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# 1 Introduction

motivation of the project



집키섬  
@zipkeysum

친구들이랑 시장 갔다가 멍멍이 봤어 고양이한테 맞고 우는중이래

아으아 아까 올리브영갔는데  
어떤분이 댕댕이를 뱃속에 넣고  
다니셔서 허락말고 찍었는데  
겁나귀어워ㅠㅠㅠㅠ



2017. 4. 21. 오후 5:41

리트윗 3,342회 마음에 들어요 830회



백미 @whitericecat · 1일

물갈아줬더니 또 고양이수염차를 우리고  
있다. 너 대체왜그러니...



↩ 3

↻ 8,941

♥ 2,529



# 1 Introduction

motivation of the project

## 애견산업 시장 규모 및 애견인구 추이



# 2 Market Analysis

market demand

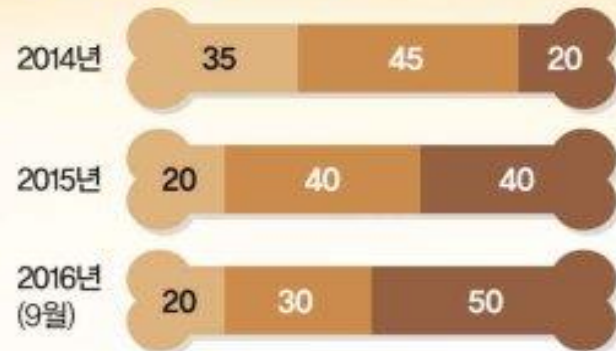
반려견 간식제품 가격 (단위 : kg당 원)

종류	가격대
캔 · 파우치	1만1170 ~ 1만3000원
육포 · 닭안심살	6975 ~ 3만6828원
닭갈비	5975 ~ 1만3880원
소시지 · 치즈	9041 ~ 1만800원
버거 · 육포	5300 ~ 2만9300원
개껌(6조각)	1590 ~ 1722원
과자류	1만3680 ~ 2만1440원
수제간식	5만3500 ~ 9만6000원
영양제	13만8850 ~ 42만4000원

※ 2016년 7월 기준      자료 : 농협중앙회·인터넷 가격비교 사이트

반려견 사료 등급별 매출비중 (단위 : %)

이코노미   프리미엄   슈퍼프리미엄



자료 : 이마트



# 2 Market Analysis

market demand





# 2 Market Analysis

market demand

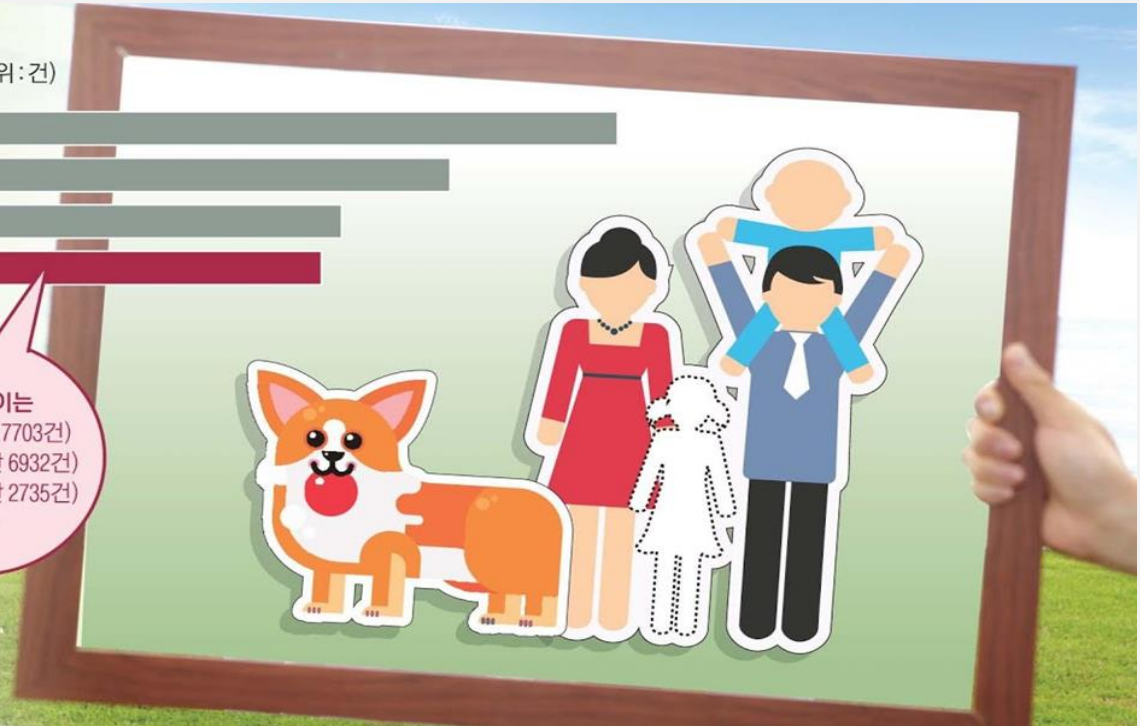
소셜 · 온라인상에서의 '가족' 연관어 빈도 수 (단위: 건)



개·고양이는  
강아지(25만 7703건)  
+반려견(24만 6932건)  
+고양이(22만 2735건)  
합산

※2016년 1월 1일~2017년 5월 31일  
트위터+블로그+인터넷 커뮤니티+인스타그램 합산

〈자료: KB국민카드〉



# 2 Market Analysis

target customers

Anthropomorphism and dog-oriented self-concept →	Cluster 1 Dog people	Cluster 2 Dog parents	Cluster 3 Pet owners
Importance ratings of dog food choice criteria	Mean	Mean	Mean
Price	4.57	4.68	4.83
Taste	5.13 <sup>a,b</sup>	4.33 <sup>a</sup>	4.08 <sup>b</sup>
Health/nutrition	6.17 <sup>a</sup>	5.79 <sup>a</sup>	5.28 <sup>a</sup>
Freshness	5.76 <sup>a</sup>	5.07 <sup>a</sup>	4.52 <sup>a</sup>
Ease of preparation	5.00	4.80	4.61
Variety in diet	4.52 <sup>a,b</sup>	3.88 <sup>a</sup>	3.55 <sup>b</sup>
Quality	6.03 <sup>a</sup>	5.59 <sup>a</sup>	5.14 <sup>a</sup>
Holistic/natural/organic	4.19 <sup>a</sup>	3.56 <sup>a</sup>	2.66 <sup>a</sup>
Brand name	4.28 <sup>a</sup>	4.10	3.81 <sup>a</sup>
Being on sale/promo/discount	4.00	4.13	4.00
Type of store where food is purchased	3.58 <sup>a</sup>	3.27 <sup>b</sup>	3.77 <sup>a,b</sup>
Product selection in store where food is purchased	3.87 <sup>a</sup>	3.50 <sup>b</sup>	2.99 <sup>a,b</sup>
Convenience of location of store where food is purchased	4.47 <sup>a</sup>	4.49 <sup>b</sup>	3.92 <sup>a,b</sup>
Recommendation from health care professionals	4.99 <sup>a</sup>	4.71 <sup>b</sup>	3.75 <sup>a,b</sup>
Recommendation from friends	4.25 <sup>a</sup>	3.86 <sup>a</sup>	2.80 <sup>a</sup>
Recommendation from food preparation experts	3.97 <sup>a</sup>	3.32 <sup>a</sup>	2.23 <sup>a</sup>
Advertising	2.97 <sup>a</sup>	2.93 <sup>b</sup>	2.23 <sup>a,b</sup>
Social media	2.34 <sup>a</sup>	2.34 <sup>b</sup>	1.72 <sup>a,b</sup>

<sup>a</sup>, <sup>b</sup>Significantly different pairs at alpha = 0.05 (post-hoc Duncan test).

Importance ratings: 1 = not important at all; 7 = extremely important.

Dog  
People

Dog  
Parents

Pet  
Owners



# 2 Market Analysis

functional pet food

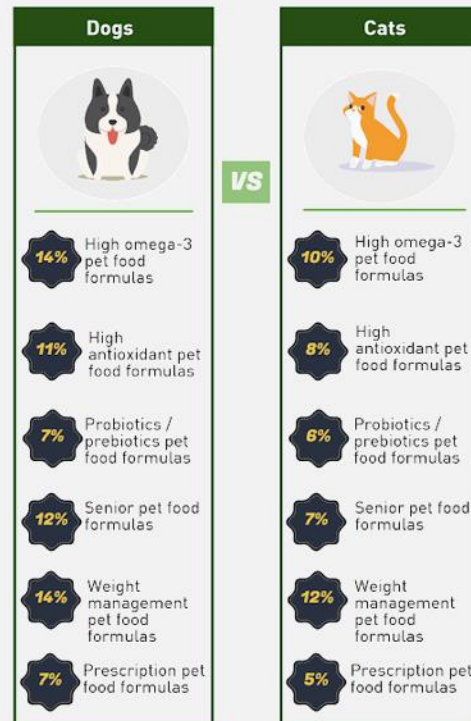
## Functional dog, cat food and pet treat trends

Consumers' purchases reflect a concern for their pets' health



### Functional pet food

Each list shows the percentage of consumers who purchased certain functional pet foods

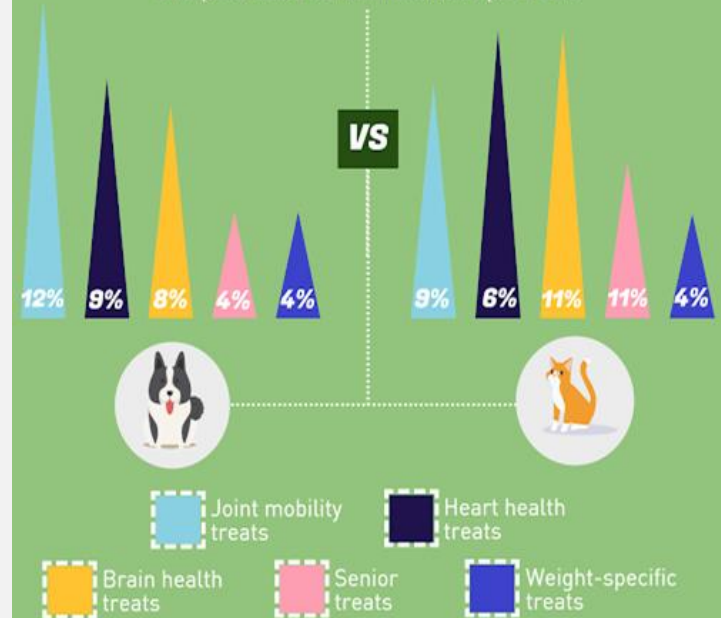


### Importance of functionality

Nowadays many people have concerns for their pets' health and choose functional pet food because every pet has their own health problems.

## Functional pet treats

Each chart shows the percentage of consumers who purchased certain functional pet treats



Copyright WATT Global Media 2016

Source: Packaged Facts, "Pet food in the US"

Animal icons designed by freedesignfile.com / freepik.com

# 3 Necessity of Customization

example : choice difficulties from existing feeds

이름 : 소공이

성별 : ♂

중성화유무 : 유

견종 : 닥스훈트

나이 : 12년 1개월

몸무게 : 24kg

비만정도 : 고도

활동량 : 극히적음

건강특이사항 : 흉부측  
관절, 피부병

맛 선호 : 오리

알레르기 : 없음



# 3 Necessity of Customization

competitor #1 Royal Canin

## Ready-made Product

- produce customized dry feed suitable for each pet
- provide customers with products considering pets' own conditions
- directly produce in West London
- guarantee freshness in delivery

The screenshot displays the Royal Canin website's customization interface. At the top is the Royal Canin logo and a navigation bar with links: MY DOG 반려견, MY CAT 반려묘, PRODUCT 제품안내, COMPANY 로얄캐닌, VETS&NUTRITION 수의사와 함께하는 로얄캐닌, and SUPPORT 세소식&고객서비스. Below the navigation bar is a breadcrumb trail: > 제품안내 > 맞춤형 제품 찾기. The main heading is '맞춤형 제품 찾기' (Find Customized Product). A progress bar shows four steps: STEP 01 반려동물, STEP 02 품종, STEP 03 특징, and STEP 04 맞춤형 제품, with STEP 04 being the active step. Below the progress bar, a message states: '→ 검색하신 조건에 부합하는 맞춤형 제품입니다. 클릭하시면, 해당 제품이 상세 페이지로 이동합니다.' (→ This is a customized product that meets your search conditions. Clicking will lead to the product's detailed page.) At the bottom, there are two buttons: '< 이전 단계' (Previous Step) and '조건 변경하여 다시찾기' (Change conditions and search again). Below these buttons are four images of Royal Canin product bags: a large bag of Adult Formula, a bag of Mini Adult Formula, a bag of Adult Dachshund Ticked Formula, and a bag of Mini Adult Formula.

# 3 Necessity of Customization

competitor #1 Royal Canin



Dachshund Adult  
닥스훈트 어덜트



MINI Sterilised  
미니스테릴라이즈드



MINI INDOOR Adult 8+  
미니인도어어덜트8+



MEDIUM Adult  
미디움어덜트



MINI Dermacomfort  
미니더마컴포트

# 3 Necessity of Customization

competitor #2 InterPark Pet

## Ready-made Product

- produce customized dry feed suitable for each pet
- provide customers with products considering pets' own conditions
- directly produce in West London
- guarantee freshness in delivery

## 반려동물 등록/수정

반려동물은 최대 5마리까지 등록할 수 있습니다. 활동 반려동물을 기준으로 추천/할인혜택을 제공합니다.



이름*	소공개	나이 12살
구분*	<input checked="" type="radio"/> 강아지 <input type="radio"/> 고양이 <input type="radio"/> 소동물 <input type="radio"/> 관상어	
품종*	닥스훈트 (Dachshund)	
생일*	20060302	
성별	<input checked="" type="radio"/> 남자 <input type="radio"/> 여자	
기념일	기념일을 입력하세요 (예: 20160111)	

# 3 Necessity of Customization

competitor #2 InterPark Pet

우리아이  추천상품



콧미리미리 유모차-루비 도트  
490,000원



네츄럴코어 독 하루유산균 혼합형  
4,000원



네츄럴코어 독 콜라겐 황태 스틱  
3,800원



[무배]네츄럴코어 독 베네 M50  
42,900원





# 4 Business Model

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## ■ Customized 사료 생산 및 판매

### ■ 영양제 / 간식 : 특약매입에 대한 판매수수료 or 제품을 납품 받아 판매 차익

cf) 특약매입 : 백화점에서와 같이 납품업체의 제품을 외상매입하여 판매하고 재고를 반품하는 방식

## ■ 애견용품 혹은 미용 및 교육 업체의 광고 수수료

## ■ Marketing

실제 사료가 생산되는 과정(원재료의 투명성 강화)

# 5 Pet Food Customization Algorithm

Step-by-step

## 1. ingredient 단계

- 1) 전체 ingredient 군에서 입력 받은 allergy 유발 재료를 제외시킨다.
- 2) 필터링된 ingredient 군에서 입력 받은 taste\_preference를 기본 맛 베이스로 선택한다.(1-3가지)
- 3) 입력 받은 health\_issues에 필요한 영양분을 확인하고 함유하고 있는 ingredient를 추가한다.

## 2. feed quantity & calorie 계산 단계

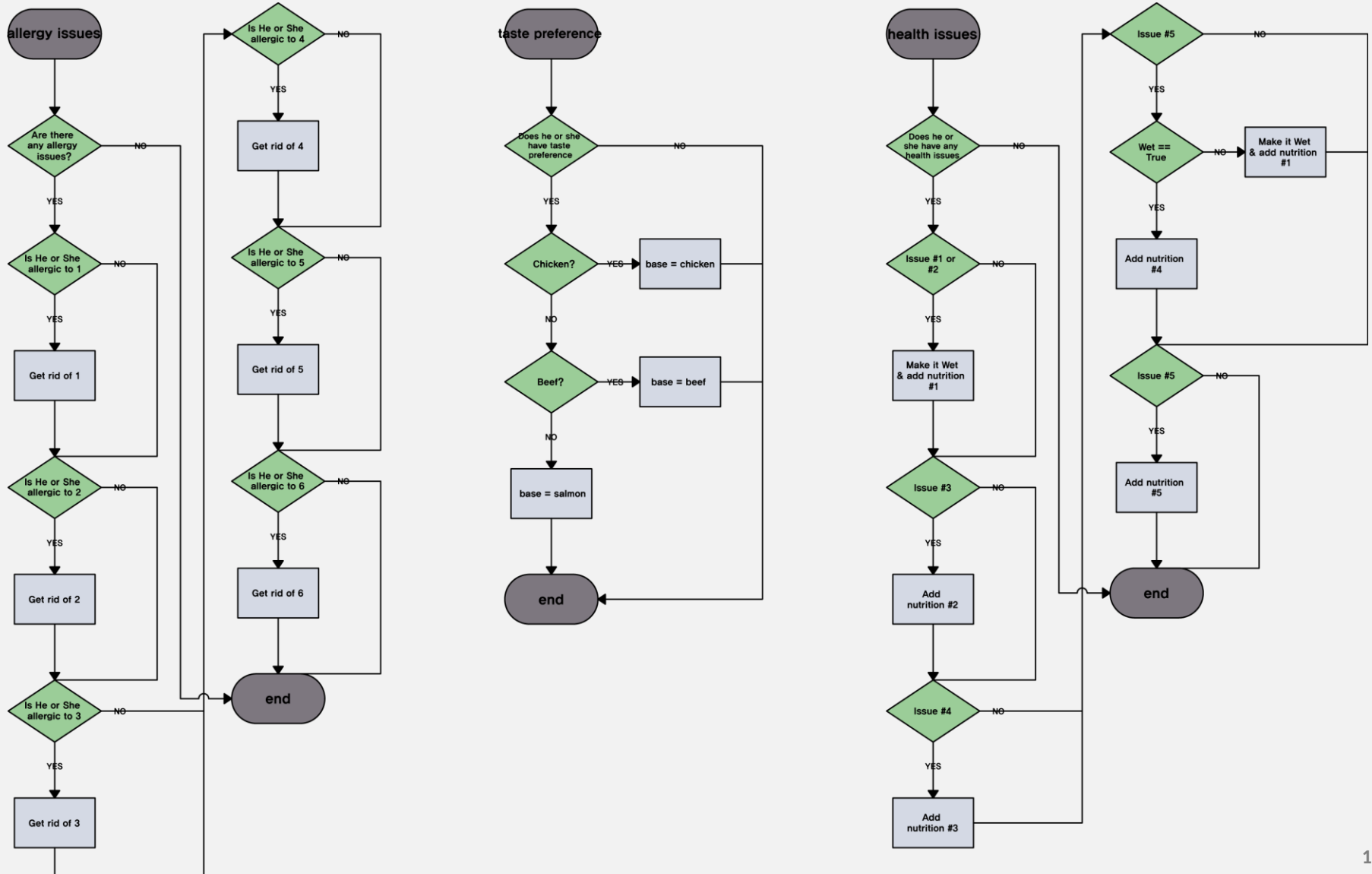
- 1) 입력 받은 breed을 통해 애견 사이즈를 초소형 / 소형 / 중형 / 대형 / 초대형으로 분류한다.
  - 2) 분류한 애견 사이즈와 입력 받은 age를 통해 강아지 나이로 환산한다.
  - 3) 입력 받은 weight을 통해 1일 적정 섭취 사료량을 계산한다.(1차 칼로리 계산)
- \* 기존의 ready-made product는 여기까지만 계산
- 4) c와 입력 받은 activity\_level를 통해 기초대사량을 계산한다.(2차 칼로리 계산)
  - 5) c, d와 입력 받은 obesity\_level을 통해 1식 섭취 사료량에 대한 기준을 설정한다.(3차 칼로리 계산)

## 3. 사료 조제 단계

계산된 ingredient와 feed quantity & calorie 정보를 바탕으로 사료를 생산한다.

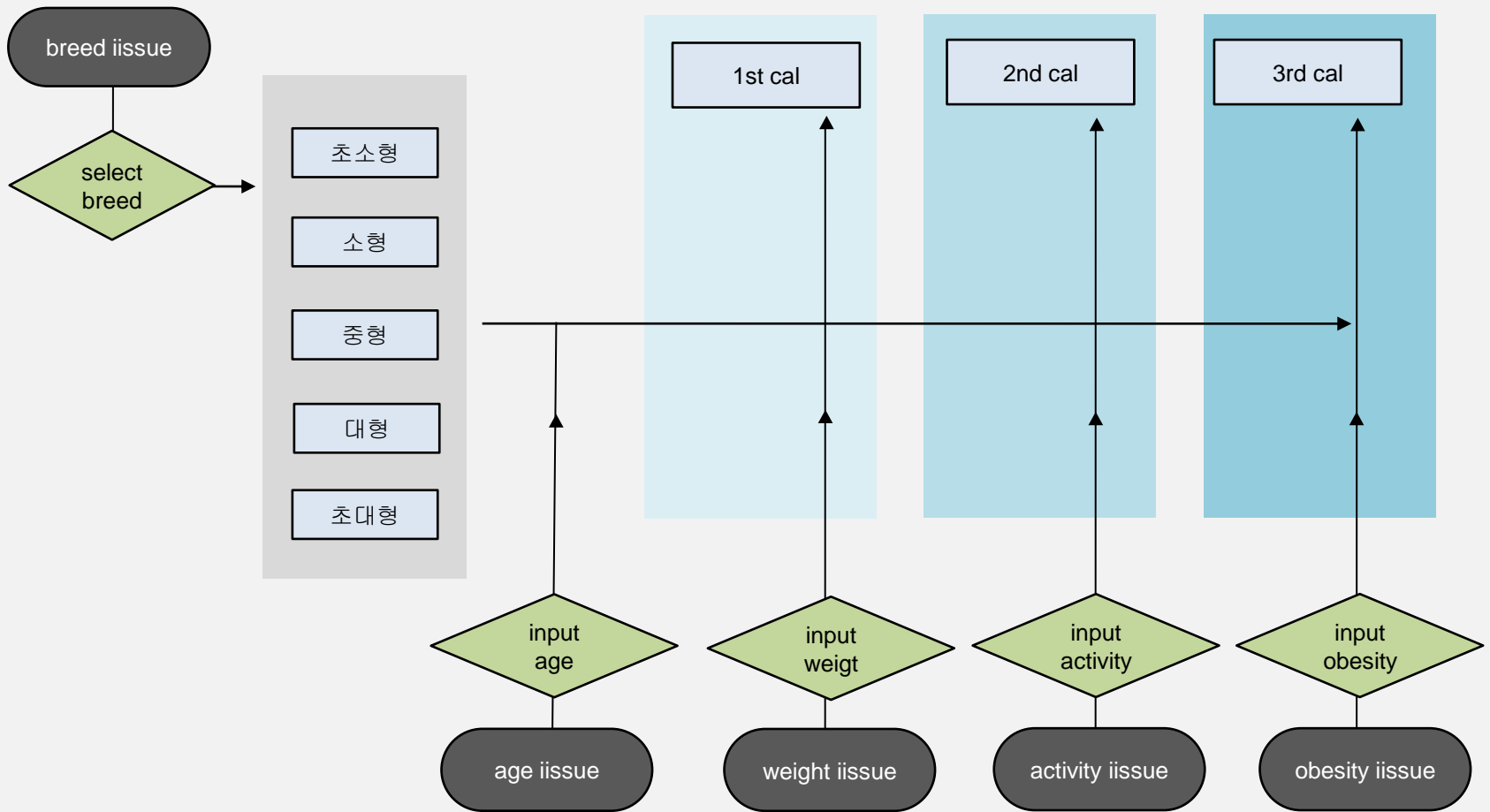
# 5 Pet Food Customization Algorithm

Step-by-step



# 5 Pet Food Customization Algorithm

Step-by-step



# 6

## How to Customize

Input data : name

이름

# 6

## How to Customize

Input data : breed

견종

purebred

mixed-breed

알수없음

뒤로

다음



# 6 How to Customize

Input data : breed

견종

purebred

mixed-breed

알수없음

← → ↻ ⓘ 127.0.0.1:8000/main/dogs ☆

이름	품종	높이	무게	생애
Affenpinscher	Companion Dogs	9 inches to 11 inches tall at the shoulder	7 to 9 pounds	12 to 14 years
Afghan Hound	Hound Dogs	2 feet to 2 feet, 4 inches tall at the shoulder	50 to 60 pounds	10 to 12 years
Airedale Terrier	Terrier Dogs	1 foot, 9 inches to 1 foot, 11 inches tall at the shoulder	40 to 65 pounds	10 to 13 years
Akita	Working Dogs	2 feet to 2 feet, 4 inches tall at the shoulder	70 to 130 pounds	10 to 12 years
Alaskan Klee Kai	Companion Dogs	13 to 17 inches	10 to 15 pounds	12 to 16 years
Alaskan Malamute	Working Dogs	1 foot, 11 inches to 2 feet, 1 inch tall at the shoulder	75 to 100 pounds	12 to 15 years
American Bulldog	Working Dogs	20 to 28 inches	60 to 120 pounds	10 to 16 years
American English Coonhound	Hound Dogs	1 foot, 11 inches to 2 feet, 2 inches tall at the shoulder	None	10 to 12 years
American Eskimo Dog	Companion Dogs	1 foot, 3 inches to 1 foot, 7 inches tall at the shoulder	Starts at 30 pounds	12 to 15 years
American Foxhound	Hound Dogs	1 foot, 9 inches to 2 feet, 1 inch tall at the shoulder	40 to 60 pounds	12 to 13 years
American Pit Bull Terrier	Terrier Dogs	1 foot, 5 inches to 1 foot, 7 inches tall at the shoulder	30 to 85 pounds	12 to 16 years
American Staffordshire Terrier	Terrier Dogs	16 to 19 inches	40 to 60 pounds	10 to 15 years
American Water Spaniel	Sporting Dogs	1 foot, 3 inches to 1 foot, 6 inches tall at the shoulder	25 to 45 pounds	12 to 15 years
Anatolian Shepherd Dog	Working Dogs	2 feet, 3 inches to 2 feet, 5 inches tall at the shoulder	80 to 150 pounds	11 to 13 years
Appenzeller Sennenhunde	Herding Dogs	1 foot, 7 inches to 1 foot, 10 inches tall at the shoulder	48 to 55 pounds	9 to 12 years
Australian Cattle Dog	Herding Dogs	1 foot, 5 inches to 1 foot, 8 inches tall at the shoulder	30 to 50 pounds	12 to 15 years
Australian Shepherd	Herding Dogs	1 foot, 6 inches to 1 foot, 11 inches tall at the shoulder	40 to 65 pounds	12 to 15 years
Australian Terrier	Terrier Dogs	10 inches to 11 inches tall at the shoulder	14 to 16 pounds	Up to 15 years
Azawakh	Hound Dogs	1 foot, 11 inches to 2 feet, 5 inches tall at the shoulder	33 to 55 pounds	12 to 15 years
Barbet	Sporting Dogs	1 foot, 8 inches to 2 feet, 1 inch tall at the shoulder	37 to 62 pounds	13 to 15 years
Basenji	Hound Dogs	1 foot, 4 inches to 1 foot, 5 inches tall at the shoulder	22 to 24 pounds	10 to 12 years
Basset Hound	Hound Dogs	Up to 1 foot, 2 inches tall at the shoulder	50 to 65 pounds	10 to 12 years
Beagle	Hound Dogs	1 foot, 1 inch to 1 foot, 3 inches tall at the shoulder	18 to 30 pounds	10 to 15 years
Bearded Collie	Herding Dogs	1 foot, 8 inches to 1 foot, 10 inches tall at the shoulder	45 to 55 pounds	12 to 14 years
Bedlington Terrier	Terrier Dogs	1 foot, 3 inches to 1 foot, 4 inches tall at the shoulder	17 to 23 pounds	14 to 16 years

# 6

## How to Customize

Input data : breed

견종

purebred

mixed-breed

알수없음

견종

뒤로

다음

# 6

## How to Customize

Input data : breed

견종

purebred

mixed-breed

알수없음

견종

고든 세터(Gorden Setter)  
골든 리트리버(Golden Retriever)  
그레이 하운드(Grey Hound)  
그레이트 데인(Great Dane)  
그레이트 피레네(Great Pyrenees)  
그린랜드 독(Greenland Dog)  
나폴리탄 마스티프 (Neapolitan Mastiff)  
노르웨이안 버훈트 (Norwegian Buhund)

뒤로

다음

# 6

## How to Customize

Input data : breed

견종

purebred

mixed-breed

알수없음

첫번째 종

견종

두번째 종

견종

세번째 종

견종

뒤로

다음

# 6

## How to Customize

Input data : breed

견종

purebred

mixed-breed

알수없음

첫번째 종

견종

두번째 종

세번째 종

고든 세터(Gorden Setter)  
골든 리트리버(Golden Retriever)  
그레이 하운드(Grey Hound)  
그레이트 데인(Great Dane)  
그레이트 피레네(Great Pyrenees)  
그린랜드 독(Greenland Dog)  
나폴리탄 마스티프 (Neapolitan Mastiff)  
노르웨이안 버훈트 (Norwegian Buhund)

뒤로

다음

# 6

## How to Customize

Input data : age

**나이**

나이

생일



# 6

## How to Customize

Input data : age

나이

나이

생일

years

months

뒤로

다음

# 6

## How to Customize

Input data : age

나이

나이

생일

years

months

0  
1  
2  
3  
4  
5  
6  
7

0  
1  
2  
3  
4  
5  
6  
7

뒤로

다음

# 6

## How to Customize

Input data : age

나이

나이

생일

years

months

day

뒤로

다음

# 6

## How to Customize

Input data : age

나이

나이

생일

years	months	day
2018	Jan	1st
2017	Feb	2nd
2016	Mar	3th
2015	Apr	4th
2014	May	5th
2013	Jun	6th
2012	Jul	7th
2011	Aug	8th

뒤로

다음

# 6

## How to Customize

Input data : gender

**성별**

남아

여아

**중성화**



다음

# 6

## How to Customize

Input data : gender

성별

남아

여아

중성화



수술날짜

years

months

day

■ 2주 내에 수술을 한 이력이 있을 경우 반드시 입력해주세요.

뒤로

다음



# 6

## How to Customize

Input data : weight

몸무게

kg

비만정도



뒤로

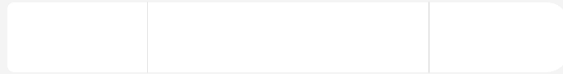
다음

# 6

## How to Customize

Input data : amount of exercise

운동량



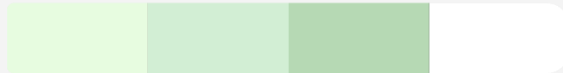
활동적

# 6

## How to Customize

Input data : amount of exercise

운동량



활동적



■ 주 4회 이상 1시간 이상의 산책을 나가며 집에서도 활동적입니다.

산책을 나가 외부를 걷는 시간, 거리도 중요하지만 반려견의 평소 가정에서의 모습에 더 비중을 두시는게 좋습니다. 아이가 집에서도 뛰어다니며 놀아달라고 보챌다면 선택해주세요.

뒤로

다음

# 6

## How to Customize

Input data : health issues

**건강특이사항**  
<중복선택>

수술 후

임신

관절

소화불량

피부 및 털 질환

체장질환

뒤로

다음

# 6

## How to Customize

Input data : preference

**맛 선호**

소고기

닭고기

오리고기

양고기

연어

가리지않음

**organic**



**피해야 할 재료**

<중복선택>

소고기

닭고기

오리고기

양고기

연어

곡물

밀가루

유제품

콩

달걀

뒤로

완료

# 6 How to Customize

examples



이름 : 사랑이

성별 : ♀

중성화유무 : 무

견종 : 장모치와와

나이 : 3개월

몸무게 : 820g

비만정도 : 정상

활동량 : 보통

건강특이사항 : 슬개골, 배꼽탈장

맛 선호 : 가리지 않음

알레르기 : 오리

# 6 How to Customize

examples



이름 : 땅콩이  
성별 : ♀  
중성화유무 : 유  
(수술일 : 2005.10)  
건종 : 요크셔테리어  
나이 : 14살  
몸무게 : 3.5kg  
비만정도 : 정상  
활동량 : 적음  
건강특이사항 : 관절, 치아  
맛 선호 : 연어  
알레르기 : 없음



- From West London, Tails.com makes fresh tailor-made food for each dog
- Input information in the sign-up stage: (breed, weight, health problems, etc.) of one's pet.
- Similar to FeedBap's concept and goals
- Limitation
  - Although Tails.com has a good pet food customization system, they do not provide services for customers to easily edit specifications for pets.
  - In the website, it is hard to find where to change dogs' information right away.
  - In FAQ section, they notify how to make modifications.
  - If change needed, customers have to do it manually

## How can I update my details?



Forgotten your password? Moved house? Changed your email, or have a new bank card? No problem. Update your details by logging in to tails.com, visiting your account section and clicking on 'Your Details'. You can make any changes by clicking the yellow 'change' button.

If you've forgotten your password, that's no problem. Simply click [here](#), enter your email address, and we'll send you instructions on how to reset it.

*If users are trying to change their pet information, they have to contact the customer service center directly. This kind of manual update would be time-consuming and demanding*



# 7 Why Feedbap? 1. Simple Updates

Differentiation Strategy

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- FeedBap, on the other hand, has a chatbot system and a pop-up to hear from customers quickly and help them adjust specifications.
- By having continuous feedback from customers, FeedBap can provide customized dog food that fits each dog's condition at all times.
- Customers can have changed specifications by using chatbot.

# 7 Why Feedbap? 2. Flexible Delivery

Differentiation Strategy



- Tails.com only delivers tailor-made food once a month.
- Customers cannot make personalized delivery schedule.



**Monthly deliveries**

Never run out of food again



- FeedBap has a very flexible delivery system that allows customers to get their dogs' food whenever they want.
- For customers who do not really care about delivery, default setting is a month.

# 7 Why FeedBap? 3. Consultation with Professionals

Differentiation Strategy

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- FeedBap, unlike other pet food platforms, provides a web consultation system with professional vets for FeedBap members through online chat, if wanted.
- Or we could apply this simple consultation method using chatbot technology
- Customers using FeedBap can receive answers from veterinarians within few hours.
- There are some companies with vet consultation service (via email, phone call), but they are not as fast & convenient as FeedBap's.

# 7 Why Feedback? 4. Active Communication

Differentiation Strategy



- Tails.com has a section for getting feedback from customers, which seem old-fashioned.
- Customers have to enter the website and leave reviews.

**send us your photos & feedback** 

We love hearing stories about our tails.com dogs

**Name**

**Email**

**Subject**

**Message**

**Share photo (jpg, png)**

From time to time, we may use your dog's photo in our marketing materials (in print and digital) and on printed materials in deliveries. [See our T&Cs here.](#)

**still can't find what you're looking for? contact us**



**SEARCH FAQ**  
*Find answers now*



**E-MAIL**



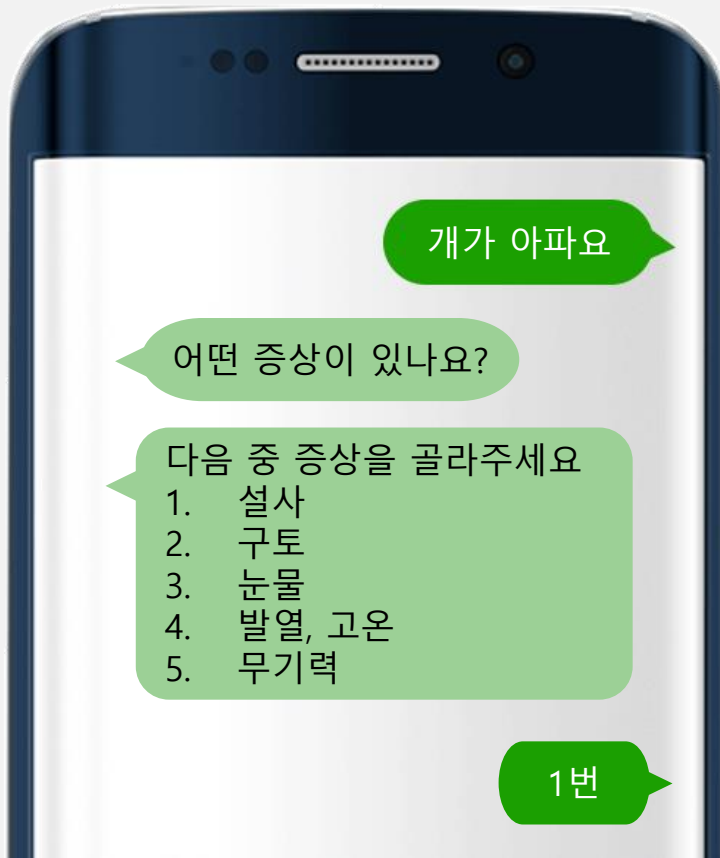
**PHONE**



**SOCIAL MEDIA**

# 7 Why FeedBap? 4. Active Communication

Differentiation Strategy



- FeedBap enables customers to give feedback using chatbot
- Customer also can get simple recommendation using chatbot
- Development using *JavaScript* or *Node.js*

# 7 So.. Why Feedbap Again?

Differentiation Strategy

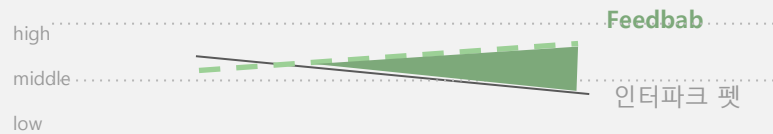


	FeedBap	Tails.com	Royal Canin	Interpark Pet
<b>Customization for Breeds</b>	O	O	O	X
<b>Customization for Each Dog</b>	O	O	X	X
<b>Reliability &amp; Freshness of Food</b>	O	O	X	X
<b>Easy Specification Editing</b>	O	X	X	X
<b>Flexible Delivery</b>	O	X	X	X
<b>Easy Consultation with Vets</b>	O	Δ (Phone call, Email, Website)	Δ (Website Q&A)	X
<b>Easy Feedback</b>	O	X	X	X

# 8 System Requirements

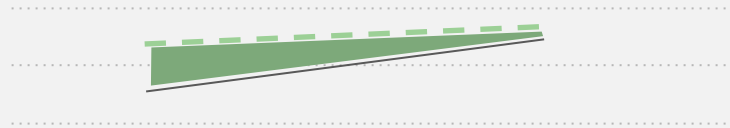
development priority

General  
Service



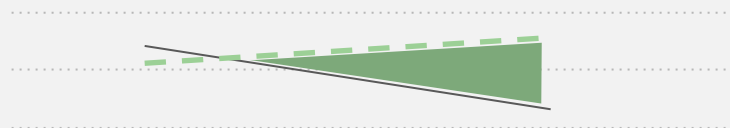
기존 제품의 유통 뿐만이 아닌  
customize제품 판매에 특화

Customization



단순한 상품의 분류/나열이 아닌  
customer-friendly 감성에 집중

Beyond  
Service



챗봇 서비스 등  
customize시장의 요구 반영

General  
Requirements

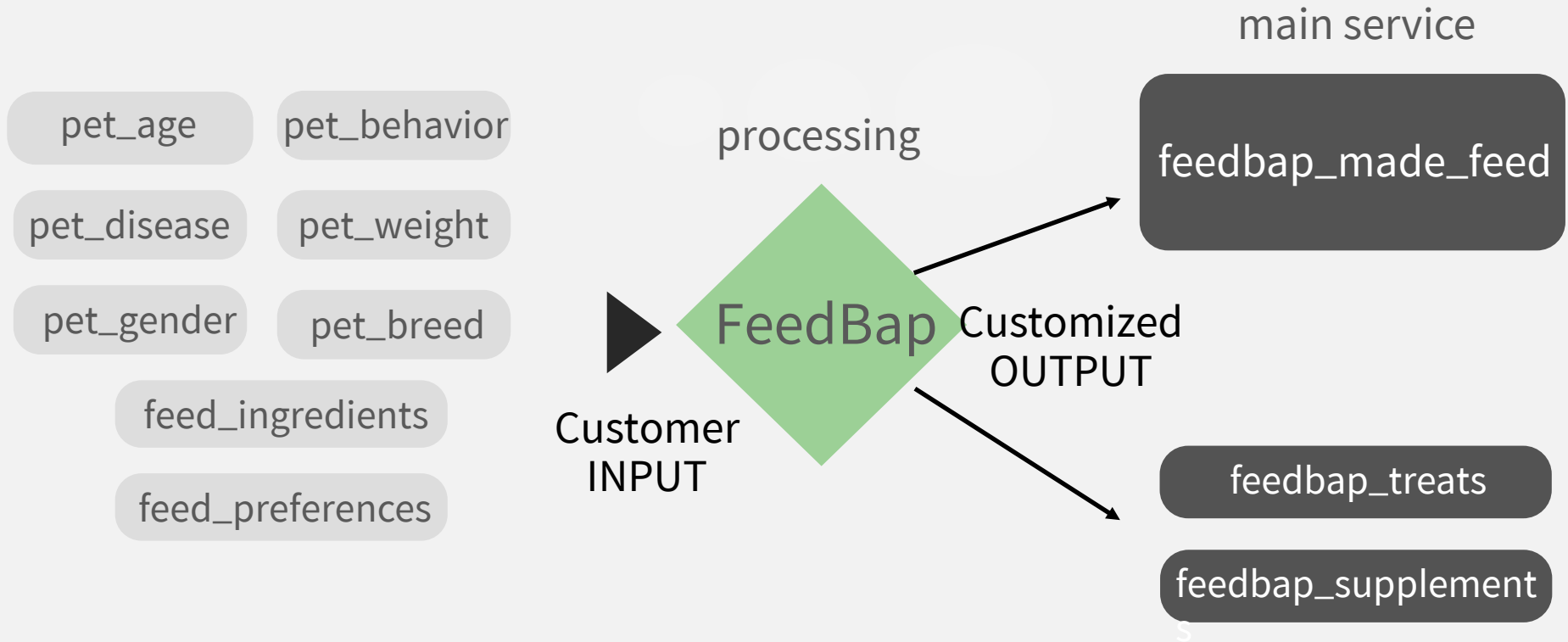
구현  
완성도

서비스  
특화정도

Requirements  
Goal

# 8 System Requirements

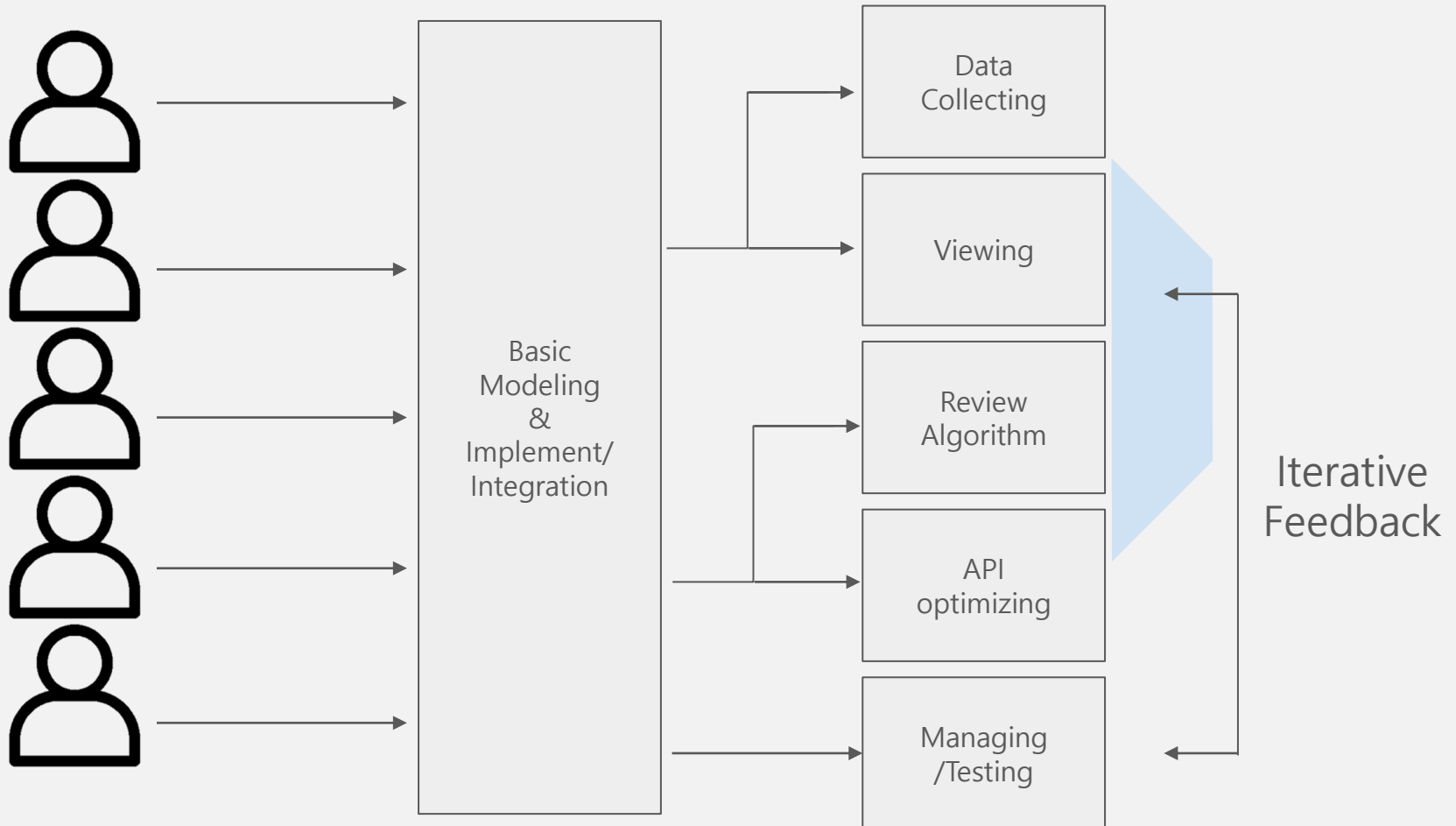
system algorithm





# 8 System Requirements

team co-work plan



# 8 System Requirements

technological background

## Business Model

- high cost tool is avoided
- need API suitable for collecting data

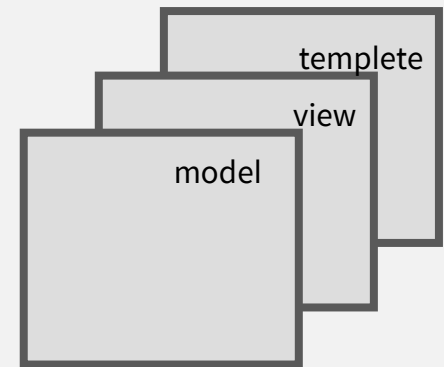
## Team Agreement

- use tools which has high visibility to make implementation easy to understand
- focus on requirement engineering and planning

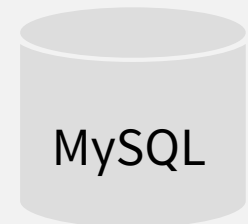
## System Requirement

- rapid implementation rather than perfection

Django



Framework ORM



MySQL  
Database