



# Getting Started in Search

*Workshop*

*20 July, 2016 Singapore*

**Agnes Molnar**

Founder & Principal Consultant

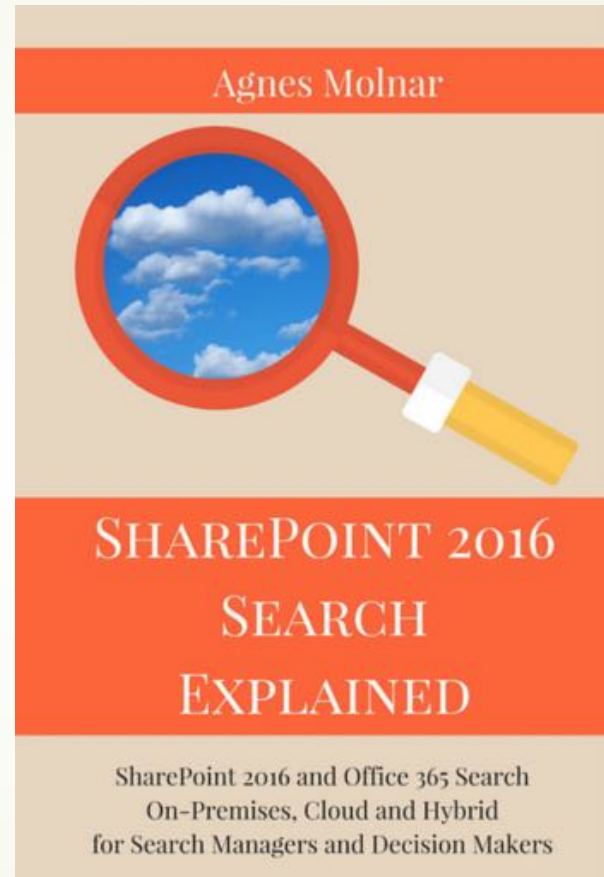
**Search Explained**

**Maish Nichani**

Founder & Principal

**Pebbleroad**

# Introduction – Agnes Molnar



<http://SearchExplained.com/IKO2016>

[Agnes.Molnar@SearchExplained.com](mailto:Agnes.Molnar@SearchExplained.com)

@SearchExplained

# Introduction – Maish Nichani



[maish@pebbleroad.com](mailto:maish@pebbleroad.com)  
@maish

What does search mean to you?

# What is enterprise search?

- What is search?
  - Search is the act of finding information to get a job done.
- What is a search experience?
  - The search experience is the state of mind of the user before, during and after search.
- What is enterprise search?
  - Enterprise search refers to a powerful stack of technologies you subscribe to or buy to help design great search experiences.

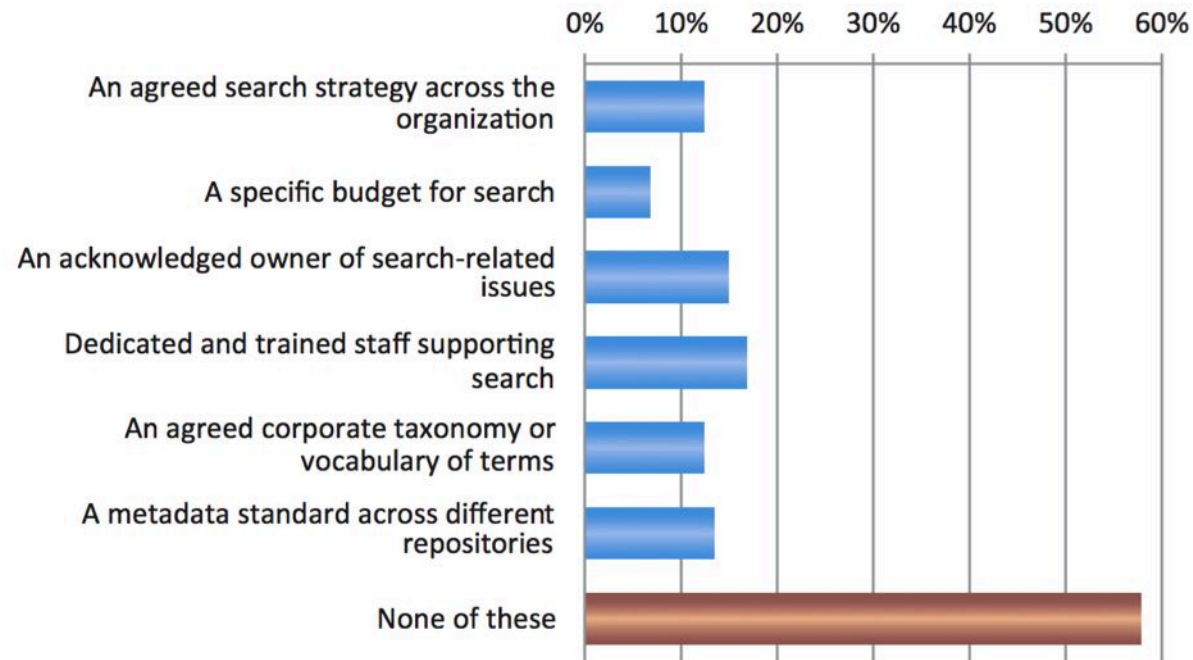
# Why enterprise search?



Source: International Data Corporation (IDC); McKinsey & Company

# Why enterprise search?


**Figure 4: Thinking of the maturity of your approach to search, which of the following do you have?**  
(N=266 multiple)




While 71% of organizations consider search to be vital or essential to productivity and effectiveness, 58% show little or no signs of maturity in search.



# Why not use Google?



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Search

Location



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1500 Bendemeer Road, Singapore 339946  
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Work

blications





# Business Challenges with Search



# Business Challenges with ~~Search~~ Findability

# The Paradox of Content

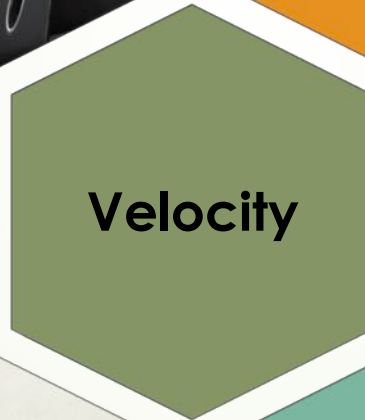
- Less Content – Less Value
- More Content – More Garbage



# Content Challenges



**Volume**



**Velocity**



**Variety**



# Information Overload



Getting information off the  
Internet is like taking a  
drink from a fire hydrant.

Mitchell Kapor

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The average person receives  
63,000 words of new  
information every day.

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Average length of a novel:  
64,531 words

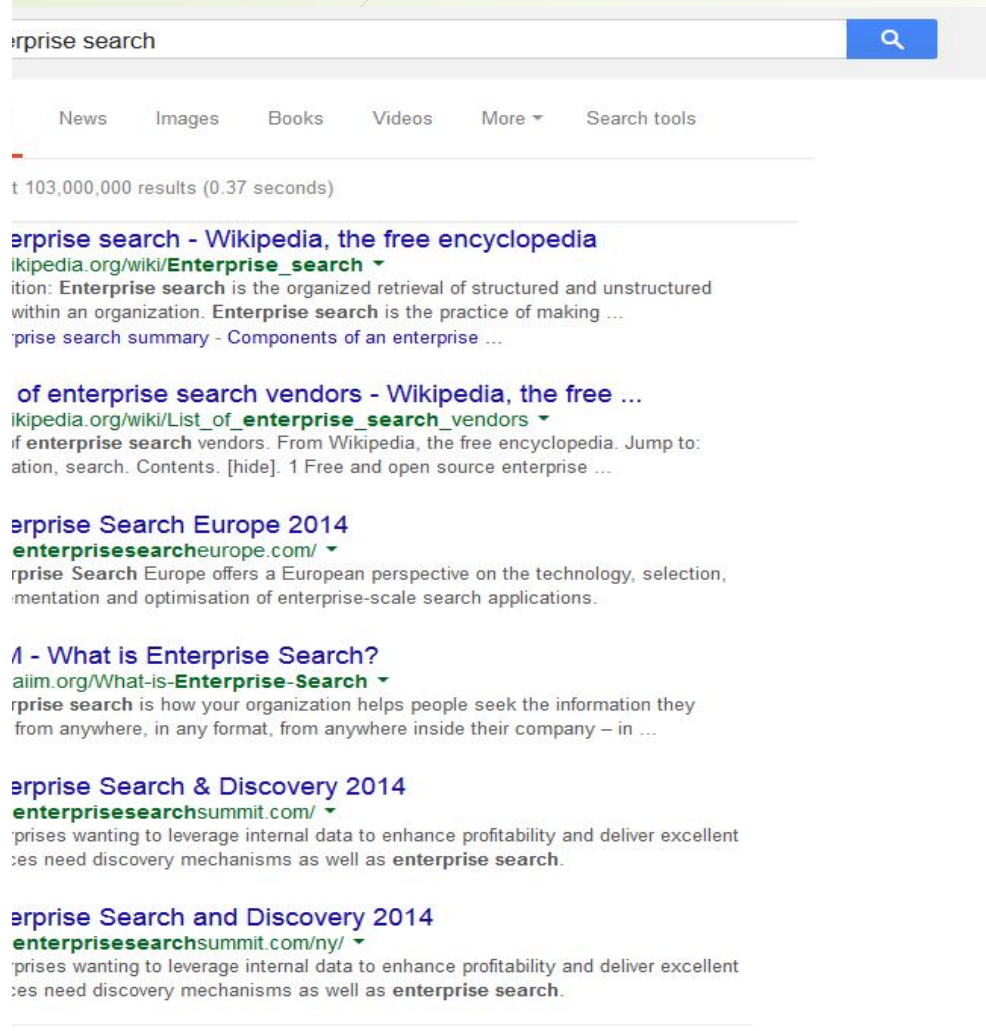
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If you wanted to read  
everything you've got in 2015,  
it would take you the first three  
months of 2016!

Source: Robby Walker; Amazon Text Stats



# Visualization Challenges



“Ten blue lines” experience

“Old style”

Not visual enough

Not obvious

Ranking

Hard to “overview”

# Data Mining & Semantics

Content has no meaning to the engine

No relationships and links between objects

No cross-system relationships defined

Lack of quality metadata





# Security in Enterprise Search

- **Goal:** to avoid “**security accidents**”
- Enterprise Search Security = Content Security
- Enterprise Search != Security Leak



# Search as a Metaphor is Broken!



*“Search is no longer simply  
about “search”  
(...)”*

*It is moving into*

*the **real-time**, the **predictive**  
and the **visual**.”*

Innovations in Knowledge Organization Conference  
Singapore, 2015

# Findability

**Navigation**

**Search**

**Accessibility**

**Information  
architecture**

**User  
experience**

**User  
interactions**

**User profile  
& persona**

**Machine  
learning**

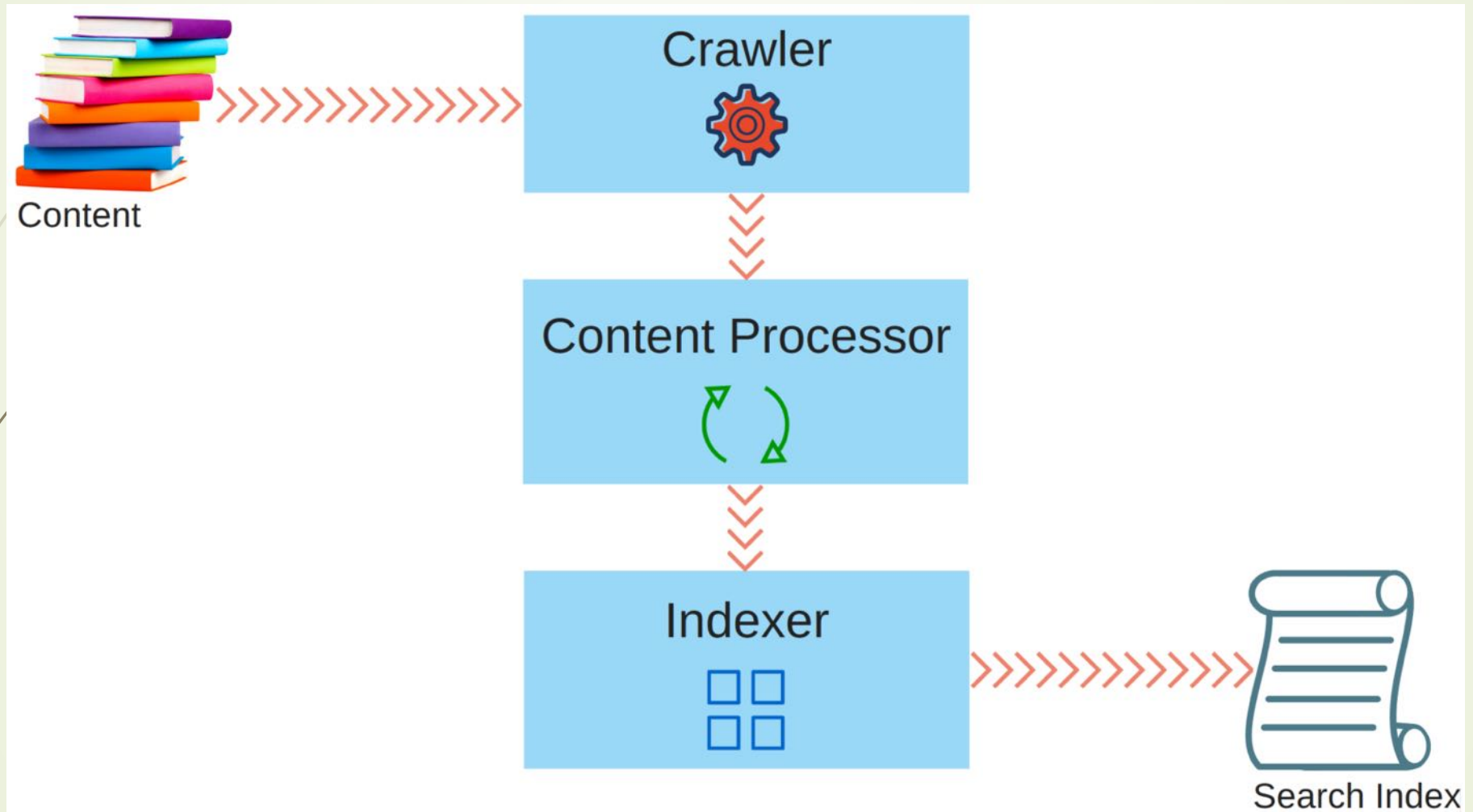


# Search Processes & Components

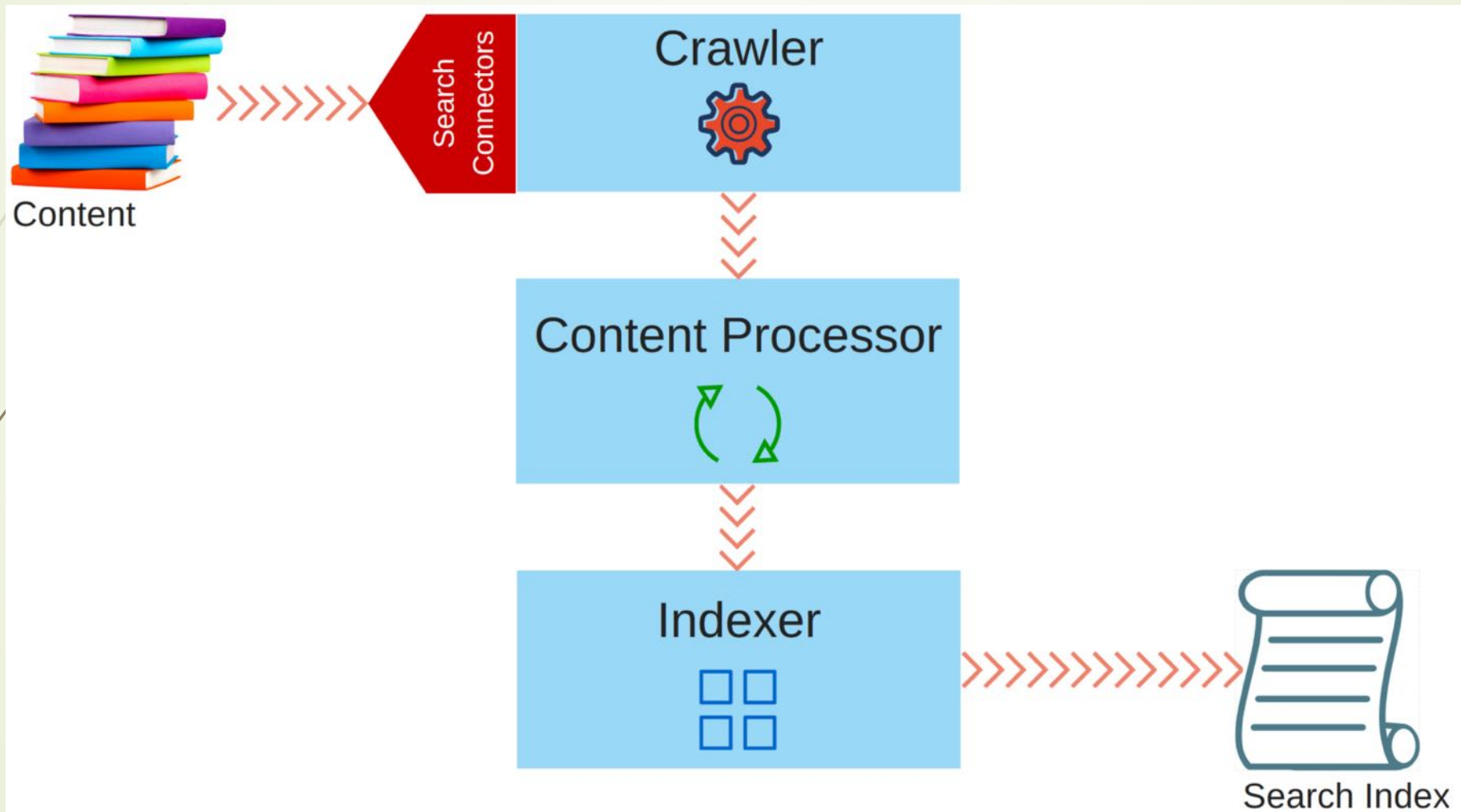
# Search Processes



# Crawling & Indexing



# Crawling & Indexing







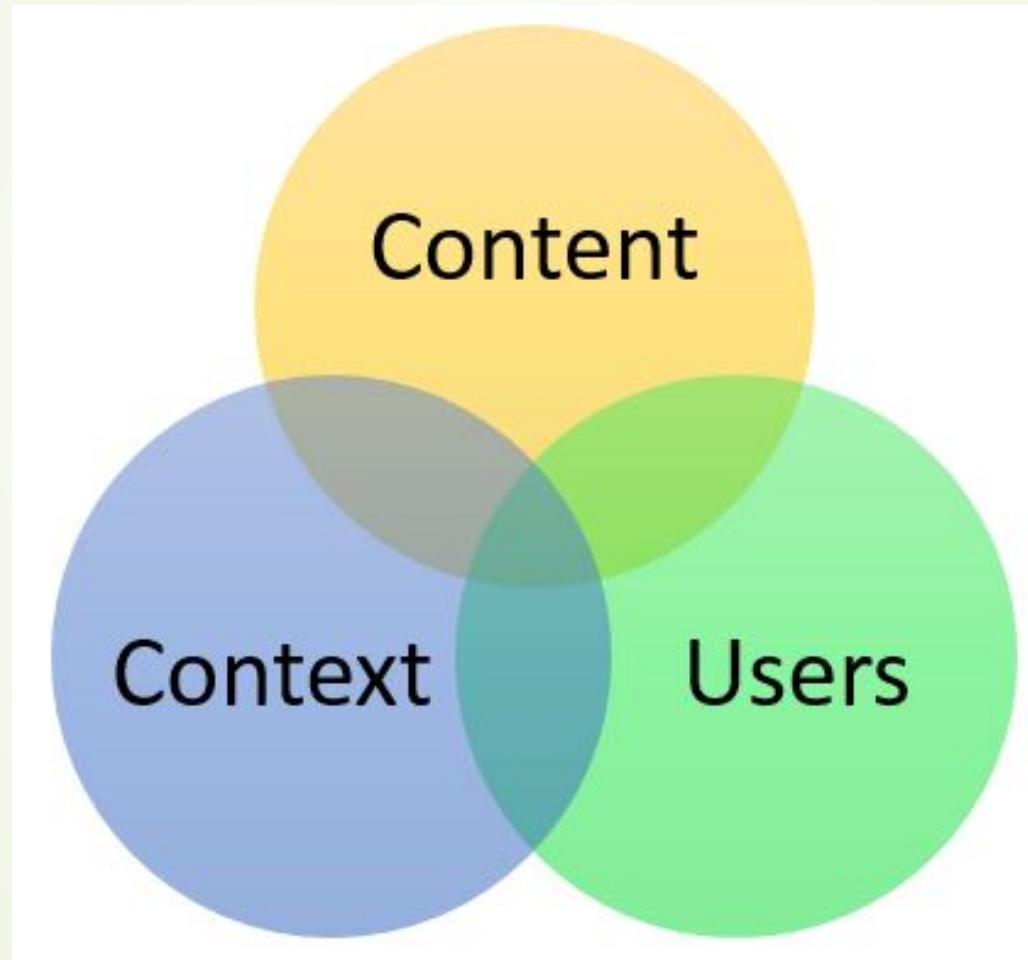
Search projects

# A business process

- More than a One-Time Project (initial implementation)
- Analysis
- Collecting Feedbacks
- Evaluation
- Continuous improvement



# Main Considerations





# Content



# Metadata

## Content Metadata

- Stored in CMS
- Explicit & implicit metadata
- Changed by users & processes

## Search Metadata

- Stored in the Search Index
- Changed by the Search Engine (indexing)
- Read-only by the users & processes
- Essential for findability
- The “heart” of UI

# Unifying Metadata

- Various systems – various metadata
  - E.g. **AUTHOR** vs. **CREATOR** vs. **CREATED BY** vs. **OWNER** vs. ...
- Various systems – various value sets
  - E.g. **MAISH NICHANI** vs. **maish.nichani** vs. **PEBBLEROAD\maish** vs. **maish@pebbleroad.com** vs. ...

# Unifying Metadata

- Unified Search experience needs Unified metadata
- Manual vs. Auto-Classification
- Search Index normalization





# Users



Assistant



Explorer

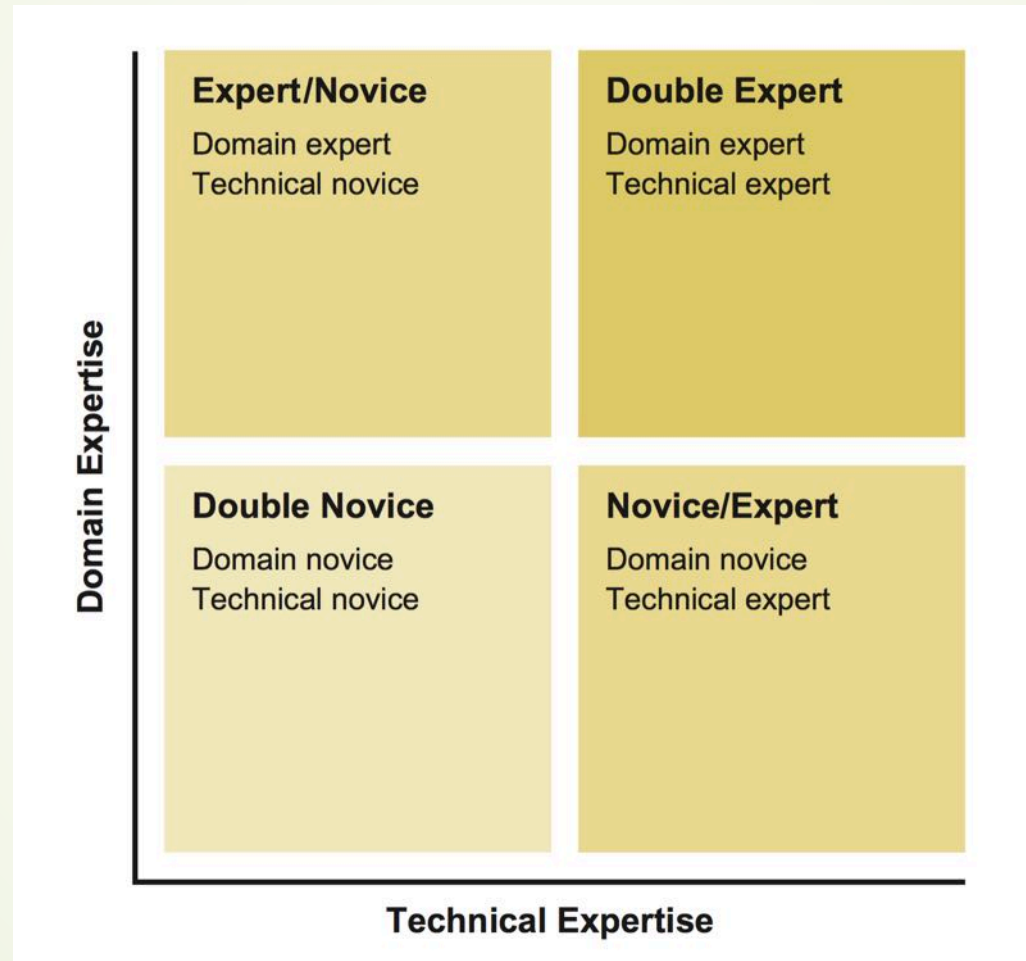


Analyst



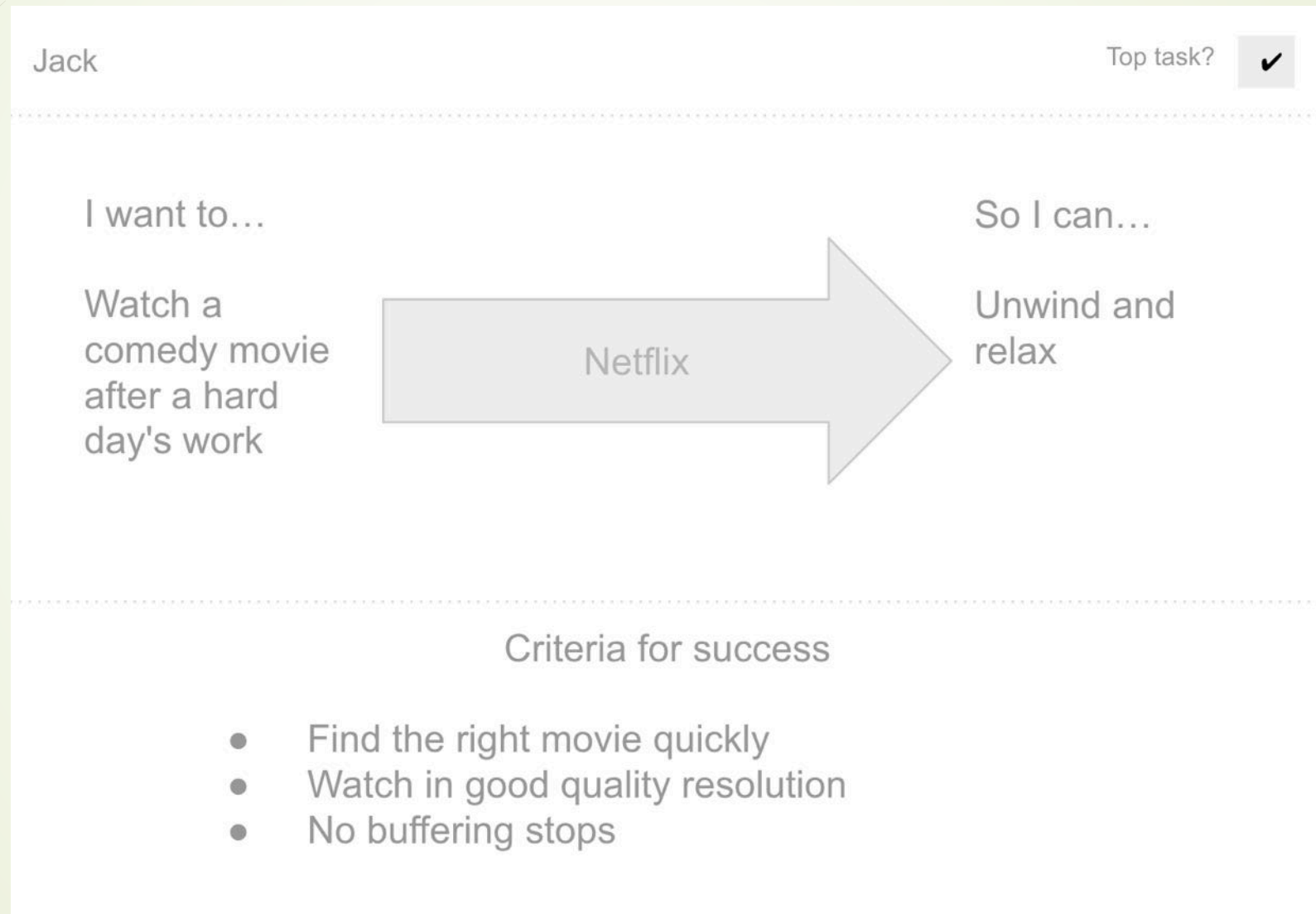
Executive

# Users

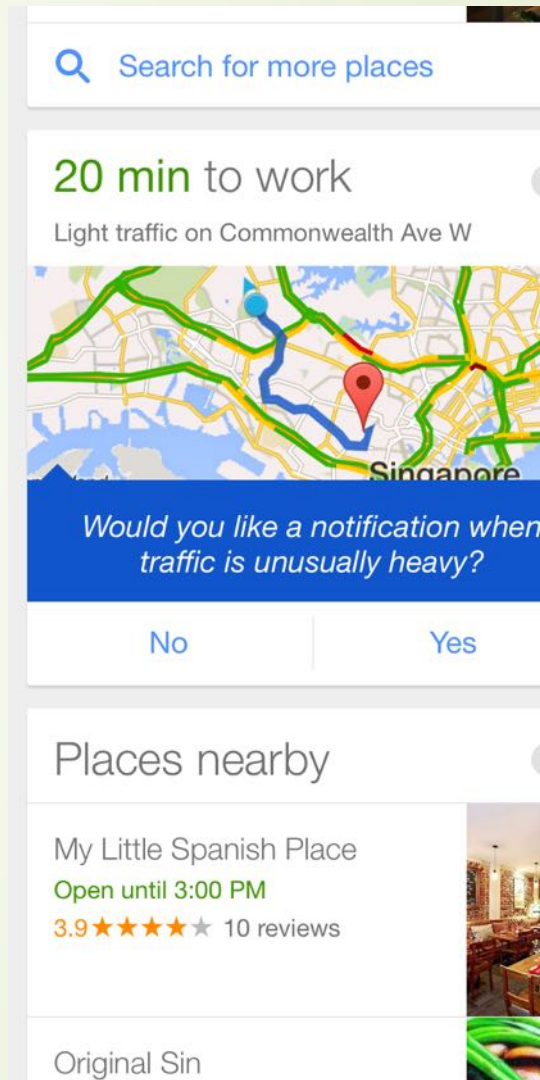
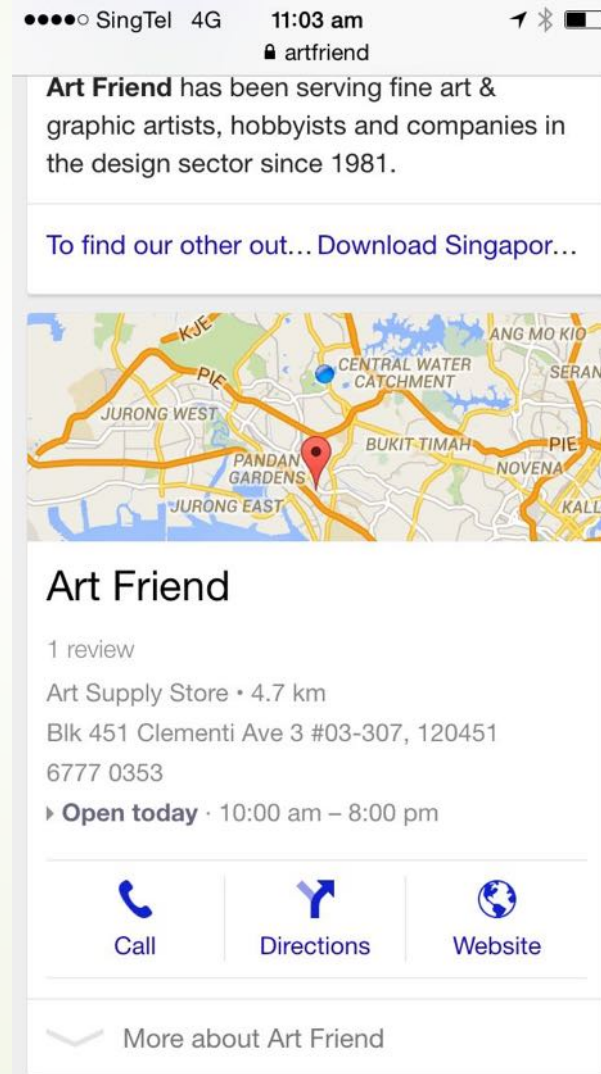
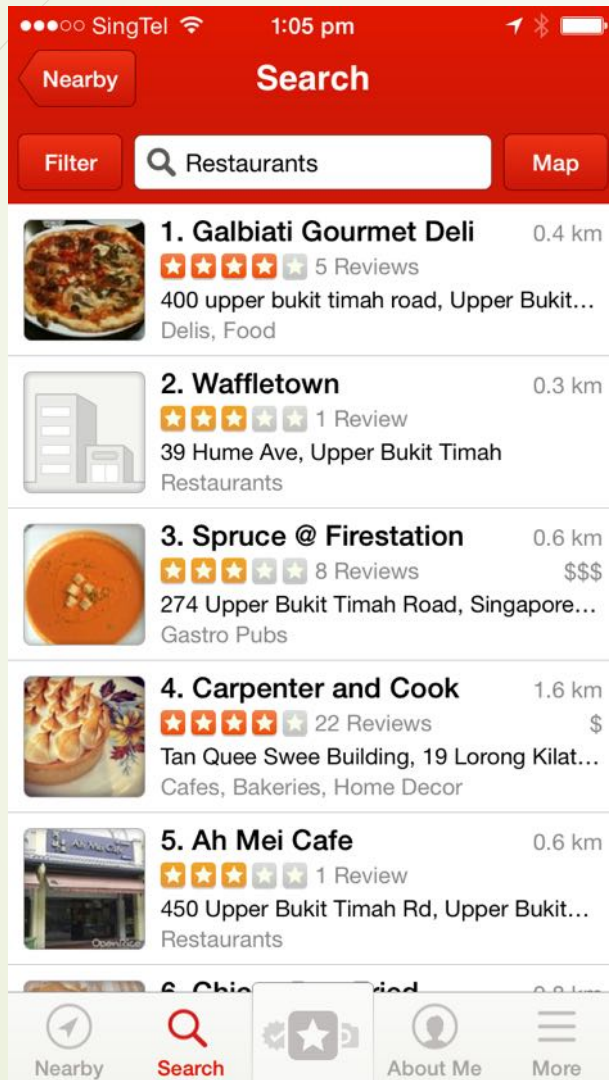


*Designing the search experience by Tony Russell–Rose and Tyler Tate*

# User tasks



# Context



# Context

<b>Device</b>	Which devices?
<b>Environment</b>	In office or out of office? What are the working conditions?
<b>Time</b>	When? How often?
<b>Activity</b>	What is the job-to-be-done?
<b>Individual</b>	What are their subject matter and technical savviness?
<b>Location</b>	Where? Stationary or mobile?
<b>Social</b>	Type of work, individual or group?

Designing with context by Cennydd Bowles, <http://www.cennydd.com/writing/designing-with-context>

# Requirements

Business goals

Scenarios & use cases

Application Lifecycle

Systems to integrate

User Experience

Metrics

Milestones


Resources

Experts

- Internal
- External
- “Liaison”



# Interface



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South Asia (289)  
Southeast Asia (183)  
North America (168)  
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**Suppliers by Country/Region**  
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☐ Hong Kong (779)  
☐ Pakistan (26)  
☐ India (251)  
☐ Argentina (325)  
☐ Australia (6)  
☐ Austria (69)  
☐ Bangladesh (5)

**Categories**  
**Consumer Electronics**  
Mobile Phones (16893)  
Screen Protector (16548)  
Mobile Phone Housings (4295)  
**Computer Hardware & Software**  
Modems (13909)



Products ▾ huawei 268,112 Product(s)


Related Searches: [huawei p7](#) [huawei p6](#) [huawei g610](#) [huawei e173](#) [huawei b593s-22](#) [huawei e5776](#)

**Products** **Suppliers**

Sort by: ☐ Gold Supplier ☐ Onsite Check ☐ Assessed Supplier ☐ ESCROW ☐ e-Credit Line

Minimum Order:  ☐ Online

View as:  




**Huawei E3276 4G LTE USB Modem**

US \$75-82 / Piece ( FOB Price)  
5 Pieces (Min. Order)

Place of Origin: CN;GUA ; Products Status: Stock ; Brand Name: Huawei ;  
Type: Wireless ; Interface Type: USB ; Certification: CE,RHOS ; Style: External


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**Brand new 3G wireless router huawei E585**


US \$30-32 / Piece ( FOB Price)  
50 Pieces (Min. Order)

Place of Origin: CN;GUA ; Products Status: Stock ; Brand Name: HUAWEI ;  
Type: Wireless ; Interface Type: USB ; Certification: CE ; Style: External ;




**Huawei E173**

antenna for huawei  
e173 3g usb modem ,




**FTTX Technology**


Huawei compatible LS  
SFP ZX 1550nm 80km




**FOLITE FOR HUAWEI**



Shenzhen WODESS Technology Co., ... ▾  
China (Mainland) | [Contact Details](#)

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Shenzhen Lanwo Technology Co., Ltd. ▾  
China (Mainland) | [Contact Details](#)

69.6% Response Rate



# Interface

- **Input** – features that allow the searcher to express what they are looking for
- **Control** – features that help searchers to modify, refine, restrict, or expand their Input.
- **Informational** – features that provide results or information about results.
- **Personalisable** – features that relate specifically to searchers and their previous interactions.

*Search User Interfaces* by Marti A. Hearst.

# Metrics



	Goals	Signals	Metrics
Happiness			
Engagement			
Adoption	Get new staff to quickly start using search to explore and find resources.	How many new staff use search in the first 2 months.	# of search sessions/month for the the new staff segment.
Retention			
Task Success			

# Roles

- **Search manager:** oversight of enterprise search strategy, governance and rollout of search projects.
- **Search analyst:** user needs, content needs and governance of the project.
- **Search back-end engineer:** search technology configuration, integration and custom development.
- **Search front-end engineer:** search interfaces, personalisation and customisation.
- **Search relevancy engineer:** relevancy tuning, content processing and search analytics.

# Proof of Concept (POC)

- Initial requirements & conditions
- Limited scope
  - Functionality
  - User Experience
  - Content
  - Users
  - Etc.
- Limited time frame

# Proof of Concept (POC)

- To prove feasibility
  - Functionality
  - User Experience
  - Content
  - Users
  - Etc.
- To prepare & set expectations
- To refine requirements

# Project phases

