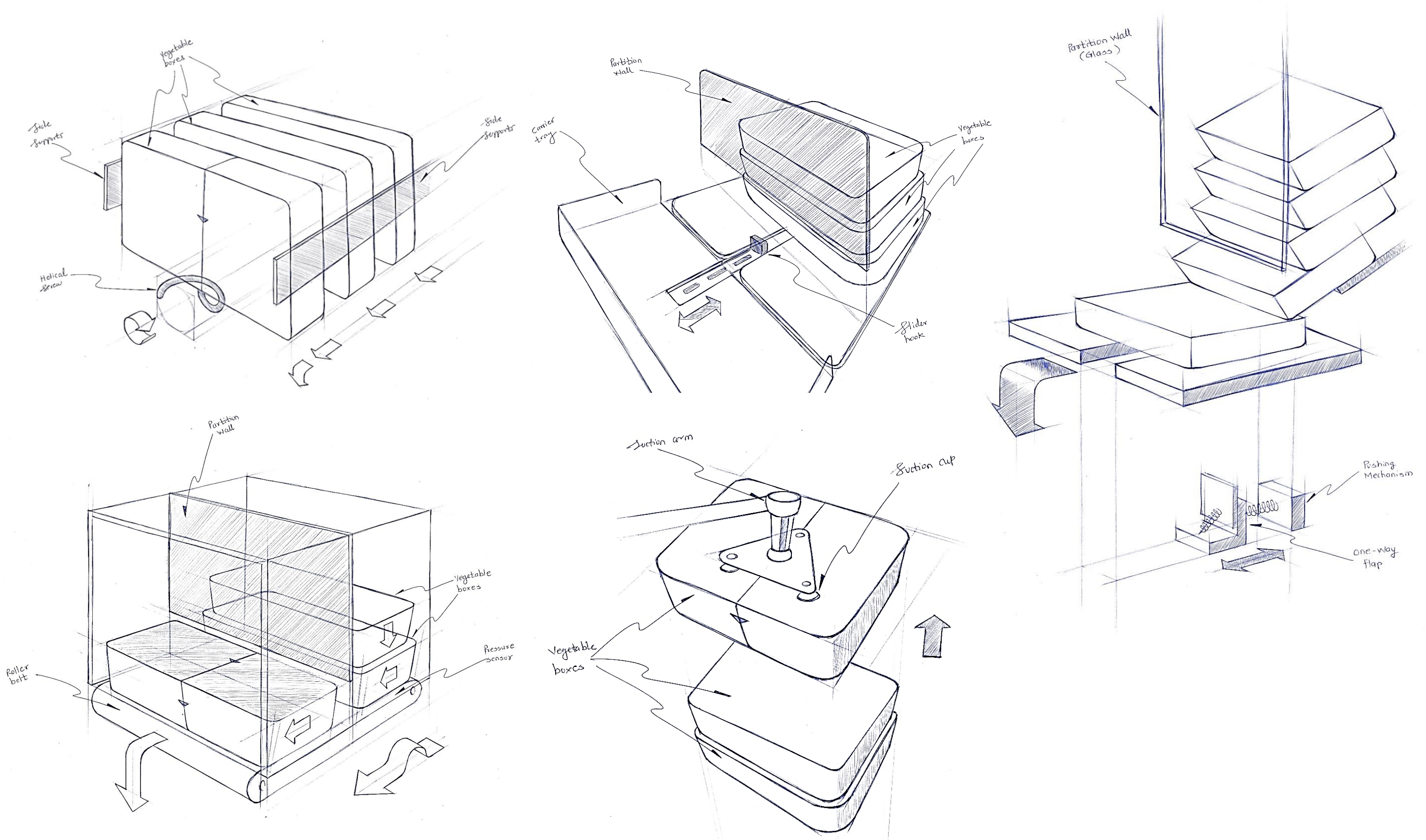
Minimum carpet area

Similar in shape with existing
vending machines

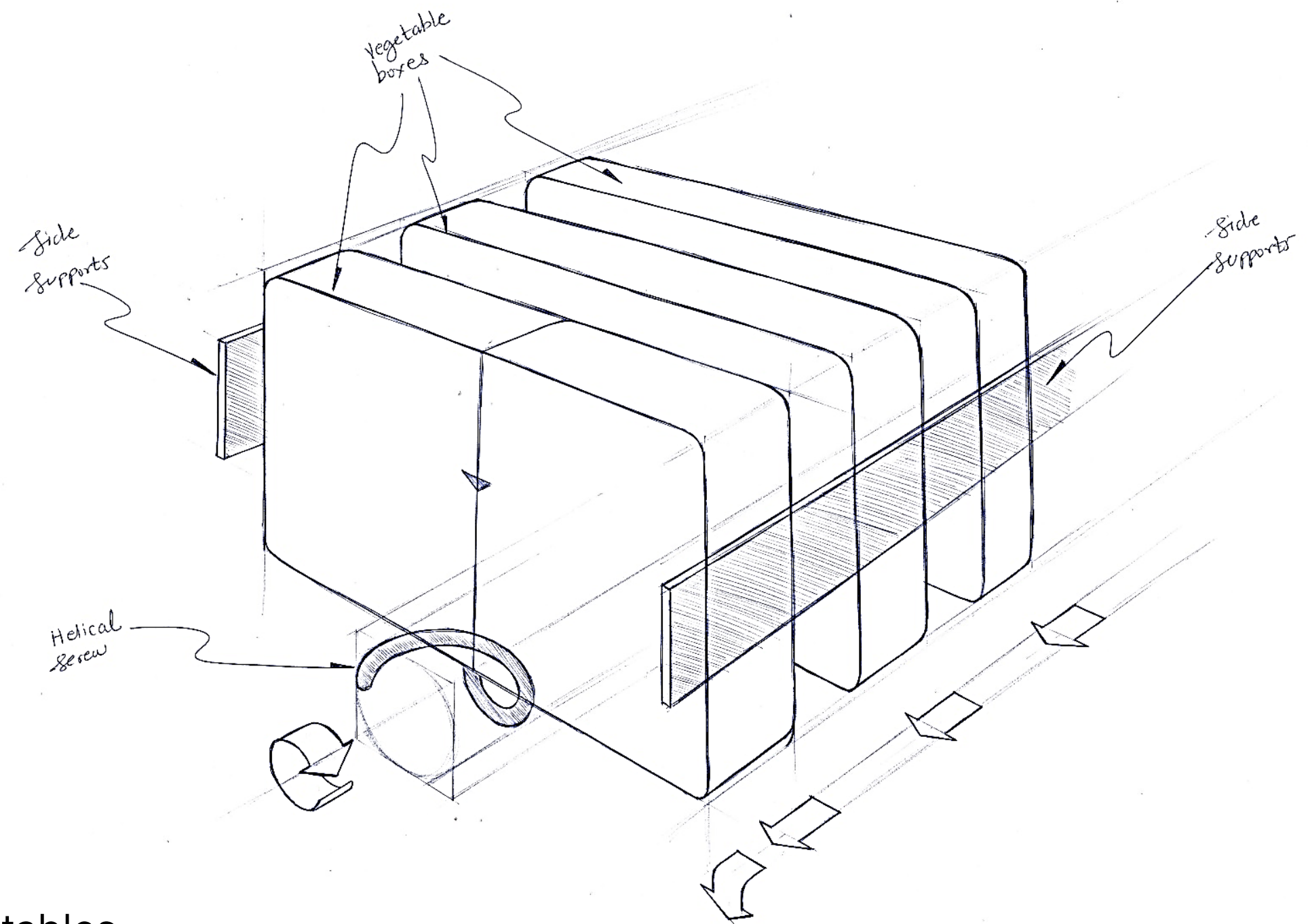
Concept generation [Phase 2]



Mechanism



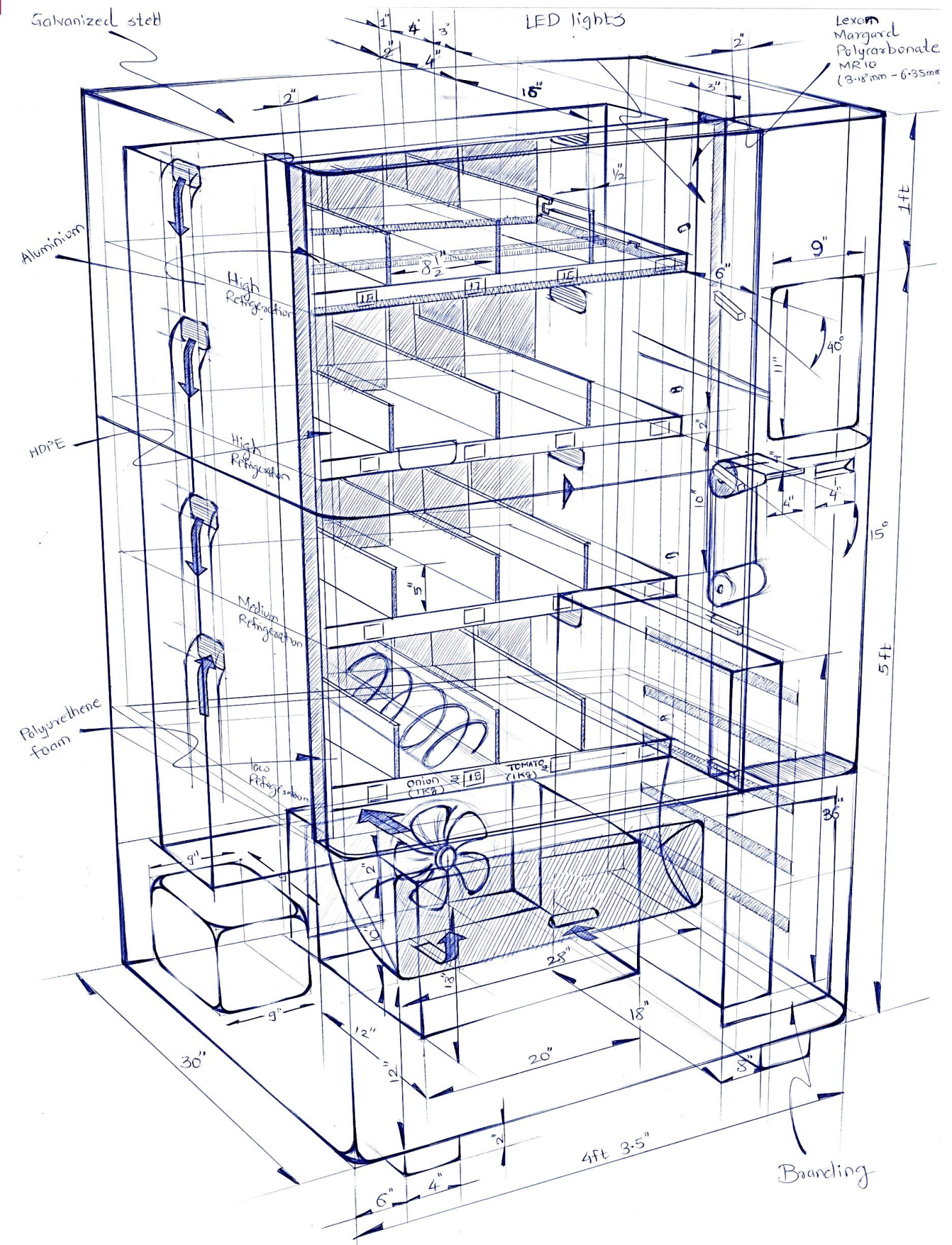
Mechanism



- Simple mechanism
- Less moving parts
- Easy to maintain
- Good visibility of inside vegetables
- Easy to calibrate
- guaranteed delivery
- Compact
- Compatibility with various pack sizes

Detailing

- Refrigeration
- Materials used
- Tray system
- LED display
- Branding area
- Dispensing chamber
- Vegetable order
- Illumination
- Labeling
- Guarantee of dispensing



Detailing

- Refrigeration

Total volume of vegetables = 115 liters

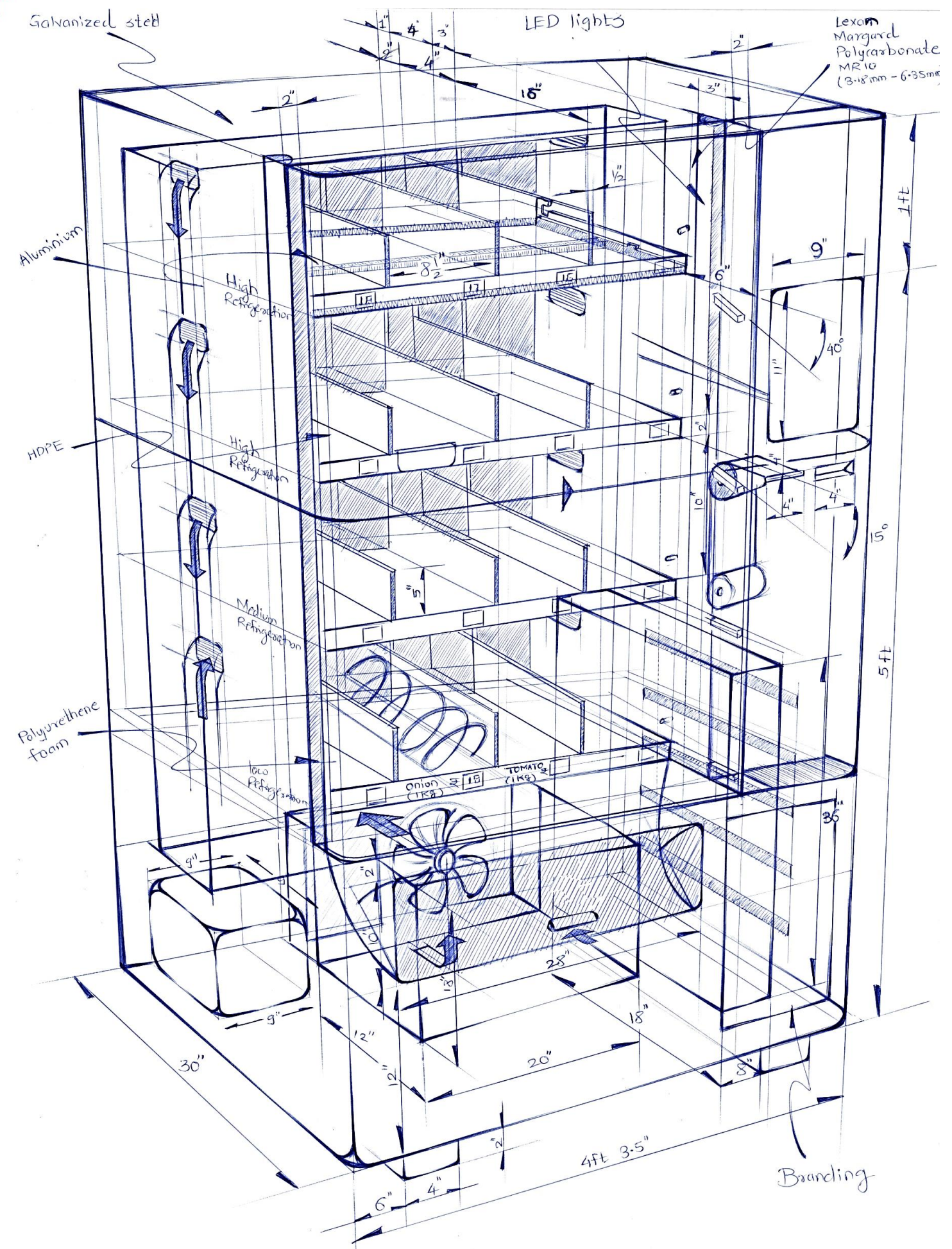
Refrigeration unit chosen = 150 liters

Kelvinator 150 Ltr Single Door 163SG

Compressor- l= 9 inches, b= 9 inches, h= 9 inches
226 mm 226 mm 226 mm

Condenser- l= 2 feet, b= 1.5 feet, h= 1.5 feet
609 mm 457 mm 457 mm

Evaporator- l= 3 feet, b= 0.75 feet, h= 4 feet
914 mm 228 mm 1219 mm



Detailing

- Refrigeration

Total volume of vegetables = 115 liters

Refrigeration unit chosen = 150 liters

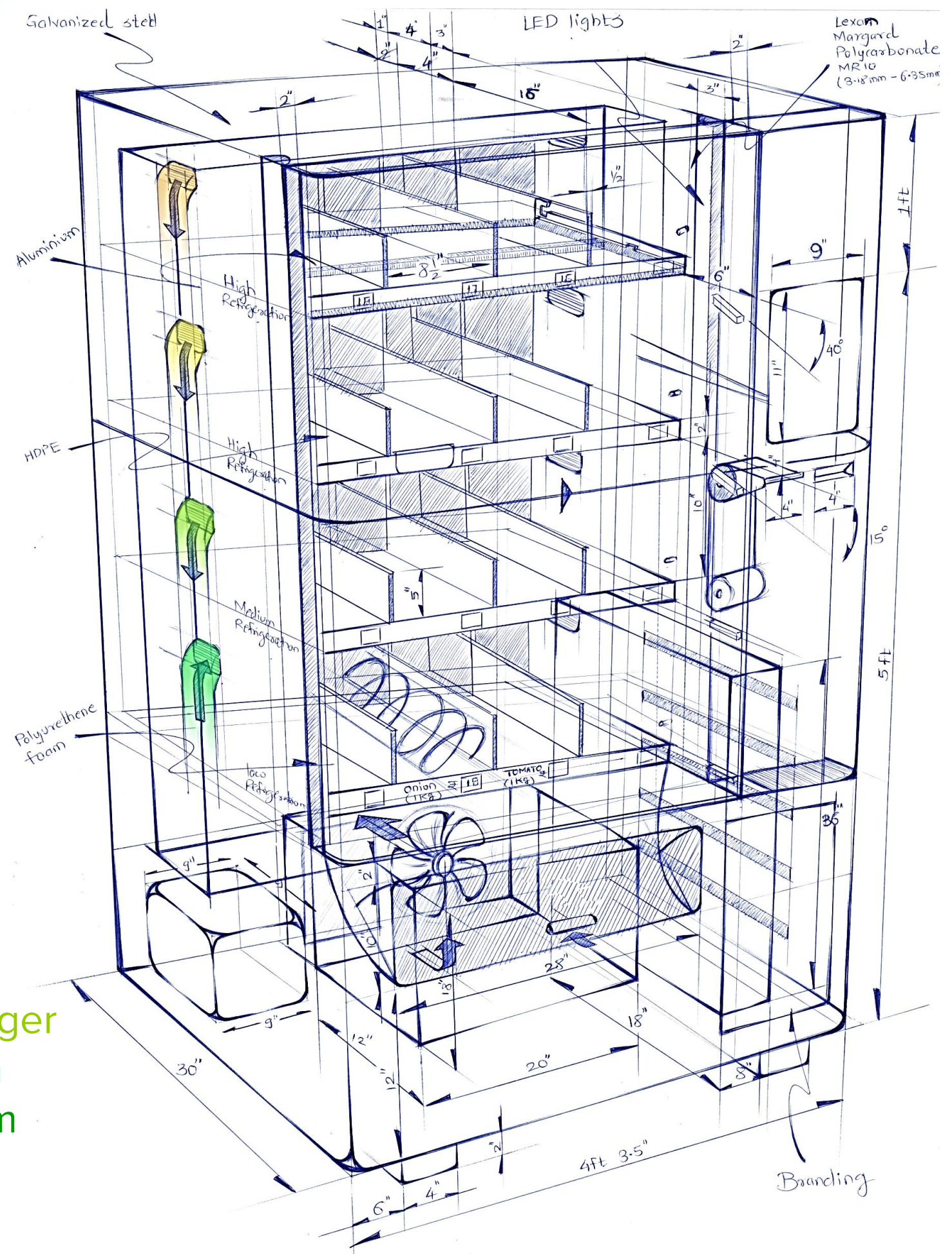
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914 mm 228 mm 1219 mm

Potato	Onion	Brinjal	Chilly
Cucumber	Curry leaves	Coriander	Ladies finger
Methi	Pumkin	Gavar	Capsicum
Cauliflower	Tomato	Drumstick	Mushroom



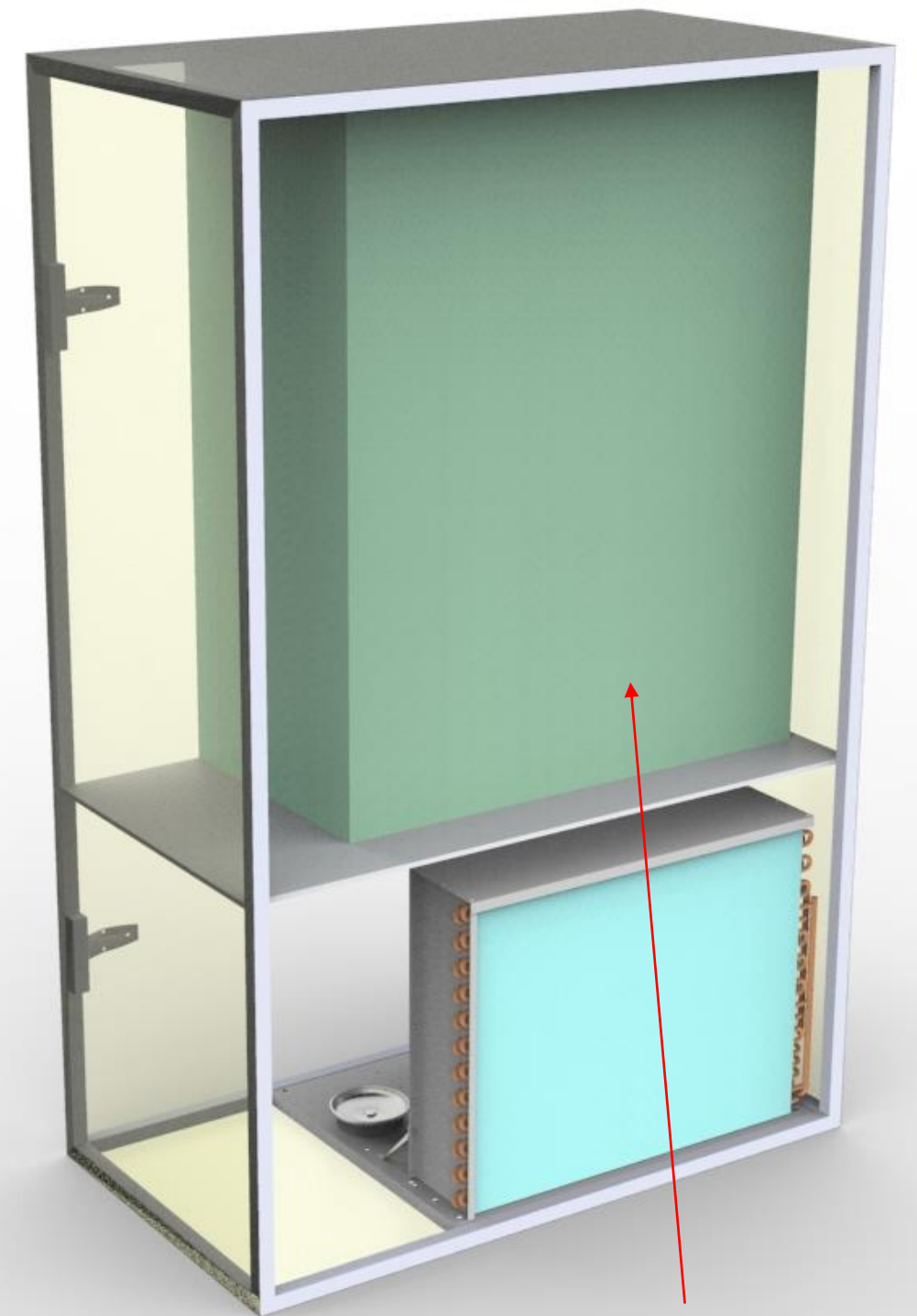
Detailing

- Refrigeration



Compressor

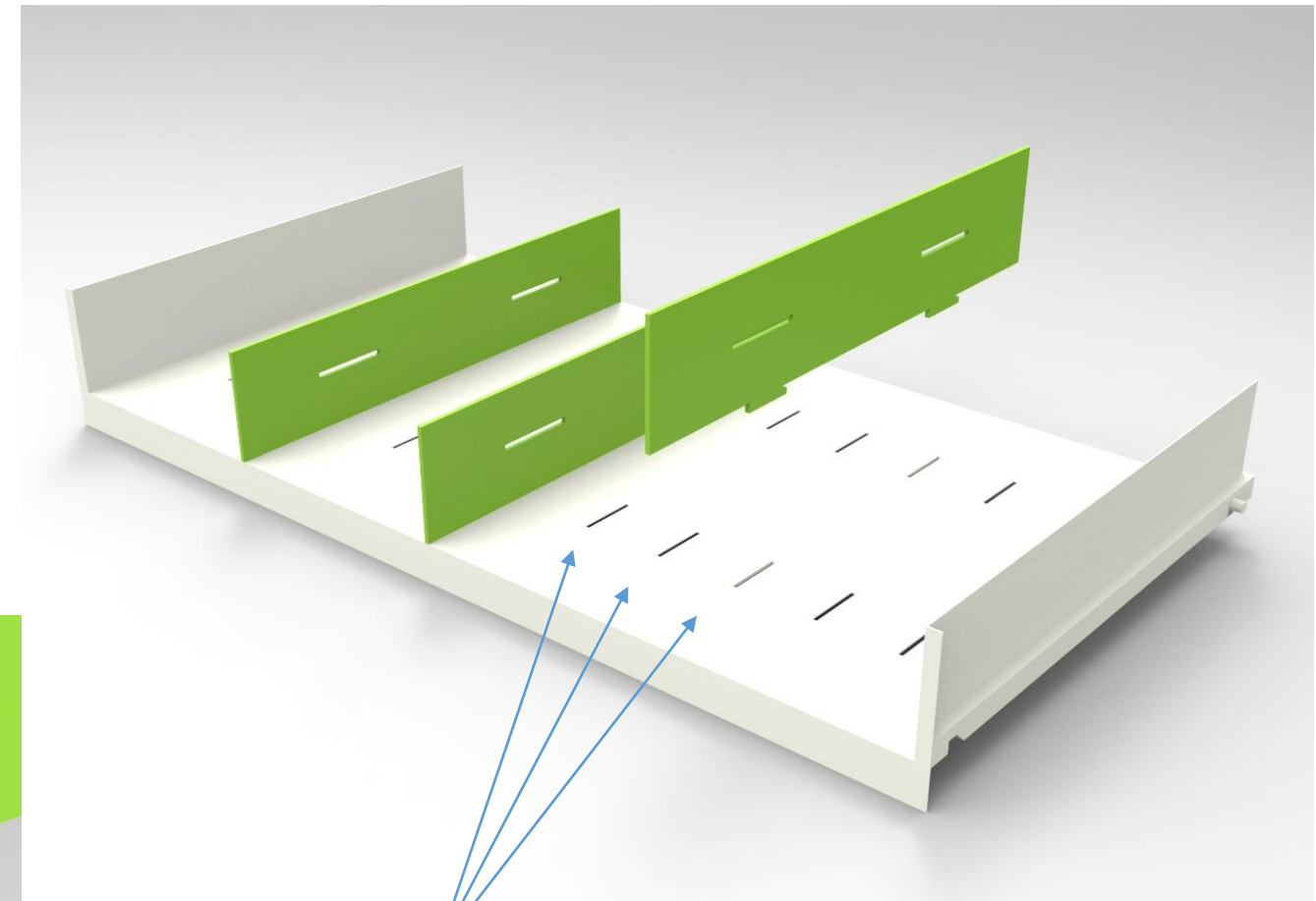
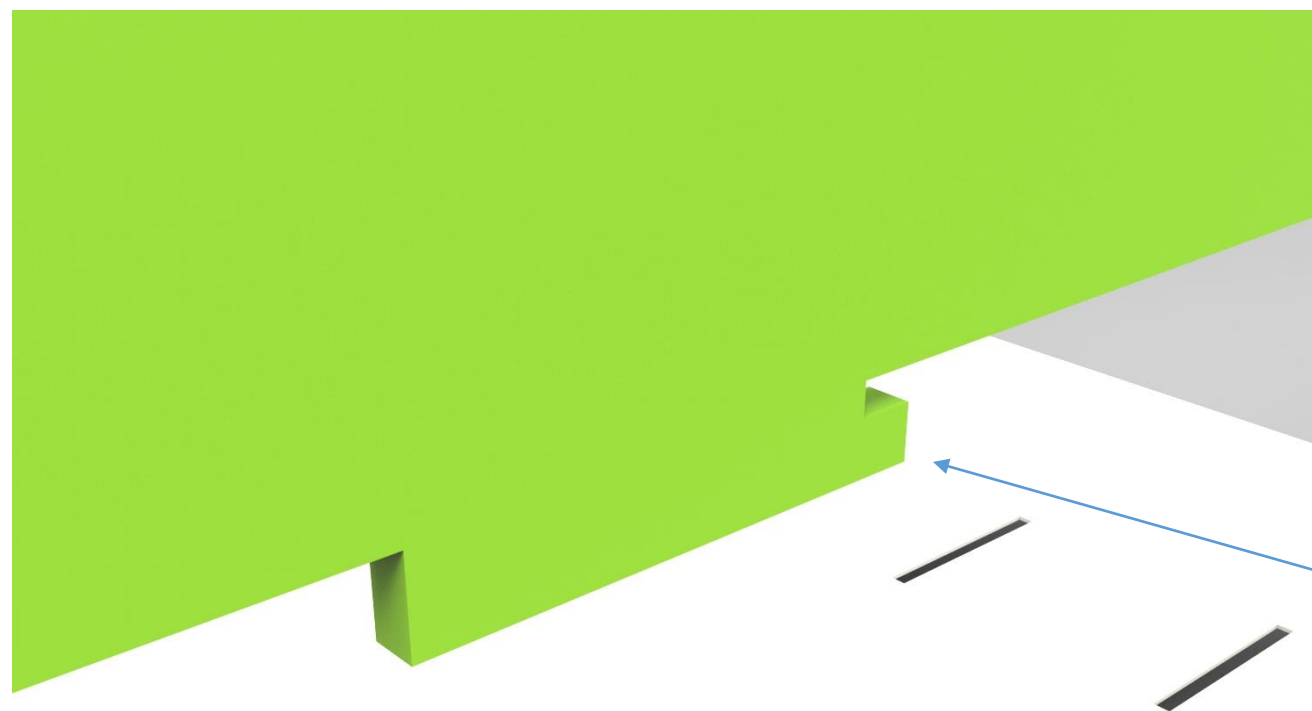
Condenser



Evaporator

Detailing

- Tray system

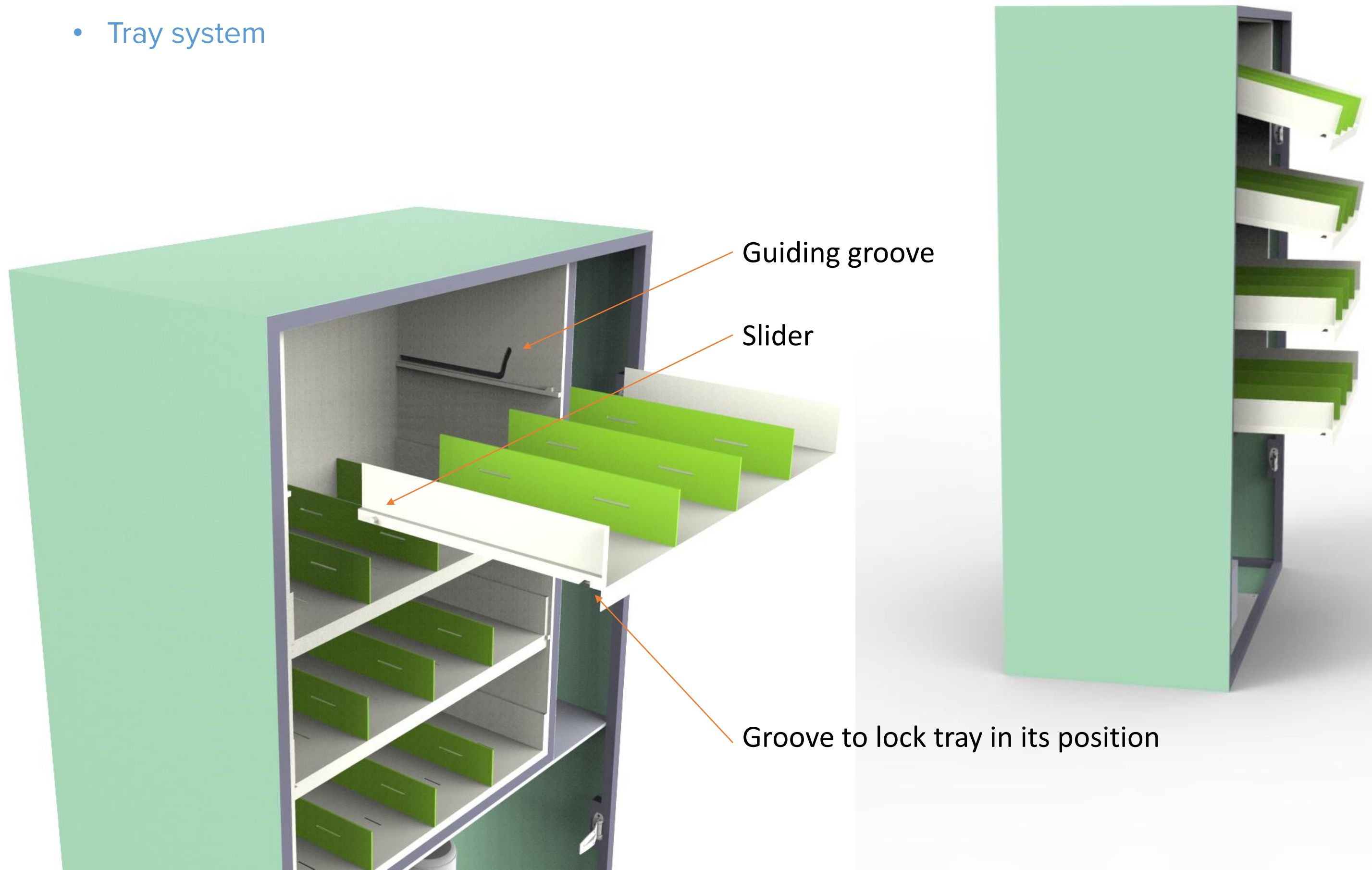


Multiple slots

Slide to lock

Detailing

- Tray system



Detailing

- Labeling



Detailing

- Materials used

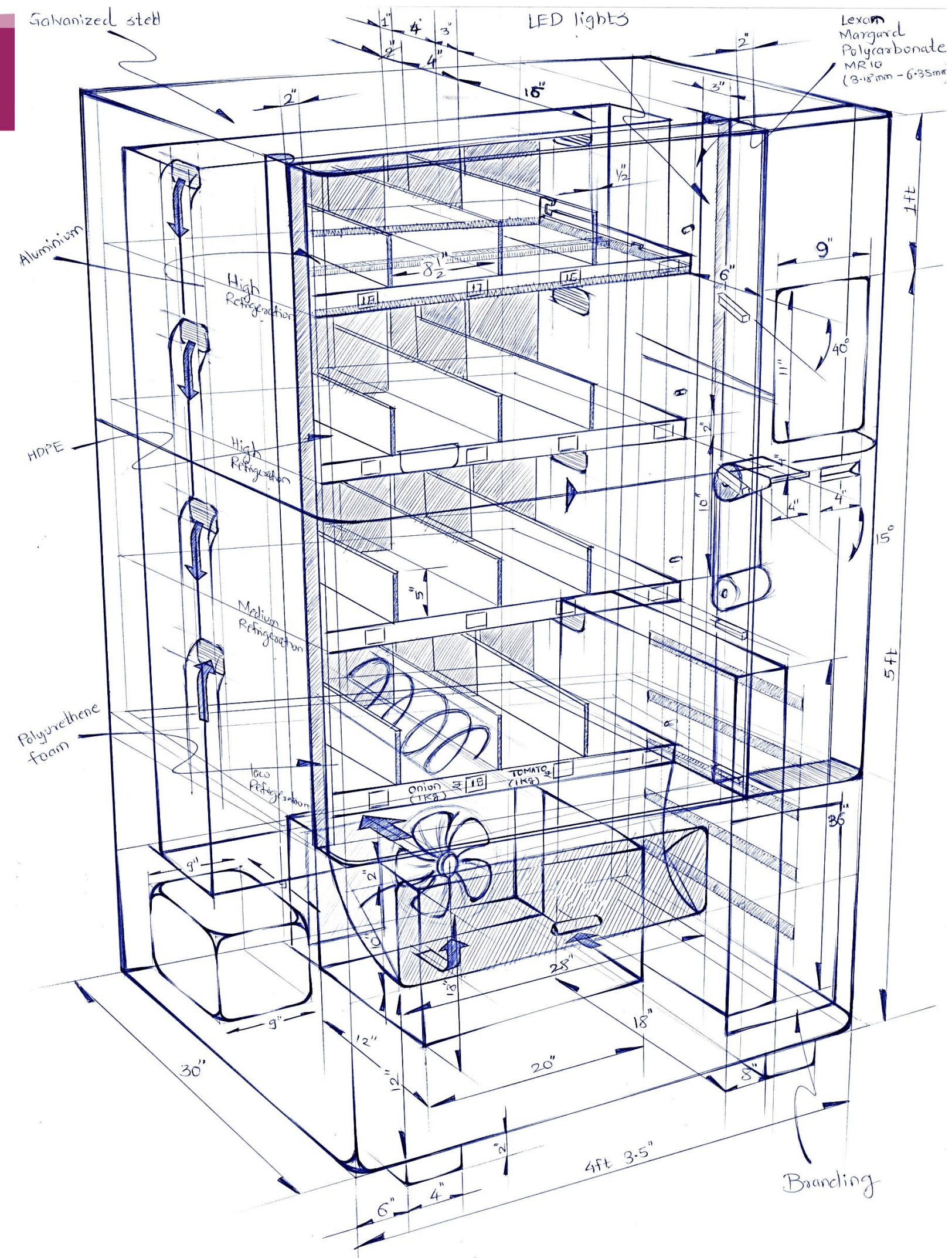
Outer casing- Galvanized iron

Tray support- Aluminium

Tray- HDPE

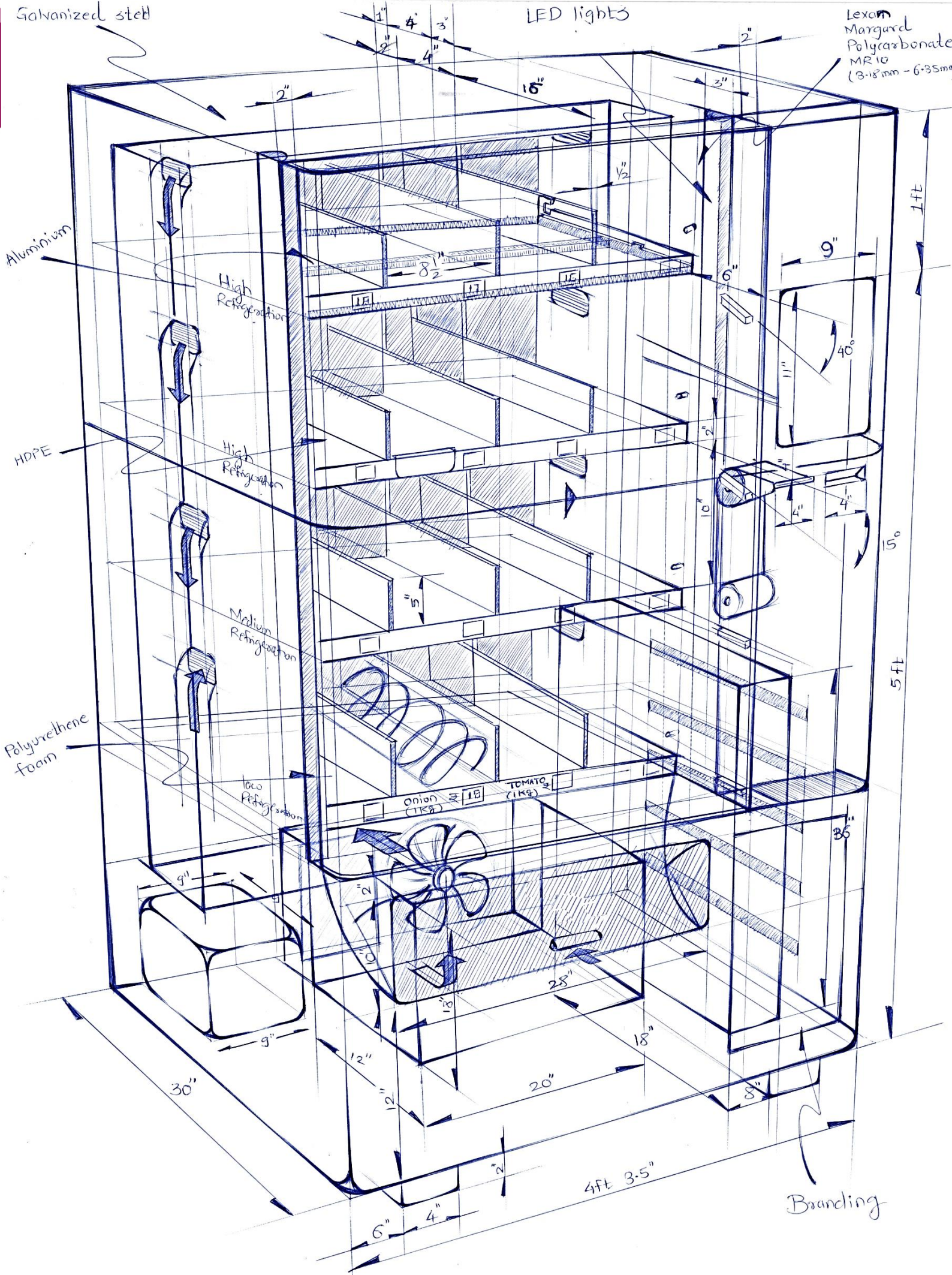
Insulation- Polyurethane foam

Glass- Lexan polycarbonate



Detailing

- LED display
- Illumination
- Branding area
- Dispensing chamber
- Guarantee of dispensing



Form

- Elegant
- Fresh

Points considered while form explorations

- It should not look drastically different than current vending machines
- Form should be easy to make with galvanized steel plate

Form

Product category space



Product category space

Form

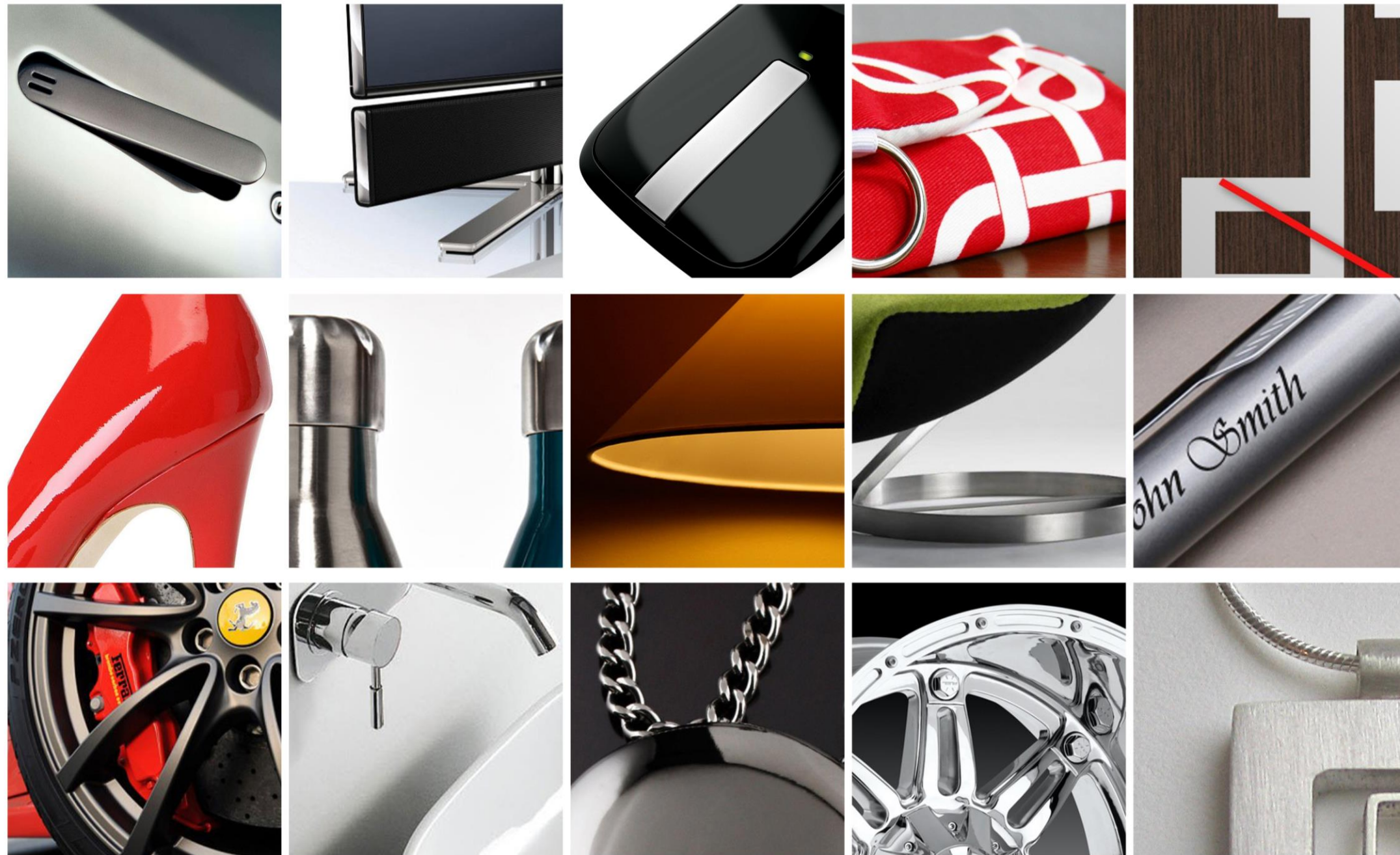
Extended category space



Extended category space

Form

Product expression - Elegant



- Smooth chamfer
- Long lines
- Contrast colour combination
- Shiny metallic finish
- Clear borders
- Clear gaps

Product expression - Elegant

Form

Product expression - Fresh

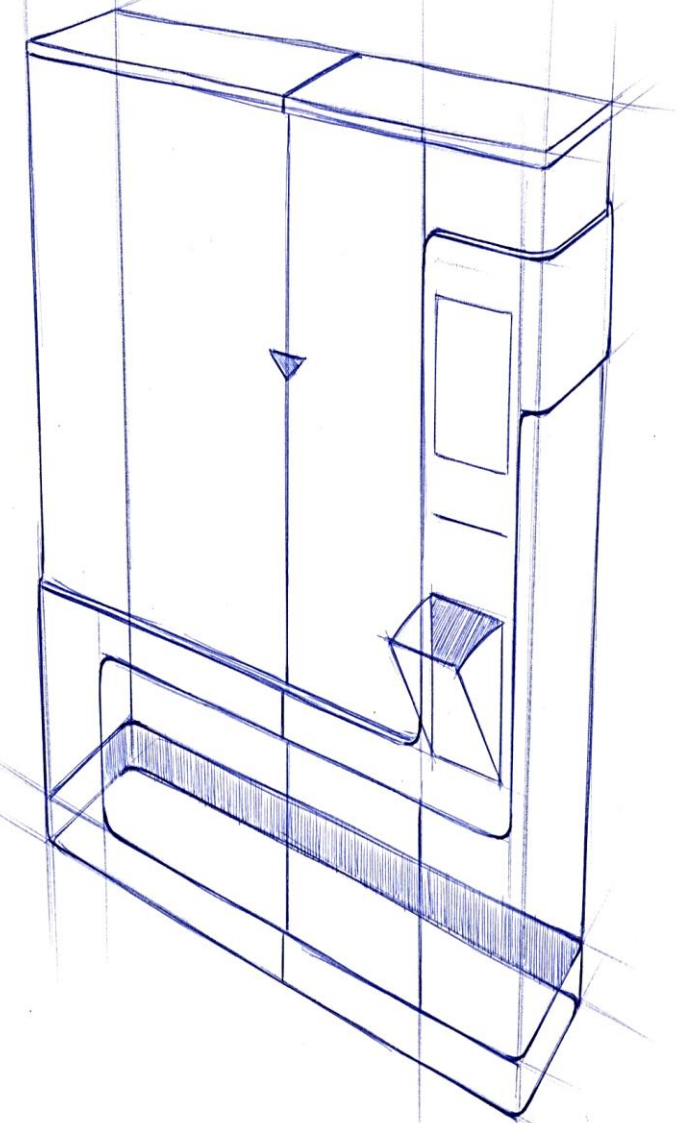
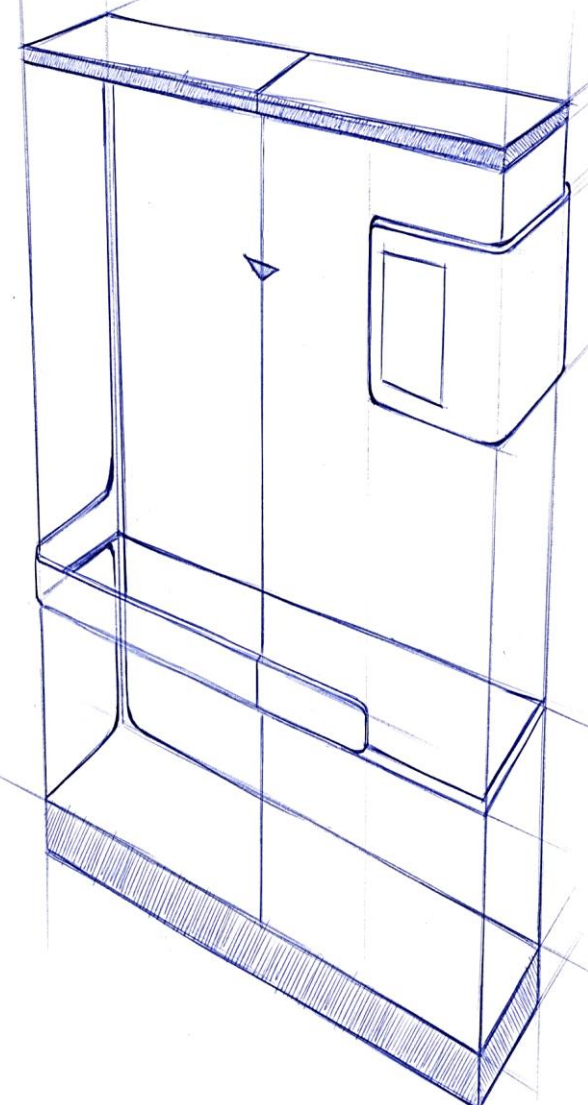
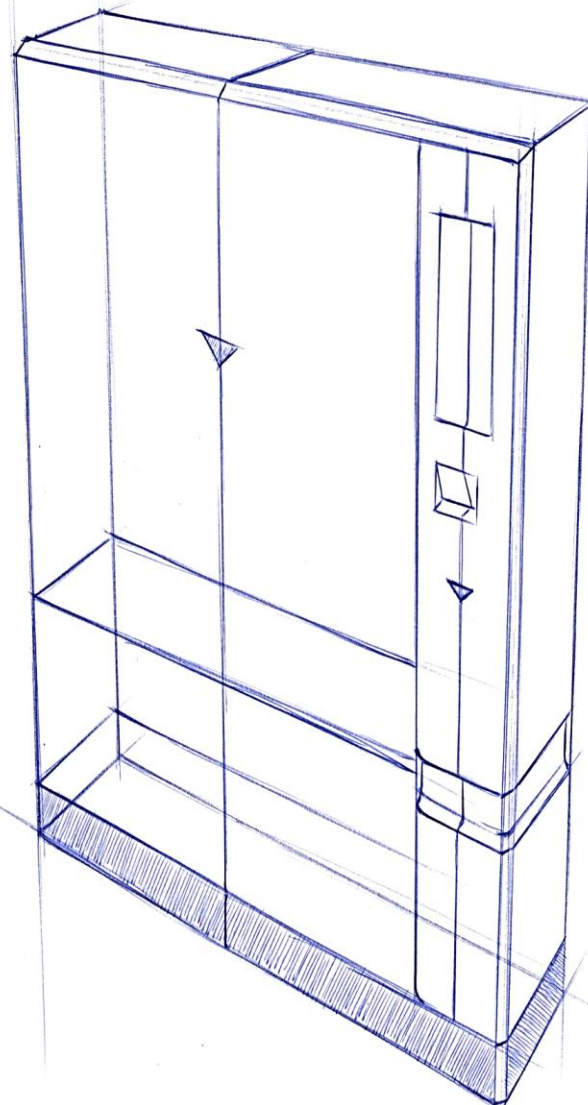
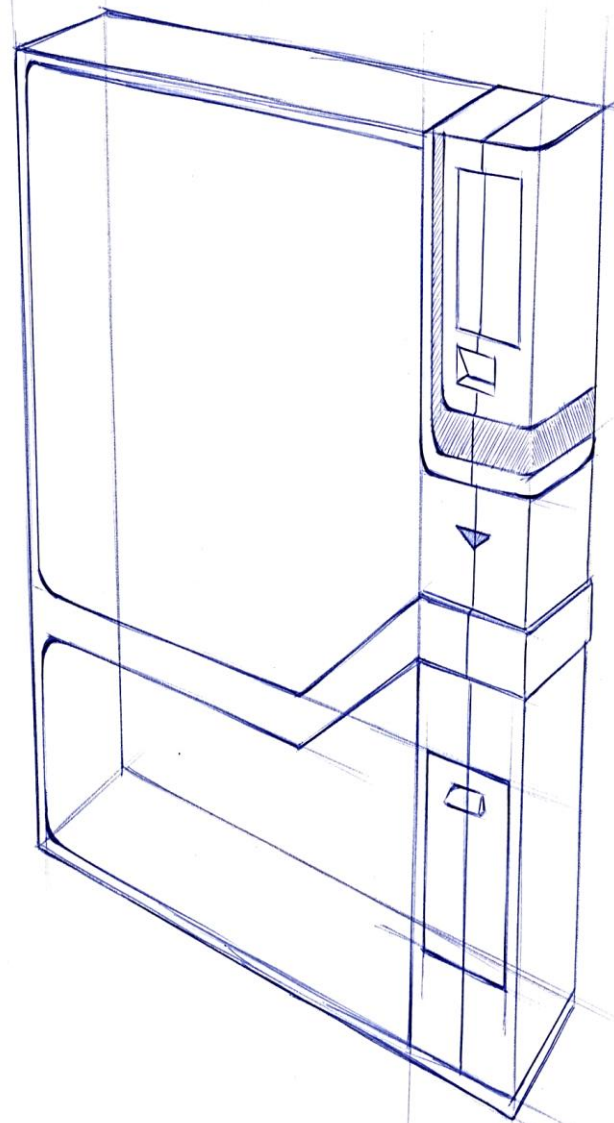


- Bright colours
- Orange / green
- Fine texture
- Matte finish
- Super gloss
- Fine details
- 2 colour scheme

Product expression - Fresh

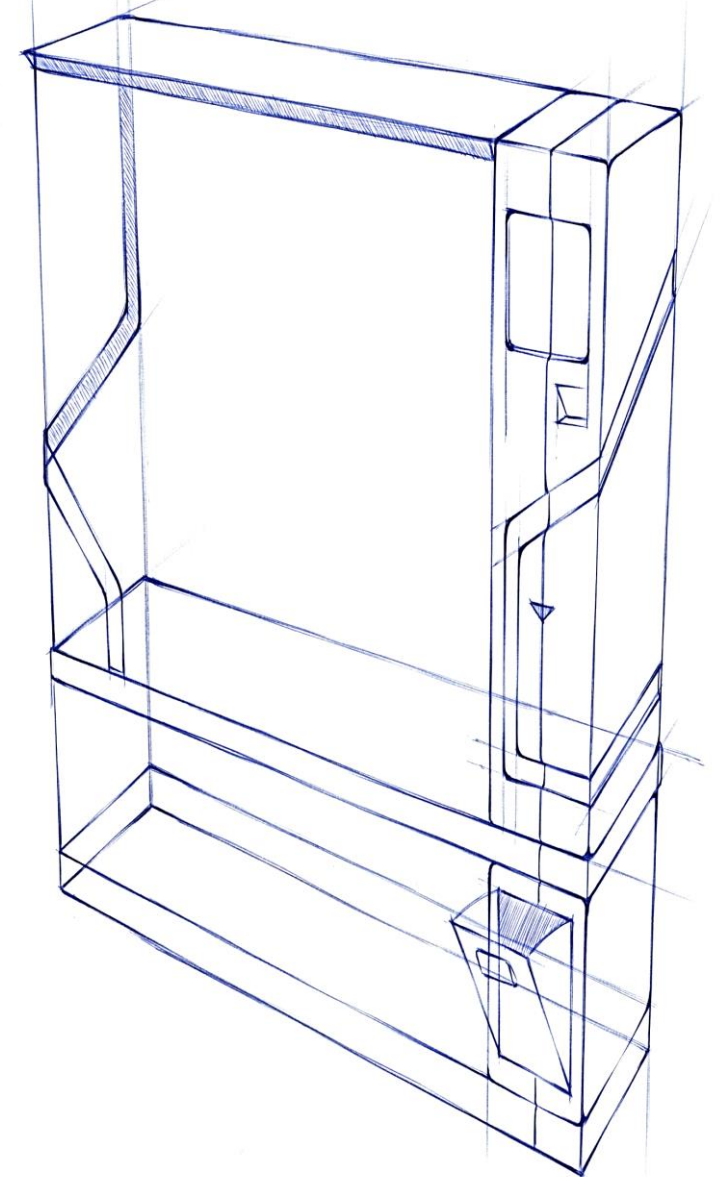
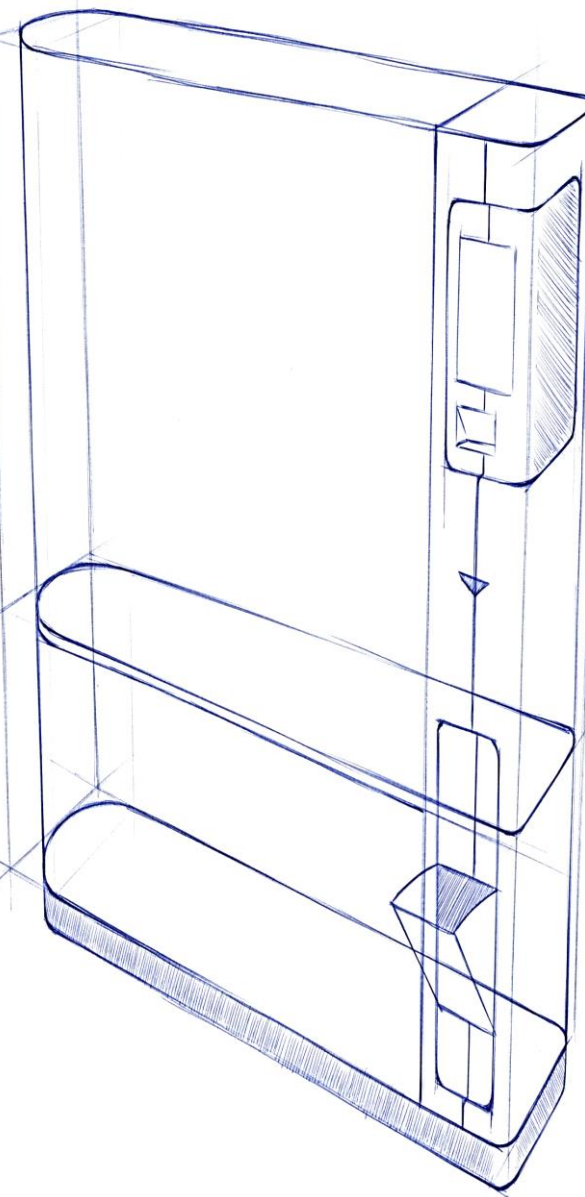
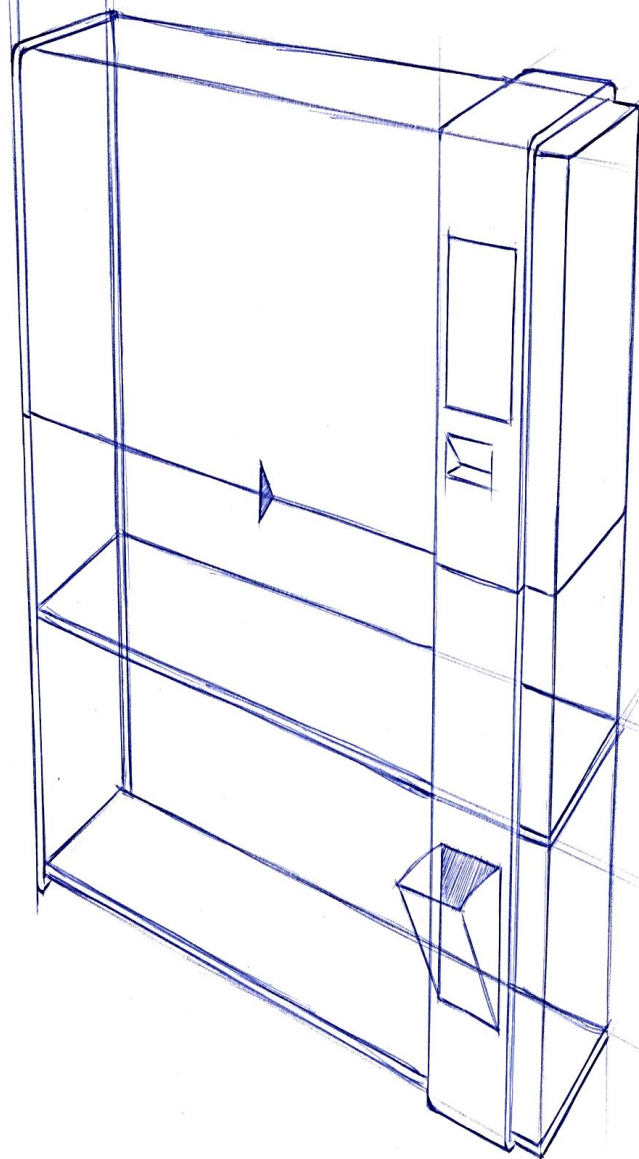
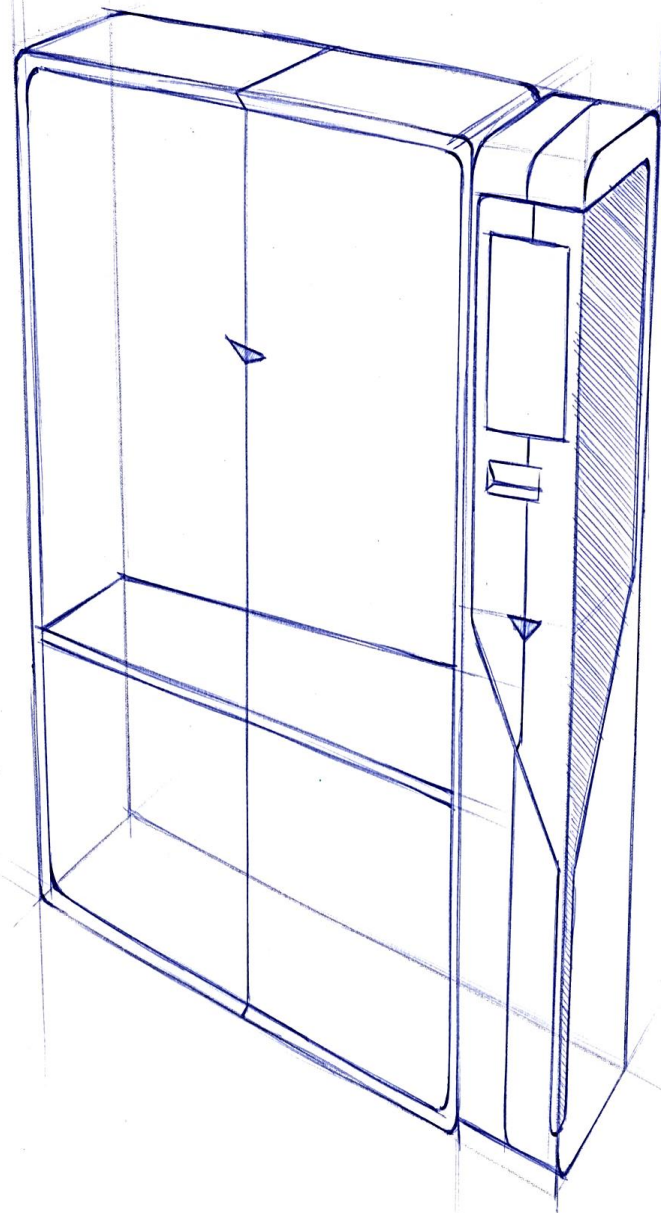
Form

3D Form explorations



Form

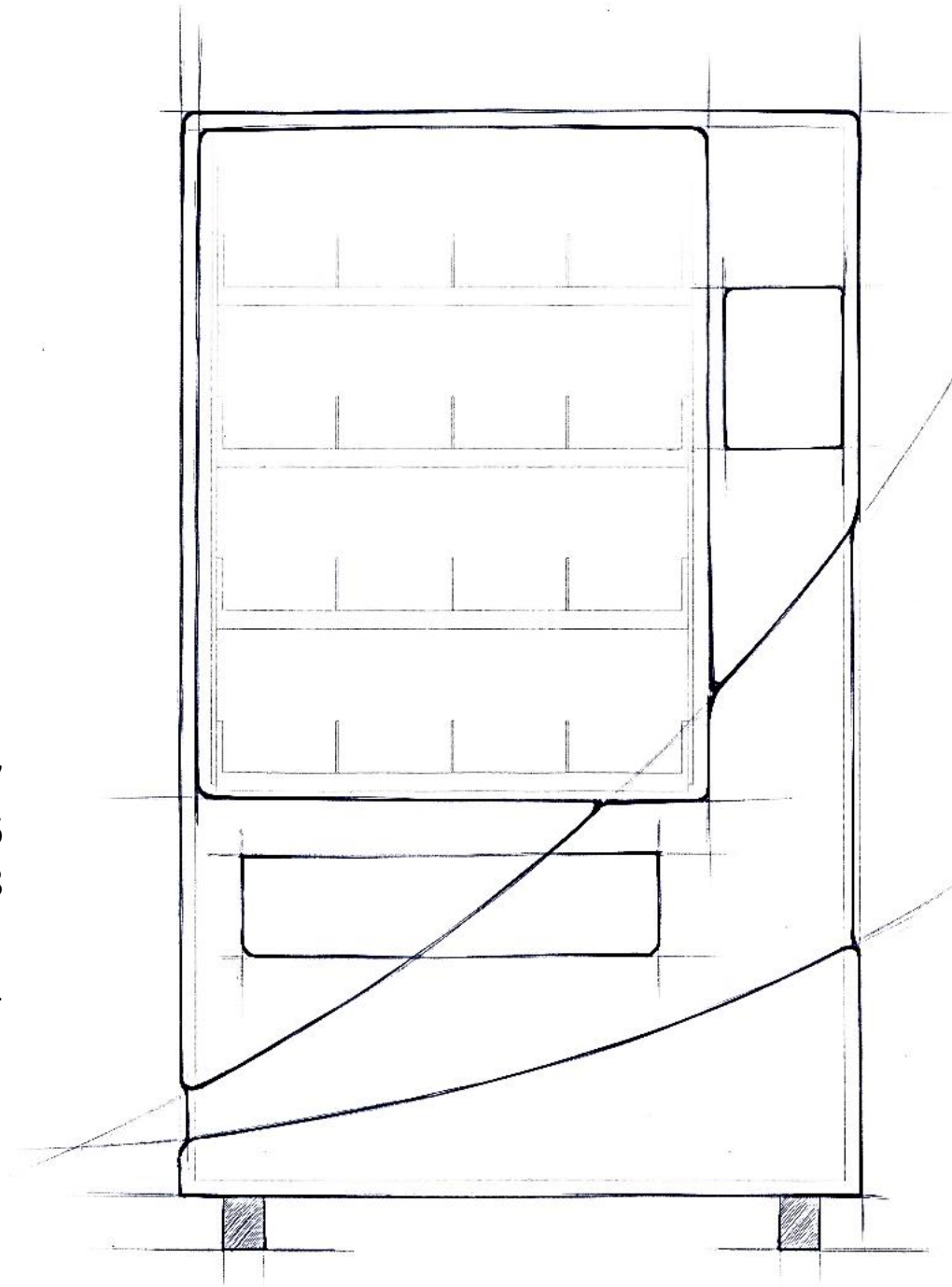
3D Form explorations



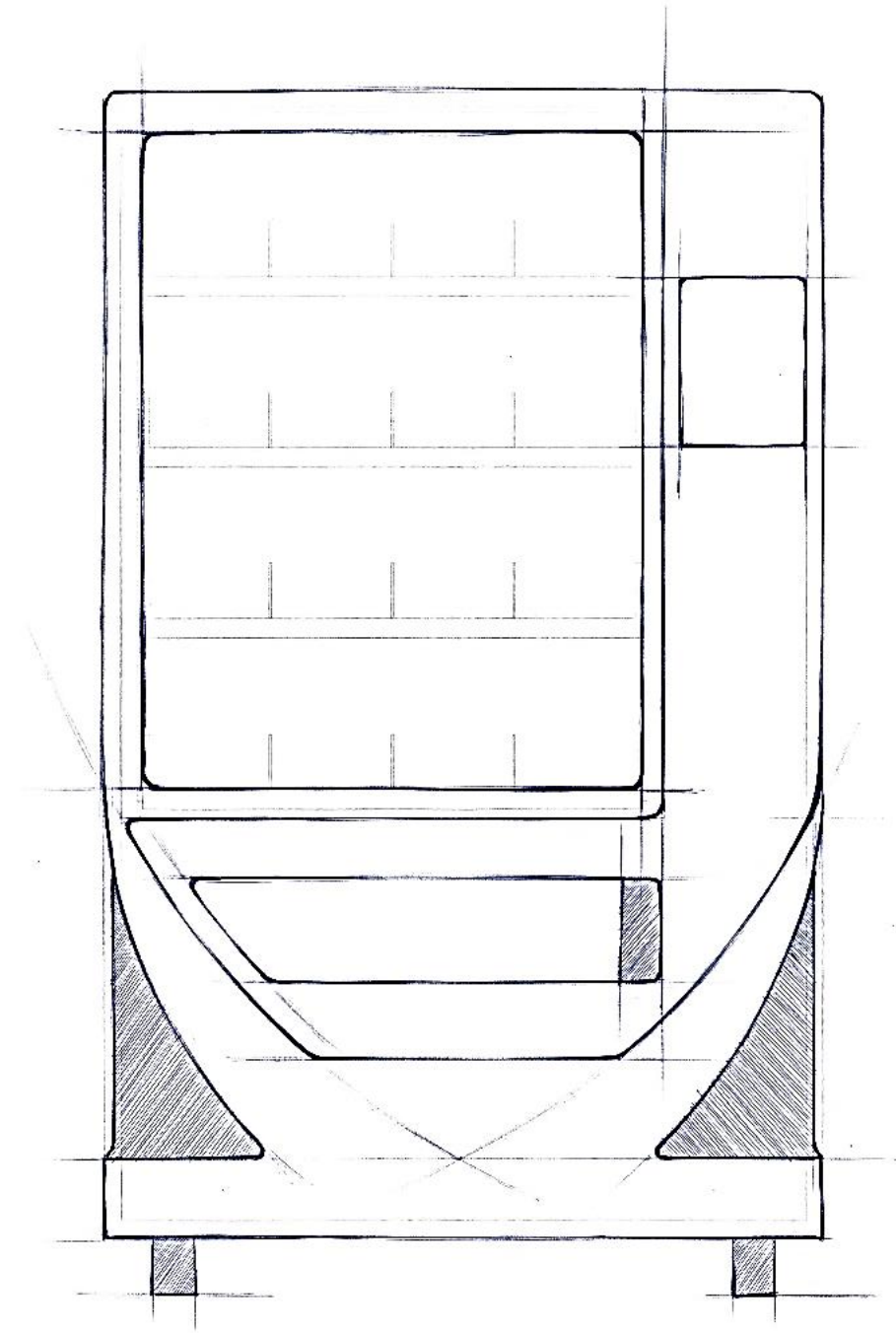
Form

Facial Form explorations

Freshness 7
Elegance 6
Uniqueness 8
Total 21



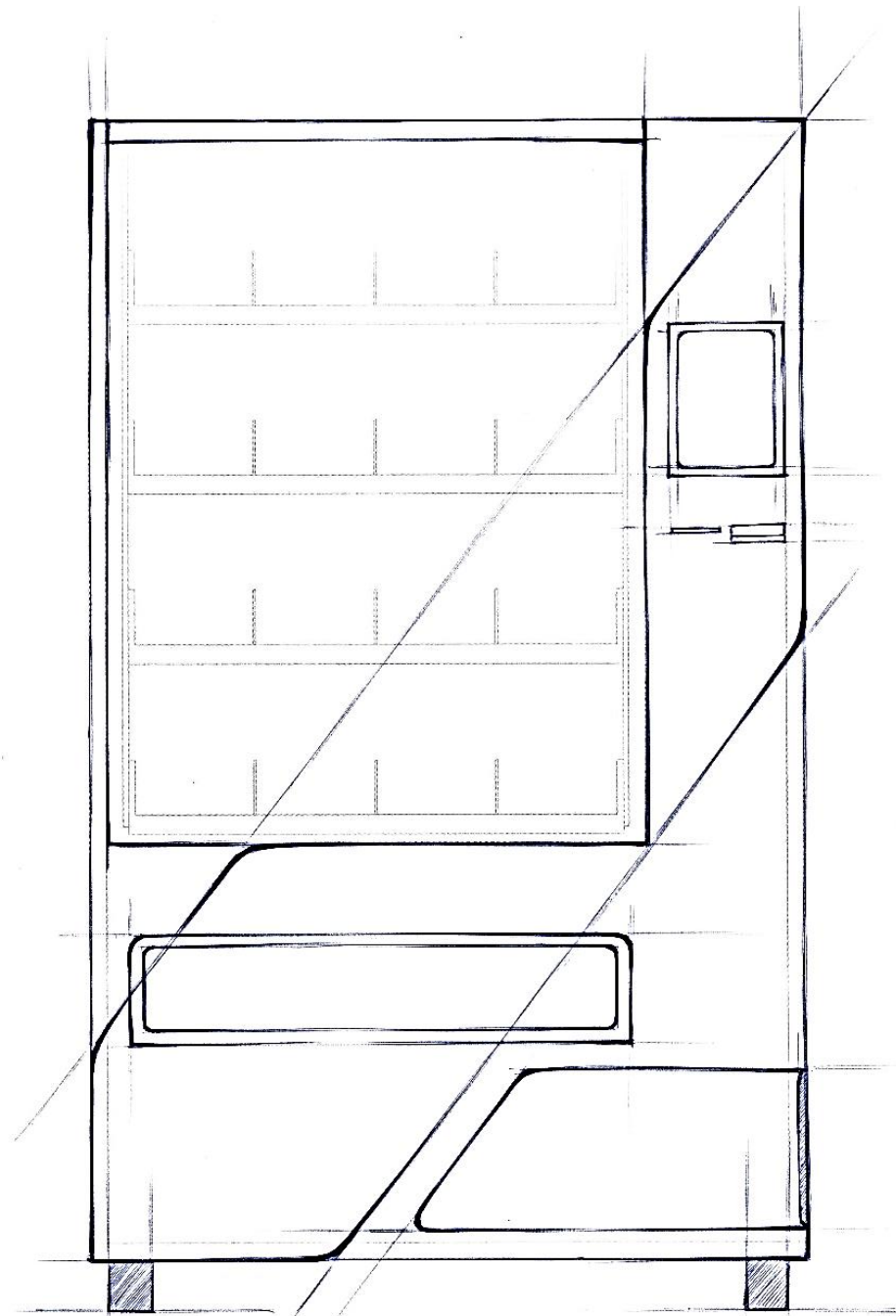
Freshness 6
Elegance 7
Uniqueness 5
Total 18



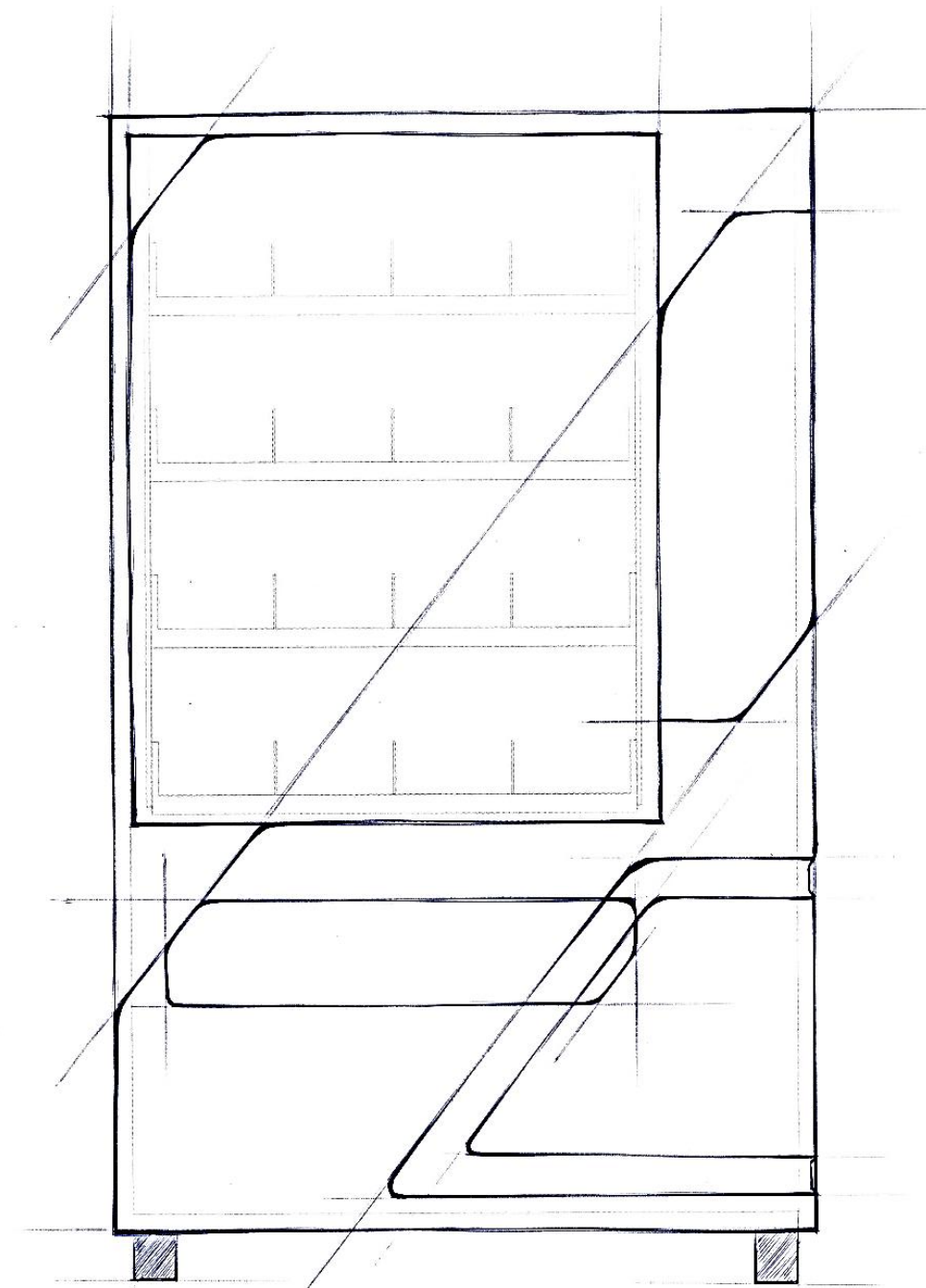
Form

Facial Form explorations

Freshness	7
Elegance	9
Uniqueness	8
Total	24

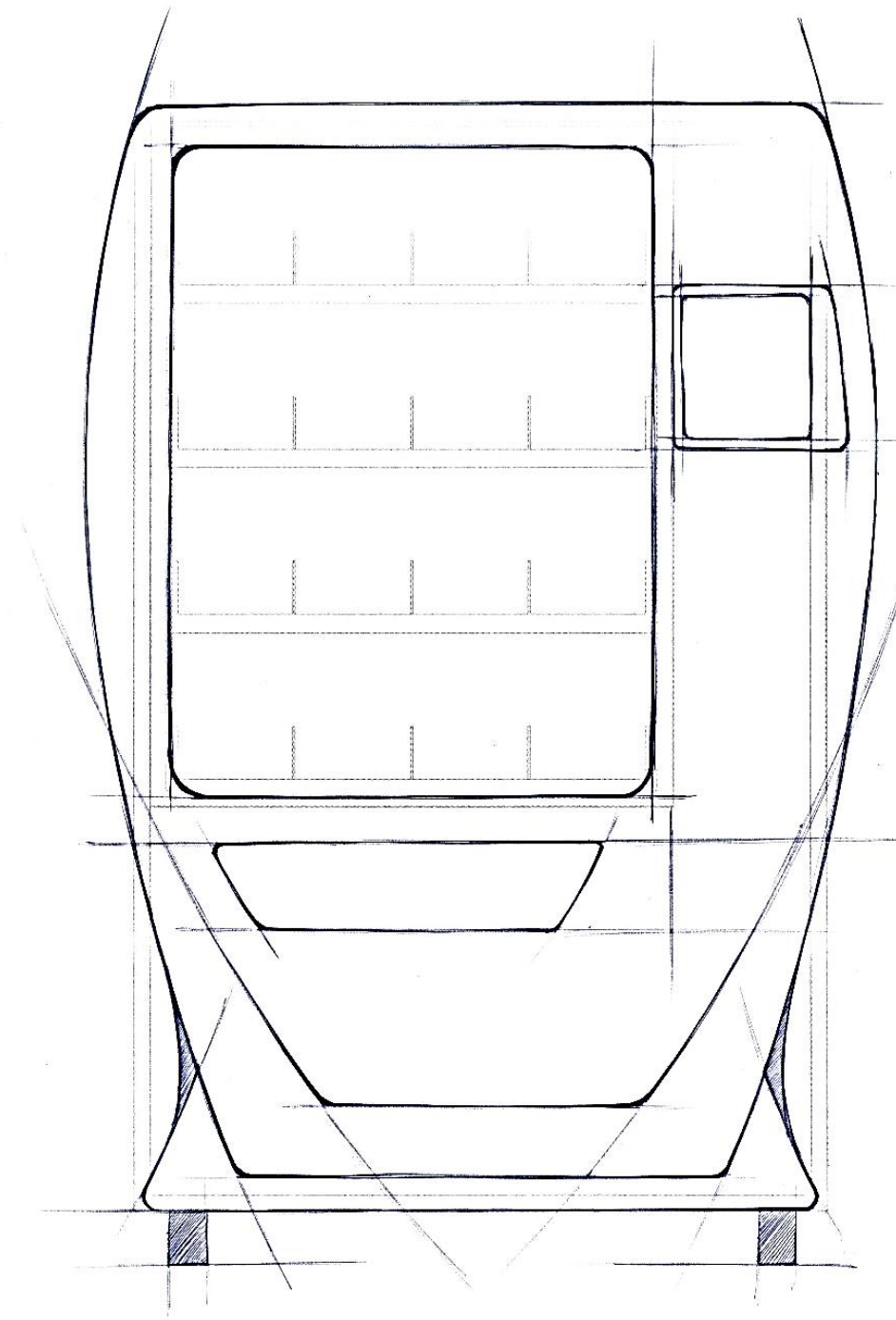


Freshness	7
Elegance	7
Uniqueness	6
Total	20

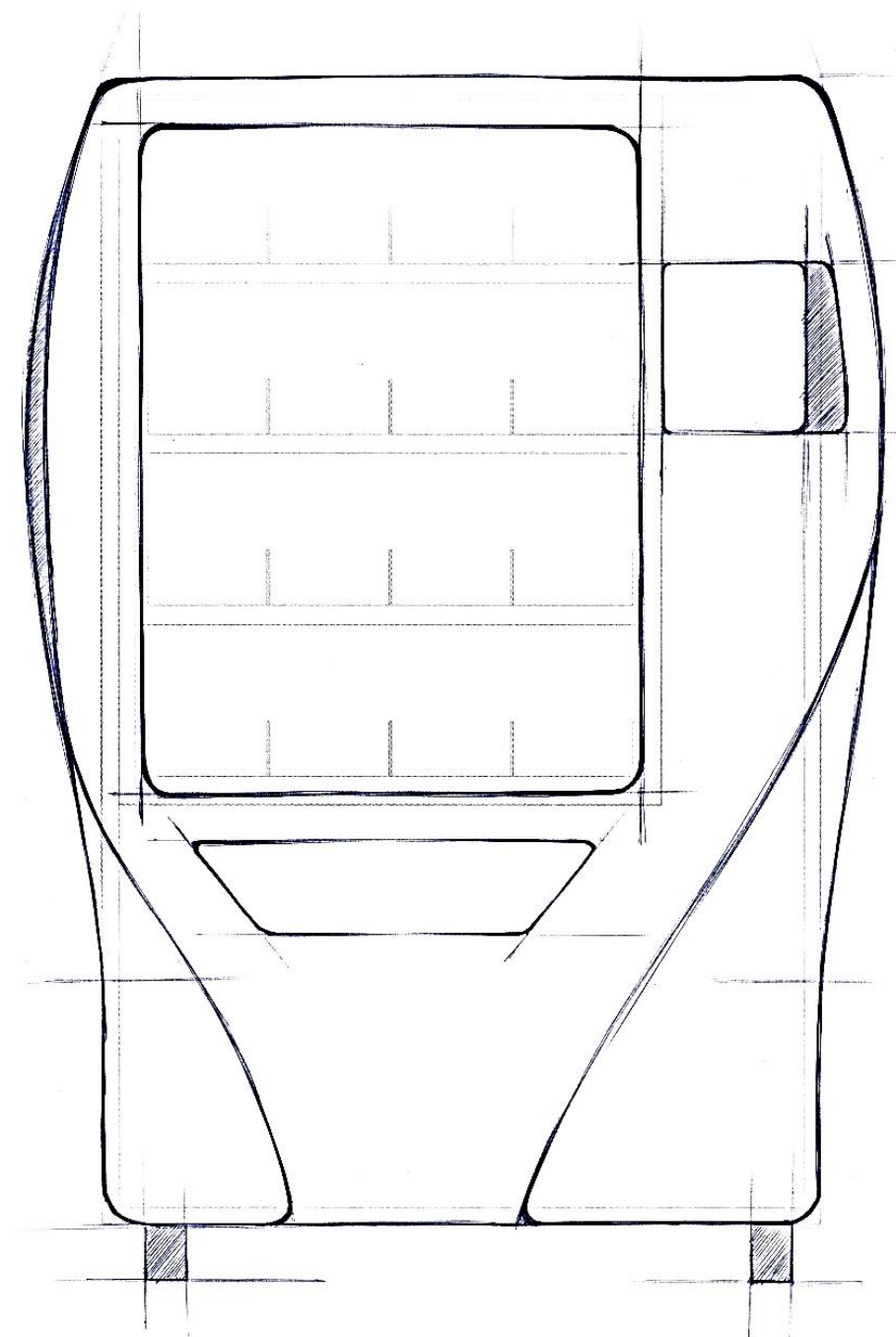


Form

Facial Form explorations



Freshness	6
Elegance	6
Uniqueness	8
Total	20

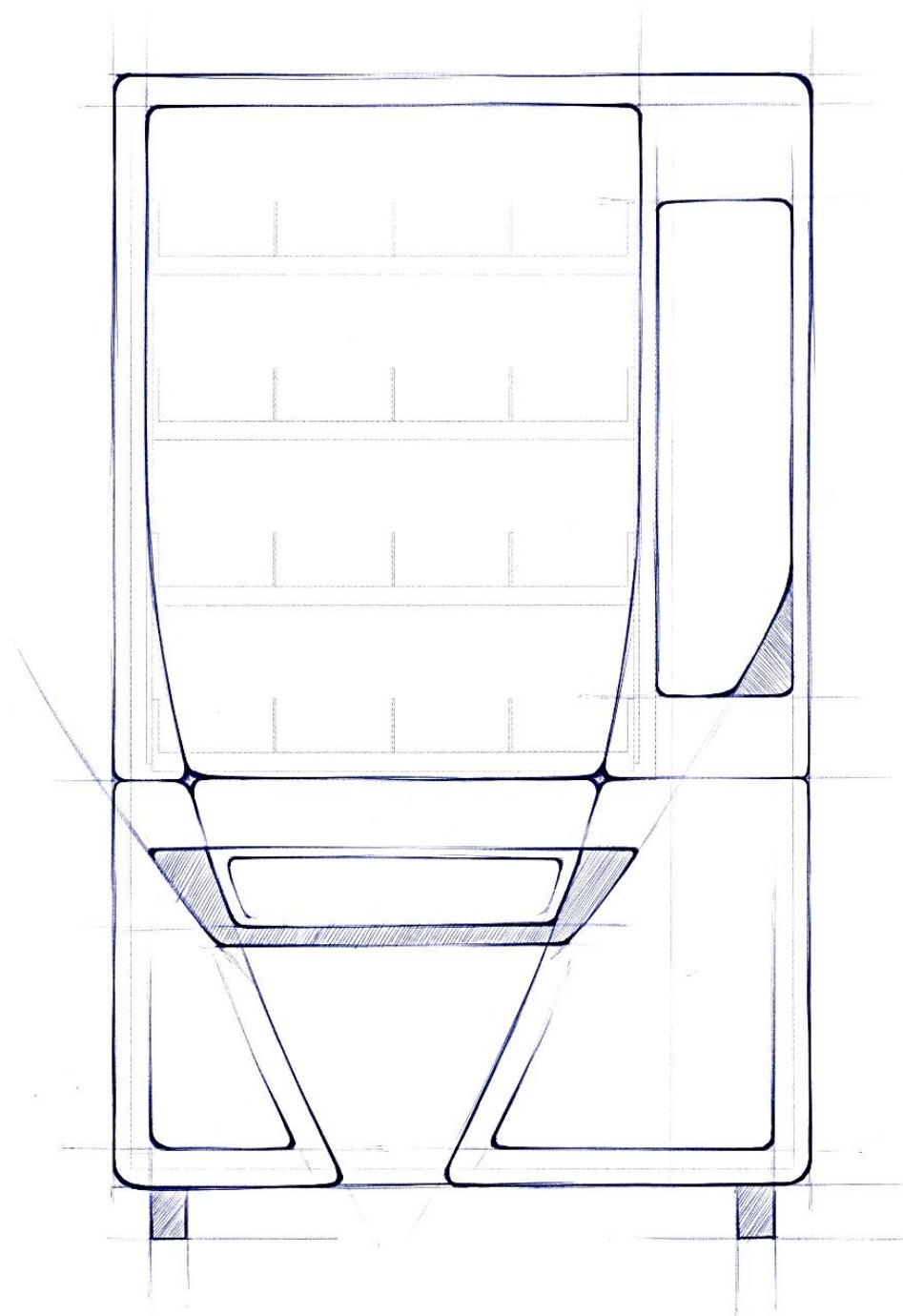


Freshness	5
Elegance	6
Uniqueness	7
Total	18

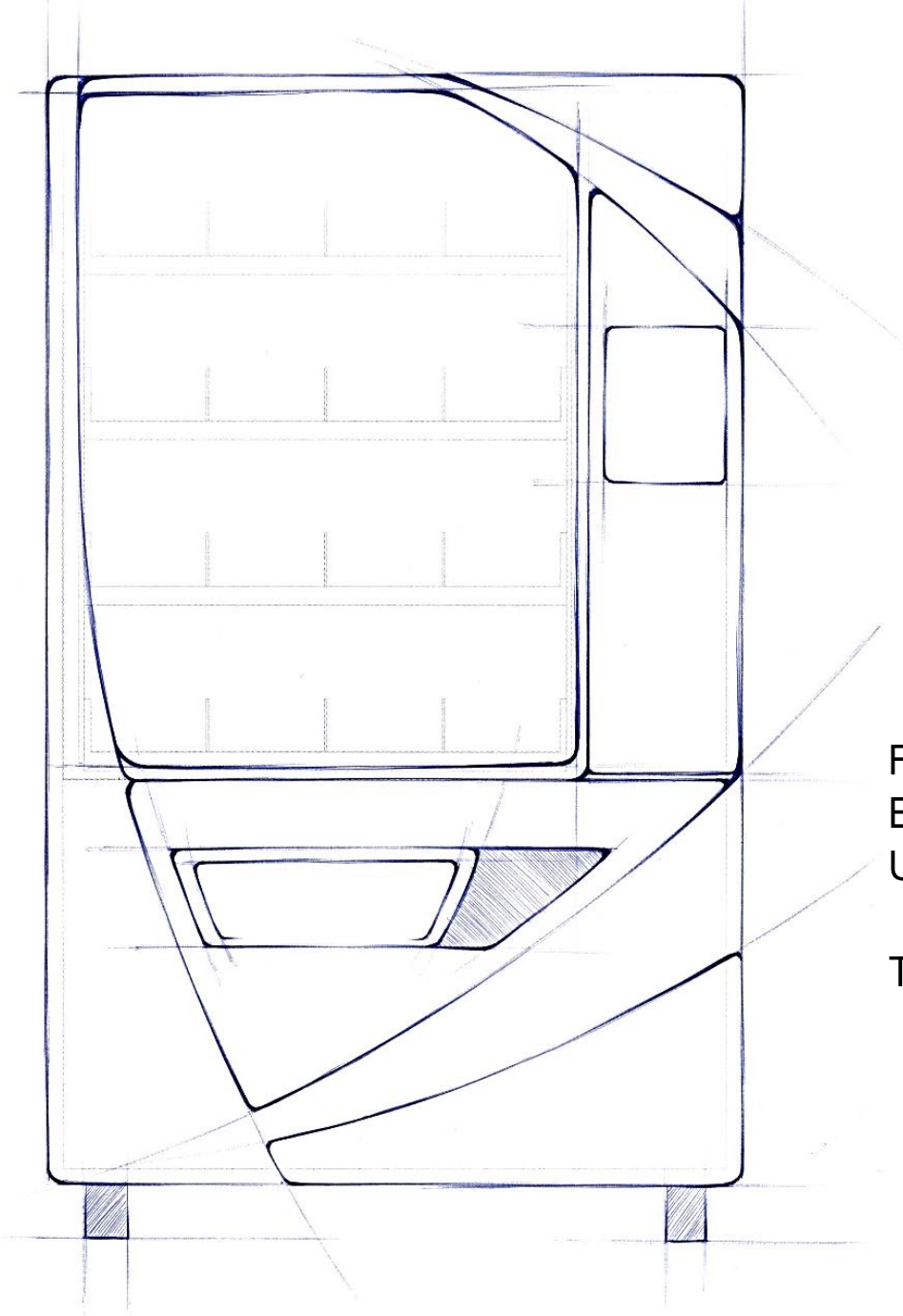
Form

Facial Form explorations

Freshness 8
Elegance 8
Uniqueness 7
Total 23



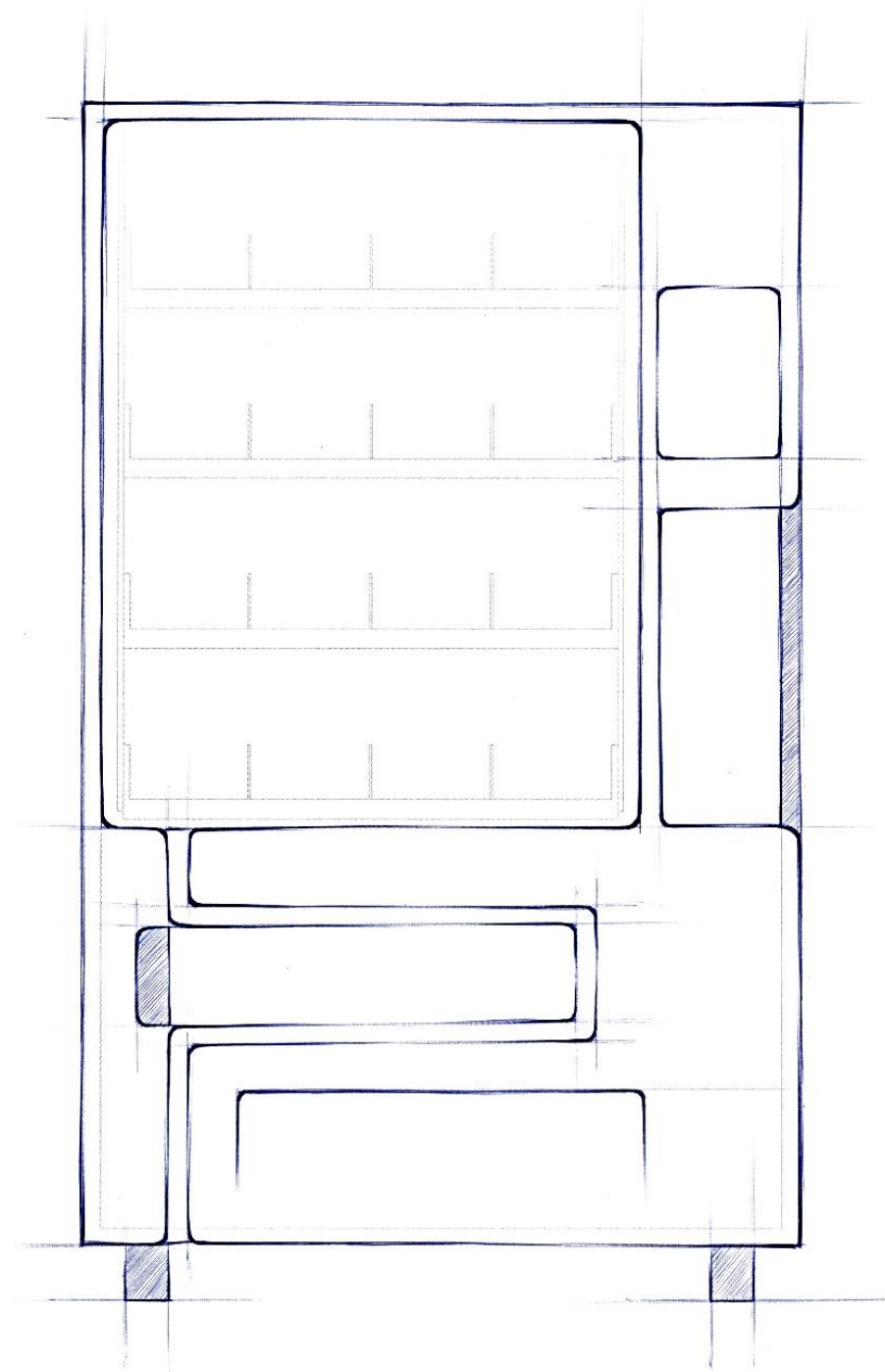
Freshness 9
Elegance 8
Uniqueness 8
Total 25



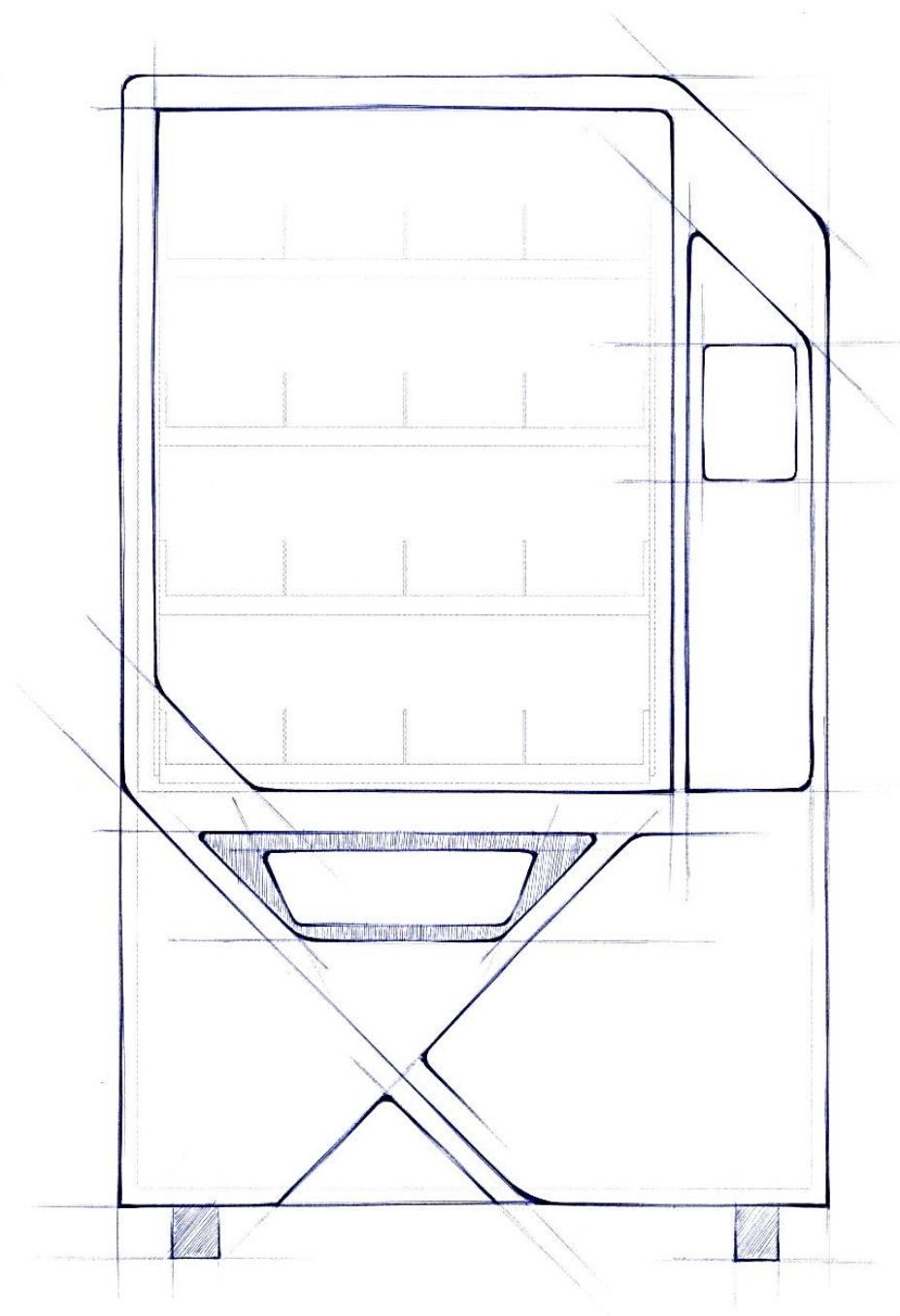
Form

Facial Form explorations

Freshness	5
Elegance	5
Uniqueness	4
Total	14



Freshness	6
Elegance	7
Uniqueness	7
Total	20



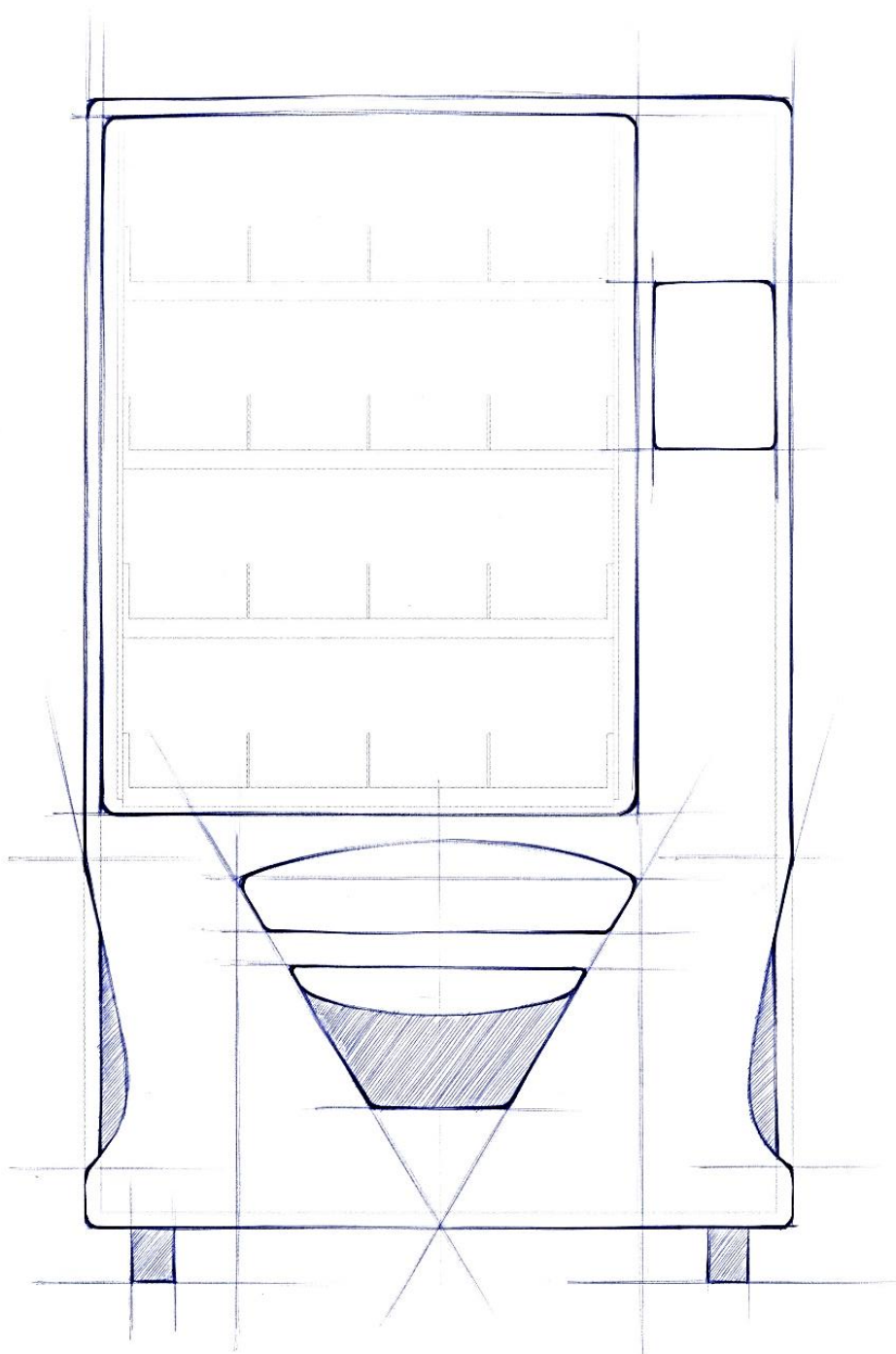
Form

Facial Form explorations

Freshness	9
Elegance	8
Uniqueness	9
Total	26

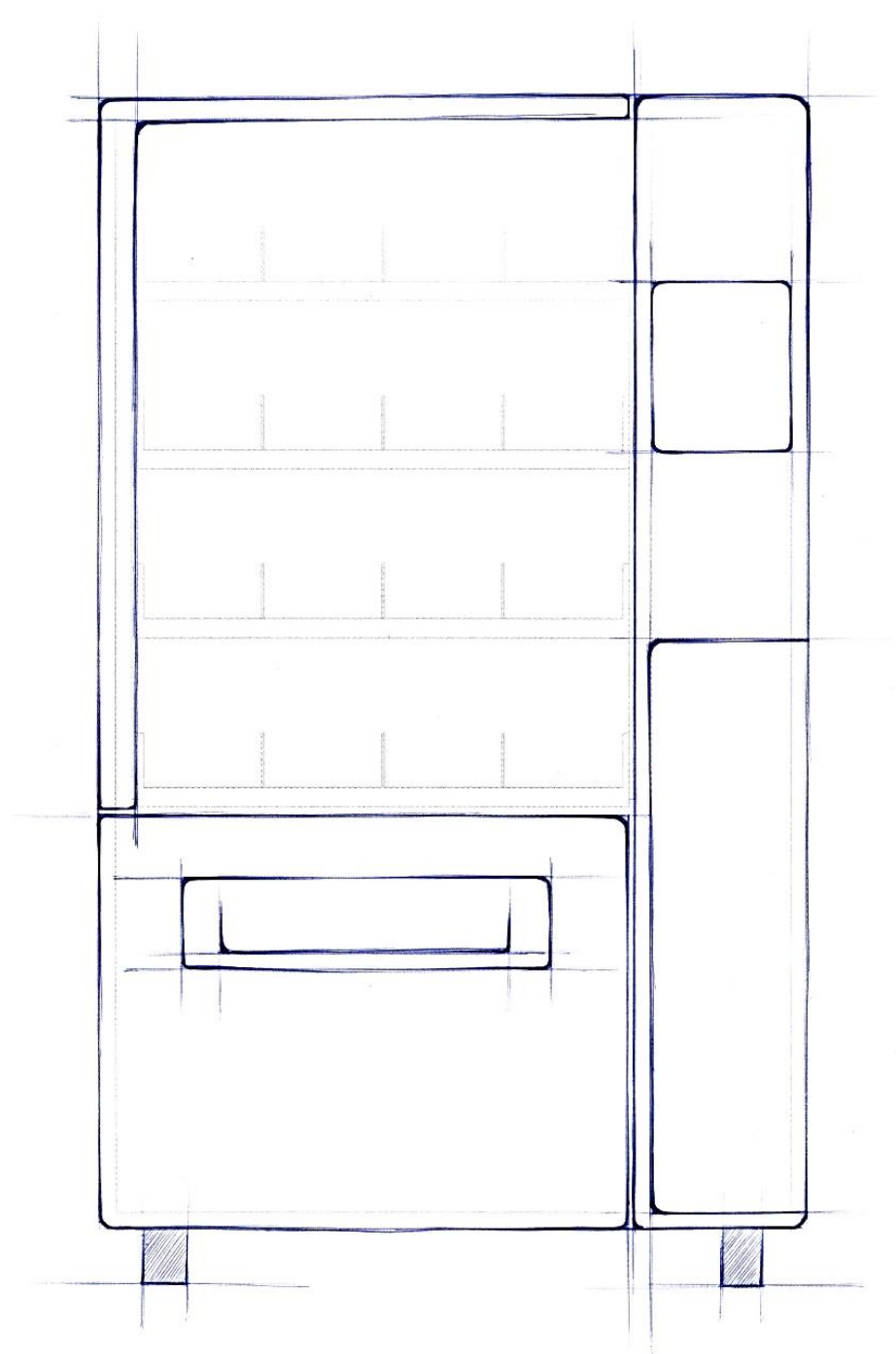
Form

Facial Form explorations



Freshness 6
Elegance 7
Uniqueness 5

Total 18



Freshness 6
Elegance 7
Uniqueness 4

Total 17

Form

Form 1



Form

Form 2



Form

Form 3



Form

Form 4



Form

Form 2

Freshness	7
Elegance	7
Uniqueness	6

Total	20
-------	----

Freshness	9
Elegance	8
Uniqueness	9

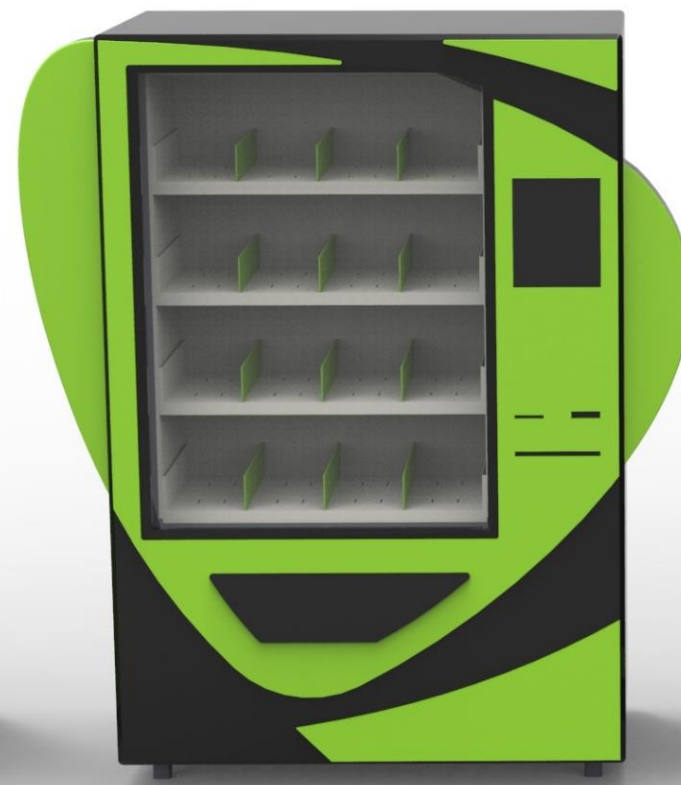
Total	26
-------	----

Freshness	8
Elegance	9
Uniqueness	6

Total	23
-------	----

Freshness	8
Elegance	9
Uniqueness	7

Total	24
-------	----



Form

Colour variations



Form

Graphic variations



Form

Final graphics



Interface

Three stake-holders

- Admin
- Service person
- Customer

Interface

Three stake-holders

- Admin
- Service person
- Customer

The interface consists of the following screens:

- Welcome note:** Displays "Welcome note", a "Brand Logo" placeholder, and a "Start" button.
- Select vegetables (Initial):** A list of vegetables with checkboxes and prices: Potato (1kg ₹__), Onion (1kg ₹__), Tomato (1kg ₹__), Curry Leaves (200 gm ₹__), Cucumber (500 gm ₹__), and Chilly (250 gm ₹__). Includes a "Cancel & Exit" button.
- Select vegetables (Selected):** Shows the selected items with quantity spinners: Potato (1kg x 2 ₹__), Onion (1kg ₹__), Tomato (1kg ₹__), Curry leaves (200 gm ₹__), Cucumber (500 gm x 1 ₹__), and Chilly (250 gm ₹__). Includes "Cancel & Exit" and "Proceed" buttons.
- Vegetables in your cart:** Lists the cart items: 1) Potato 2kg ₹__, 2) Cucumber 500 gm ₹__. Shows "2 items Total: ₹__". Includes "Cancel & Exit" and "Proceed" buttons.
- Do you need a carry bag?:** Asks "Do you need a carry bag?" with a price field ₹__. Includes "YES" and "NO" buttons, a "Total amount: ₹__" field, and a "Proceed to pay" button.
- Select mode of payment:** Offers "Credit/Debit card", "Store value card", and "Cash". Includes "Cancel & Exit" and "Proceed" buttons.
- Please swipe your card:** A screen for card payment with a "Cancel & Exit" button.
- Please enter your secret number:** A screen for PIN entry with a numeric keypad (0-9), "Cancel", "clear", and "Enter" buttons.
- Transaction Successful:** Displays "Transaction Successful Payment ₹__ received", "Please collect your vegetables", and "Thank you!".

Interface

LED screen size – 9 inches x 11 inches
228 mm x 279 mm

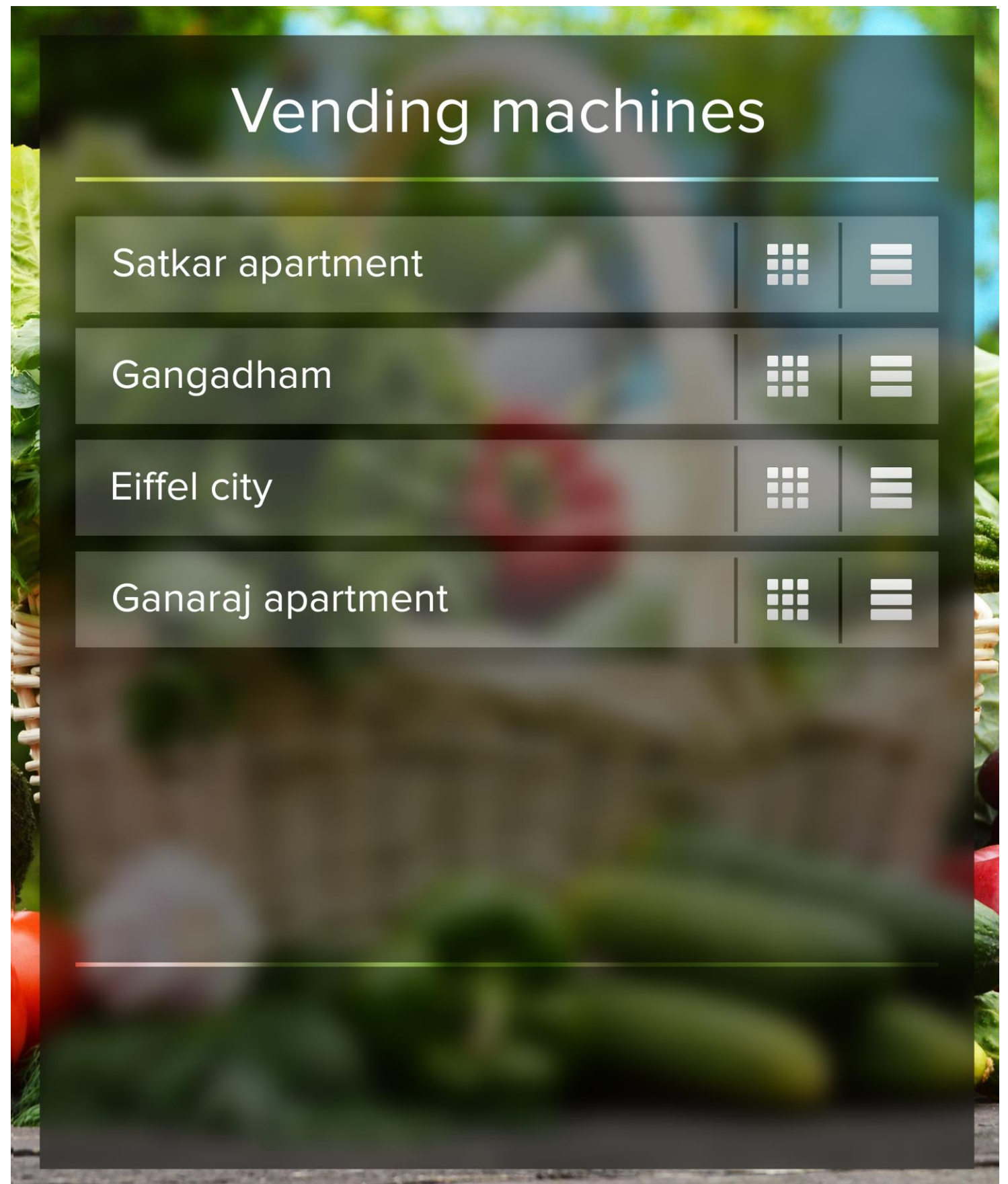
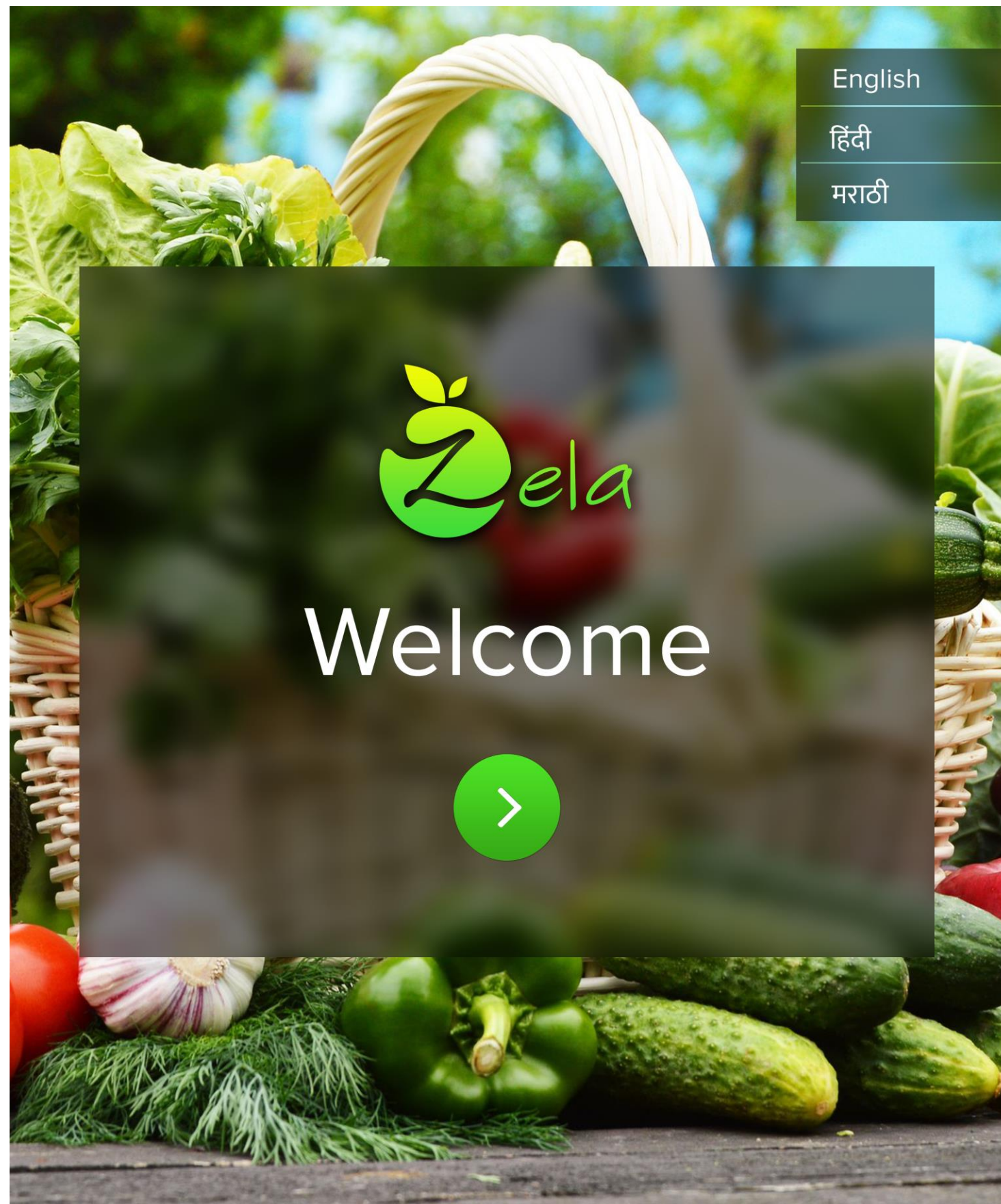
Background – Shades of blue & green
Fresh Vegetables basket

Fonts used – Proxima Nova Rg
Ek Mukta

Font size – Maximum – 72 Pts
Minimum – 20 pts



Admin



Admin

Satkar apartment

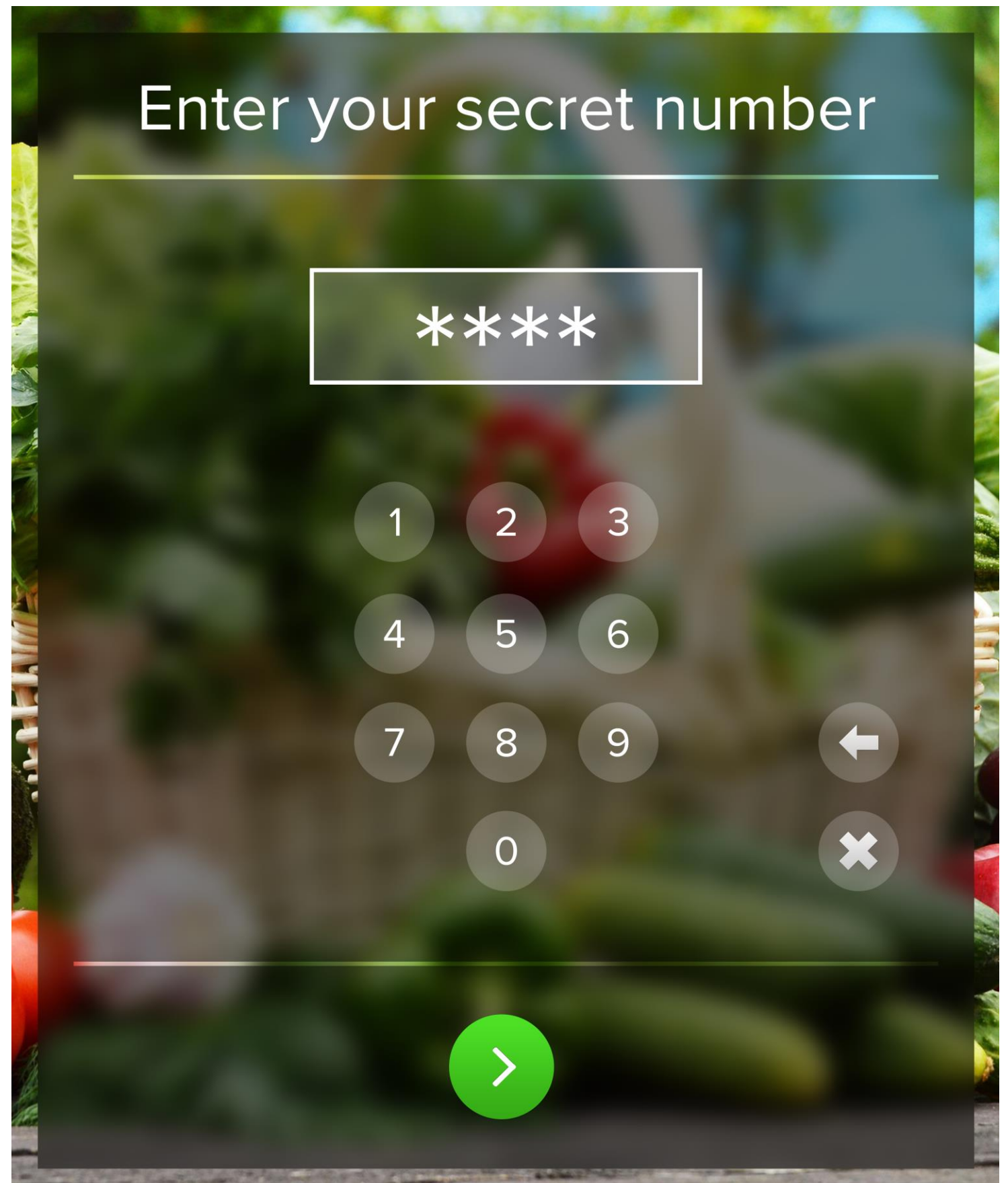
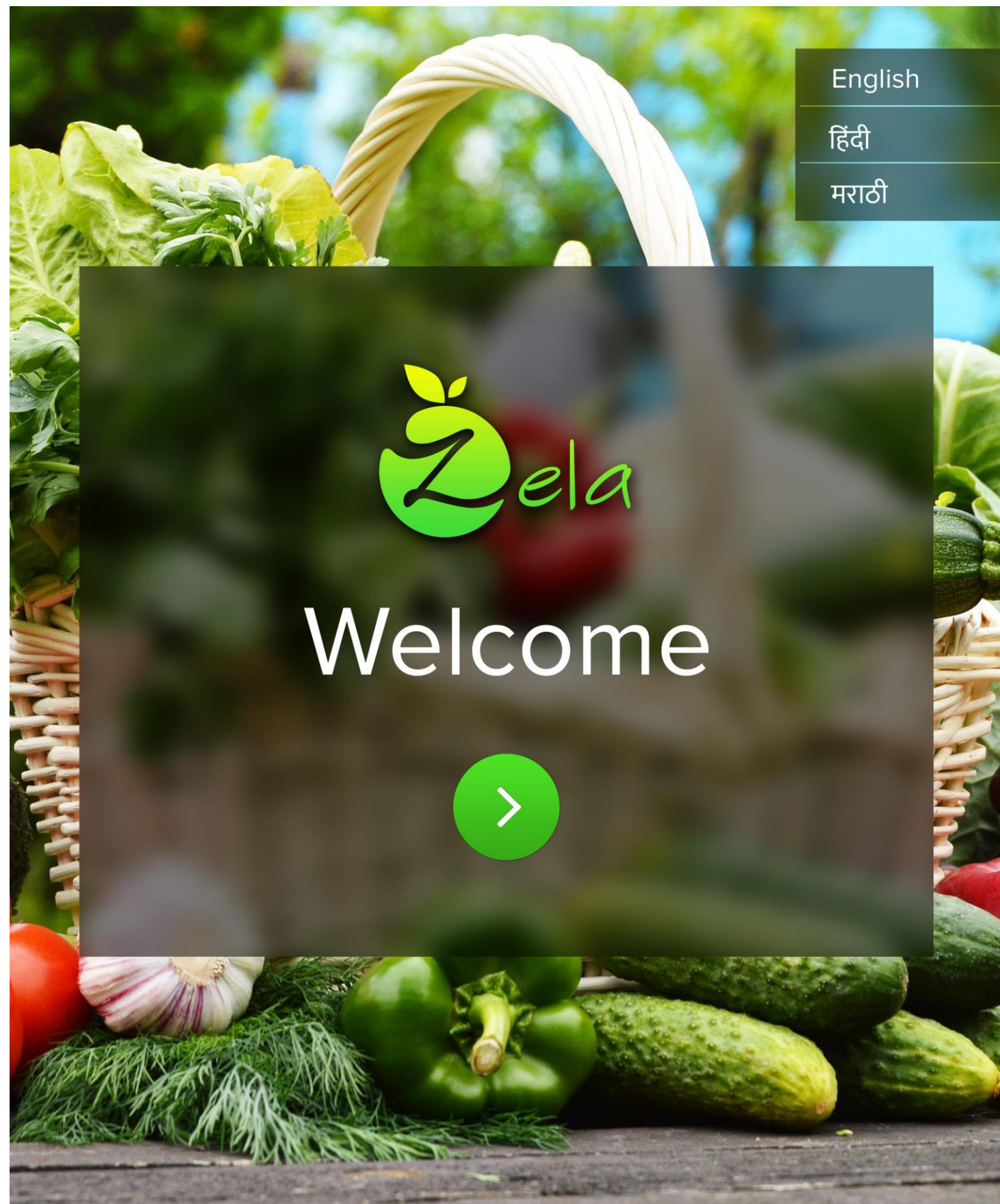


Satkar apartment

No	Vegetable	Available	Empty	Expired	Total
1	Potato	5	2	1	3
2	Onion	3	4	0	4
3	Tomato	6	1	0	1
4	Curry leaves	1	6	0	6
5	Cucumber	2	5	0	5
6	Chilly	5	2	0	2
7	Coriander	2	5	0	5
8	Ladies finger	5	2	0	2
9	Cauliflower	1	6	0	6
10	Pumkin	3	4	0	4
11	Gavar	4	3	1	4
12	Capsicum	1	6	0	6
13	Bringer	4	3	0	3
14	Drumstick	2	5	0	5
15	Mushroom	6	1	0	1
16	Methi	3	4	0	4



Service person



Service person

 Unlock door

 Check

 Settings

Exit

Door has been unlocked
Now you can refill vegetables

Done

Service person

Please lock the door first
&
Then exit

Ok

Door has been locked



Exit



Service person

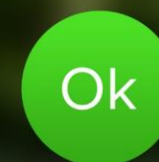
Satkar apartment

			
Potato	Onion	Brinjal	Chilly
			
Cucumber	Curry leaves	Coriander	Ladies finger
			
Methi	Pumkin	Gavar	Capsicum
			
Cauliflower	Tomato	Drumstick	Mushroom

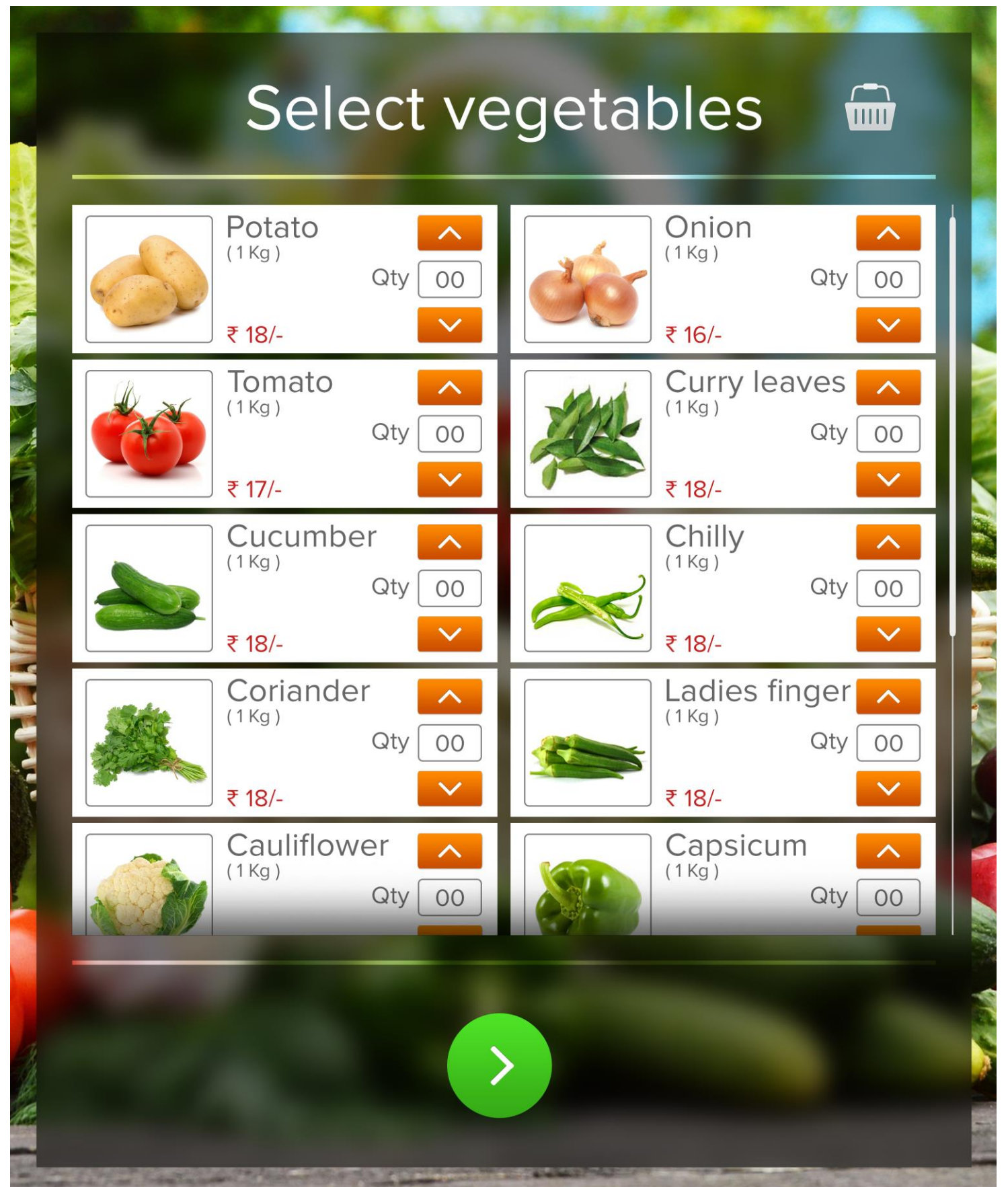
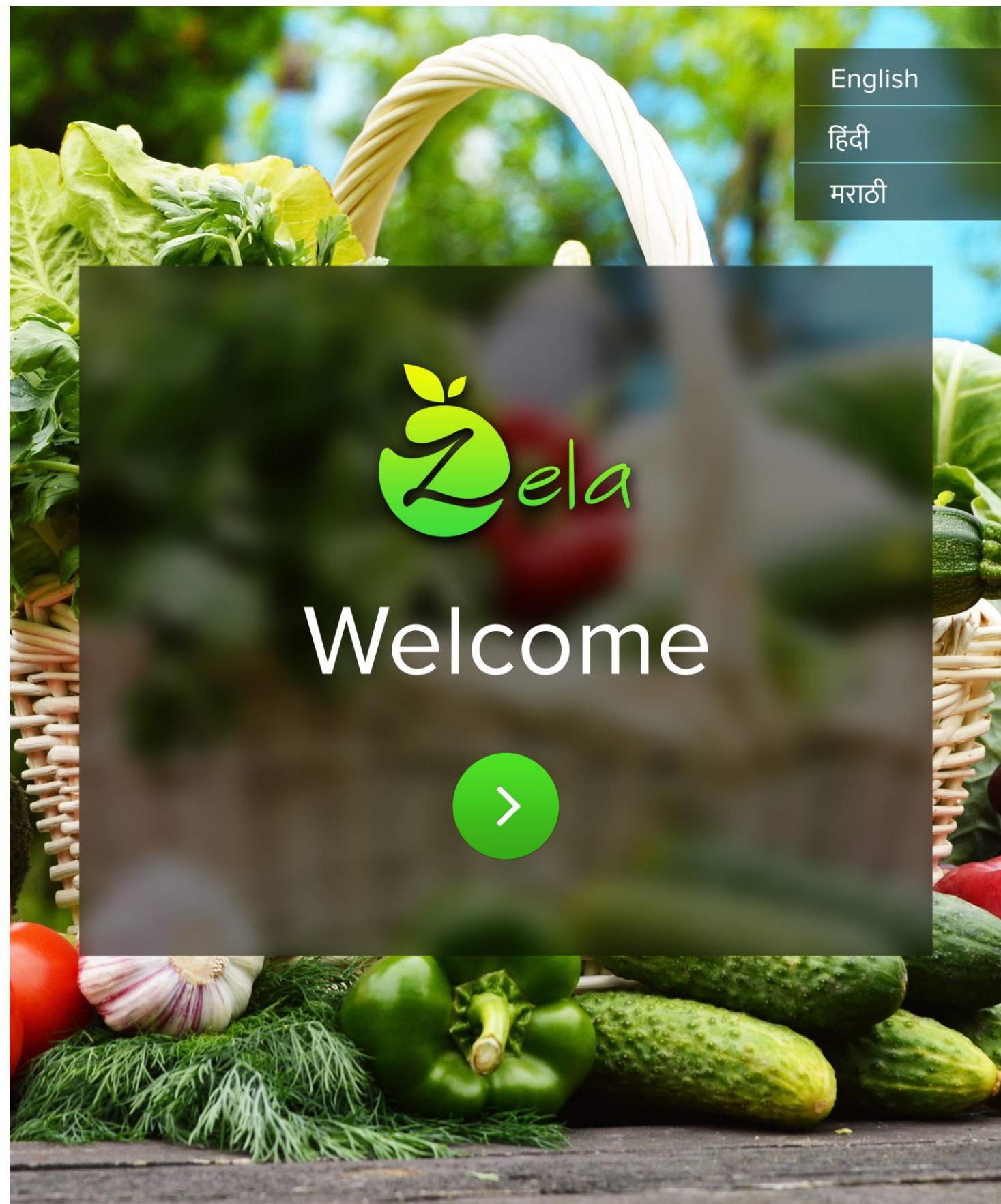


Available vegetables on the rack

			
Potato	Onion	Brinjal	Chilly
			
Cucumber	Curry leaves	Coriander	Ladies finger
			
Methi	Pumkin	Gavar	Capsicum
			
Cauliflower	Tomato	Drumstick	Mushroom

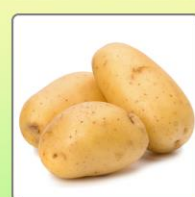


Customer



Customer

Select vegetables



Potato
(1 Kg)

Qty

₹ 18/-



Onion
(1 Kg)

Qty

₹ 16/-



Tomato
(1 Kg)

Qty

₹ 17/-



Curry leaves
(1 Kg)

Qty

₹ 18/-



Cucumber
(1 Kg)

Qty

₹ 18/-



Chilly
(1 Kg)

Qty

₹ 18/-



Coriander
(1 Kg)

Qty

₹ 18/-



Ladies finger
(1 Kg)

Qty

₹ 18/-



Cauliflower
(1 Kg)

Qty



Capsicum
(1 Kg)

Qty



Vegetables in your Basket



Potato
(1 Kg)

Qty

₹ 18/-



Price: ₹ 36/-



Tomato
(1 Kg)

Qty

₹ 17/-



Price: ₹ 17/-



Ladies finger
(1 Kg)

Qty

₹ 18/-



Price: ₹ 54/-



Total: ₹ 107/-



Customer

Do you need a carrybag ?

(If Yes, then an extra ₹ 3/- will be charged)

Yes



No



Vegetables in your Basket

	Potato (1 Kg) ₹ 18/-	Qty 02	Price: ₹ 36/-
	Tomato (1 Kg) ₹ 17/-	Qty 01	Price: ₹ 17/-
	Ladies finger (1 Kg) ₹ 18/-	Qty 03	Price: ₹ 54/-



Carrybag ₹ 3/-

Total payable amount : ₹ 110/-



Customer

Do you need a carrybag ?

(If Yes, then an extra ₹ 3/- will be charged)

Yes



No



Vegetables in your Basket

	Potato (1 Kg) ₹ 18/-	Qty 02	Price: ₹ 36/-
	Tomato (1 Kg) ₹ 17/-	Qty 01	Price: ₹ 17/-
	Ladies finger (1 Kg) ₹ 18/-	Qty 03	Price: ₹ 54/-



Carrybag ₹ 3/-

Total payable amount : ₹ 110/-



Customer

Please swipe your card

Enter your secret number

1

2

3

4

5

6

7

8

9

0



Customer

Vegetables in your Basket



Potato
(1 Kg)

₹ 18/-

Qty

02

Price: ₹ 36/-



Tomato
(1 Kg)

₹ 17/-

Qty

01

Price: ₹ 17/-



Ladies finger
(1 Kg)

₹ 18/-

Qty

03

Price: ₹ 54/-



Carrybag ₹ 3/-

Total payable amount : ₹ 110/-



Cancel

Pay



Please
collect your vegetables

Thank You !

Usability testing

Satkar apartment



Potato



Onion



Brinjal



Chilly



Cucumber



Curry leaves



Coriander



Ladies finger



Methi



Pumkin



Gavar



Capsicum



Cauliflower



Tomato



Drumstick



Mushroom



Satkar apartment



Potato



Onion



Brinjal



Chilly



Cucumber



Curry leaves



Coriander



Ladies finger



Methi



Pumkin



Gavar



Capsicum



Cauliflower



Tomato



Drumstick

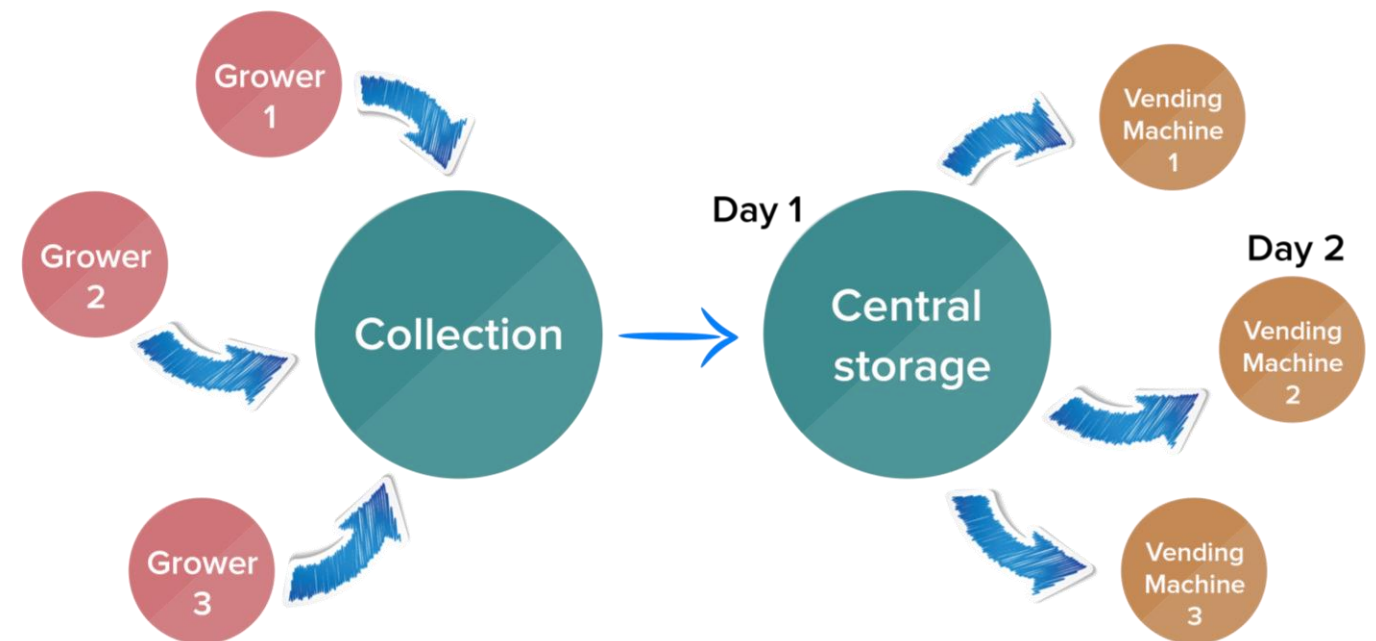


Mushroom



How will it work ?

- Installation in society parking
- New amenity in society marketing
- Deal with farmers
- Vegetables according to statistical data
- Organic fertilizers at cheaper rate
- Vegetables collection (in the evening / night)
- Transportation to the centralized storage system (Same day)
- Admin- Check available number of packets (next day – morning)
- Take print out- give it to service person
- Service person- Collect vegetable packets from storage system
- Refill all the vending machines in that area (same morning)
- Customer- get fresh & healthy vegetables everyday



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[2] http://en.wikipedia.org/wiki/Vending_machine as on 31st Jan, 2015

[3] <http://agritrade.iift.ac.in/html/Training/ASEAN%20%E2%80%93%20India%20FTA%20%20Emerging%20Issues%20for%20Trade%20in%20Agriculture/Fruits%20and%20vegetables%20Supply%20Chain%20in%20India.pdf> as on 31st jan, 2015

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3. https://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&uact=8&ved=OCDEQFjAF&url=http%3A%2F%2Fwww.ruralfinance.org%2Ffileadmin%2Ftemplates%2Frlc%2Fdocuments%2F1176485646364_FAO_Punjabi_Fruits_and_Vegetables_FV_Supply_Chains.ppt&ei=QljTVMrXCcKruQTHOYLYDQ&usg=AFQjCNG6JqjsOetbfvEvzoxuqZ8eDL46lg&sig2=IRpvMaVcmTmOEB-D9tEExQ&bvm=bv.85142067,d.c2E as on 26th Jan, 2015
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7. <http://www.perishablepundit.com/docs/freshday-vending.pdf> as on 23rd March, 2015
8. <http://www.godrejvending.com/Vending/product.aspx?id=7&menuid=807&catid=410&subcatid=0&subsubcatid=0&subsubsubcatid=0&productid=2680> as on 23rd March, 2015
9. <http://www.cdph.ca.gov/programs/cpns/Documents/Network-FV-WP-VendingMachineStandards.pdf> as on 23rd March, 2015
10. <http://www.bbc.com/news/uk-scotland-tayside-central-30310449> as on 23rd March, 2015
11. <http://www.soshiok.com/content/shanghai-gets-1st-veggie-vending-machine> as on 23rd March, 2015

Fin.