



Live Search

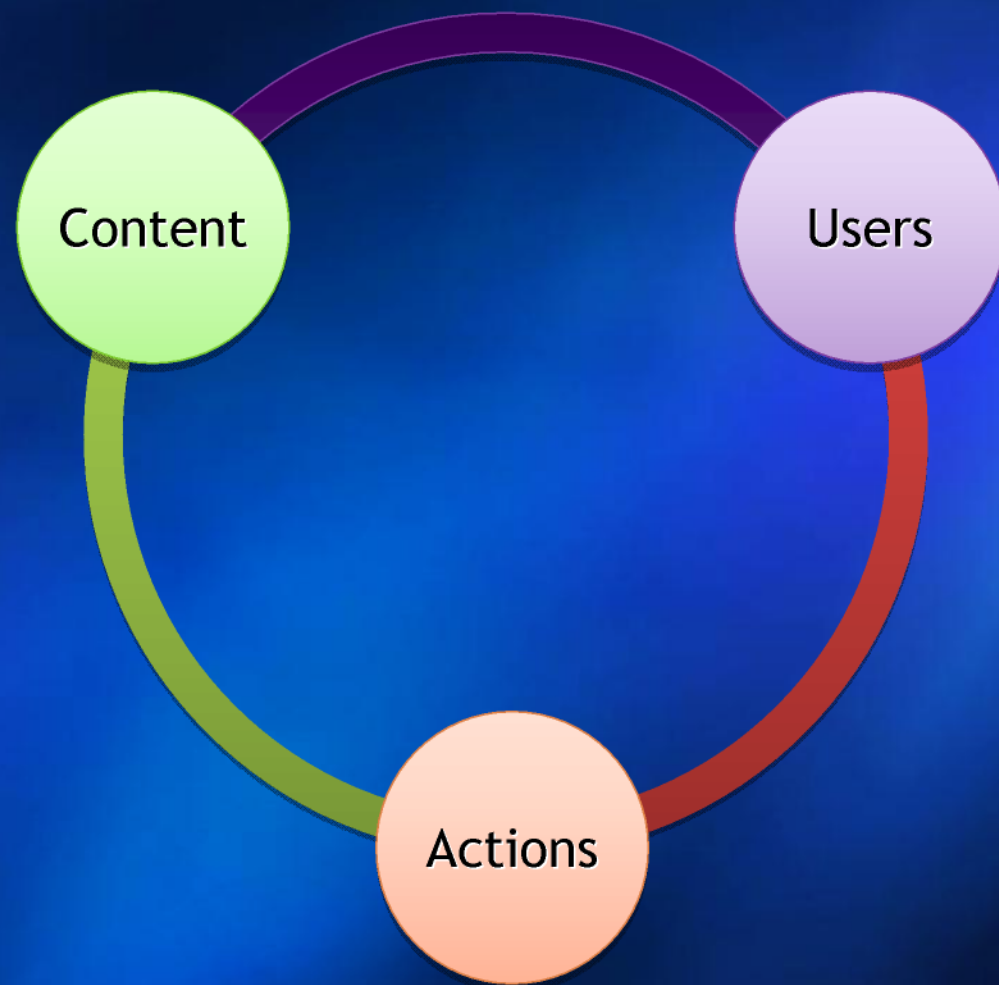
# Taking Search to New Frontiers

Harry Shum  
Corporate Vice President  
Microsoft Corporation  
WWW 2008

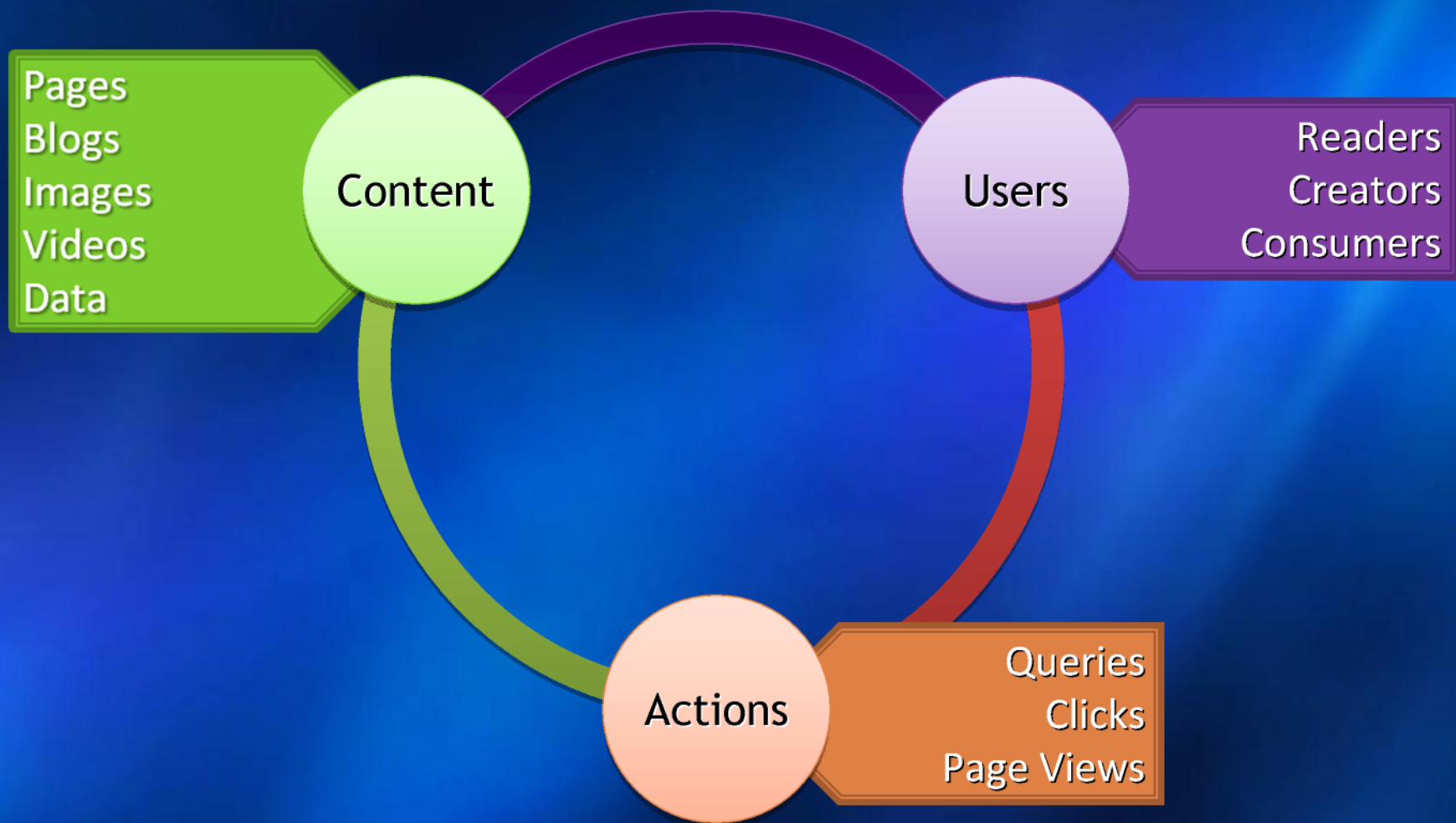
# The History of Search

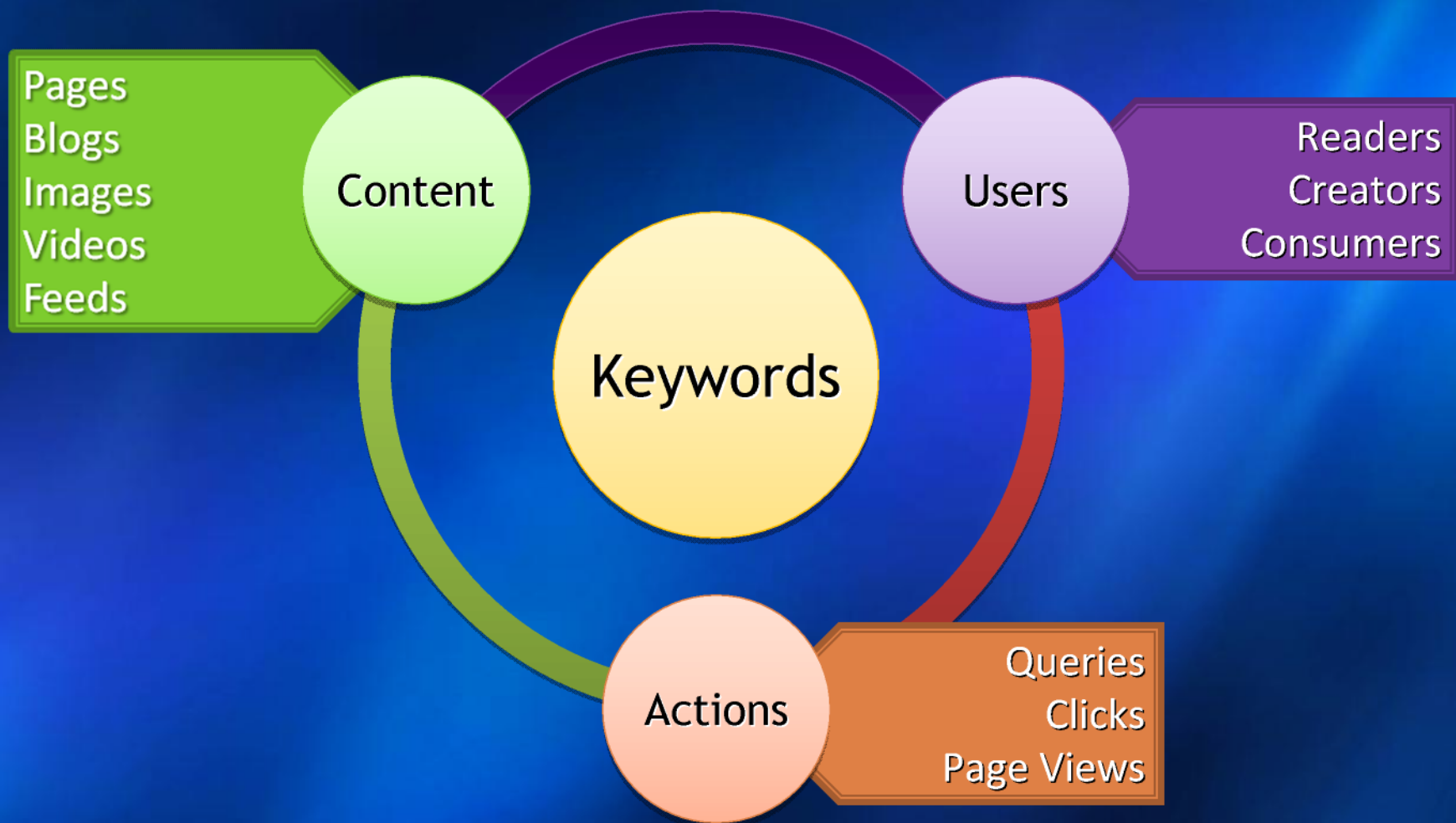












Scale



Growth  
in video



Growth  
in  
images



Growth in  
commerce

Keywords



Social web

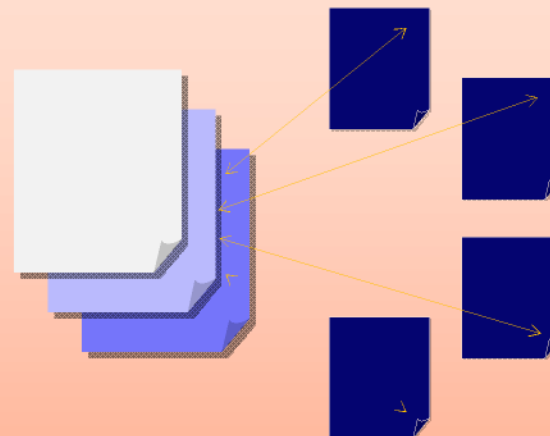
User  
participati  
on



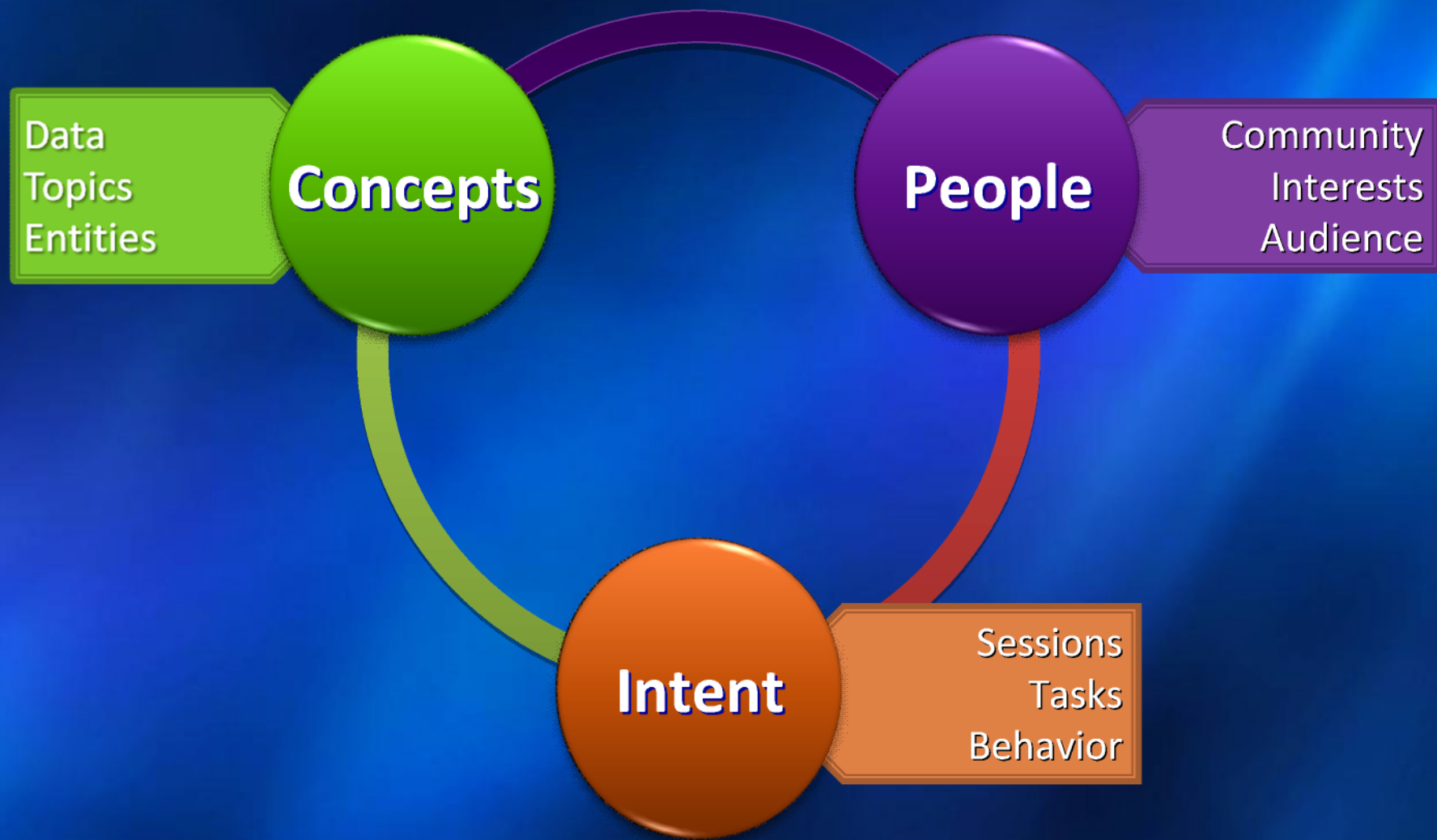
Wisdom of  
the crowds

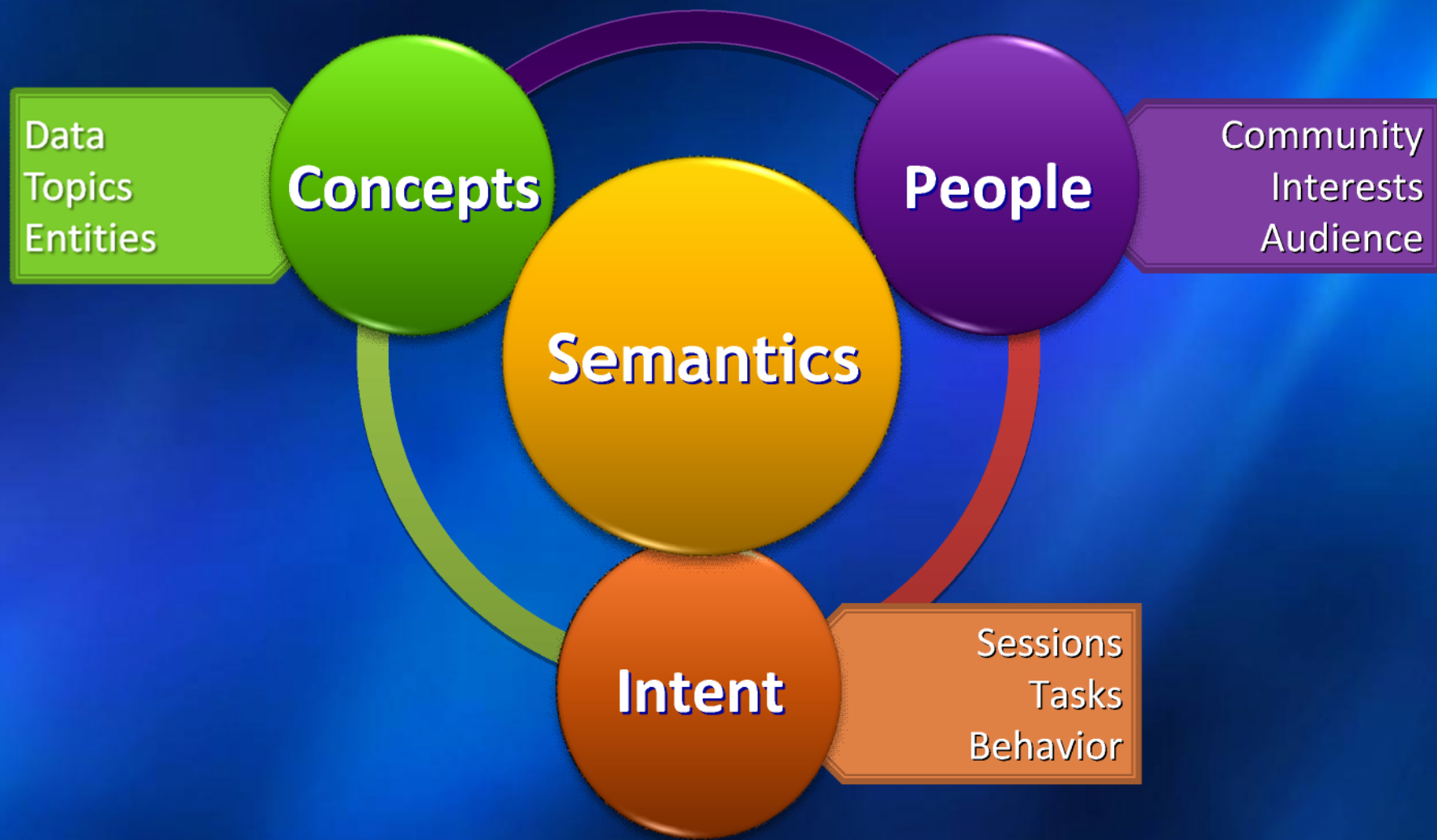
40% unanswered  
queries  
50% require refinement

- queries to sessions
- action oriented
- whole page relevance





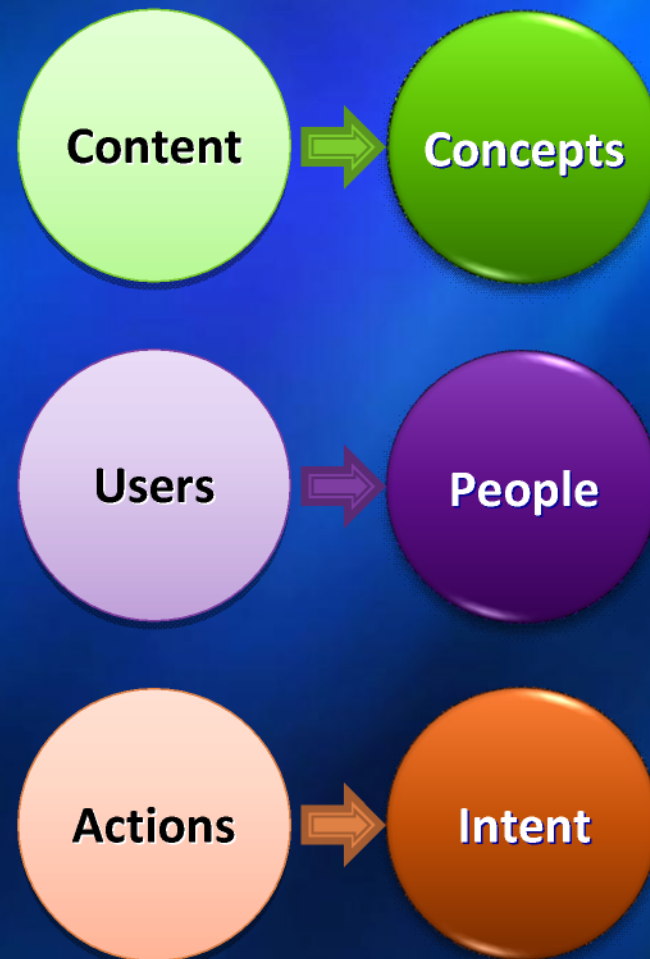




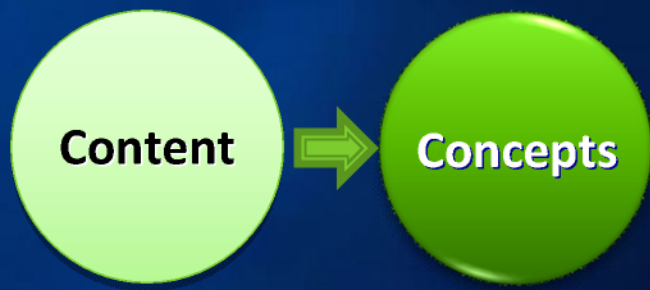
# A Practical Approach to Semantics

Understand > Extract > Expose

- Data-driven
- Incremental
- Interactive







# Technical Quests

## Intra-page Intelligence



## Inter-page Intelligence



## Temporal Understanding

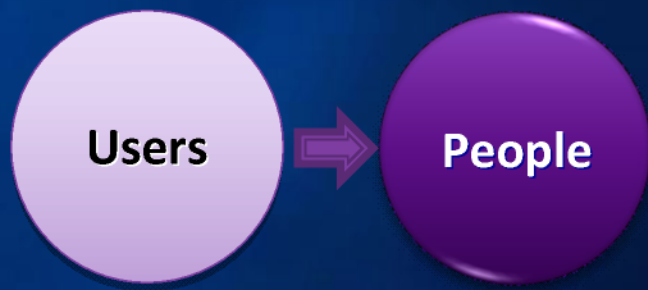


# Video Search

## *Demo*

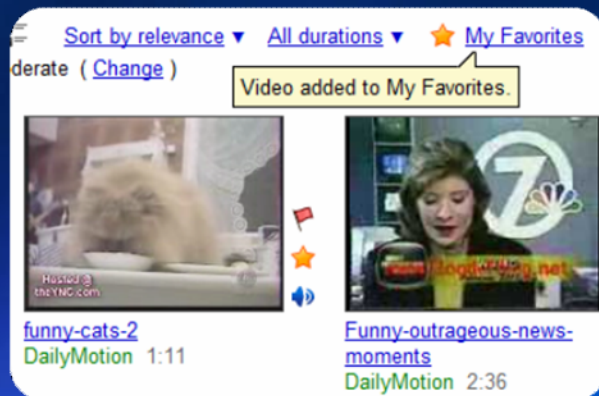
Researchers:

Kit Thambiratnam, Roger Peng Yu,  
Neema Moraveji, Frank Seide

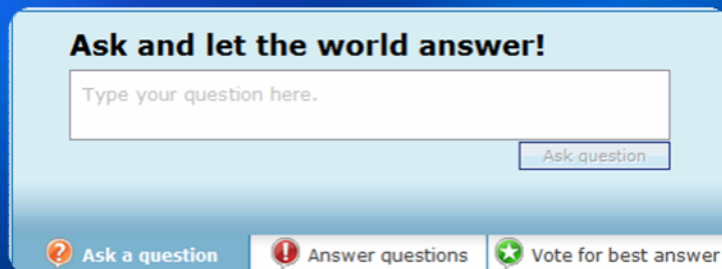


# Technical Quests

## Personalization



## Community



## Collaborative Filtering

### Related searches

[Brad Pitt Angelina Jolie](#)  
[Shiloh Nouvel](#)  
[Brad Pitt Pictures](#)  
[Brad Pitt Gossip](#)  
[Jennifer Aniston](#)  
[Brad Pitt Jennifer Aniston](#)  
[Brad Pitt Photos](#)  
[Brad Pitt Movies](#)

### Related People

Bill Clinton  
George H. W. Bush  
John Kerry  
Ronald Reagan  
Dick Cheney



# Guanxi

# *Demo*

Researchers:

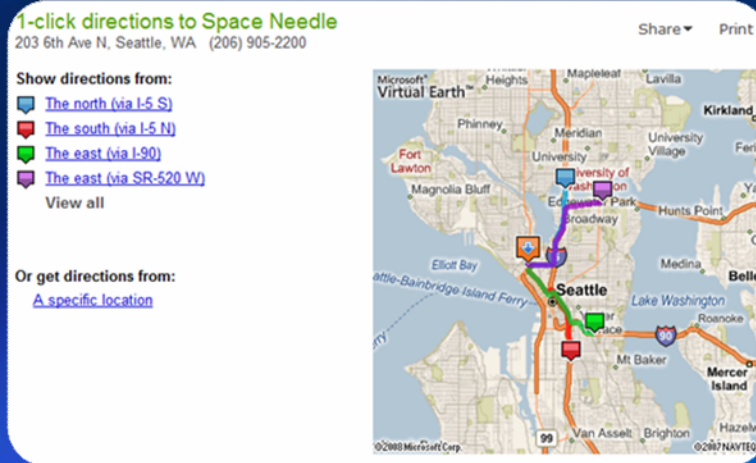
Zaiqing Nie, Yunxiao Ma, Yong Cao,  
Ruochi Zhang, Bo Zhang, Xin Zou, and  
Ji-Rong Wen

Actions

Intent

# Technical Quests

## Contextual Intelligence



## Mobile Awareness

## Intent Refinement



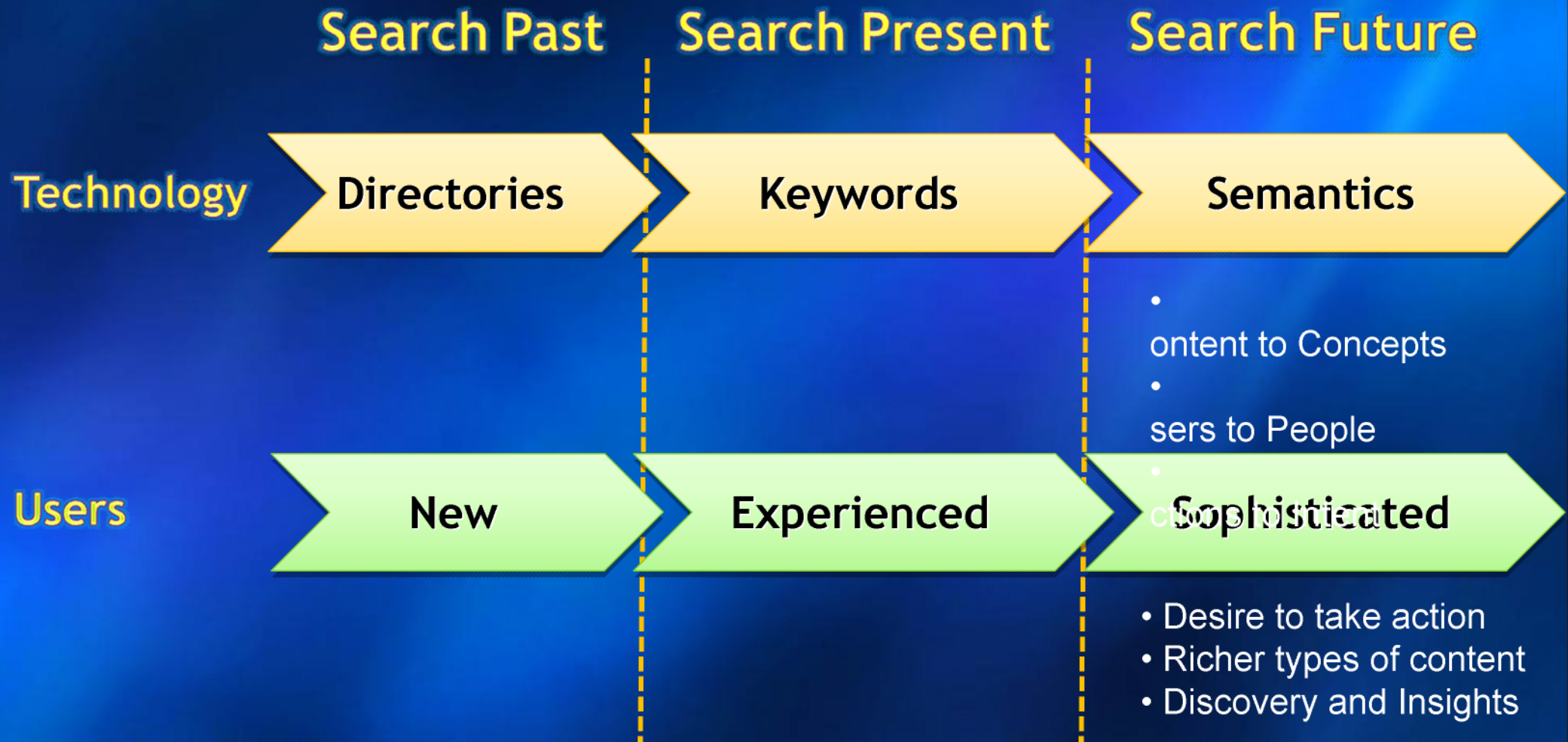
# Image Search

## *Demo*

Researchers:  
Fang Wen, Xiaoou Tang



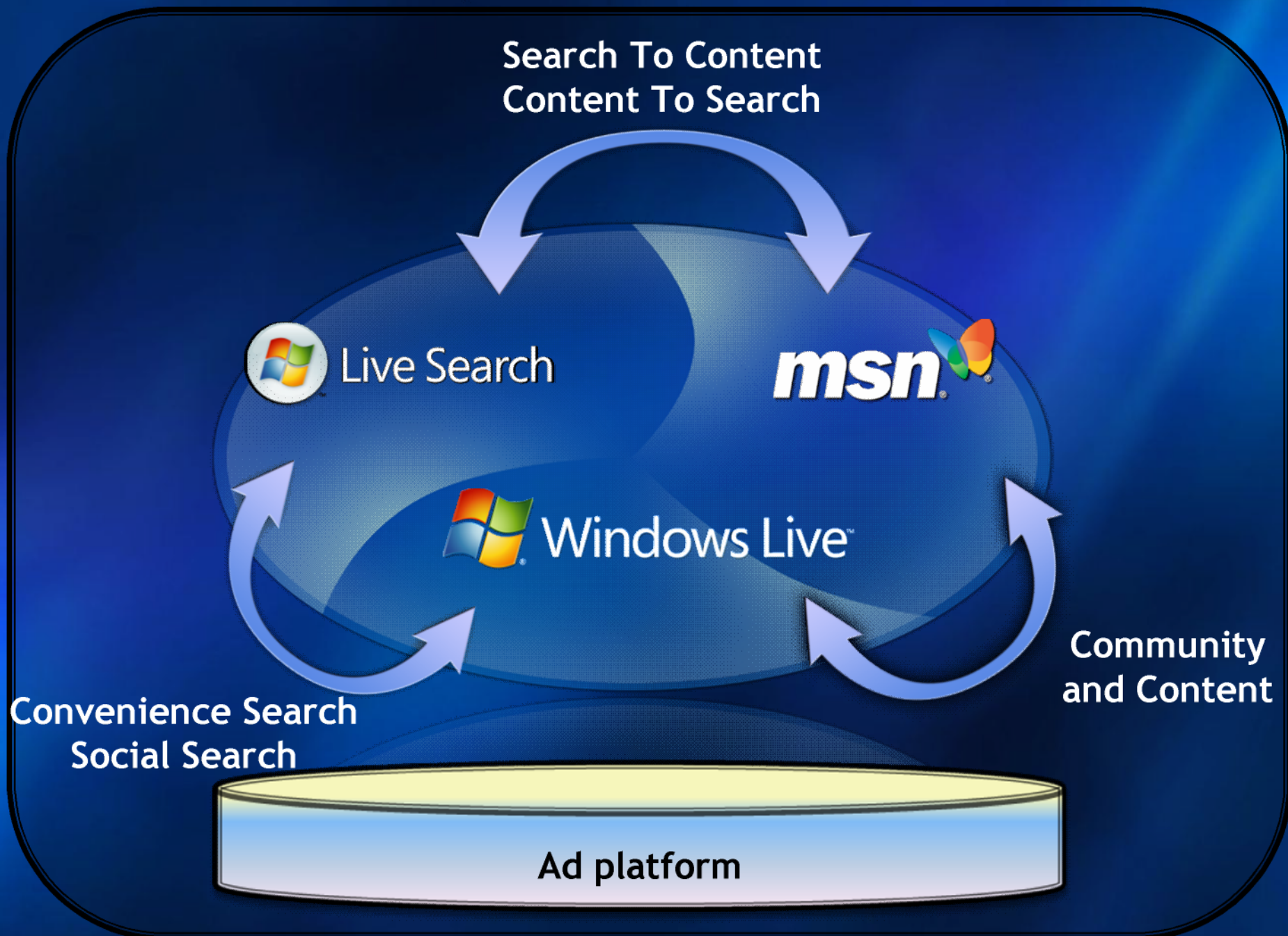
# The Opportunity for Search



Live Search

*Demo*

# Online Ecosystem





*QnA*



Live Search