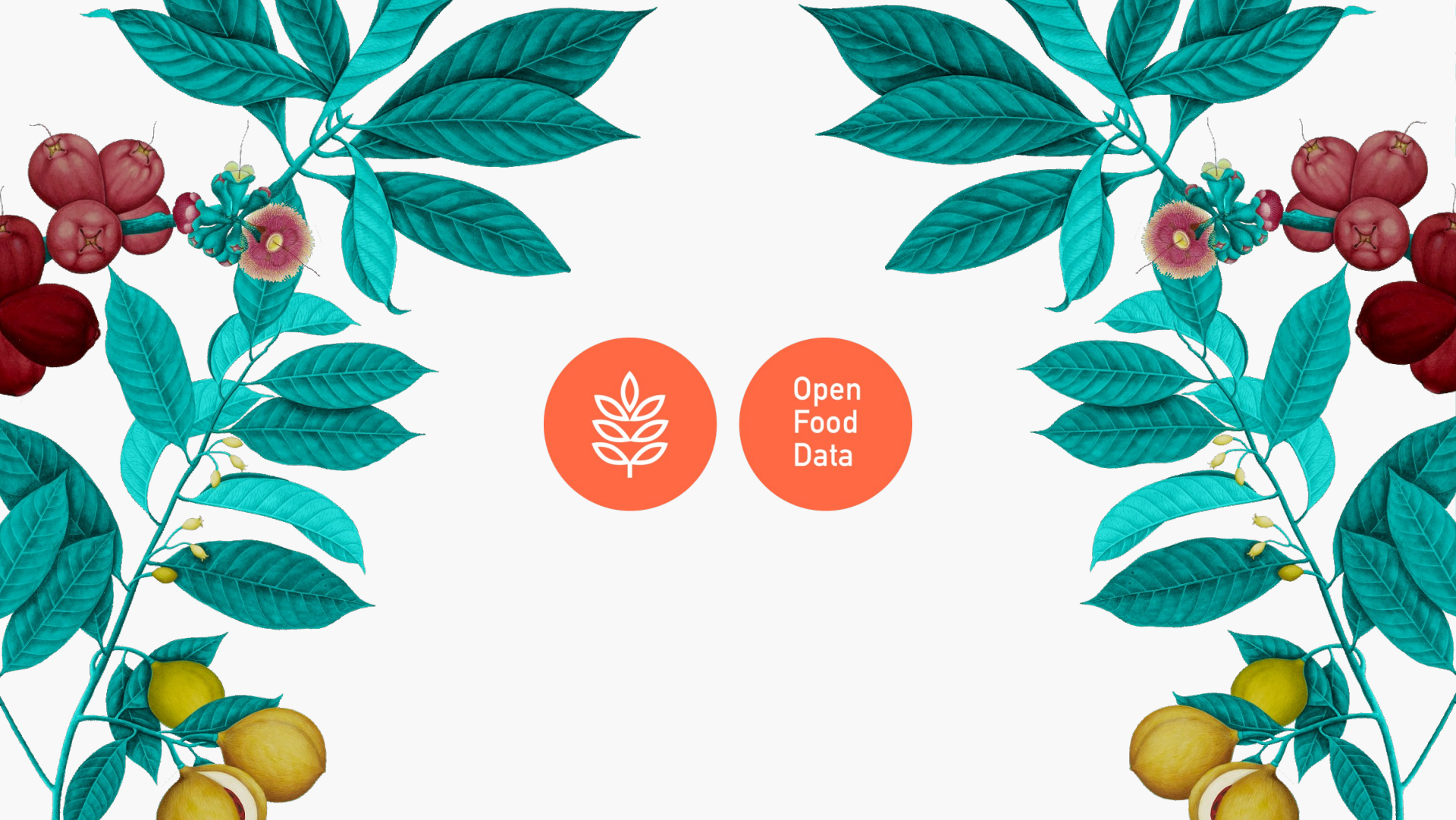

Open
Food
Data


WELCOME
BACK!


PITCHES



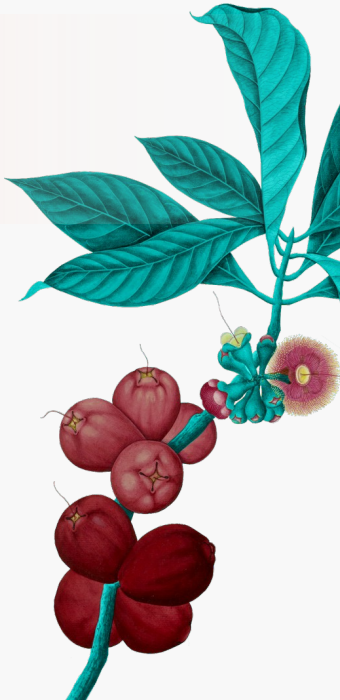
BeerChain

Powered by Ambrosus

Open Food Data



$ 1 200 bln fake food sold yearly








Corona Extra
Corona Extra
Corona Extra
Corona
Extra

FRAUD



Open Food Data

IDENTITY



CANNOT BE REUSED





Demo

Powered by Ambrosus

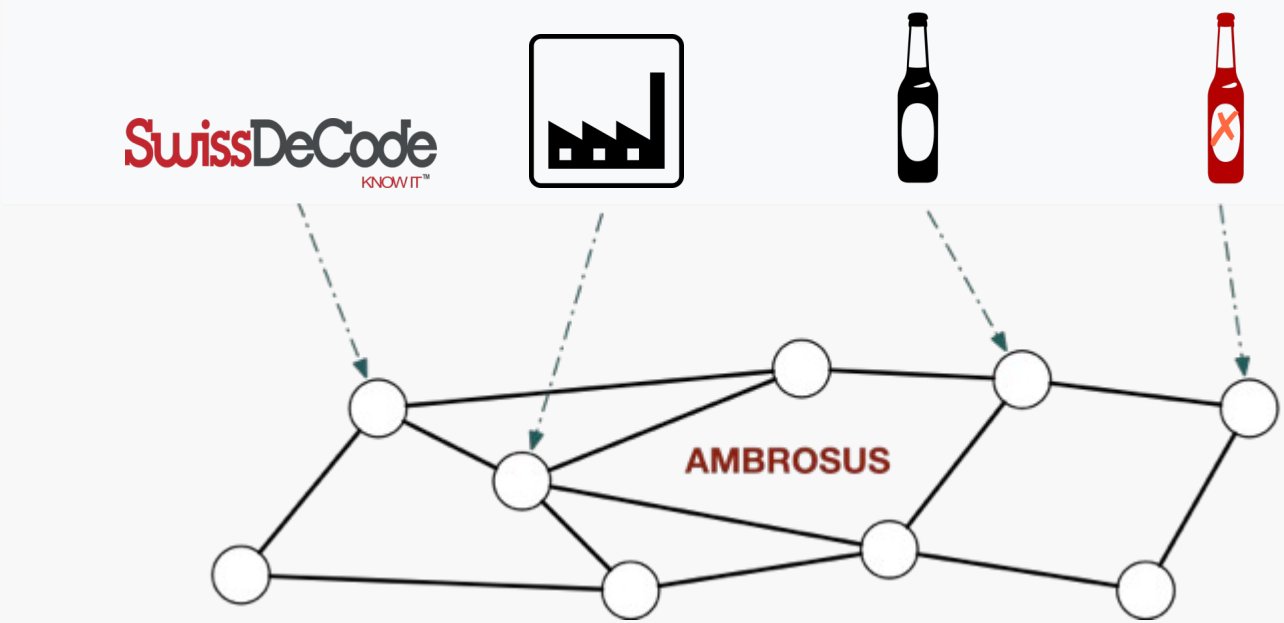


Thank you

Try it yourself:
https://beerchain1.firebaseapp.com/

Powered by Ambrosus

After credit slide




Open
Food
Data
SHARPER

Starting Point

Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP)

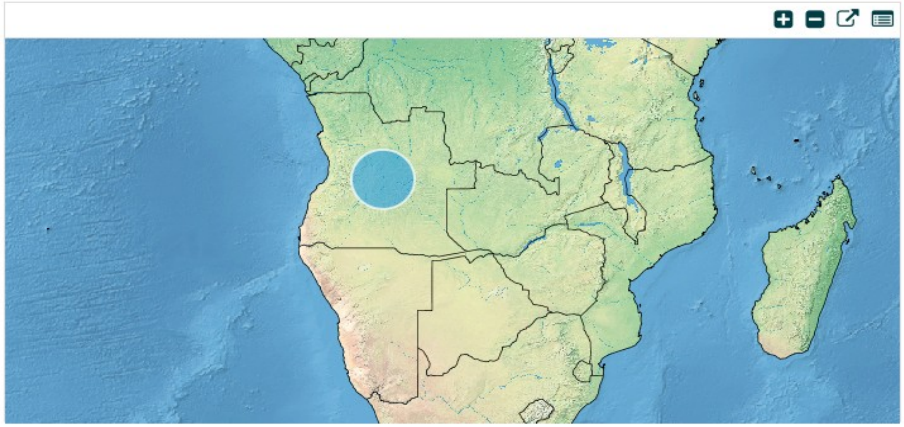
Background | SHARP Application | On the ground | Data | News and events | Resources

Geography

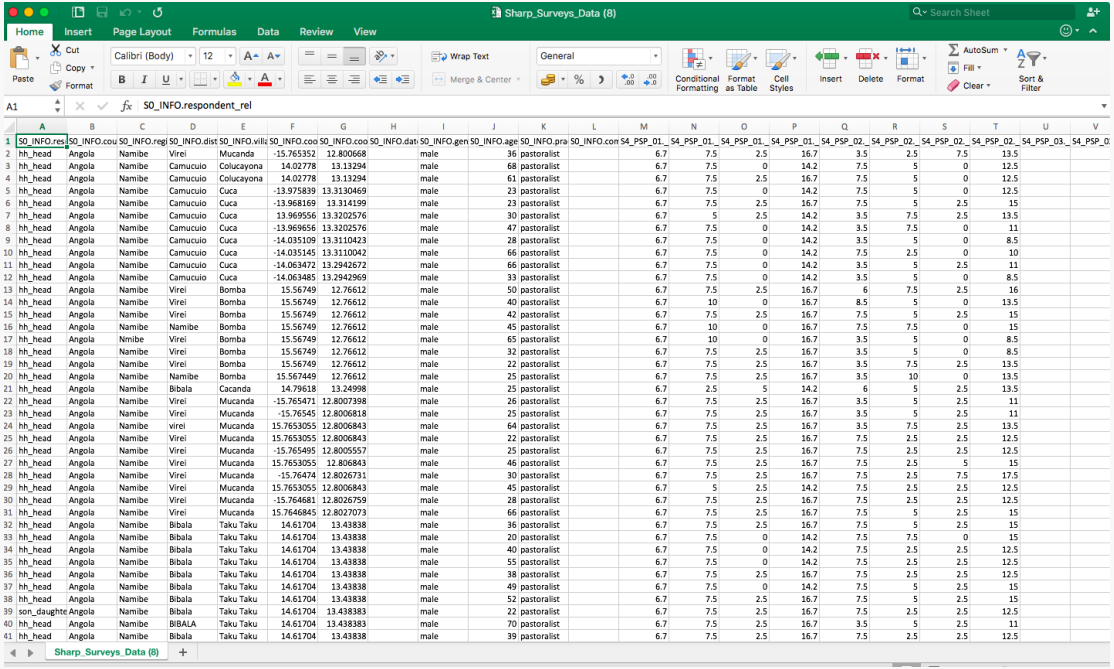
Agroecosystem indicators

Analysis of SHARP surveys

Practice: Pastoralist | Gender: Male | Country: Angola | Question: (none) | Export



Starting Point



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	S0_INFO.res	S0_INFO.cou	S0_INFO.regi	S0_INFO.dist	S0_INFO.villa	S0_INFO.coo	S0_INFO.coo	S0_INFO.dat	S0_INFO.gen	S0_INFO.age	S0_INFO.pra	S0_INFO.con	S4_PSP_01_	S4_PSP_01_	S4_PSP_01_	S4_PSP_01_	S4_PSP_02_	S4_PSP_02_	S4_PSP_02_	S4_PSP_02_	S4_PSP_03_	S4_PSP_0
2	hh_head	Angola	Namibe	Virei	Mucanda	-15.765352	12.800668		male	36	pastoralist		6.7	7.5	2.5	16.7	3.5	2.5	7.5	13.5		
3	hh_head	Angola	Namibe	Camucuio	Colucayona	14.02778	13.13294		male	68	pastoralist		6.7	7.5	0	14.2	7.5	5	0	12.5		
4	hh_head	Angola	Namibe	Camucuio	Colucayona	14.02778	13.13294		male	61	pastoralist		6.7	7.5	2.5	16.7	7.5	5	0	12.5		
5	hh_head	Angola	Namibe	Camucuio	Cuca	-13.975839	13.3130469		male	23	pastoralist		6.7	7.5	0	14.2	7.5	5	0	12.5		
6	hh_head	Angola	Namibe	Camucuio	Cuca	-13.968169	13.314199		male	23	pastoralist		6.7	7.5	2.5	16.7	7.5	5	2.5	15		
7	hh_head	Angola	Namibe	Camucuio	Cuca	13.969556	13.3202576		male	30	pastoralist		6.7	5	2.5	14.2	3.5	7.5	2.5	13.5		
8	hh_head	Angola	Namibe	Camucuio	Cuca	-13.969656	13.3202576		male	47	pastoralist		6.7	7.5	0	14.2	3.5	7.5	0	11		
9	hh_head	Angola	Namibe	Camucuio	Cuca	-14.035109	13.3110423		male	28	pastoralist		6.7	7.5	0	14.2	3.5	5	0	8.5		
10	hh_head	Angola	Namibe	Camucuio	Cuca	-14.035145	13.3110042		male	66	pastoralist		6.7	7.5	0	14.2	7.5	2.5	0	10		
11	hh_head	Angola	Namibe	Camucuio	Cuca	-14.063472	13.2942672		male	66	pastoralist		6.7	7.5	0	14.2	3.5	5	2.5	11		
12	hh_head	Angola	Namibe	Camucuio	Cuca	-14.063485	13.2942969		male	33	pastoralist		6.7	7.5	0	14.2	3.5	5	0	8.5		
13	hh_head	Angola	Namibe	Virei	Bomba	15.56749	12.76612		male	50	pastoralist		6.7	7.5	2.5	16.7	6	7.5	2.5	16		
14	hh_head	Angola	Namibe	Virei	Bomba	15.56749	12.76612		male	40	pastoralist		6.7	10	0	16.7	8.5	5	0	13.5		
15	hh_head	Angola	Namibe	Virei	Bomba	15.56749	12.76612		male	42	pastoralist		6.7	7.5	2.5	16.7	7.5	5	2.5	15		
16	hh_head	Angola	Namibe	Namibe	Bomba	15.56749	12.76612		male	45	pastoralist		6.7	10	0	16.7	7.5	7.5	0	15		
17	hh_head	Angola	Nmibe	Virei	Bomba	15.56749	12.76612		male	65	pastoralist		6.7	10	0	16.7	3.5	5	0	8.5		
18	hh_head	Angola	Namibe	Virei	Bomba	15.56749	12.76612		male	32	pastoralist		6.7	7.5	2.5	16.7	3.5	5	0	8.5		
19	hh_head	Angola	Namibe	Virei	Bomba	15.56749	12.76612		male	22	pastoralist		6.7	7.5	2.5	16.7	3.5	7.5	2.5	13.5		
20	hh_head	Angola	Namibe	Namibe	Bomba	15.567449	12.76612		male	25	pastoralist		6.7	7.5	2.5	16.7	3.5	10	0	13.5		
21	hh_head	Angola	Namibe	Bibala	Cacanda	14.79618	13.24998		male	25	pastoralist		6.7	2.5	5	14.2	6	5	2.5	13.5		
22	hh_head	Angola	Namibe	Virei	Mucanda	-15.765471	12.8007398		male	26	pastoralist		6.7	7.5	2.5	16.7	3.5	5	2.5	11		
23	hh_head	Angola	Namibe	Virei	Mucanda	-15.76545	12.8006818		male	25	pastoralist		6.7	7.5	2.5	16.7	3.5	5	2.5	11		
24	hh_head	Angola	Namibe	virei	Mucanda	15.7653055	12.8006843		male	64	pastoralist		6.7	7.5	2.5	16.7	3.5	7.5	2.5	13.5		
25	hh_head	Angola	Namibe	Virei	Mucanda	15.7653055	12.8006843		male	22	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	2.5	12.5		
26	hh_head	Angola	Namibe	Virei	Mucanda	-15.765495	12.8005557		male	25	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	2.5	12.5		
27	hh_head	Angola	Namibe	Virei	Mucanda	15.7653055	12.806843		male	46	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	5	15		
28	hh_head	Angola	Namibe	Virei	Mucanda	-15.76474	12.8026731		male	30	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	7.5	17.5		
29	hh_head	Angola	Namibe	Virei	Mucanda	15.7653055	12.8006843		male	45	pastoralist		6.7	5	2.5	14.2	7.5	2.5	2.5	12.5		
30	hh_head	Angola	Namibe	Virei	Mucanda	-15.764681	12.8026759		male	28	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	2.5	12.5		
31	hh_head	Angola	Namibe	Virei	Mucanda	15.7646845	12.8027073		male	66	pastoralist		6.7	7.5	2.5	16.7	7.5	5	2.5	15		
32	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	36	pastoralist		6.7	7.5	2.5	16.7	7.5	5	2.5	15		
33	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	20	pastoralist		6.7	7.5	0	14.2	7.5	7.5	0	15		
34	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	40	pastoralist		6.7	7.5	0	14.2	7.5	2.5	2.5	12.5		
35	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	55	pastoralist		6.7	7.5	0	14.2	7.5	2.5	2.5	12.5		
36	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	38	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	2.5	12.5		
37	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	49	pastoralist		6.7	7.5	0	14.2	7.5	5	2.5	15		
38	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	52	pastoralist		6.7	7.5	2.5	16.7	7.5	5	2.5	15		
39	son_daughte	Angola	Namibe	Bibala	Taku Taku	14.61704	13.438383		male	22	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	2.5	12.5		
40	hh_head	Angola	Namibe	BIBALA	Taku Taku	14.61704	13.438383		male	70	pastoralist		6.7	7.5	2.5	16.7	3.5	5	2.5	11		
41	hh_head	Angola	Namibe	Bibala	Taku Taku	14.61704	13.43838		male	39	pastoralist		6.7	7.5	2.5	16.7	7.5	2.5	2.5	12.5		

Starting Data

Final scores for each individual:

- 18 factors in Production
- 14 factors in Economic
- 7 factors in Social
- 12 factors in Environmental
- 2 factors in Governmental

Data collection takes 4-5h per farm and Reports take 3-6 months to be done!





SHARPER»

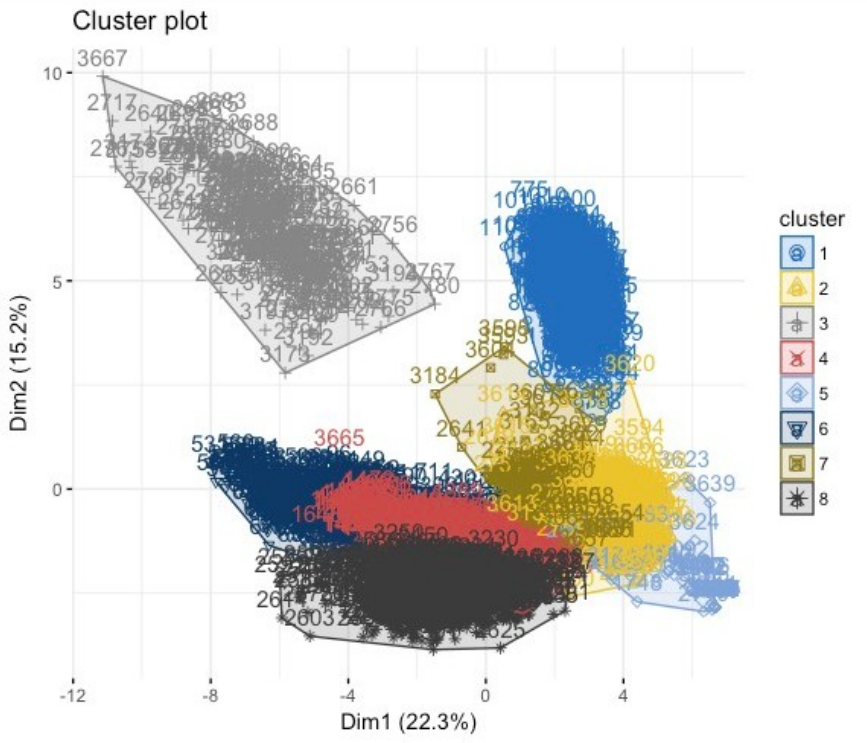
Going a step further than SHARP

- LEARN: Understanding the dataset
- BENCHMARK: Immediate individual analysis
- COMPARE: Recommendation starting points





Learn



General overview:

Key takeaways from the whole dataset

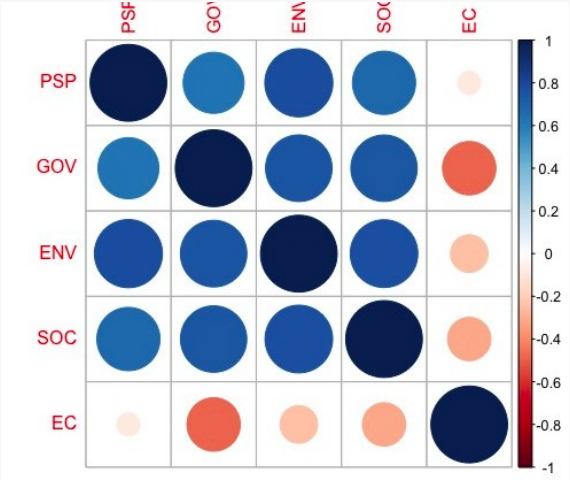
8 types of “farms”

Learn

Correlations:

X Gender/Respondent/Age

> Years/Practice



Learn

SHARP Analytics Dashboard

Summary of influential factors on:

Production Systems | Governance | Environment | Economics | Social

	summary.reg_psp..coef.summary.reg_psp..coef...4.....0.01..4.
S0_INFO.countryBurkina Faso	1.244177e-72
S0_INFO.countryChad	1.507357e-04
S0_INFO.countryGambia	1.855503e-03
S0_INFO.countryMozambique	6.175826e-53
S0_INFO.practicefarmer	1.114935e-33

Raw Data:

Show 10 entries

	X	S0_INFO.respondent_rel	S0_INFO.country	S0_INFO.region	S0_INFO.district	S0_INFO.village	S0_INFO.coords.lat	S0_
1	1	hh_head	Mali	tombouctou		guindigata /horo		
2	2	hh_head	Mali	tombouctou		guindigata		
3	3	hh_head	Mali	tombouctou		guindigata / horo		
4	4	hh_head	Mali	tombouctou		horo		
5	5	hh_head	Mali	tombouctou		guindigata		
6	6	hh_head	Mali	tombouctou		guindigata /ho6j		
7	7	hh_head	Mali	tombouctou		guindigata		
8	8	hh_head	Mali					
9	9	hh_head	Mali	tombouctou		guindigata		
10	10	hh_head	Mali	tombouctou		guindigata		

Showing 1 to 10 of 3,667 entries

Demo

https://floriferous.github.io/open-sharp-data/





Land2Door

The link to local food access

TEAM MEMBERS:

Emmanuel Muller, JeanDavid Harrouet, Luca Corinzia Ragav Lingamaneni, Veronica Estrada, Rémi Tognet Bruchet Aurélie Barberis.

The Land2Door solution

An open data base:



Aggregated from the web or Crowedsourced.



It gathers local farmers and direct selling points.
It contains data such as localization,products, seasonality, volumes.



Is to be made available via an API to open this information to the consumers & restaurants.

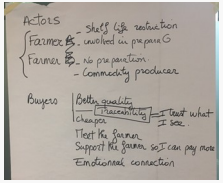
Hackday objectives setting

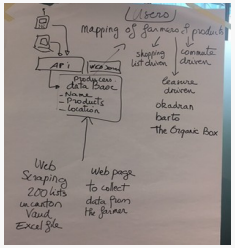
Existing datas and work carried out sofar

Target groups (Farmers & End Users)

Review data interface structure

Interactions flow between Farmers and end users





1) Fuel the database

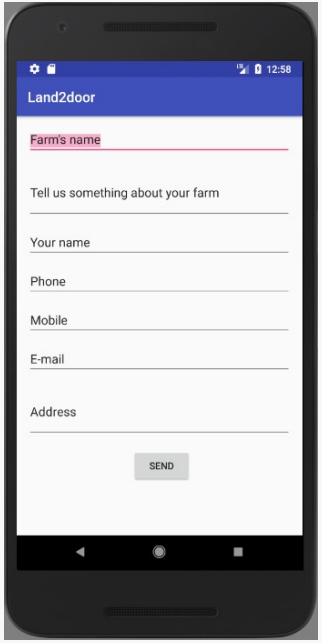
Create an app to enrol and collect data directly from the Producer.

2) Create link to consumers

Develop front end users to locate the closest farmers based on consumer geolocalisation and shopping list.

We deliver…

[redacted]





Shopping list

Farmers app

Alexa skill mock-up

Our next steps

Raise awareness and extend network in order to fund our project

- ✓ *Develop a web page to support the database.*
- ✓ *Test the collection mobile app on pilot farmers group.*
- ✓ *Test the end-users app on pilot consumers group.*

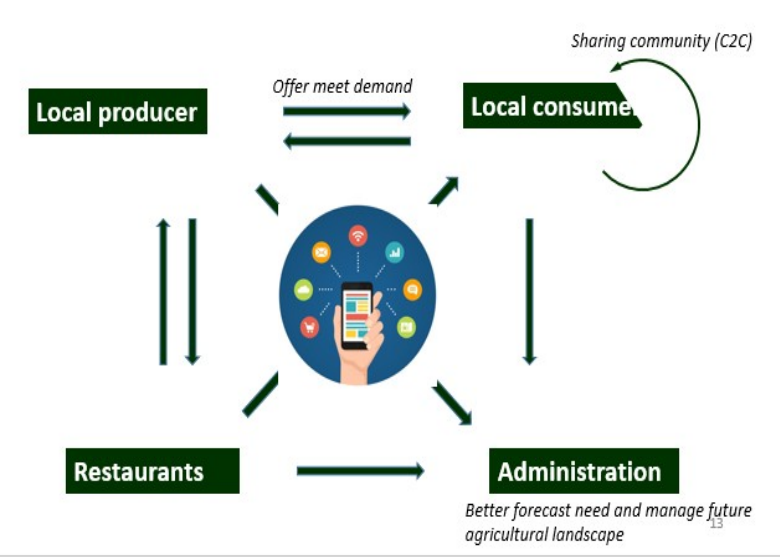
--> Optimize data interface and further populate it.

Develop business model for direct selling, first in Canton de Vaud.

To grow the “manger local”…

Land2Door

The end to end solution for local food access





Total Recall

How Food Traceability helps effective recall handling

Current Problem with Recalls

In 2017, there were 578 product recalls in Europe.

The current system (RASFF) is slow and is not readily available to consumers.

Only ⅓ of all the recalled products were recovered.

Consumers don’t know if their purchased product is safe.

Our Solution

Information on the entire supply chain and recalls of any product readily accessible to consumers, retailers, and manufacturers.









Prognolite

Help restaurants to save resources

The Challenge

Restaurants don´t know

odemand in the future

otheir sales mix

otable turnover





The Approach

oGain insights from the restaurant sales data and survey-based reports from the customers (with only 1 year history)

oDetermine important KPIs to address and assign teams to develop solutions

oBrainstorm and exchange the ideas between teams

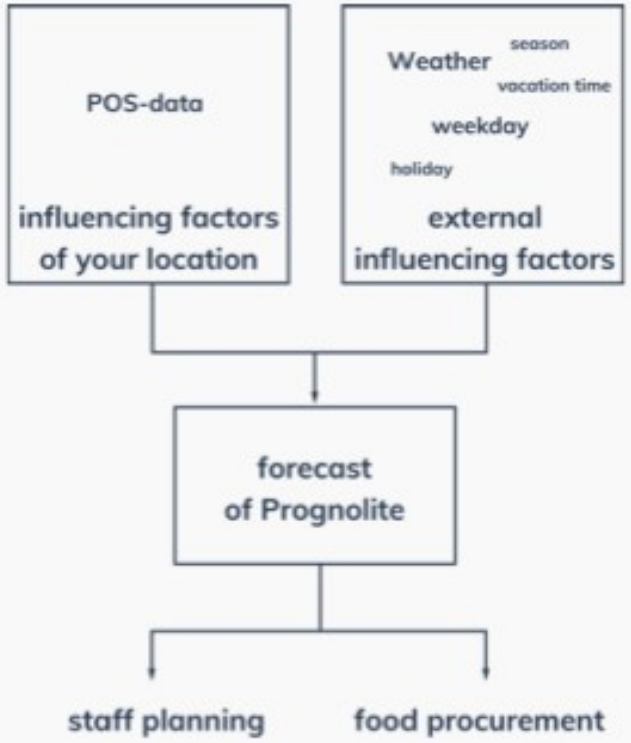




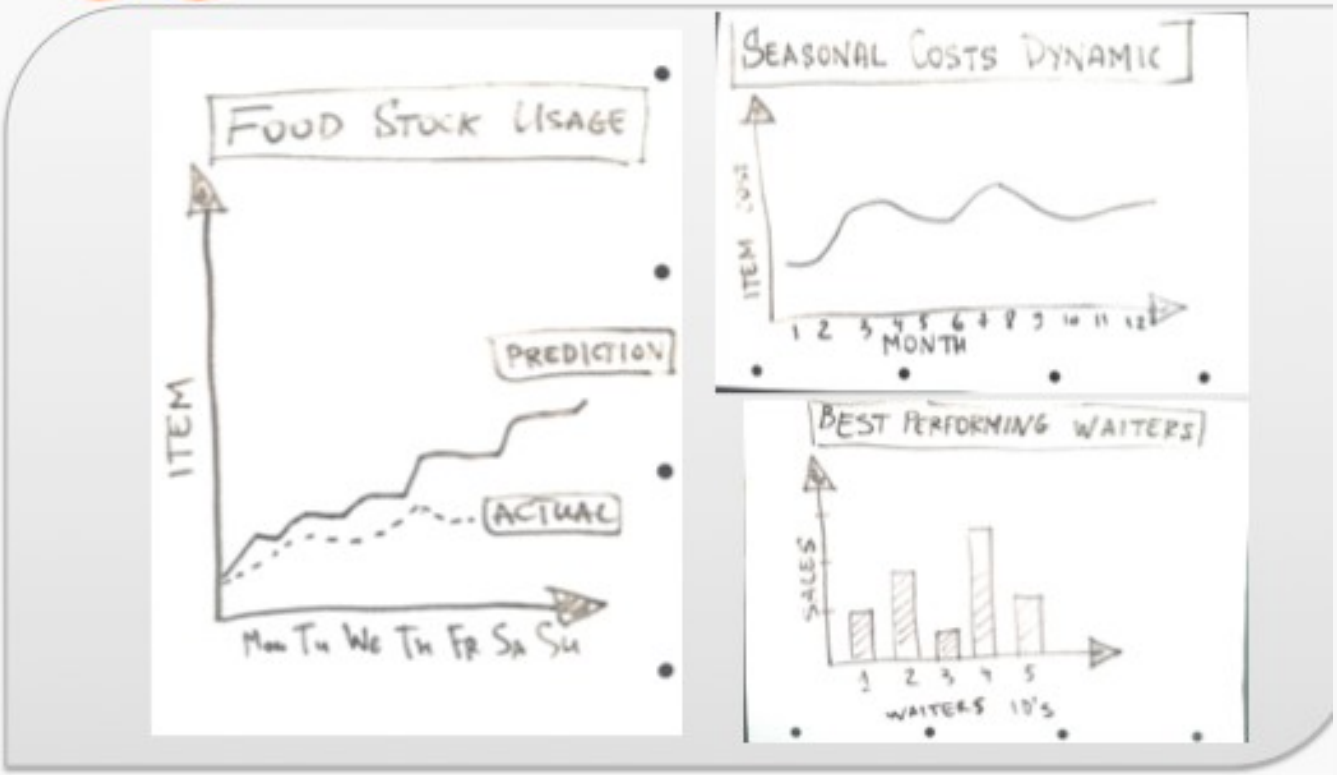
The Solution

We use data from the past....

.... to provide best forecasts for the future



Coming soon


FOOD STOCK USAGE
ITEM
PREDICTION
ACTUAL
Mon Tu We Th Fr Sa Su
SEASONAL COSTS DYNAMIC
ITEM COST
MONTH
BEST PERFORMING WAITERS
SALES
WAITERS ID'S

Open Food Data



Situation

- *Overflow of information*
- *BUT lack of awareness*
- *Increased sugar consumption -> increased global health issues*







Data to Awareness





Total amount of sugar: 551g

Amount	Product	Sugar [g]	Chart
1.0	Coca Cola 1.5L	159g	
1.0	Red Band sweet mushr.	67g	
1.0	Petit Beurre choc.lait	56g	
1.0	Kinder Schokolade	53g	
1.0	MBud Piemont	47g	
1.0	Giandor 100g	46g	
1.0	Mandelplätzli	42g	
1.0	Alnatura jus pommes	34g	
1.0	Zweifel paprika	25g	
1.0	Rivella bleu 1.5l	23g	

Products	Nutritional Data
- Cumulus CSV - Chrome Extention -> Leshop - OCR -> Receipt recognition - Barcode scanning - User entry	- Foodrepo.org - Nährwertdaten.ch - Migros Webpage Crawling

Solution


13:08
TooSweet
TooSweet
250
159
148
134
621
Bio M-Drink Past
Coca Cola 1.5L
Alnatura Reisdrink 1l
Red Band sweet mushr.
others
Home

Solution



Sugar consumption over time

Solution



Total sugar amount per product and receipt

Solution

Most relevant products



Thank you -
have a sweet day

Team Members
Charlotte Soland
Gabriel Hochstrasser
Michael Hochstrasser







Food Theory

Improve Food Habits

Food Category Recognition

- *Capture an image of food*
- *Deep Convolutional Neural Network classifies it into several categories*
- *Health information derived from food category*





Improve Food Habits

Food Category Recognition

- *Capture an image of food*
- *Deep Convolutional Neural Network classifies it into several categories*
- *Health information derived from food category*



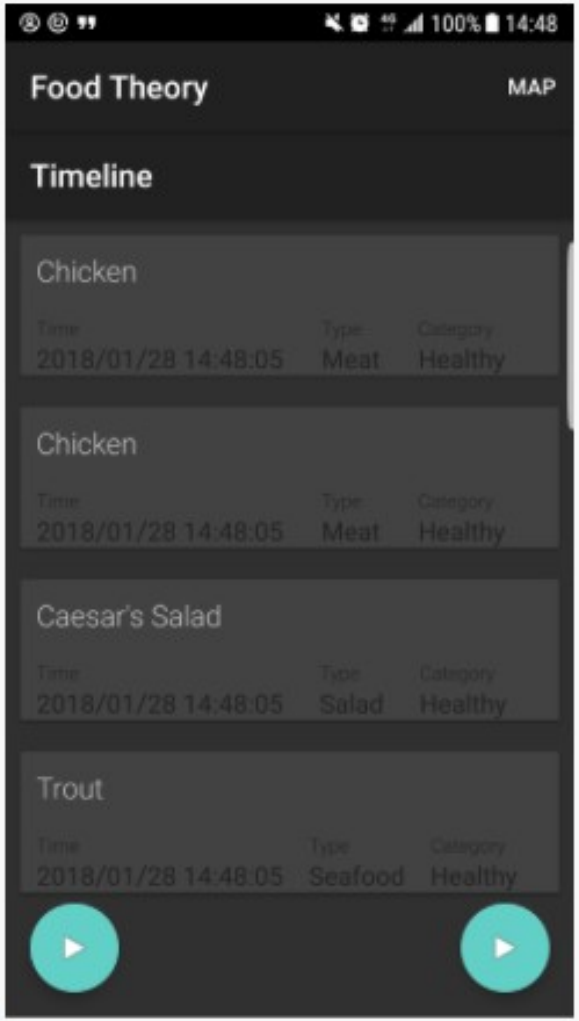


Table 1. MobileNet Body Architecture

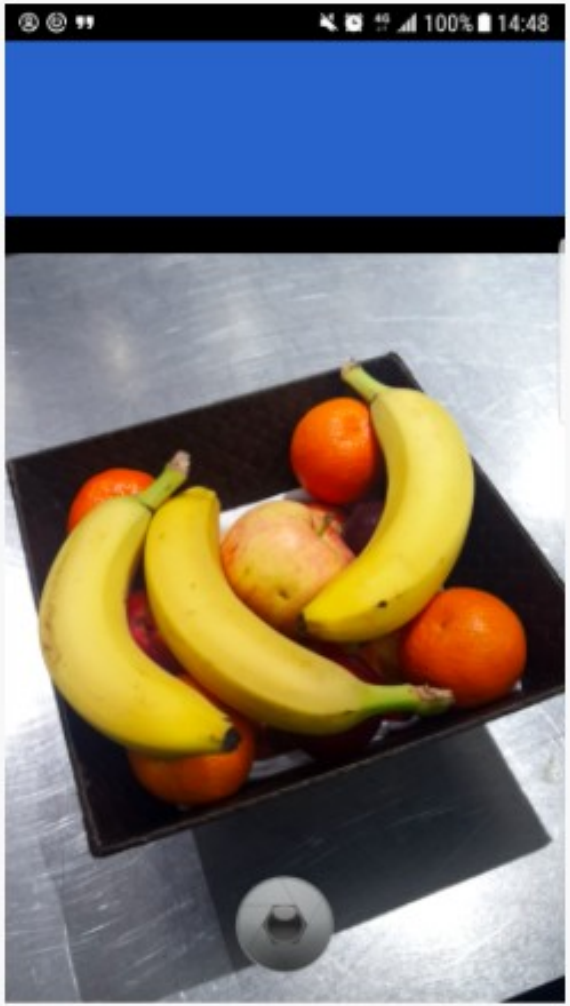
Type / Stride	Filter Shape	Input Size
Conv / s2	$3 \times 3 \times 3 \times 32$	$224 \times 224 \times 3$
Conv dw / s1	$3 \times 3 \times 32$ dw	$112 \times 112 \times 32$
Conv / s1	$1 \times 1 \times 32 \times 64$	$112 \times 112 \times 32$
Conv dw / s2	$3 \times 3 \times 64$ dw	$112 \times 112 \times 64$
Conv / s1	$1 \times 1 \times 64 \times 128$	$56 \times 56 \times 64$
Conv dw / s1	$3 \times 3 \times 128$ dw	$56 \times 56 \times 128$
Conv / s1	$1 \times 1 \times 128 \times 128$	$56 \times 56 \times 128$
Conv dw / s2	$3 \times 3 \times 128$ dw	$56 \times 56 \times 128$
Conv / s1	$1 \times 1 \times 128 \times 256$	$28 \times 28 \times 128$
Conv dw / s1	$3 \times 3 \times 256$ dw	$28 \times 28 \times 256$
Conv / s1	$1 \times 1 \times 256 \times 256$	$28 \times 28 \times 256$
Conv dw / s2	$3 \times 3 \times 256$ dw	$28 \times 28 \times 256$
Conv / s1	$1 \times 1 \times 256 \times 512$	$14 \times 14 \times 256$
$5\times$ Conv dw / s1	$3 \times 3 \times 512$ dw	$14 \times 14 \times 512$
$5\times$ Conv / s1	$1 \times 1 \times 512 \times 512$	$14 \times 14 \times 512$
Conv dw / s2	$3 \times 3 \times 512$ dw	$14 \times 14 \times 512$
Conv / s1	$1 \times 1 \times 512 \times 1024$	$7 \times 7 \times 512$
Conv dw / s2	$3 \times 3 \times 1024$ dw	$7 \times 7 \times 1024$
Conv / s1	$1 \times 1 \times 1024 \times 1024$	$7 \times 7 \times 1024$
Avg Pool / s1	Pool 7×7	$7 \times 7 \times 1024$
FC / s1	1024×1000	$1 \times 1 \times 1024$
Softmax / s1	Classifier	$1 \times 1 \times 1000$

Reference[1]:
MobileNets: Efficient Convolutional Neural Networks for Mobile Vision Applications

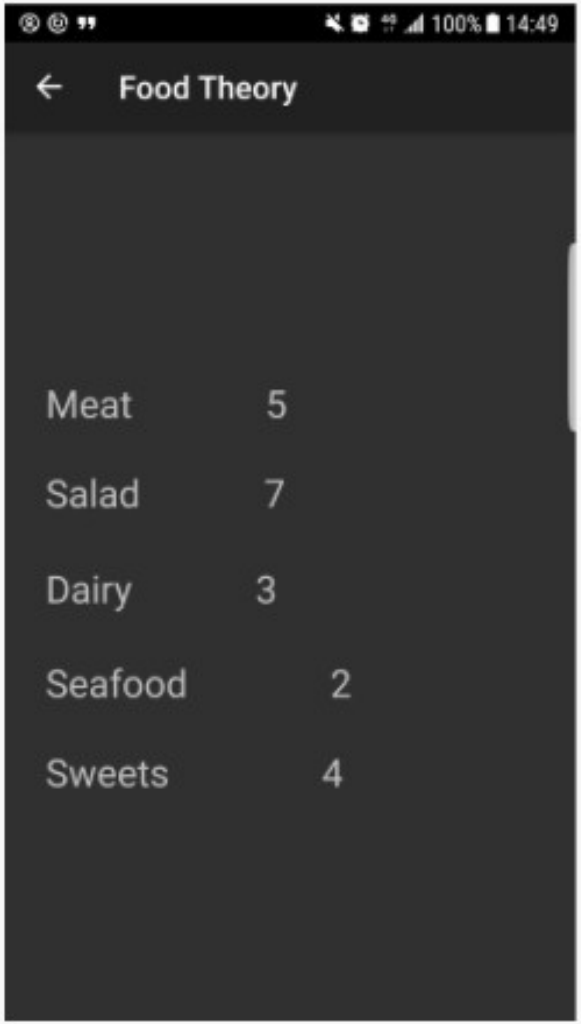
Open Food Data



Open Food Data



Open Food Data



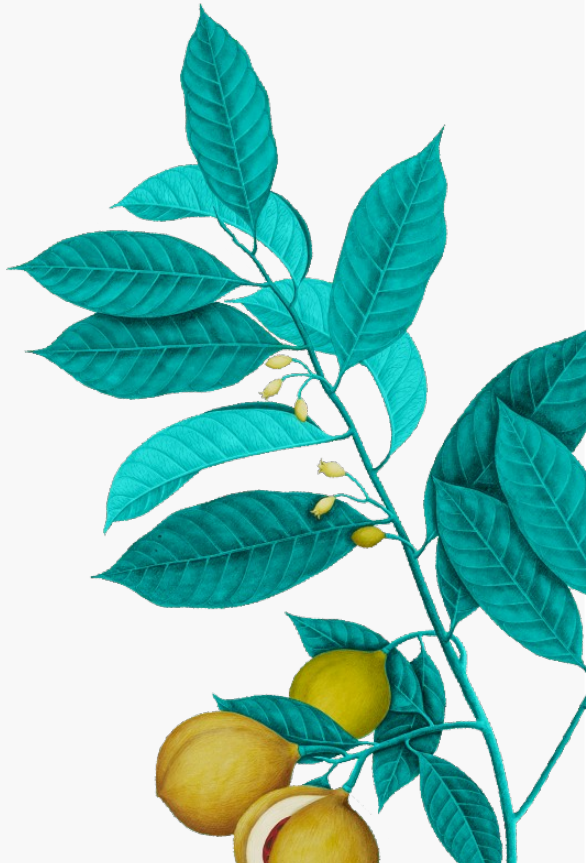


Open Food Data

Swiss NutriScore

Kirtan, Sharbatanu, Timo

THE OPEN FOOD REPO



Nutriscore


Pur Bœuf
Puur Rundvlees
NUTRI-SCORE
A B C D E
Energie
Matières
Glucides
Fibres
Protéines
Sel / Zout
Ce produit est
Dit product


100% 14:41
Barcode Reader
OpenFood-
print
The nutriscore of your product is
B

Recommendation



Fitness & Fruits



Muesli - Fruits & Noix

Foodprint





Meal Good

Hackdays Milestones

- Market reseach to refine concept
- Packaging and Recipes research and prototyping
- Connect with like-minded people for brainstorming
- Having fun



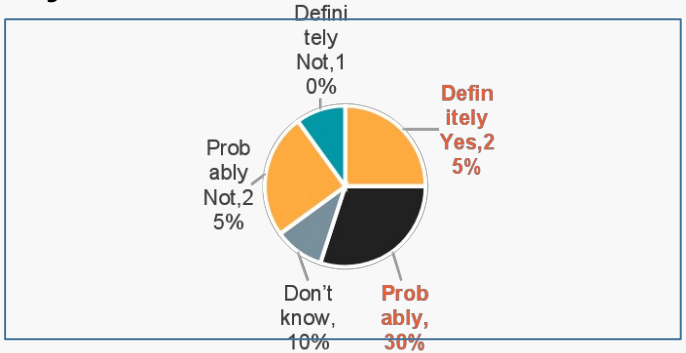


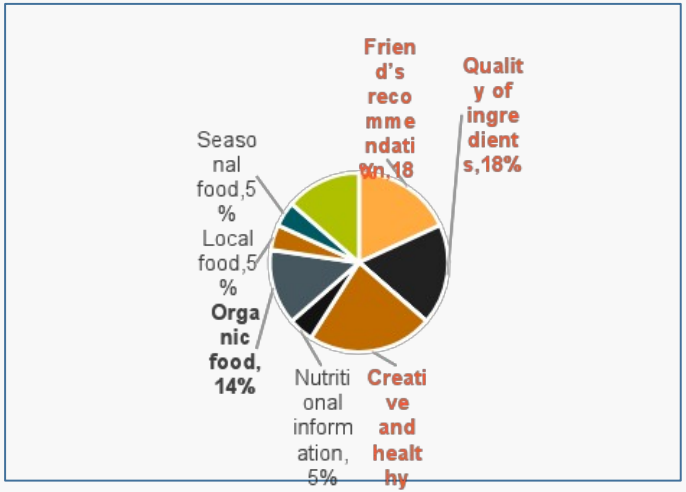
Summary of Market Study*

- **55% show interest** in the offer (definitely or probably buy)

- Main **drivers** of interest are:
  - **creative** and **healthy recipes**;
  - **quality** of ingredients;
  - **friends**' recommendations;
  - **local**, **organic** & **seasonal** food

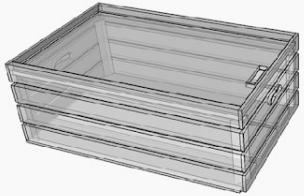
- Suggested price ranges for a 1-person kit:
  - **Vegetarian: 7-16 CHF**
  - **Non- vegetarian: 10-20 CHF**



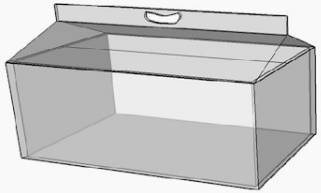


*Sample analyzed: 21 people; 62% male/38% female; 70% from Lausanne area; 38% living alone; 43% between 25-34 y-o; 100% higher education

Packaging & Recipes



Modular
Easy to carry
Fits in postal box



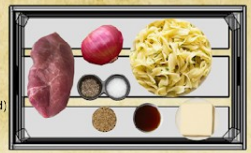
Ideal Dims:
30x20x14 cm

PORK ESCALOPES WITH APPLE JUICE SAUCE

Preparation: 15 minutes **Cooking: 15 minutes**

INGREDIENTS (2 people)

200 gr egg noodles
230 pork escalopes
1 TS flavour
1TS butter
½ red onion (minced)
1TS apple vinegar
½ cup of apple juice
½ ts of brown sugar
Salt and pepper





PREPARATION

Boil the noodles in a pot till their almost cooked (al dente). Drain them and add a bit of oil.
In the meantime, spread out and flat the escalopes, add a pinch of salt and pepper.
In a big plate spread flavour on top of the escalopes, shake them to take out the excess flavour
In a big pan, cook the escalopes with butter and when they cook, put them aside in a plate
In the same pan, cook the onion, add butter if necessary, and deglaze with vinegar. Add the apple juice and brown sugar, get to boil and leave to reduce until the sauce become the sauce becomes thicker. Put them back the escalopes

Serve with egg noodles and green beans.

ORECCHIETTE WITH SWEET PEPPER CONFIT AND ASPARAGUS

Preparation and cook time: 20 minutes

INGREDIENTS (2 people)

1 sweet pepper
1 onion
1 garlic clove
200 gr orecchiette
100 asparagus
20 gr parmesan
Salt and pepper





PREPARATION

Put the onion and the sweet pepper, asparagus and garlic with olive oil, salt and pepper. Cook it in a fry pan at medium heat for 15 minutes.

In the meantime, brings the water to a boil and cook the pasta.

When the pasta is cooked, drain it and add it to the vegetables in the fry pan. Serve in plates and add the parmesan on top.

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THANK YOU

ENGAGEMENT
A DEVELOPMENT FUND OF THE MIGROS GROUP

EPFL
ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

RECAP

Stay in contact

- *Press release on Wednesday, 31st of January, via Newsletter*
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Next Hackdays

Open Food Data Hackdays: 16th & 17th of February in Basel






THANK YOU