

# Flows

2013~2014 first semester

Roy Yin

1. Today's Art

- P1 -

2. Case Study

- P6 -

3. Studio - Money Flows & Food/Drink Flows

- P14 -

## specifications form materials of BZK

Name researcher

*example  
you*

name element

*Door handle, floortile, etc*

length (mm)

width (mm)

height/diameter (mm)

amount

unit

*1, 10000, etc  
m2, m1 m3, pieces, etc*

material 1

type

*Wood, steel, plastic, etc  
stainless steel, PET, spruce, etc*

material 2

type

material 3

type

material 4

type

material 5

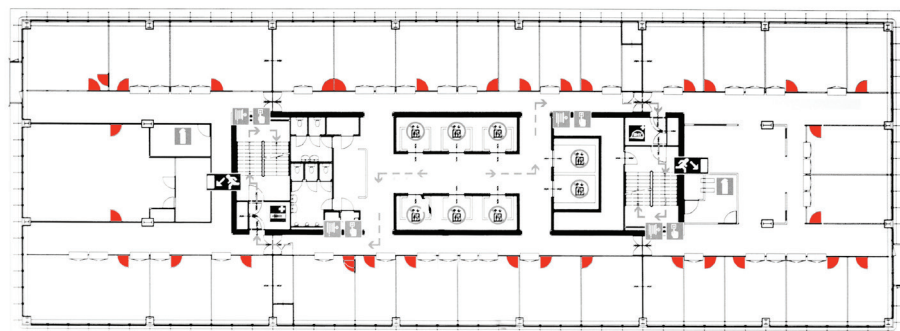
type

colour(s)

other relevant specs

*explanation of the element*

location of material  
in plan



name element

door handle

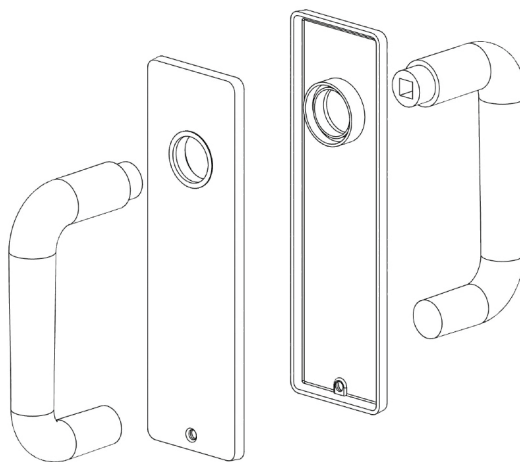
photo 1



subtitle

door handle(left side)

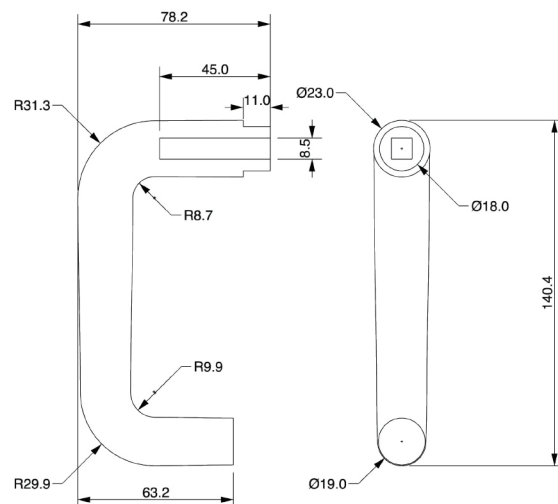
photo 2



subtitle

door handle with its frame

section drawing 1:5





## specifications form materials of BZK

*example  
you*

Name researcher

name element

*Door handle, floortile, etc*

length (mm)

width (mm)

height/diameter (mm)

amount

unit

*1, 10000, etc  
m2, m1 m3, pieces, etc*

material 1

type

material 2

type

material 3

type

material 4

type

material 5

type

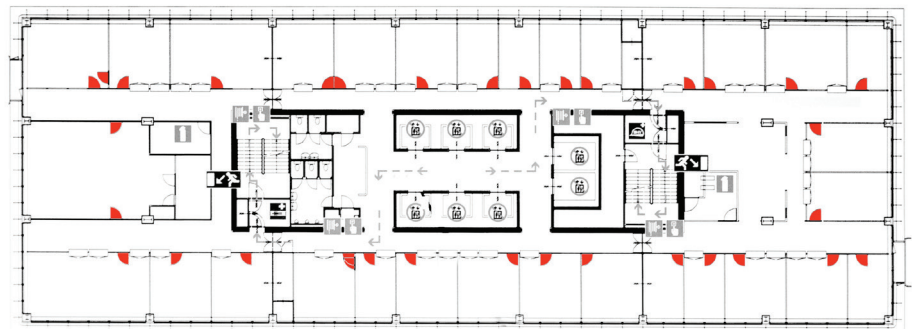
*Wood, steel, plastic, etc  
stainless steel, PET, spruce, etc*

colour(s)

other relevant specs

*explanation of the element*

location of material  
in plan



name element

frame of door handle

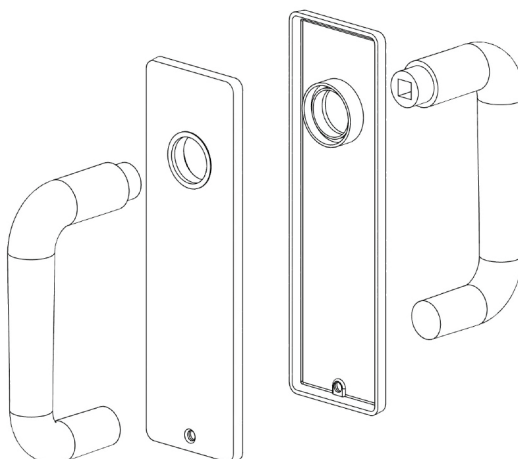
photo 1



subtitle

frame of door handle(front side)

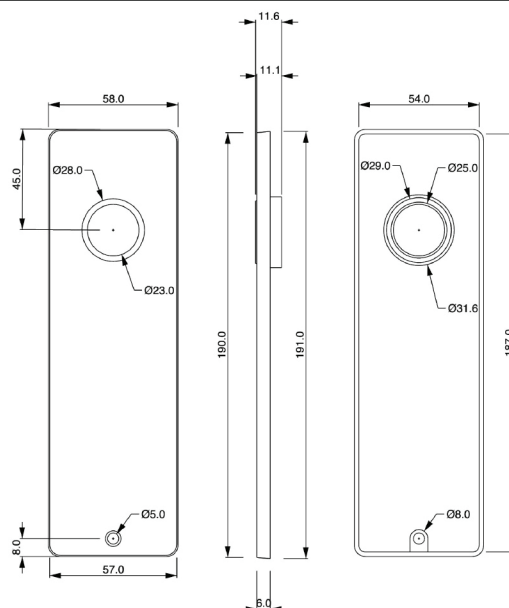
photo 2



subtitle

door handle with its frame

section drawing 1:5





The abandon blinders which we used for type design.



Today's Art Results





### PASONA URBAN FARMING

This project is designed by Kono Designs.

Urban Farm at Pasona Tokyo Headquarters is a nine story high, 215,000 square foot corporate office building for a Japanese recruitment company, Pasona Group, located in downtown Tokyo. It is a major renovation project consisting of a double skinned green facade, offices, an auditorium, cafeterias, a rooftop garden and most notably, urban farming facilities integrated within the building. The green space totals over 43,000 square feet (3995 square meter) with 200 species including fruits, vegetables and rice that are harvested, prepared and served at the cafeterias within the building. It is the largest and most direct farm-to-table of its kind ever realized inside an office building in Japan.

Using both hydroponic and soil based farming, crops and office workers share a common space. For example, tomato vines are suspended above conference tables, lemon and passion fruit trees are used as partitions for meeting spaces, salad leaves are grown inside seminar rooms and bean sprouts are grown under benches. The main lobby also features a rice paddy and a broccoli field. These crops are equipped with HEFL, fluorescent and LED lamps and an automatic irrigation system. An intelligent climate control monitors humidity, temperature and breeze to balance human comfort during office hours and optimize crop growth during after hours. This maximizes crop yield and annual harvests. Seasonal flowers and orange trees are planted on the balconies between the double skinned facade, partially relying on natural exterior climate to showcase changing of leaves and colors to the exterior facade. All plants are maintained and harvested by Pasona employees with the help of an agricultural specialist.

Pasona Urban Farm is beyond aesthetic and visual improvement. It creates a unique workplace environment that promotes worker's productivity, mental health, and social interaction and engages the wider community of Tokyo by showcasing the benefits and technology of urban agriculture.



## **QUALITATIVE ANALYSIS**

Situation before

Normal Office Building with no green inside the building and on facade.

### **History**

On February 11, 2005, the Pasona Group opened an agricultural facility on the B2 level of its Otemachi headquarters. Located in a space previously utilized as a bank vault, the facility is designed to provide those in the city with a first hand touch of rural life. PASONA O2 is a unique facility, located underground and therefore removed from natural sunlight. Offering a wealth of plant life and cultivation, the facility is an oasis in the midst of Tokyo's central business district (CBD). Within the facility, various innovative methods are applied to duplicate the natural elements. Flowers thrive under the light provided by light-emitting diodes (LEDs). Herbs and vegetables are cultivated utilizing metal halide lamps, and rice utilizing high-pressure sodium vapor lamps. Using a method known as tank farming, or hydroponics, and fluorescent lights, the facility also offers tomatoes and a variety of plants.

### **Result of project**

Located in the heart of Tokyo's CBD, PASONA O2 serves as an information transmission satellite, communicating to an urban audience new pleasures and the potential of agricultural life. The facility not only provides this first hand experience, but also offers a variety of seminars and training programs and a hideaway for physical and mental relaxation. And it produces the most important thing - fresh food!

### **Factors that contributed to the success of the project**

1.It can create 4000 square meter farm land in the city centre. It save time and energy for transportation of food from the farm. 2.Office building has a good heating system and ventilation system, which is the two main qualities of a green house system. So it does not need to make an other heating system or ventilation system to support the farming inside the building. 3.Office workers enjoy the fun to pick up and plant the food. It brings physical and mental relaxation to the office workers. 4.A better green environment has been created. Fresh air are generated from the plants.

### **Challenges that the project must overcome**

It spends a huge amount of electricity for lighting system. If they can figure it out how to reduce consume of electricity, the program would be more successful. For example, this may work so well in a good natural light office.

### **Spatial quality**

They can use the leftover space and also share the light in the office. If every office building in Japan create a farm, it would create a lot of farmland.

Contribution of the project to the design practice

Rice can harvest three times a year.





The building has a double-skin green facade where flowers and orange trees are planted on small balconies. From the outside, the office block appears to be draped in green foliage.

Inside the offices, tomato vines are suspended above conference tables, lemon and passion fruit trees are used as partitions for meeting spaces, salad leaves are grown inside seminar rooms and bean sprouts are grown under benches.



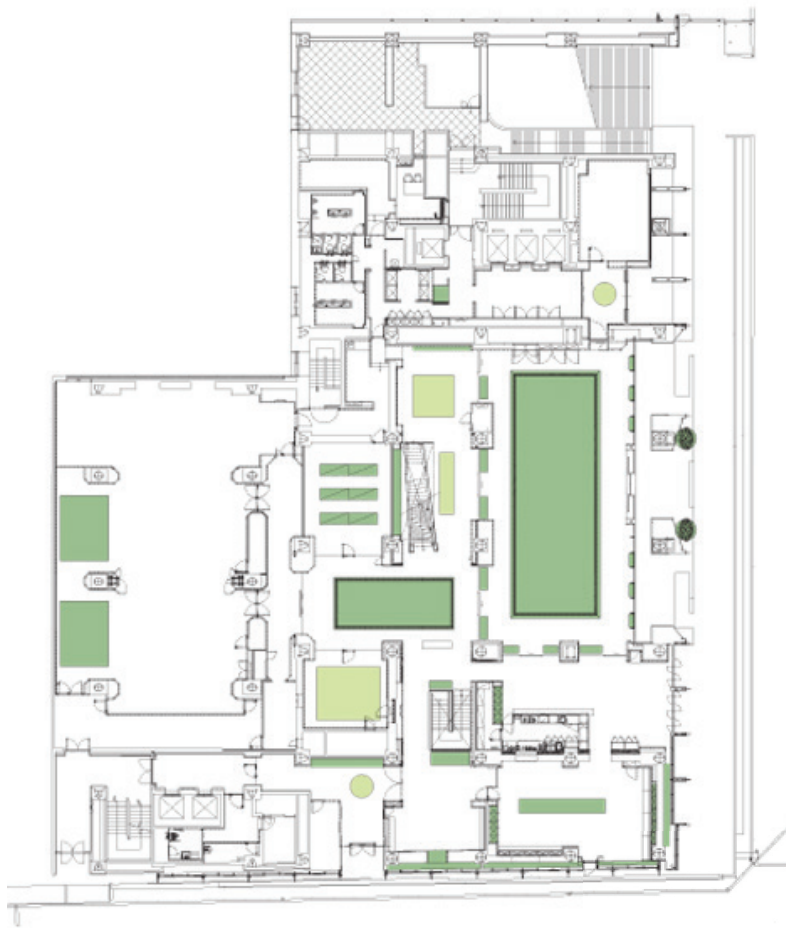




Plants hang in bags surrounding meeting desks and there are vines growing within vertical cages and wooden plant boxes around the building.

Ducts, pipes and vertical shafts were rerouted to the perimeter of the building to allow for maximum height ceilings and a climate control system is used to monitor humidity, temperature and air flow in the building to ensure it is safe for the employees and suitable for the farm.





Ground Floor Plan

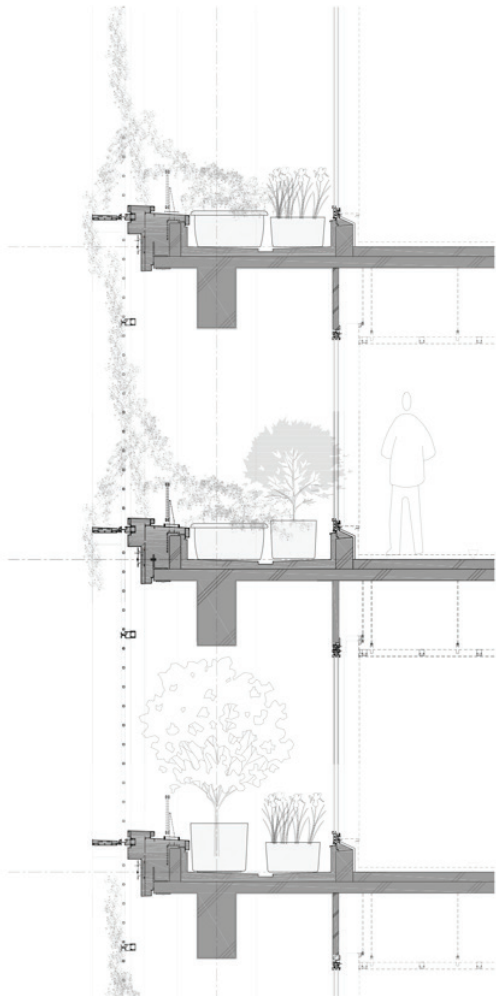
Besides future sustainability of farmers, Pasona HQ's urban farm is beyond visual and aesthetic improvement. It exposes city workers to growing crops and interaction with farmland on a daily basis and provides improvement in mental health, productivity and relaxation in the workplace. Studies show that most people in urbanised societies spend over 80% of their time indoors. Plants are also known to improve the air quality we breathe by carbon sequestration and removing volatile organic compound. A sampling on the air at Pasona HQ have shown reduction of carbon dioxide where plants are abundant. Such improvement on the air quality can increase productivity at work by 12%, improves common symptoms of discomfort and ailments at work by 23%, reduce absenteeism and staff turnover cost.

Employees of Pasona HQ are asked to participate in the maintenance and harvesting of crops with the help of agricultural specialists. Such activity encourages social interaction among employees leading to better teamwork on the job. It also provides them with a sense of responsibility and accomplishment in growing and maintaining the crops that are ultimately prepared and served to their fellow co-workers at the building's cafeterias.



Typical Office Floor Plan

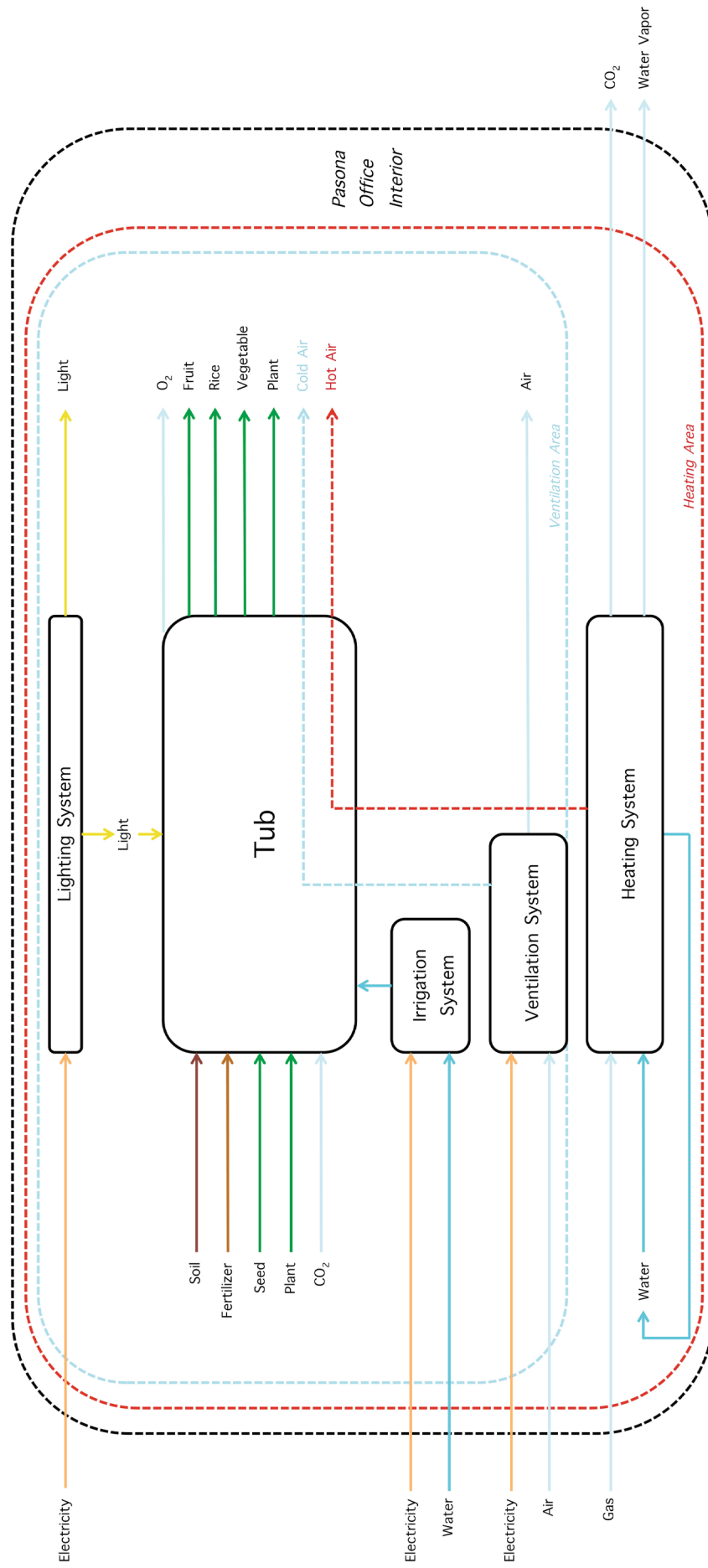




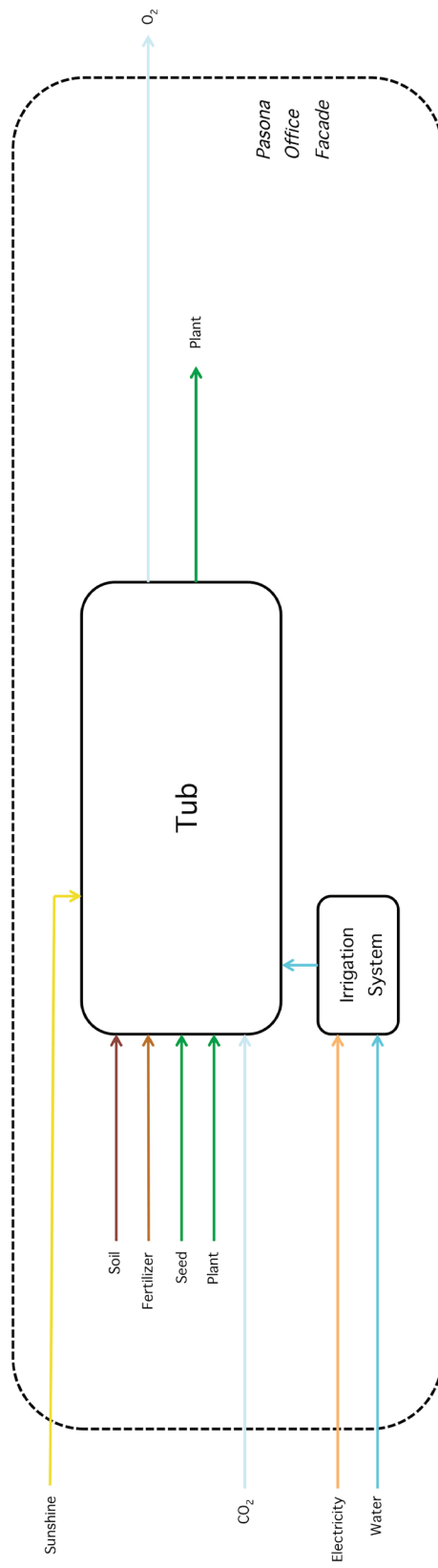
Section Showing Facade and Balconies

Pasona Urban Farm is a unique workplace environment that promotes higher work efficiency, social interaction, future sustainability and engages the wider community of Tokyo by showcasing the benefits and technology of urban agriculture.





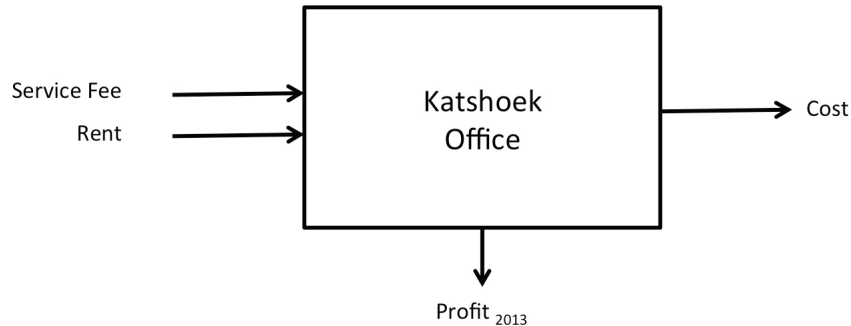
pasona urban farm MFA interior part



pasona urban farm MFA facade part

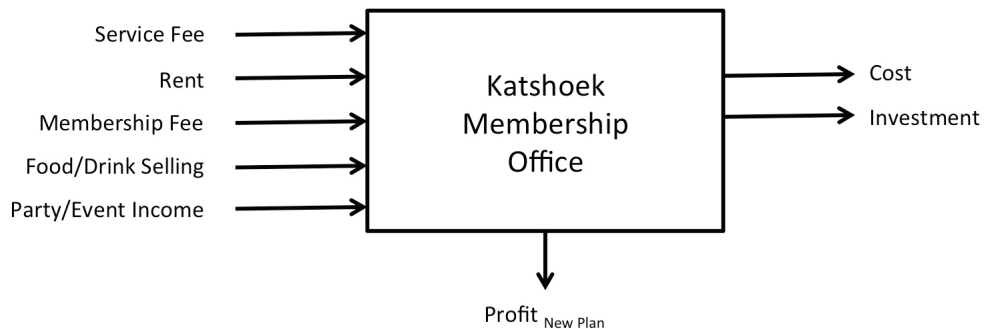
# Studio - Money Flows & Food/Drink Flows

## Money Flows in Katshoek



2013

2014~2018 New Plan

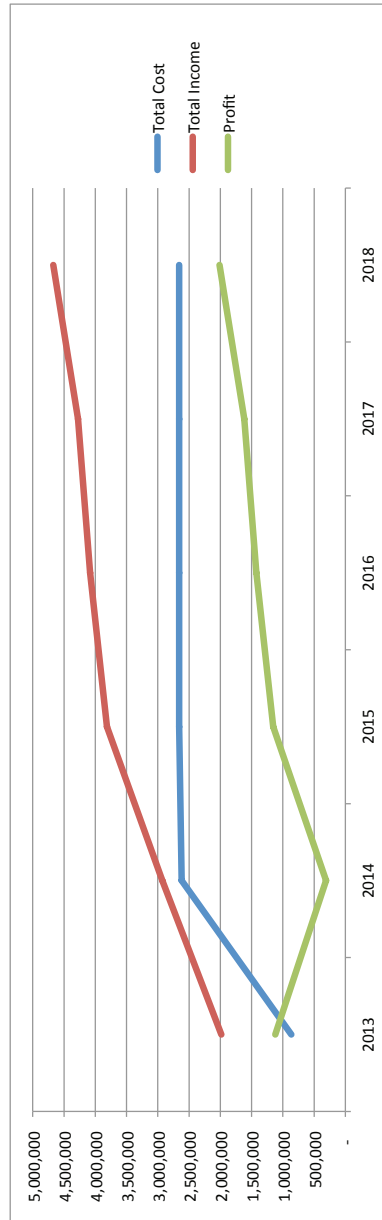


### Cost :

Damages	Security installations
Maintenance general spaces	Security network
Security service	Sewage pump installation
Other service management	Electricity use
Receptionists	Gas and city heating use
Green maintenance interior	Telephone/data connection
Green maintenance exterior	Wateruse
Parking Sliding doors tourniquet mechanics	Other costs general spaces
Central heating install	Pest control
Electrical install	Cleaning service general spaces
Electrical install maintenance	Sanitary articles
Waterpressure installation	Window cleaning
Cooling installation	Terrain cleaning
Elevator installation	Waste disposal
Ventilation	Servicecosts empty spaces
Sanitary installation	Other management
Park.installation	
Firesafety installations	

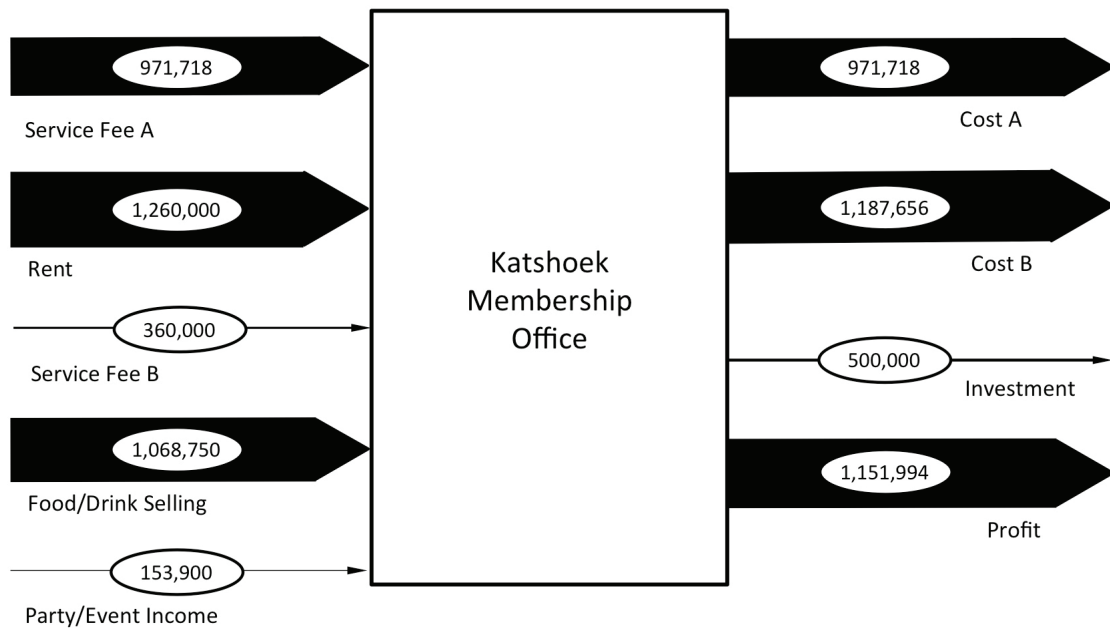
# Membership Office Analysis for Katshoek (2013~2018) (Estimation 1)

Year	2013	2014	2015	2016	2017	2018	Total Cost
Investment(€)	-	1,000,000	500,000	500,000	500,000	500,000	3,000,000
Cost(€)	863,750	1,619,531	2,159,374	2,159,374	2,159,374	2,159,374	11,120,777
Total Cost(€)	863,750	2,619,531	2,659,374	2,659,374	2,659,374	2,659,374	14,120,777
Service Fee(€)	863,750	1,063,750	1,331,718	1,439,687	1,527,656	1,615,625	7,842,185
Rent (excl.) (€)	1,120,000	1,120,000	1,260,000	1,400,000	1,540,000	1,680,000	8,120,000
Food/Drink Selling(€)	-	650,000	1,068,750	1,087,500	1,056,250	1,230,000	5,092,500
Party/Event Income(€)	-	93,600	153,900	156,600	152,100	147,600	703,800
Total Income(€)	1,983,750	2,927,350	3,814,368	4,083,787	4,276,006	4,673,225	21,758,485
Profit(€)	1,120,000	307,819	1,154,994	1,424,413	1,616,632	2,013,850	7,637,708
Space for Normal Member	0%	30%	45%	40%	35%	30%	
Space for Rent for Office	40%	40%	45%	50%	55%	60%	
Share Space	0%	5%	10%	10%	10%	10%	
Profit compare to 2013	-	-812181	34,994	304,413	496,632	893,850	

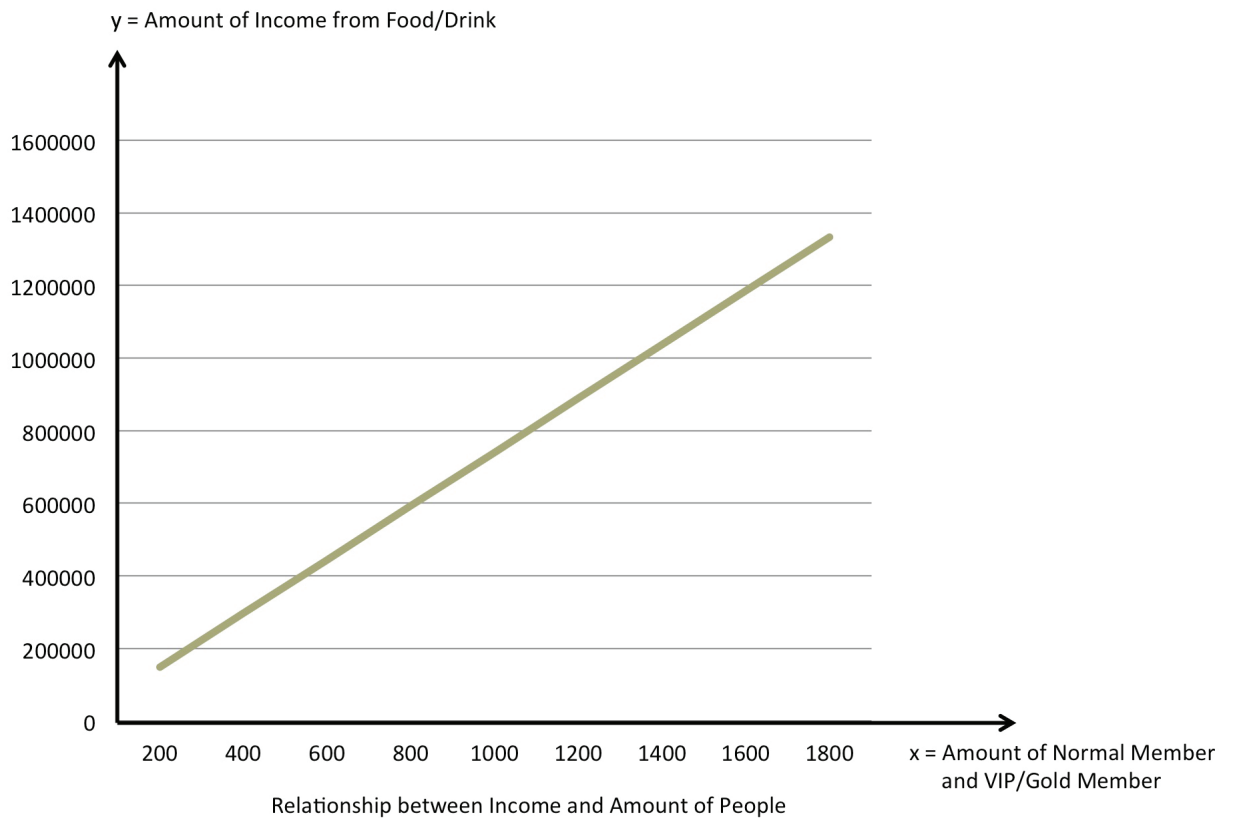


rent price per m2 per year(€)	100	100	100	100	100	100
Amount of Normal Member	0	1000	1800	1800	1700	1600
Amount of Vip/Gold Member	300	300	338	375	413	450
Profit from Each Person Spend for Food/Drink(€)		2.5	2.5	2.5	2.5	3
Percentage of People Spend Money on Food/Drink in Katshoek		100%	100%	100%	100%	100%

Normal Member Payment per day for service fee is €1 , 4m2 for use



A huge amount of money come from Food/Drink Selling.



$$y = 200ax + 24bx$$

a = Daily Spend for Food/Drink Per Person

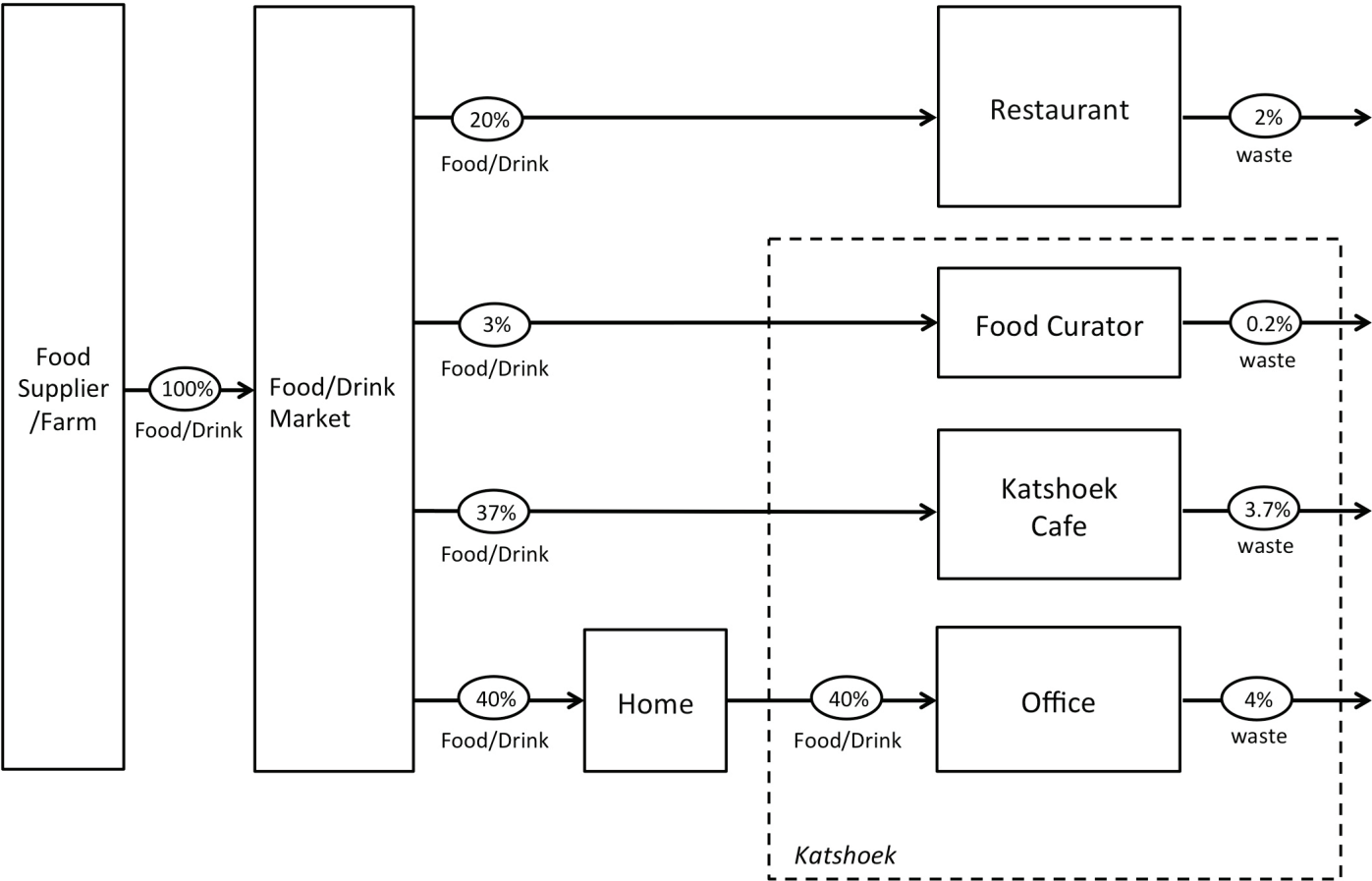
b = Party/Event Spend Per Person

c = Daily Service Fee Per Person

The more members Katshoek has, the more money Katshoek would earn.  
The more food/drink Katshoek could sell, the more money Katshoek could earn.

It is obvious that the more people in Katshoek the more money Katshoek could earn. But according to a Web survey conducted last year by Right Management, a human resources consulting firm, the survey found that 65% of workers eat at their desks or don't take a break at all. CareerBuilder, another employment consultant, found that less than one-fifth of executives surveyed ate lunch at a sit-down restaurant, about **40% take a brown-bag lunch** and 17% eat fast food. According to these data, I got the Food/Drink flows.

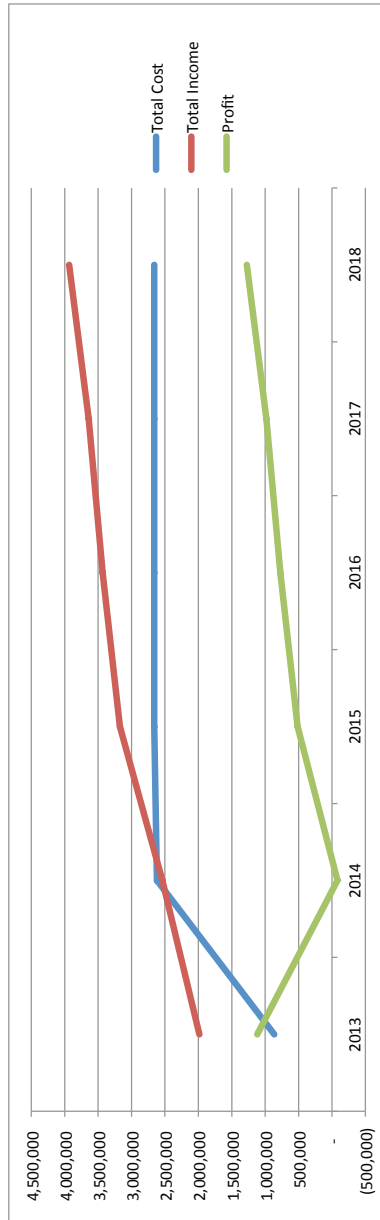
Food/Drink Flows for New Plan





## Membership Office Analysis for Katshoek (2013~2018) (Estimation 2)

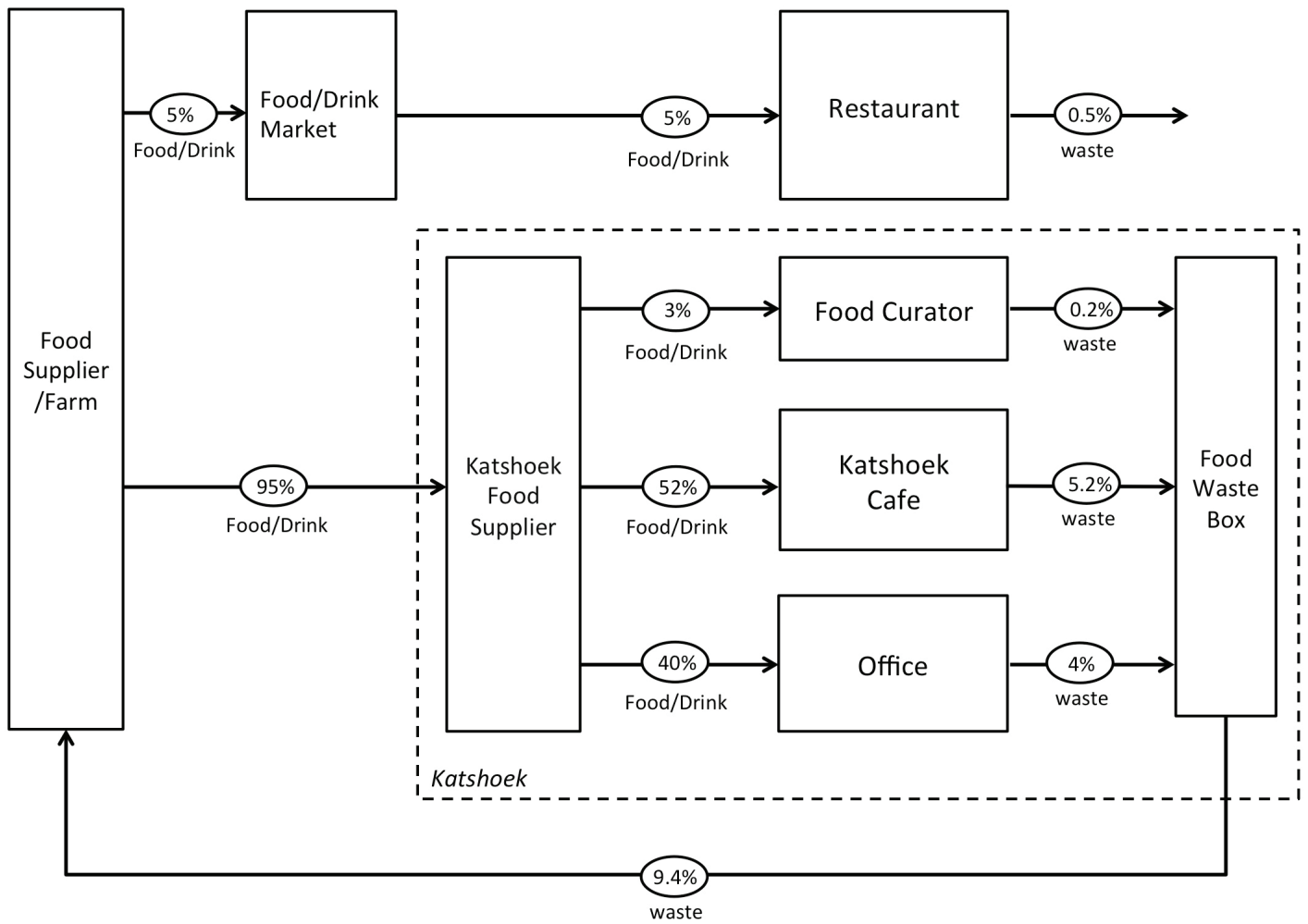
Year	2013	2014	2015	2016	2017	2018	Total Cost
Investment(€)	-	1,000,000	500,000	500,000	500,000	500,000	3,000,000
Cost(€)	863,750	1,619,531	2,159,374	2,159,374	2,159,374	2,159,374	11,120,777
Total Cost(€)	863,750	2,619,531	2,659,374	2,659,374	2,659,374	2,659,374	14,120,777
Service Fee(€)	863,750	1,063,750	1,331,718	1,439,687	1,527,656	1,615,625	7,842,185
Rent (excl.) (€)	1,120,000	1,120,000	1,260,000	1,400,000	1,540,000	1,680,000	8,120,000
Food/Drink Selling(€)	-	260,000	427,500	435,000	422,500	492,000	2,037,000
Party/Event Income(€)	-	93,600	153,900	156,600	152,100	147,600	703,800
Total Income(€)	1,983,750	2,537,350	3,173,118	3,431,287	3,642,256	3,935,225	18,702,985
Profit(€)	1,120,000	-82,181	513,744	771,913	982,882	1,275,850	4,582,208
Space for Normal Member	0%	30%	45%	40%	35%	30%	
Space for Rent for Office	40%	40%	45%	50%	55%	60%	
Share Space	0%	5%	10%	10%	10%	10%	
Profit compare to 2013	-	-1202181	-606256	-348087	-137118	155,850	



rent price per m2 per year(€)	100	100	100	100	100	100
Amount of Normal Member	0	1000	1800	1700	1600	1600
Amount of Vip/Gold Member	300	300	338	375	413	450
Profit from Each Person Spend for Food/Drink(€)		2.5	2.5	2.5	2.5	3
Percentage of People Spend Money on Food/Drink in Katshoek		40%	40%	40%	40%	40%

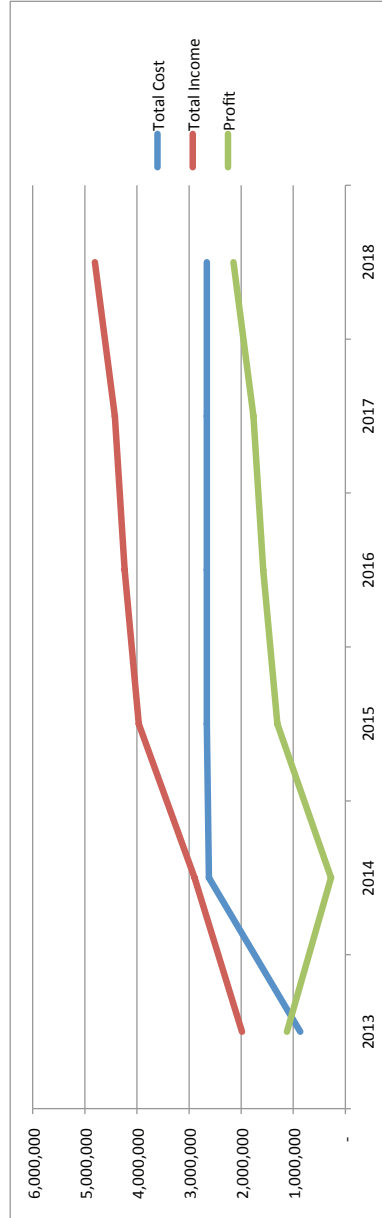
Normal Member Payment per day for service fee is €1 , 4m2 for use

# Improvement for Food/Drink Flows for New Plan



### Membership Office Analysis for Katshoek (2013~2018) (Estimation 3)

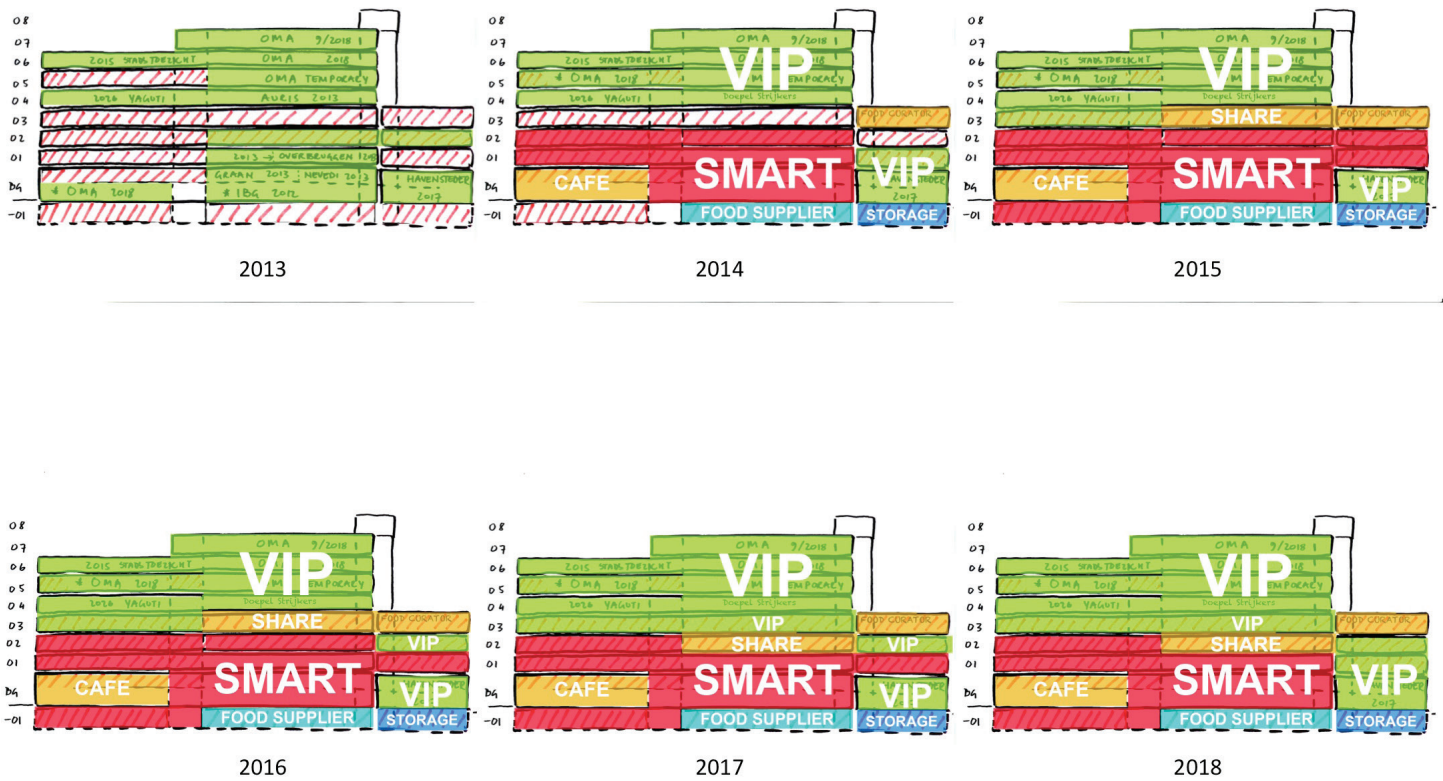
Year	2013	2014	2015	2016	2017	2018	Total Cost
Investment(€)	-	1,000,000	500,000	500,000	500,000	500,000	3,000,000
Cost(€)	863,750	1,619,531	2,159,374	2,159,374	2,159,374	2,159,374	11,120,777
Total Cost(€)	863,750	2,619,531	2,659,374	2,659,374	2,659,374	2,659,374	14,120,777
Service Fee(€)	863,750	1,063,750	1,331,718	1,439,687	1,527,656	1,615,625	7,842,185
Rent (excl.) (€)	1,120,000	1,120,000	1,260,000	1,400,000	1,540,000	1,680,000	8,120,000
Food/Drink Selling(€)	-	617,500	1,218,375	1,239,750	1,204,125	1,363,250	5,643,000
Party/Event Income(€)	-	93,600	153,900	156,600	152,100	147,600	703,800
Total Income(€)	1,983,750	2,894,850	3,963,993	4,236,037	4,423,881	4,806,475	22,308,985
Profit(€)	1,120,000	275,319	1,304,619	1,576,663	1,764,507	2,147,100	8,188,208
Space for Normal Member	0%	30%	45%	40%	35%	30%	
Space for Rent for Office	40%	40%	45%	50%	55%	60%	
Share Space	0%	5%	10%	10%	10%	10%	
Profit compare to 2013	-	-844681	184,619	456,663	644,507	1,027,100	



rent price per m2 per year(€)	100	100	100	100	100	100
Amount of Normal Member	0	1000	1800	1800	1700	1600
Amount of Vip/Gold Member	300	300	338	375	413	450
Profit from Each Person Spend for Food/Drink(€)		2.5	3.0	3.0	3.0	3.5
Percentage of People Spend Money on Food/Drink in Katshoek		95%	95%	95%	95%	95%

Normal Member Payment per day for service fee is €1 , 4m2 for use

## Initial Plan for Program



\*Smart is for normal member.

As we see, food/drink selling is one of the most important plan for the business, and 65% of workers eat at their desks or don't take a break at all, we should make a more extreme plan in order to sell more and earn more.

So why not

**selling the food in the whole building**

instead of being in one place.

We could have food/drink **everywhere!**

