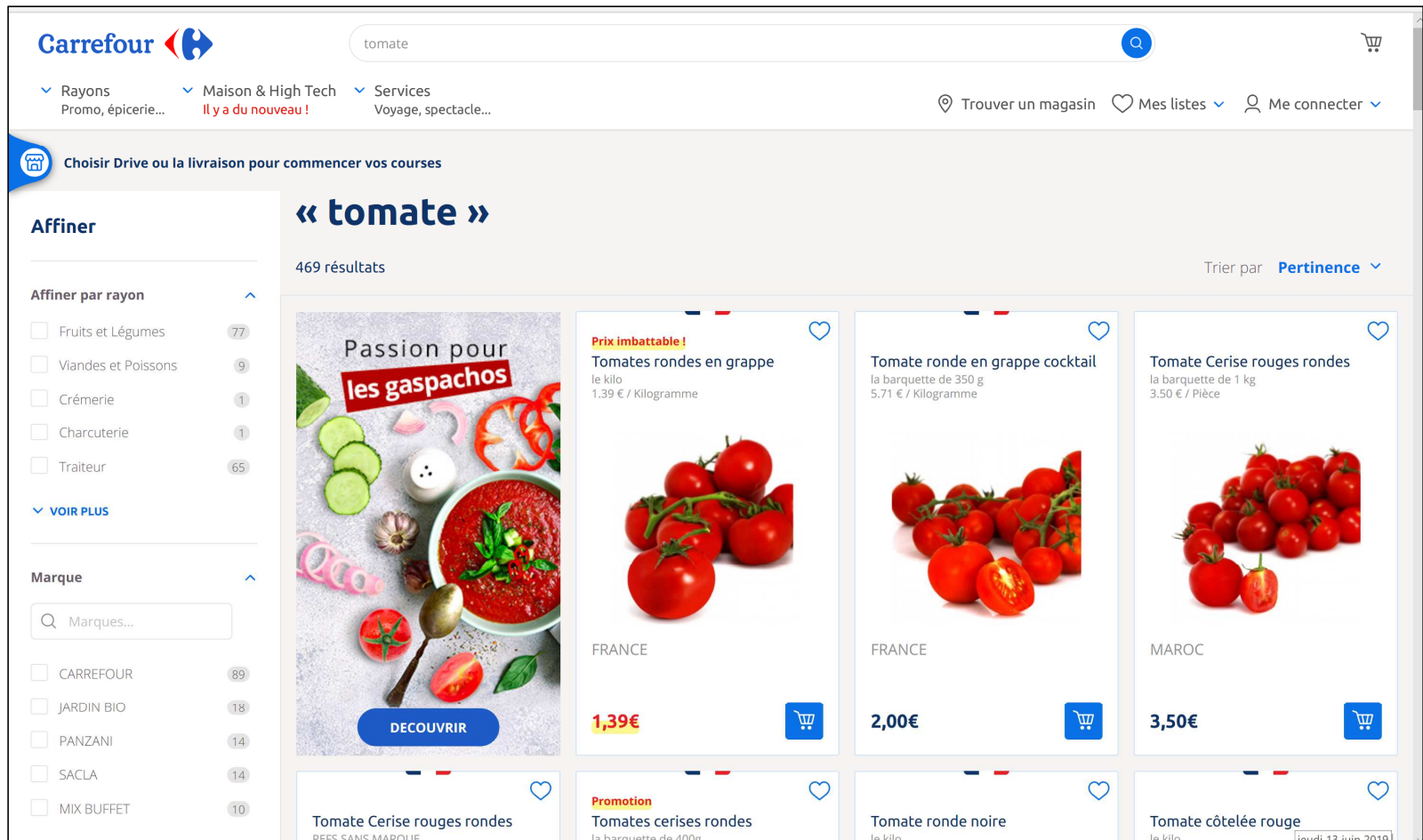




adelean
EXTRACT TRANSFORM SEARCH

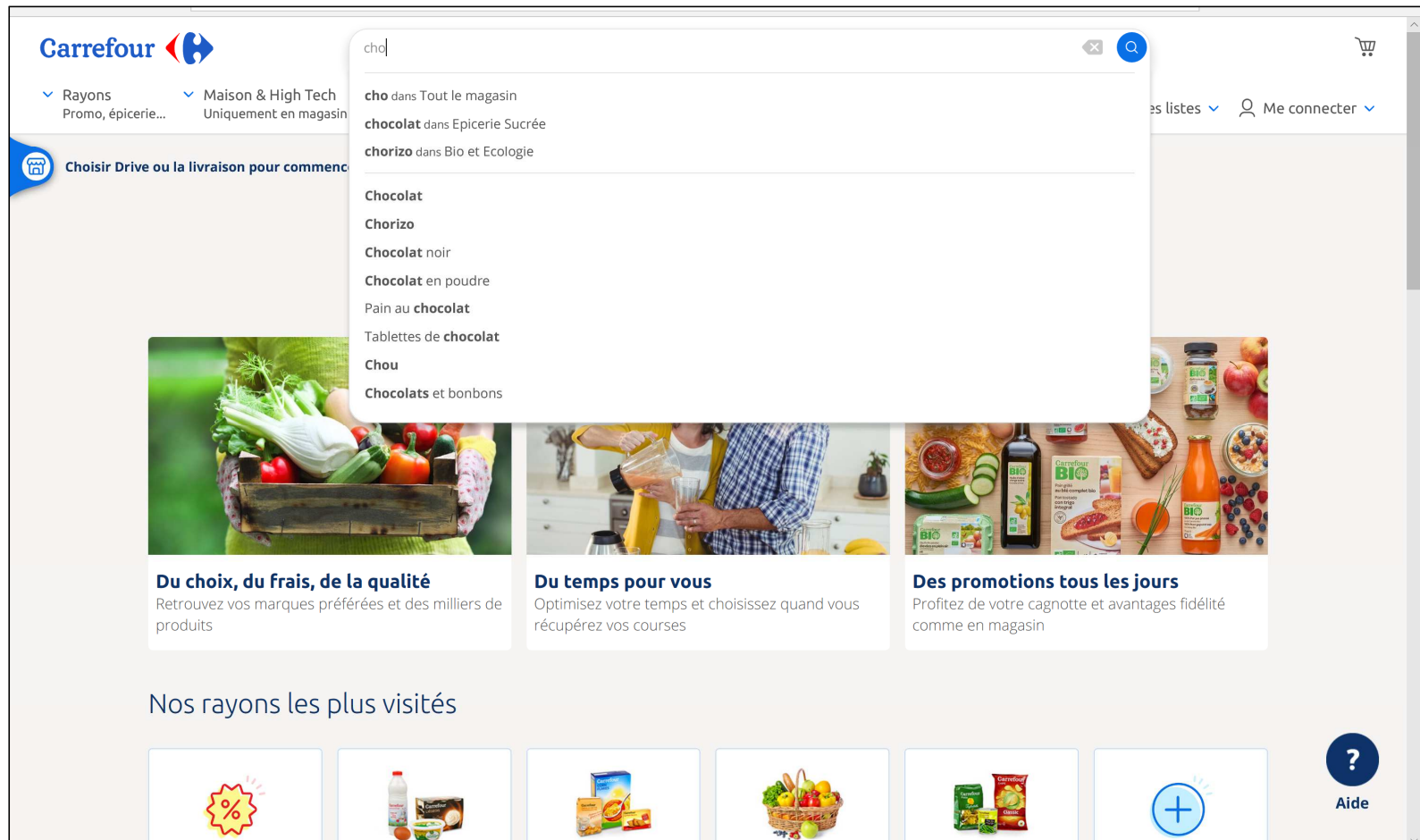
- @lucianprecup
- @margauxwagner
- @a2lean
- #bbuzz

The journey of a search engine to voice search



A search engine on “large screen”

@a2lean #bbuzz



A search engine on “large screen”

@a2lean #bbuzz

Carrefour

hagan daz

Rayons
Promo, épicerie...

Maison & High Tech
Uniquement en magasin

Services
Voyage, spectacle...

Trouver un magasin

Mes listes

Me connecter

Choisir Drive ou la livraison pour commencer vos courses

Affiner

Marque

Marques...

☐ HAAGEN-DAZS 28

☐ HAAGEN DAZS 5

Préférences alimentaires

☐ Casher 6

Promotions

☐ Toutes les promotions 2





☐ Vu en catalogue 2

« haagen dazs »

Votre recherche "hagan daz" n'a pas donné de résultats dans ce magasin, elle a été transformée en "haagen dazs".

33 résultats

Trier par **Pertinence**

<p>Glace vanille HAAGEN-DAZS</p> <p>HAAGEN-DAZS</p> <p>le pot de 400g</p> <p>12.38 € / Kilogramme</p>  <p>4,95€</p> <p>Prix imbattable!</p> <p>Glaces Caramel Attraction</p>	<p>Glace chocolat frappé HAAGEN DAZS</p> <p>HAAGEN-DAZS</p> <p>le pot de 377g</p> <p>15.78 € / Kilogramme</p>  <p>5,95€</p> <p>Prix imbattable!</p> <p>Glaces fruit attraction HAAGEN-</p>	<p>Glace barista collection HAAGEN DAZS</p> <p>HAAGEN-DAZS</p> <p>les 4 pots de 318g</p> <p>19.50 € / Kilogramme</p>  <p>6,20€</p> <p>Glace vanille pécan HAAGEN-</p>	<p>Glaces gelato chocolat HAAGEN DAZS</p> <p>HAAGEN-DAZS</p> <p>les 4 mini pots - 288g</p> <p>21.53 € / Kilogramme</p>  <p>6,20€</p> <p>Glaces Vanilla Attraction</p>
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A search engine on "large screen"

@a2lean #bbuzz

DIGGR Categories humanitarian priorities water sanitation

Did you mean : **water hygiene and sanitation**

Suggestions

Tips : With Diggr you can search from more than 35 different MSF information platforms at the same time

About 153 results in 0.534 seconds

Sorting Display : 10 results per page Order by : Relevance

Hide search filters

Facets

Selected Filters :

- MSF Websites X
- eng X

LANGUAGES

- ☒ eng (153)
- ☐ fra (5)
- ☐ ara (1)
- ☐ zho (1)

DATES OF TOPIC

PRODUCT

SOURCES

ORGANISATION

- ☐ Médecins Sans Frontières (122)
- ☐ World Health Organization (93)
- ☐ Drugs for Neglected

GO TO THE WATER HYGIENE AND SANITATION PAGE ON SHERLOG

GO TO THE WATER AND SANITATION PAGE ON OOPS MED

"Marketing" shortcuts

Setting priorities for humanitarian water, sanitation and hygiene research: a meeting report | DMello Guyett et al - 2018 - Setting priorities for humanitarian water, sanitation, and hygiene research.pdf

Last modified on 18/12/2018

<http://fieldresearch.msf.org/msf/bitstream/10144/619251/1>

Setting priorities for humanitarian water, sanitation and hygiene research: a meeting report MSF for humanitarian water, sanitation and hygiene research: a meeting report 2018, 12 (1)

Microsoft Word - The Priorities UK New 2011.doc | the_priorities_uk_2011.pdf

Last modified on 17/12/2018

<https://evaluation.msf.org/sites/evaluation/files>

Water, hygiene and sanitation.....9 4. Number, type and location of water points Hygiene and sanitation.....

Pagination

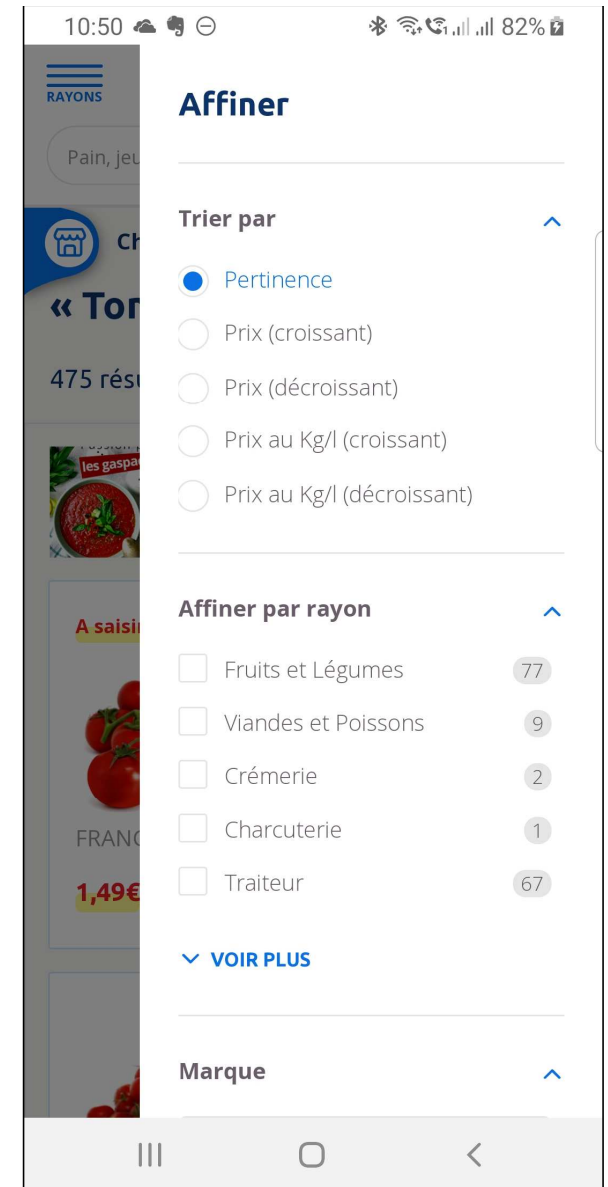
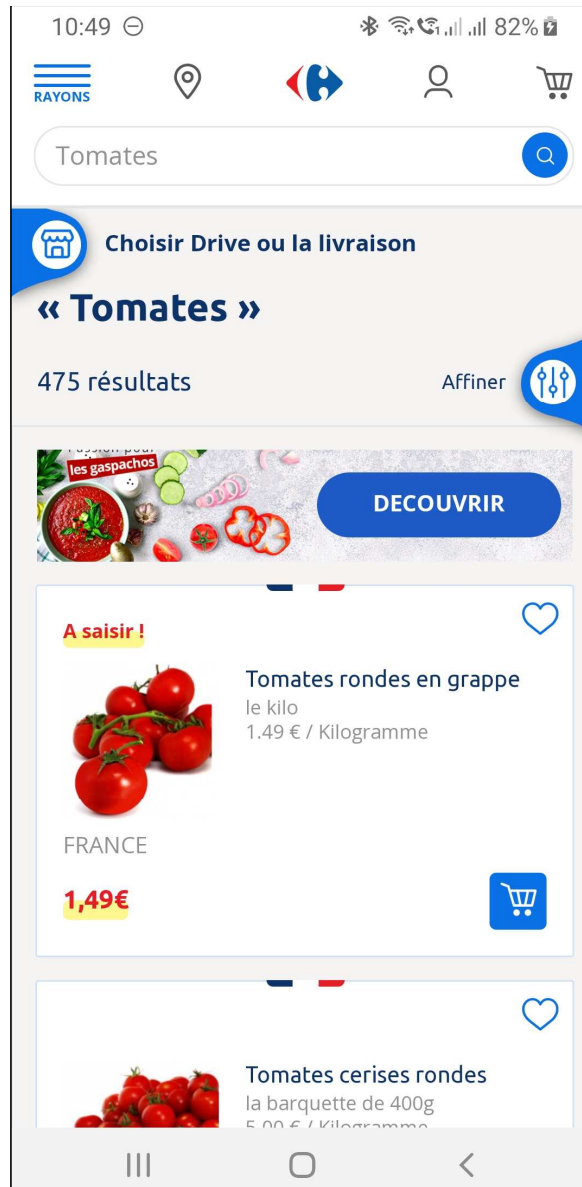
< << 1 2 3 4 5 6 7 8 9 10 > >>

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A search engine on "large screen"

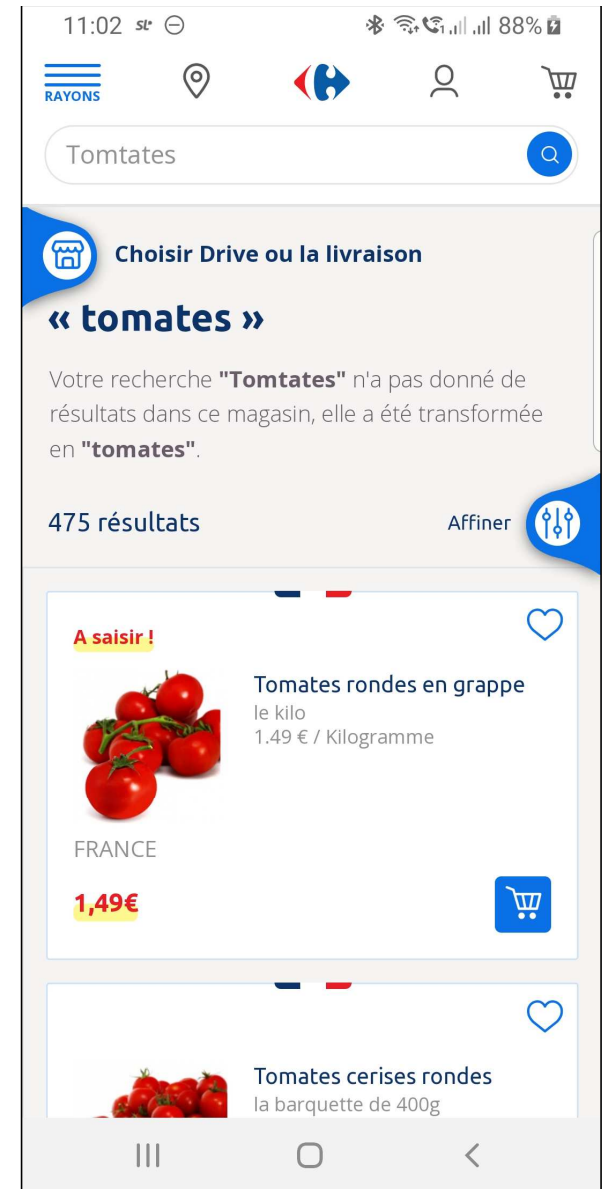
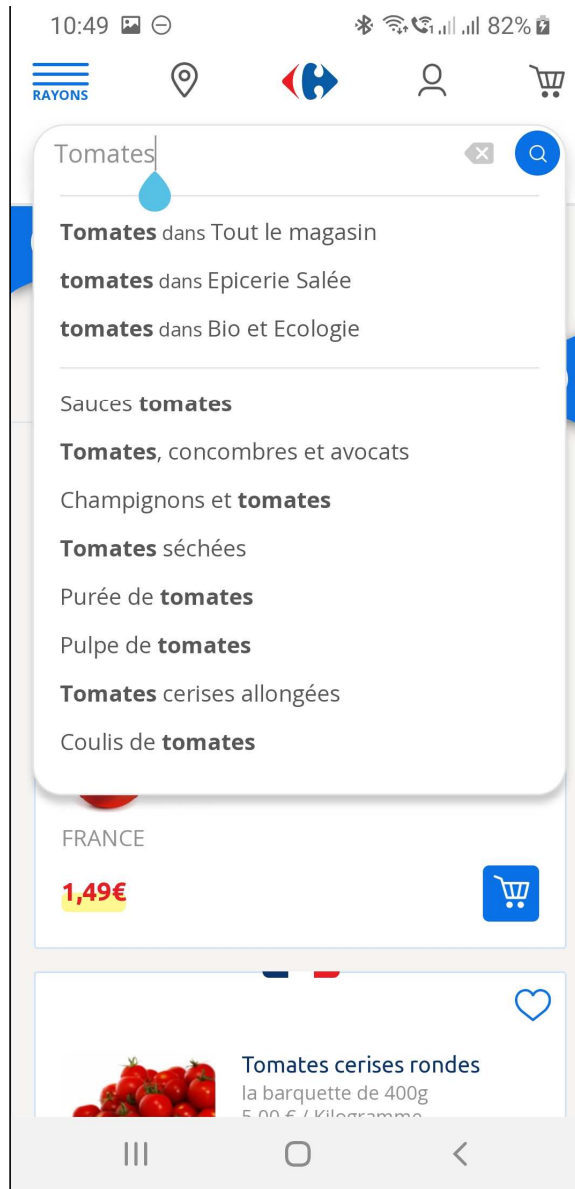
Search on a
mobile device

@a2lean #bbuzz



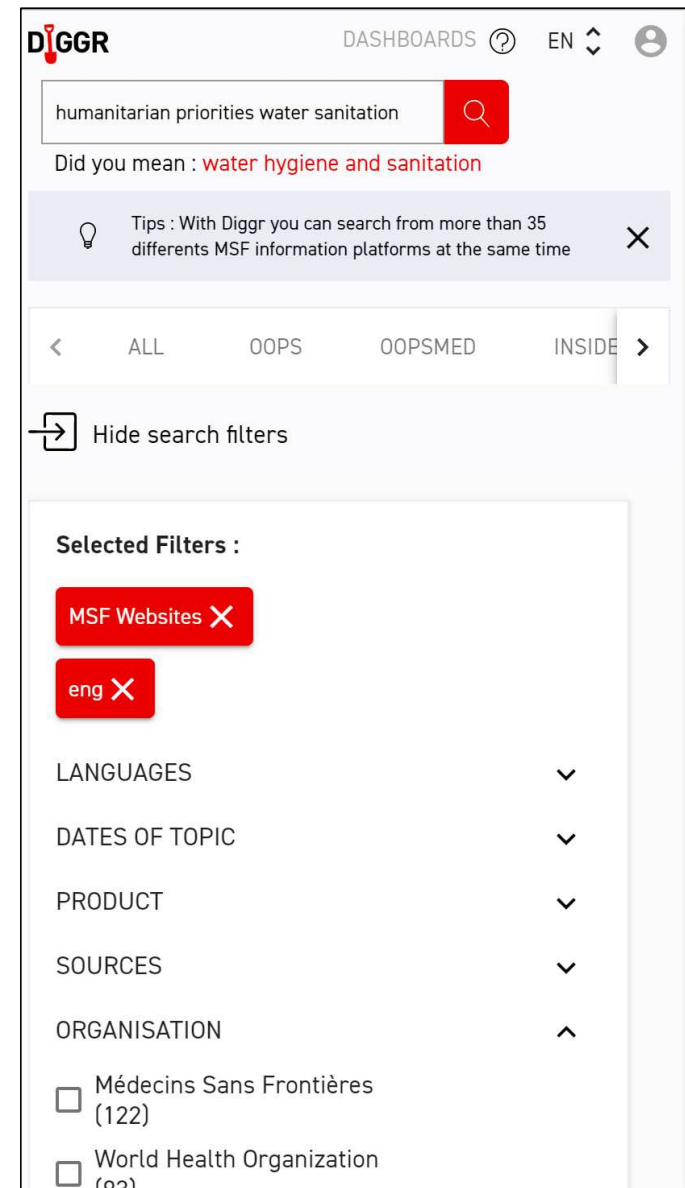
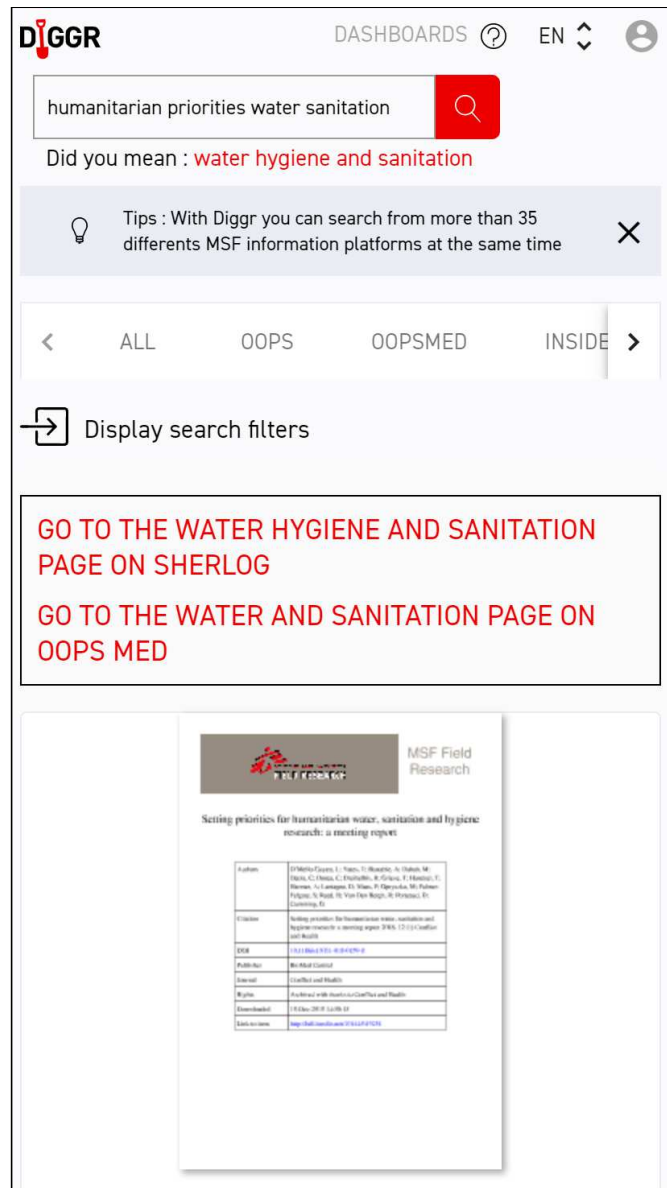
Search on a mobile device

@a2lean #bbuzz



Search on a mobile device

@a2lean #bbuzz



Issues and challenges with voice search



Lack of space to display information



Large amount of results : how to narrow?



Unclear search: how to clarify?



Stop words or “noise” in the query



Filters expressed as search keywords



Description of a search API

- Example of a search API:
 - Input :
 - Text
 - Filters
 - Sorting
 - Output :
 - Suggestions
 - Results
 - Marketing shortcuts
 - Facets
- Challenge :
 - We developed a classic search engine and we need to adapt it for a voice



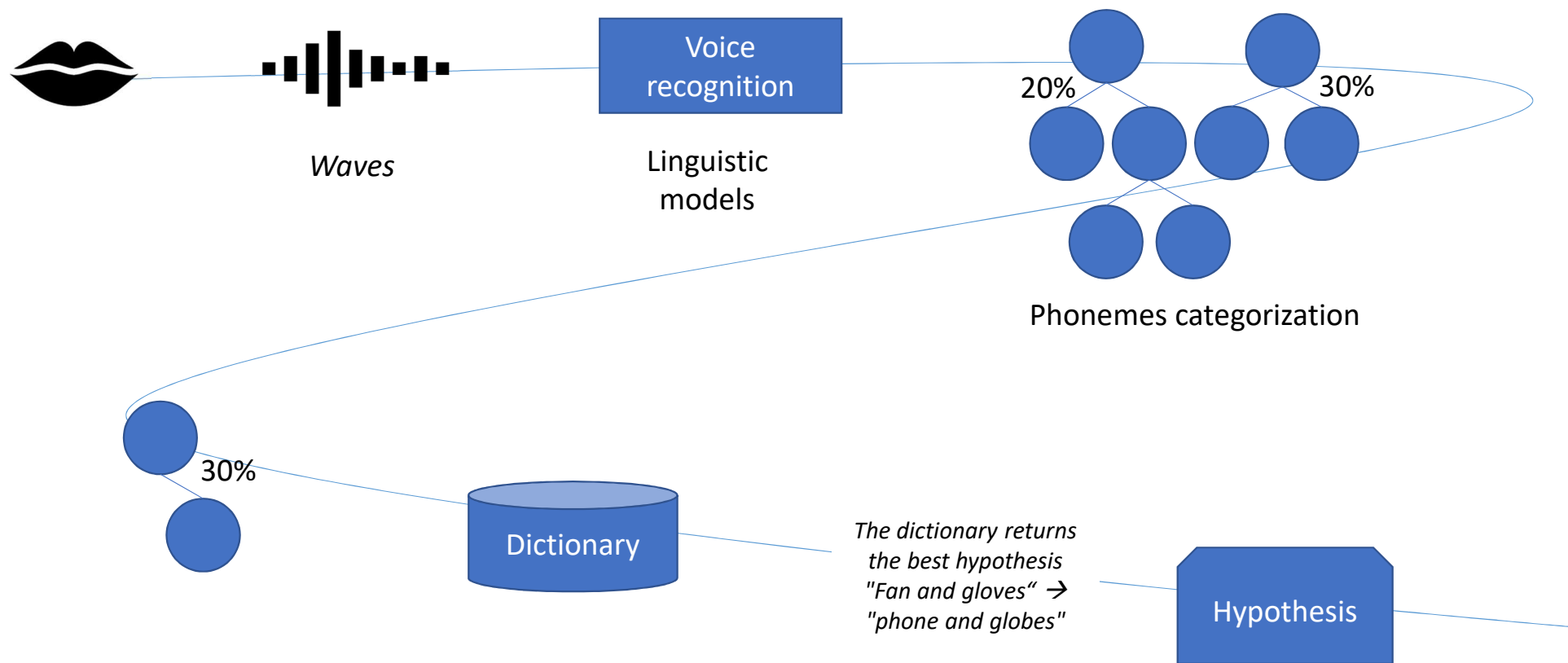
First steps from voice to API calls

1) Speech to Text



2) Knowing the service to call - link a sentence to a service





INTENT / UTTERANCES/ SLOTS

Intent = the requested service .

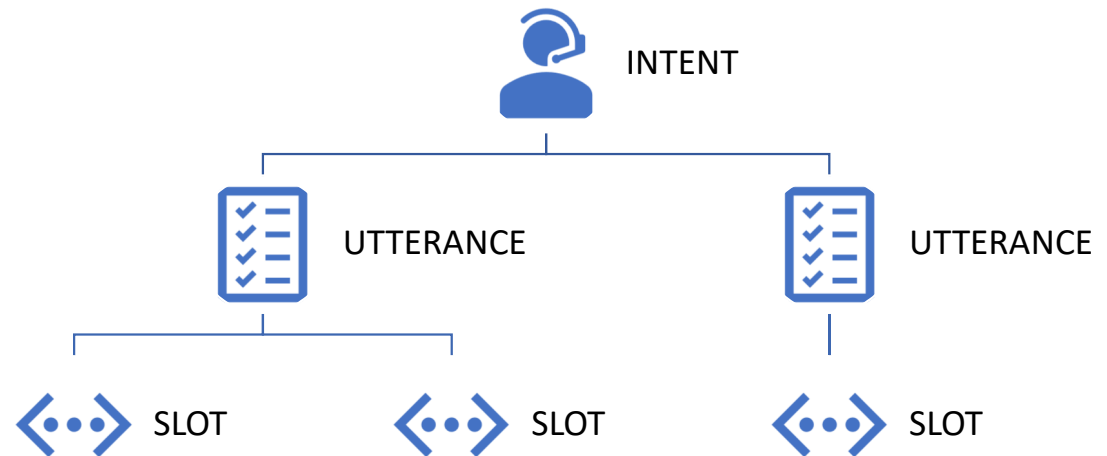
Utterances = several means of calling it, different phrases that correspond to the same intention
Each Intent has several Utterances.

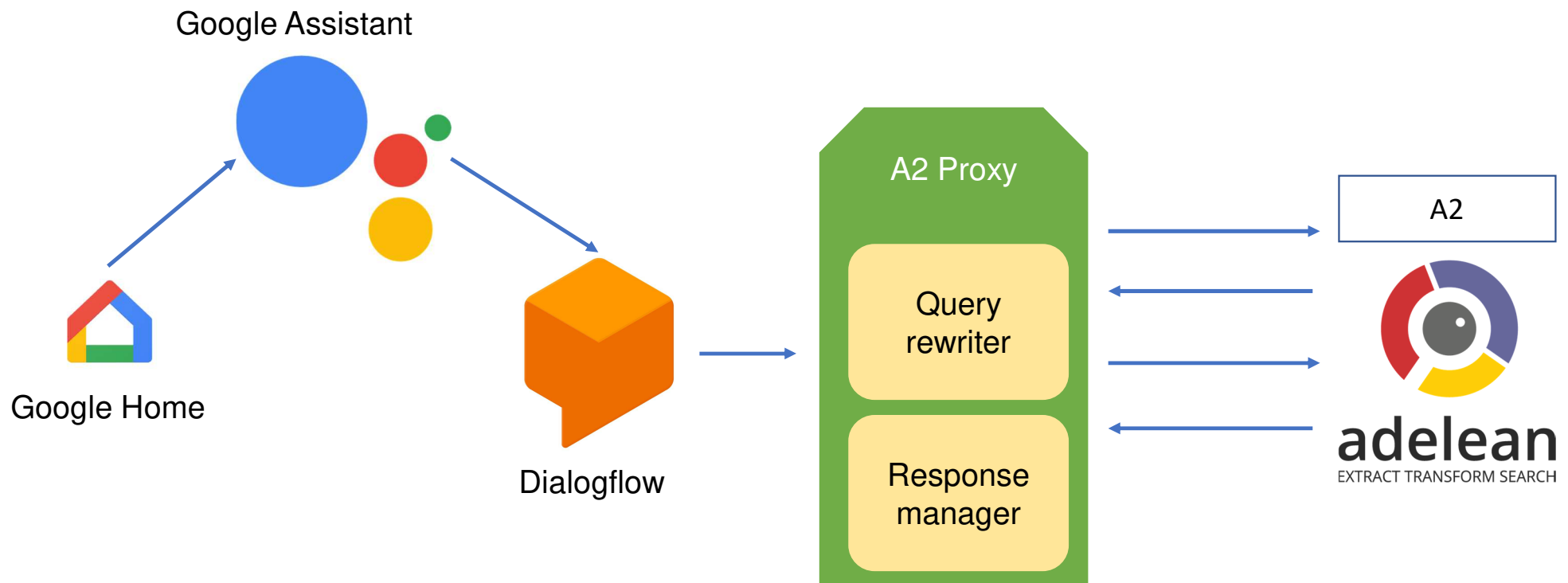
Slot = represents variable information within the Intent.

"I am looking for **tomatoes**"

"I need some **chocolate** in the **frozen foods** department«

"Where is the **Kulturbrauerei** entrance ?"

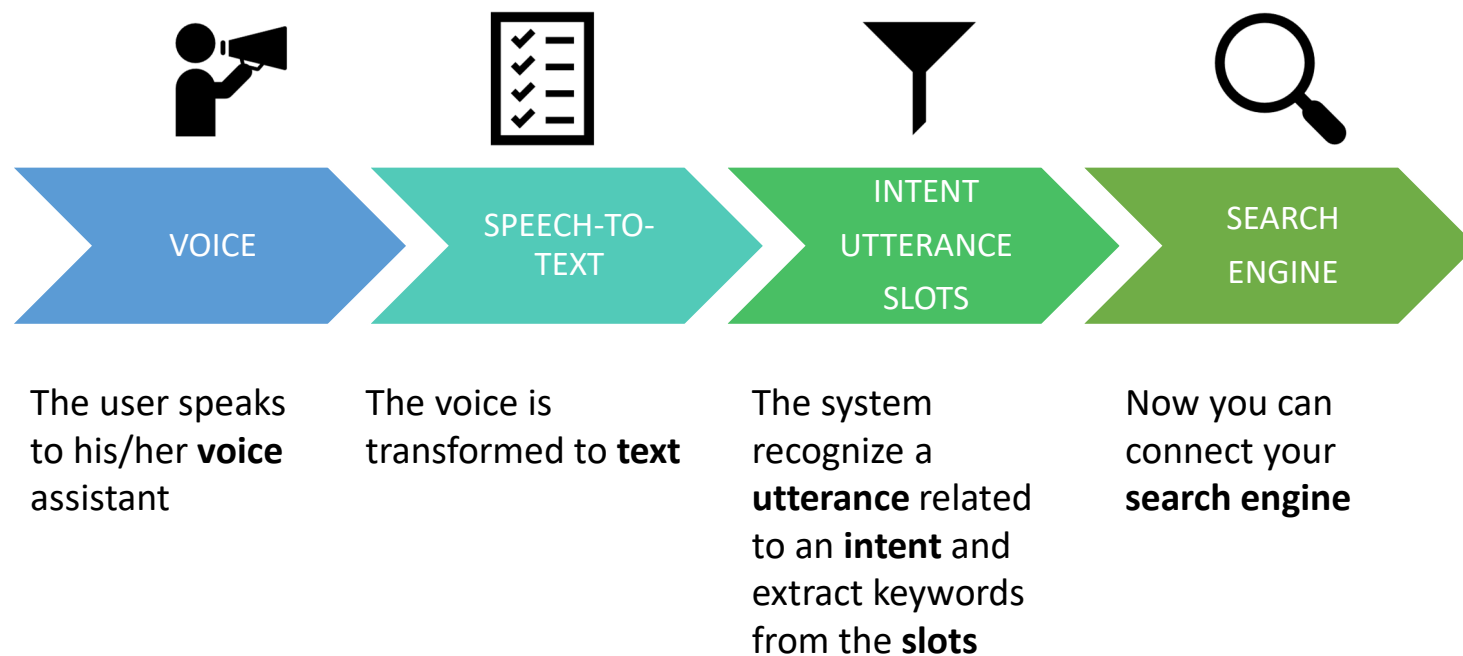




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Steps from voice to search API



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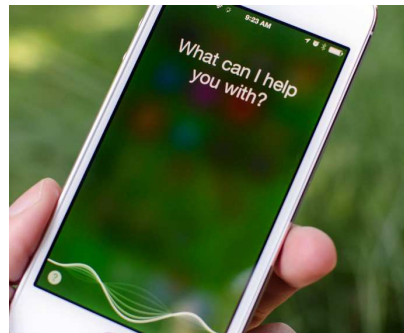
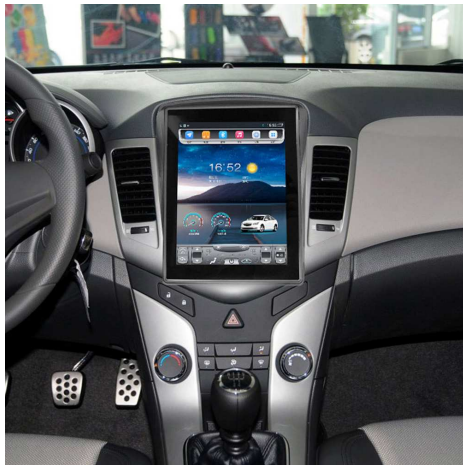
Filters expressed as search keywords



VOICE + SCREEN
(multimodal)



Additional Workflow
To Display less



VOICE ONLY



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Issues and challenges with voice search



Lack of space to display information



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Stop words or “noise” in the query



Filters expressed as search keywords



How to narrow

- “Quick win” solution :
 - Filters
- Issue :
 - Which filters to choose?
- Prerequisite:
 - Your search engine should already have relevant filters
- Go further:
 - Clustering
- Go even further:
 - Personalization

Brand ^

🔍 Brand

☐ CARREFOUR 89

☐ JARDIN BIO 18

☐ PANZANI 14

☐ SACLA 14

☐ MIX BUFFET 10

✓ [SEE MORE](#)

Price —

\$ to \$ Go

☐ \$0 - \$5

☐ \$5 - \$10

☐ \$10 - \$15

☐ \$15 - \$20

☐ \$20 - \$25

☐ \$25 - \$50

☐ \$50+

Breakfast by Dietary Need —

Gluten-Free Breakfast

Organic Breakfast

Sugar-Free Breakfast

Flavor —

☐ Chocolate

☐ Strawberry

☐ Cinnamon

☐ Peanut Butter

[See More Flavors](#) ...

Customer Rating —

☐ ★★★★★ & Up

☐ ★★★★★ & Up

☐ ★★★★★ & Up

Issues and challenges with voice search



Lack of space to display information



Large amount of results : how to narrow?



Unclear search: how to clarify?

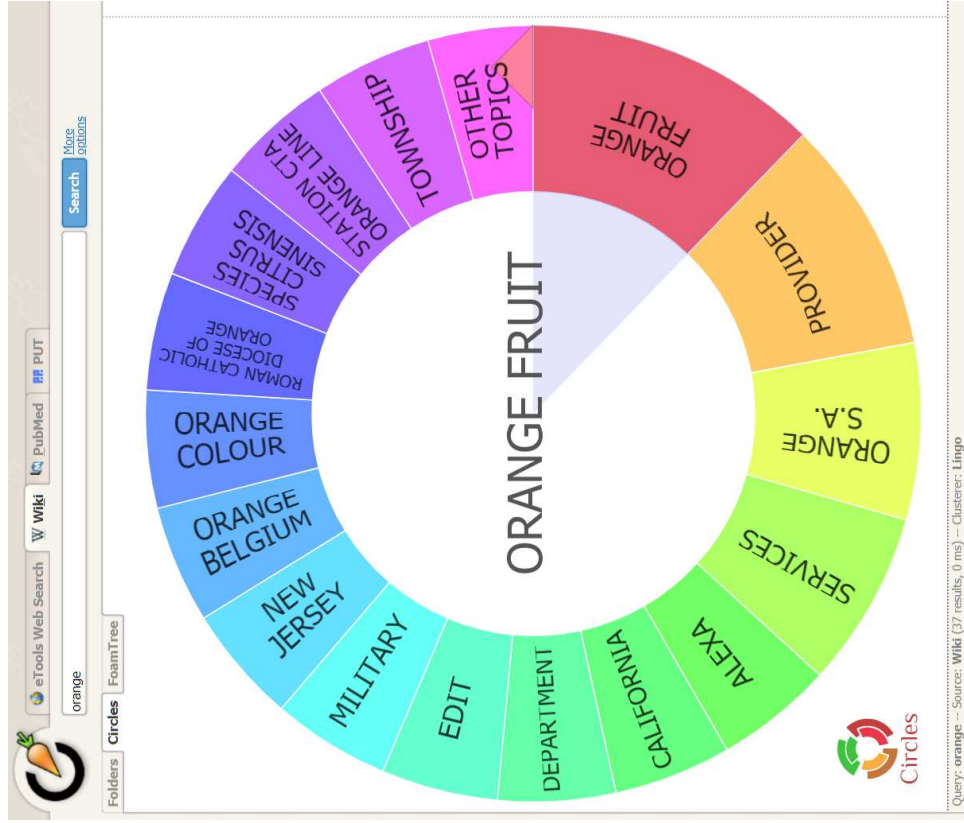


Stop words or “noise” in the query



Filters expressed as search keywords





Issues and challenges with voice search



Lack of space to display information



Large amount of results : how to narrow?



Unclear search: how to clarify?



Stop words or “noise” in the query



Filters expressed as search keywords



What if we get off-road?

- How to manage search queries such as :
 - I am searching for Simon Willnauer conferences on elasticsearch.
 - What is the best way to plug this specific cable?
 - How to win the FIFA Women's World Cup in France this year?
 - ...



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Stop words or “noise” in the query

“I am looking for **chocolate** please. Could you help me with that?”

- Issue: The query is (very) verbose
- Challenge: You have to rewrite the query
- Pitfall: We are not talking about stop words in the data ! The “Common Terms Query” will not help !
- Solution: index all the user queries and figure out the stop words





Search... (e.g. status:200 AND extension:PHP)

Uses lucene query syntax

Add a filter

[voice] text_en	
text: Descending	Count
i	7
for	6
am	6
the	5
search	4
to	3
look	3
wai	2
thi	2
some	2

[voice] text_en standard_stopwords	
standard stopwords	Count
i	7
am	6
search	4
look	3
wai	2
some	2
chocol	2
best	2
get	1
frozen	1

[voice] text_en extra_stopwords	
extra stopwords	Count
wai	2
some	2
chocol	2
best	2
need	1
machin	1
kulturbrauerei	1
how	1
get	1
frozen	1

[voice] text_en shingles	
shingles	Count
i am searching	3
i am looking	3
am searching for	3
am looking for	3
the best way	2
best way to	2
get to the	1
frozen foods department	1
france this year	1
for the best	1

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Issues and challenges with voice search



Lack of space to display information



Large amount of results : how to narrow?



Unclear search: how to clarify?



Stop words or “noise” in the query



Filters expressed as search keywords



Filters expressed as search keywords



Filters can be expressed as a search keyword

Search for « organic tomatos » →
"organic" can be a filter

Search for "Simon Willnauer's talks"
on elasticsearch →
"Simon Willnauer" can be a filter



Solution 1/ Entities extraction and query rewriting
with entities as a filter

Organic tomato →
text:tomato
organic_flag:true

Simon Willnauer talk on elasticsearch →
text:elasticsearch
speaker:Simon Willnauer
type:talk

Solution 2/ Filter fields are also "searchable" and
the scoring algorithms will put the most relevant
results first



To summarize



Lack of space to display information → **ask questions**



Large amount of results : how to narrow? → **add filters**



Unclear search: how to clarify? → **Use facets, clustering, personalization**



Stop words or “noise” in the query → **index queries and build your own list of stop words**



Filters expressed as search keywords → **rewrite the query or make sure filters are also “searchable”**





THANK YOU FOR YOUR ATTENTION

VIELEN DANK

- @lucianprecup
- @margauxwagner
- @a2lean
- #bbuzz