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# Planning for Enterprise Search

— Maish Nichani —  
PebbleRoad, Ola Search

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# Agenda

- About me
- About search
- 4 search stories
- What is enterprise search
- Elements of search experience
- Search strategy
- Search projects

# About me

PebbleRoad is UX strategy and design consultancy specialising in enterprise web and service design.

Ola Search is an enterprise search consultancy offering quick deployments using the Ola Search interface.



What does enterprise search  
mean to you?

“Just make it work like Google”





<https://www.youtube.com/watch?v=cbtf1oyNg-8>



Want search to work like magic



But starts like a black box not many understand



The journey



# 4 search stories

We use search to become <one of these> for a while



Secretary



Explorer



Analyst



Executive

# Secretary



How many pounds in a kg?

Do I need a visa to enter Myanmar?

What does this transaction code mean?

# Explorer



What do I advertise for Java developers?

Who sells good wooden furniture?

What are my employment benefits?

# Analyst



Which is the best phone to buy for dad?

Does that company really sell 'fair-trade' coffee?

How does the VW Golf compare with other cars in its class?

# Executive



How has sales fared since the apology for cheat software in our cars?

How many cases were opened this year and how many of them closed?

Which areas in Singapore have the highest office rental yield?

# How many pounds in a kg?

The image shows a Google search interface. The search bar contains the text "how many lbs in a kg". Below the search bar, there are navigation links for "Web", "Images", "Videos", "News", "Maps", "More", and "Search tools". The search results show "About 14,800,000 results (0.46 seconds)". A conversion widget is displayed, showing a dropdown menu for "Mass" with a downward arrow. Below this, there is a conversion equation: "1" is entered in a box, followed by an equals sign, and "2.20462" is entered in another box. Below the "1" box is a dropdown menu for "Kilogram" with a downward arrow. Below the "2.20462" box is a dropdown menu for "Pound" with a downward arrow. At the bottom right of the widget, there is a link for "More info".

Google how many lbs in a kg

Web Images Videos News Maps More Search tools

About 14,800,000 results (0.46 seconds)

Mass

1 = 2.20462

Kilogram Pound

More info



# Which phone to buy for dad?

1-24 of 1,353 results for Cell Phones & Accessories: Cell Phones - No-Contract Cell Phones

Sort by: New and Popular

**Network**

- 3G (411)
- GSM (375)
- 4G (191)
- Quad Band (113)
- Dual Band (33)
- Tri-Band (2)

**Internal Storage**

- 4 GB (13)
- 8 GB (36)
- 16 GB (116)
- 32 GB (97)
- 64 GB (1)

**Feature Keywords**

- QWERTY (187)
- Straight Talk (38)

**Avg. Customer Review**

- ★★★★☆ & Up (290)
- ★★★★☆ & Up (374)
- ★★★★☆ & Up (587)
- ★★★★☆ & Up (587)

**International Shipping**

- AmazonGlobal Eligible

**Condition**

- New (1,111)
- Used (218)
- Refurbished (303)

**Price**

- Under \$10 (76)
- \$10 to \$24 (194)

**Nokia Lumia 520 GoPhone (AT&T)**

\$100.00 **\$39.99** iPhone  
Get it by **Monday, Nov 17**  
FREE Shipping

**More Buying Choices**  
**\$39.99** new (82 offers)  
**\$32.99** used (21 offers)

★★★★☆ (2) 100%

**Get Deal** Prepaid Phones

**See newer version**

**HTC Desire 816 - Prepaid Phone (Virgin mobile)**

\$200.00 **\$262.75** iPhone  
Get it by **Monday, Nov 17**  
FREE Shipping and 1 more promotion

**More Buying Choices**  
**\$279.99** new (2 offers)

★★★★☆ (2) 100%

**LG Volt White - Prepaid Phone (Virgin Mobile)**

\$100.00 **\$99.99** iPhone  
Get it by **Monday, Nov 17**  
FREE Shipping and 1 more promotion

**More Buying Choices**  
**\$99.99** new (18 offers)  
**\$84.99** used (1 offer)

★★★★☆ (2) 100%

**LG Volt - Prepaid Phone (Boost Mobile)**

\$100.00 **\$70.65** iPhone  
Get it by **Monday, Nov 17**  
FREE Shipping and 1 more promotion

**More Buying Choices**  
**\$69.99** new (22 offers)  
**\$64.99** used (1 offer)

**Samsung Galaxy S II Triband (Boost Mobile)**

\$200.00 **\$195.99** iPhone  
Get it by **Monday, Nov 17**  
FREE Shipping

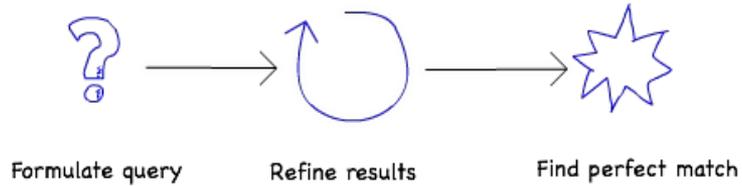
**More Buying Choices**  
**\$199.99** new (2 offers)  
**\$174.99** used (1 offer)

**AT&T Nokia Lumia 635 - No Contract GoPhone**

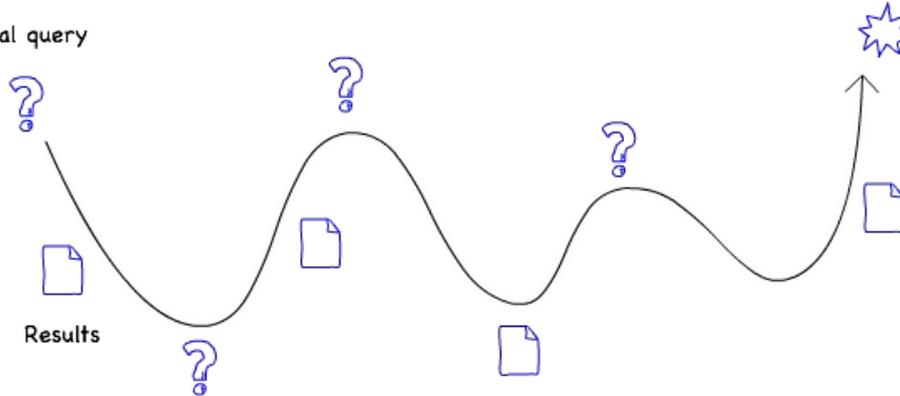
\$100.00 **\$79.99** iPhone  
Get it by **Monday, Nov 17**  
FREE Shipping

**More Buying Choices**  
**\$79.99** new (2 offers)  
**\$69.99** used (1 offer)

# Infoseeking behaviours



Initial query



# Enterprise search

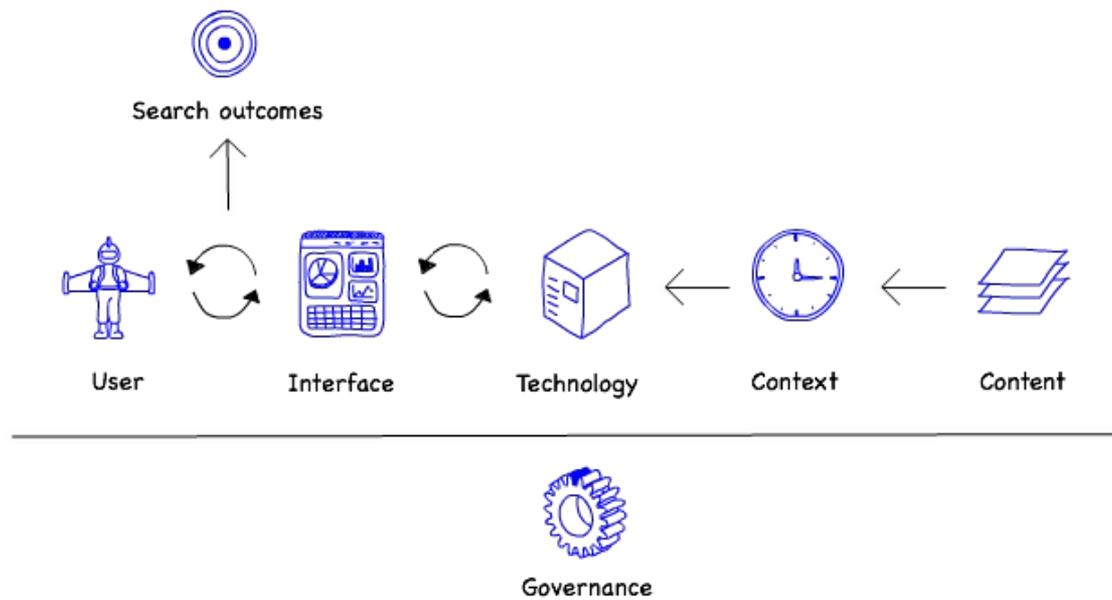
Enterprise search leverages powerful stack of technologies to tame large volumes of heterogeneous information in order to offer users a fruitful search experience.

# Why enterprise search?

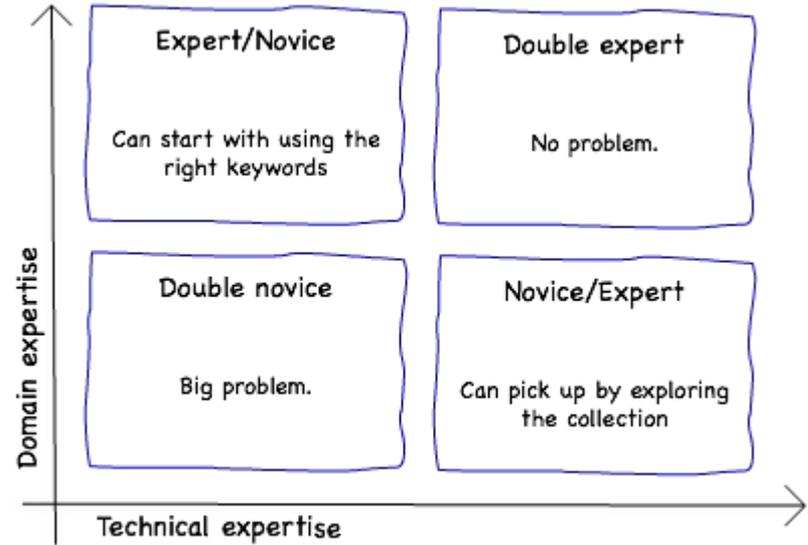
Limit risks of:

- Not finding the existing information (leading to duplication)
- Taking too long to find the right information
- Not able to discover related information
- Not finding the right people with the right expertise
- Taking too long for newcomers to get used to learn a 'messy' environment

# Elements of search experience



# User



# Content

Google   

**Web** Videos Images Shopping News More

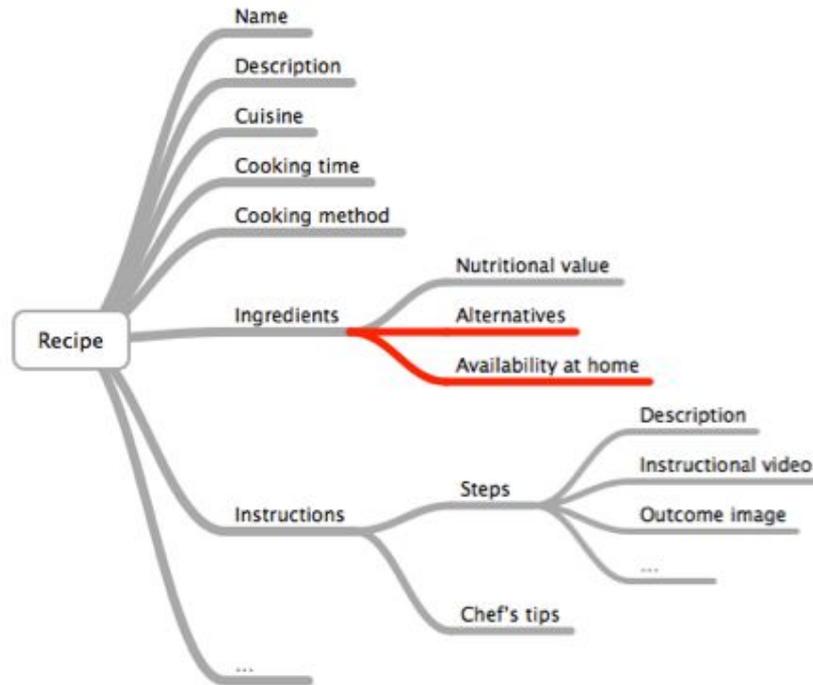
Ingredients

| Ingredients     | Yes                      | No                       |
|-----------------|--------------------------|--------------------------|
| Chocolate chips | <input type="checkbox"/> | <input type="checkbox"/> |
| Baking soda     | <input type="checkbox"/> | <input type="checkbox"/> |
| Vanilla extract | <input type="checkbox"/> | <input type="checkbox"/> |
| Baking powder   | <input type="checkbox"/> | <input type="checkbox"/> |
| Sugar           | <input type="checkbox"/> | <input type="checkbox"/> |
| Flour           | <input type="checkbox"/> | <input type="checkbox"/> |
| Eggs            | <input type="checkbox"/> | <input type="checkbox"/> |
| Butter          | <input type="checkbox"/> | <input type="checkbox"/> |

**Chocolate Chip Cookies Recipe | Martha ...**  
<https://www.marthastewart.com/.../soft-and-chewy-...>    
Rating: 3.8 - 281 reviews  
chip cookies are a go-to favorite dessert, sweet snack, or  
of treat. With our easy, three-step recipe, you'll have soft and  
chocolate chip ...  
Chocolate Chip Cookies - Soft-Baked Chocolate Chip ... - Chocolate

**Original NESTLÉ® TOLL HOUSE® Chocolate Chip Cookies ...**  
 <https://www.verybestbaking.com/recipes/.../original-nestle-t...>    
Original NESTLÉ® TOLL HOUSE® Chocolate Chip Cookies. This

# Modelling for relevance



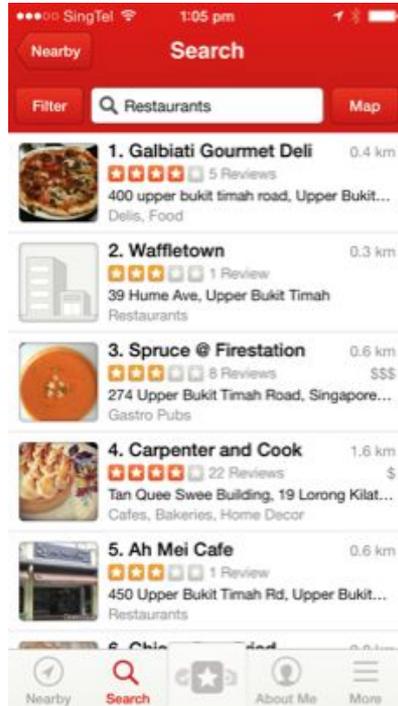
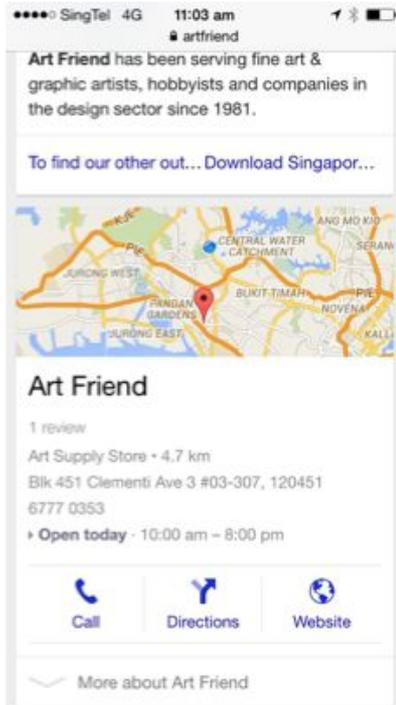
1. No metadata, no search

2. Bad metadata is worse than no metadata



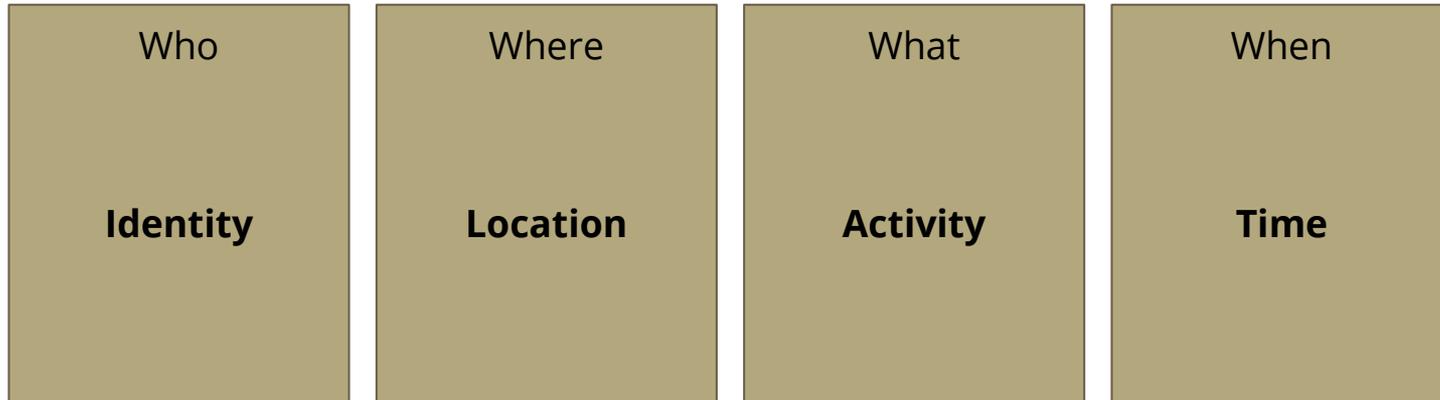
Agnes Molnar

# Context



Searching from Bukit Timah

# Context



# Interface

The beautiful box

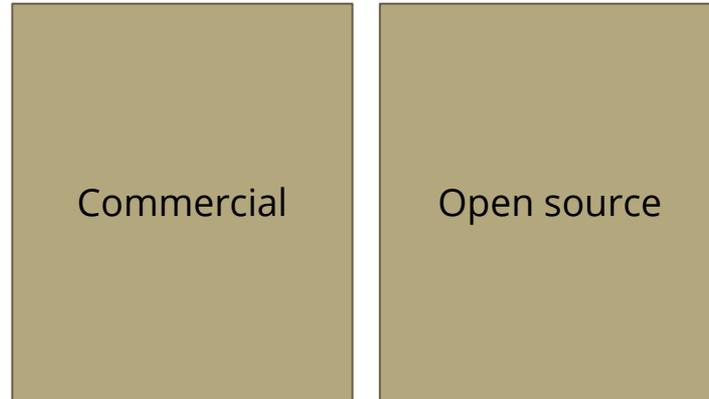


Enter keywords

Microphone icon, Heart icon, Magnifying glass icon

# Technology

Dates  
Duplicates  
Entity extraction  
Faceting  
Multi-lingual  
People search  
Query management  
Ranking  
Sentiment analysis  
Spell checking  
Stemming and lemmatization  
Stop words  
Summarisation  
Tokenization  
...



# Technology

1. Strength
2. Scalability
3. Satisfaction - ease of use

You may find that open source search engines are equal to, if not better than, commercial ones.



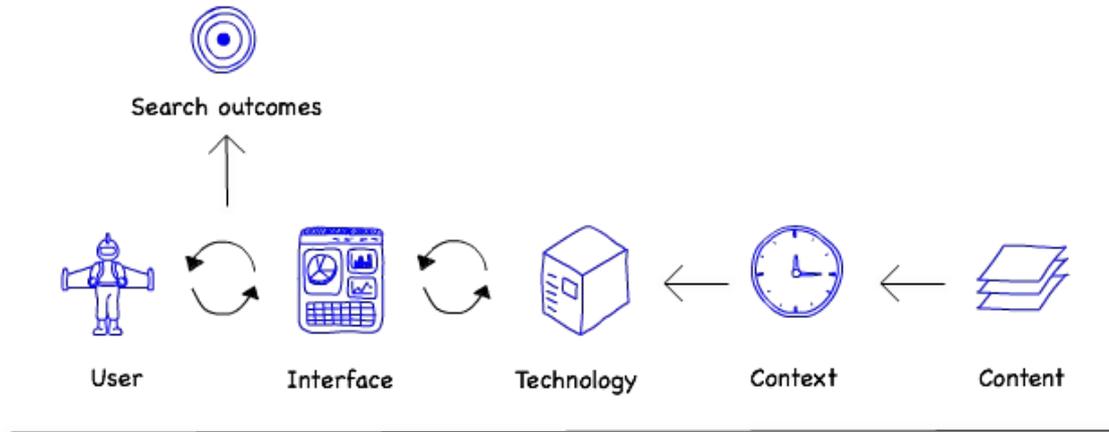
elasticsearch.

# Governance

“The impact of search on business performance depends more on the level of investment in a skilled team of people to support search than it does on the level of investment in search technology.”

Martin White, author of *Enterprise Search*

# Governance



How is it done?  
How is it measured?  
How is it improved?

# How is search performance measured?

- How many users are using the search box?
- What are the top xx places users begin their searches?
- What are the top xx search queries?
- What are the top xx pages reached through search?
- What are the queries with 0 results?
- What are the queries with 0 click-throughs on the SERP?
- How many times was search used immediately after the first SERP?
- What are the queries that result in more than 3 SERPs?
- How many users used facets or filters?
- How many users use “best bets”?
- ...

# Thank you!

maish@pebbleroad.com

