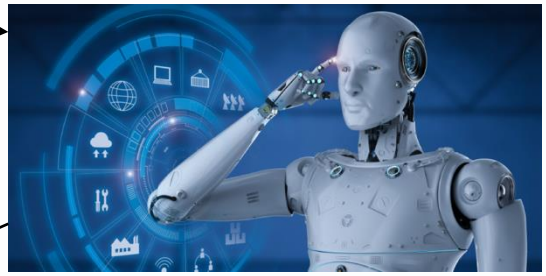
FoxShopping: A smart recommendation system for e-Commerce

I need a **gaming laptop** around **1000**$ **?**



You should buy  from **retailer** ABC,
because:
+ Hardware …
+ Price …

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Outline

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2. **Proposed methods**
    1. Technologies
    2. Collaborations
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    1. Science
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4. **Outcome**
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FoxShopping: A smart recommendation system for e-Commerce (1/2)

Traditional shopping

Online shopping

- **Online shopping** is **booming** in **Vietnam** and **Asian countries**:
  - + **Revenue** = **$2,709**m in 2019.
  - + Annual **value growth 65%** (Fig. 1)
  - ⇒ Market volume (***MV***) = **$4,537**m by 2023.
  - + **largest** segment: **Electronics** & **Media** (***MV*** = $685m in 2019)

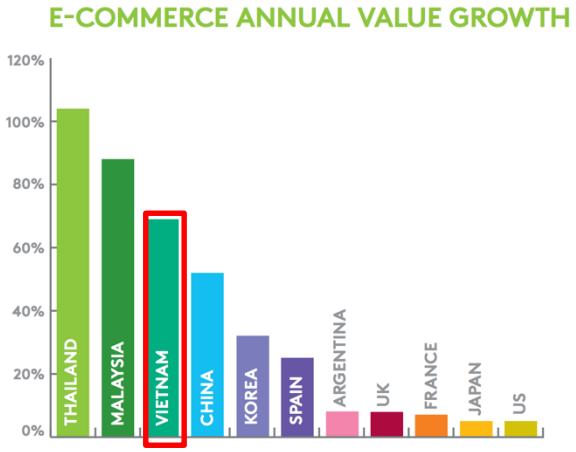
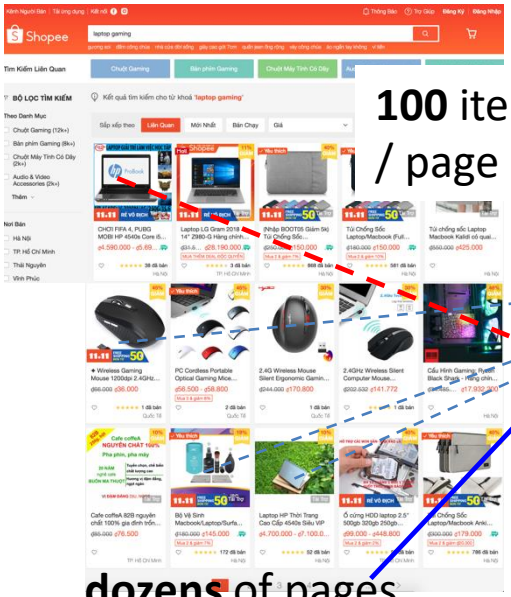


Fig. 1 Source: Kantar Worldpanel (2017)

FoxShopping: A smart recommendation system for e-Commerce (2/2)

gaming laptop



100 items / page

dozens of pages

1) **Many** items

2) **Irrelevant** items

3) Buy?

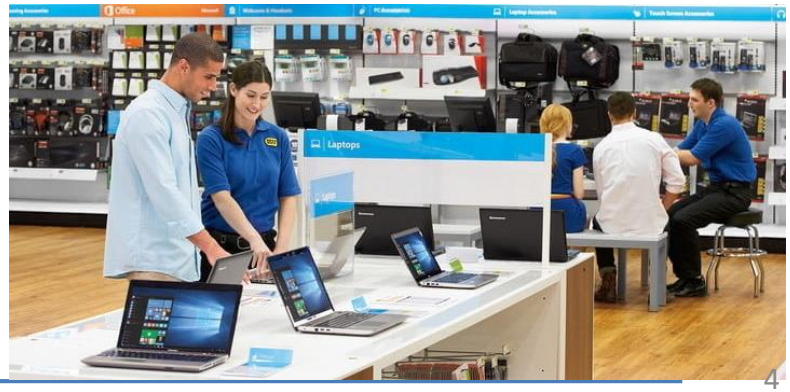
+ Suitable for usage purpose

+ Rugged

+ Price

+ faith retailers?

NO



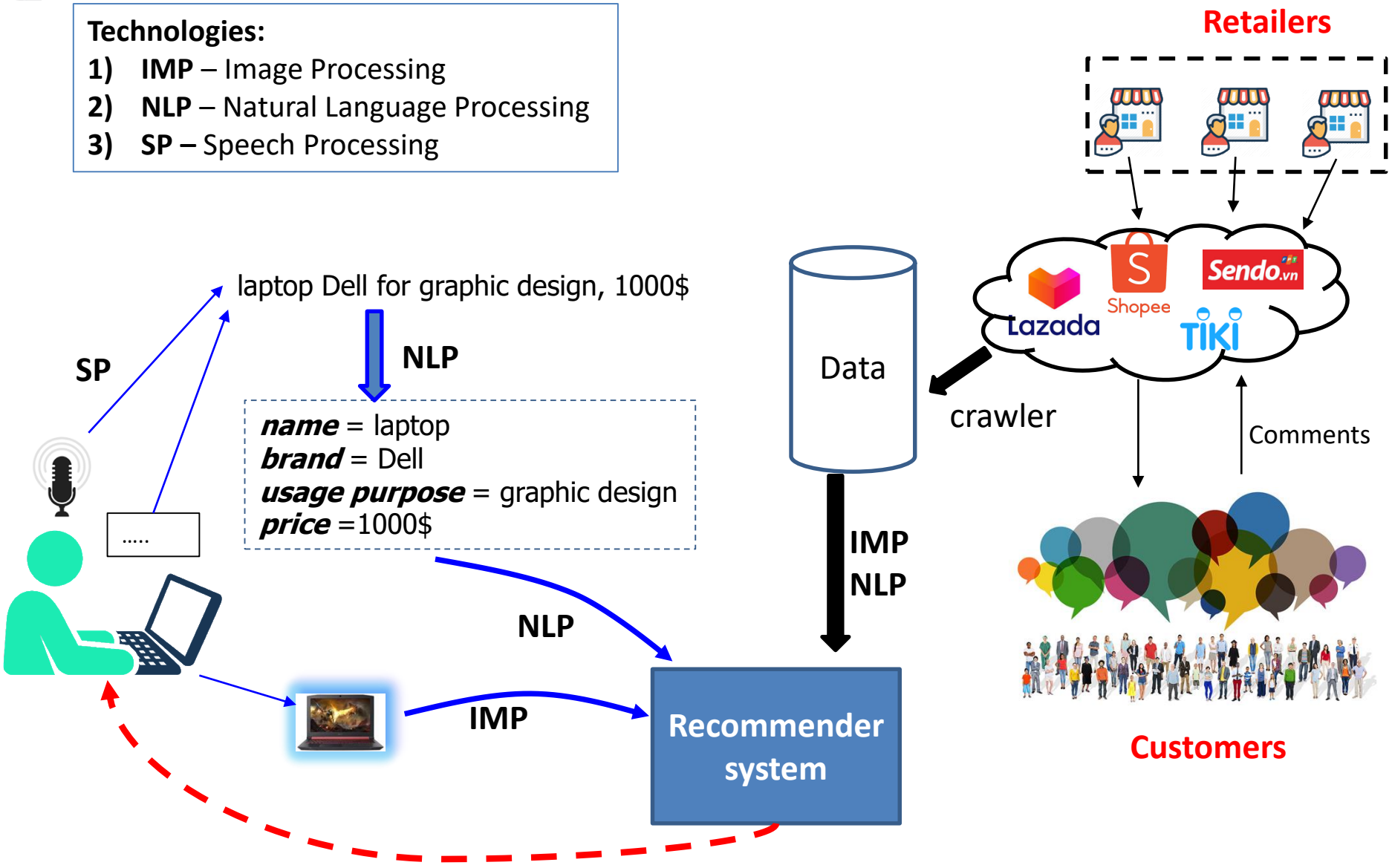
Our mission:

Support customers in shopping online

Proposed Method (1/3): Technologies for building the system

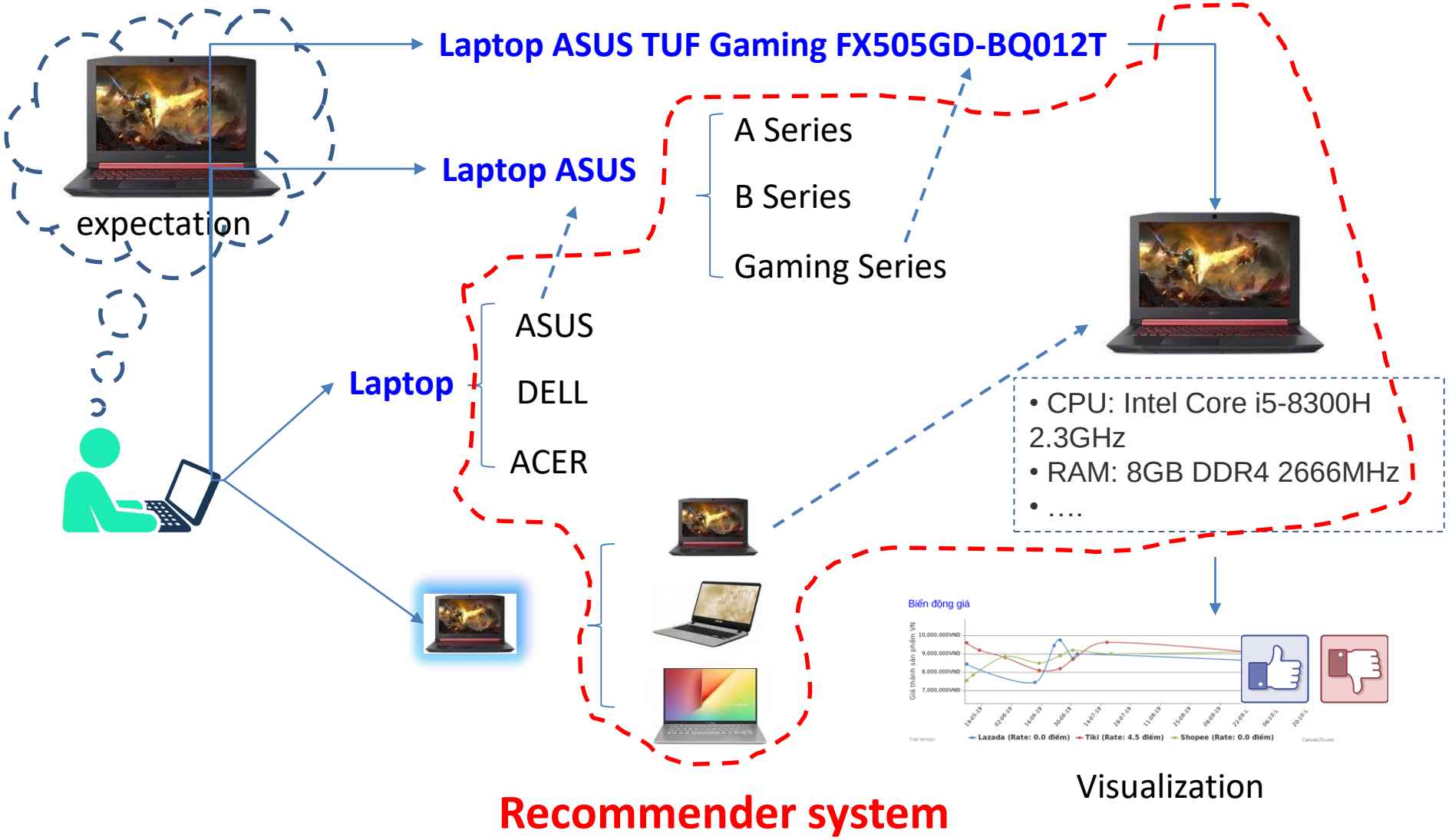
Technologies:

1) **IMP** – Image Processing
2) **NLP** – Natural Language Processing
3) **SP** – Speech Processing



Proposed Method (2/3): Process of recommendation

Goal: to determine the **expected product** from the **query**



Proposed Method (3/3): Collaborations

1. Research:

Problems are **trend** in areas

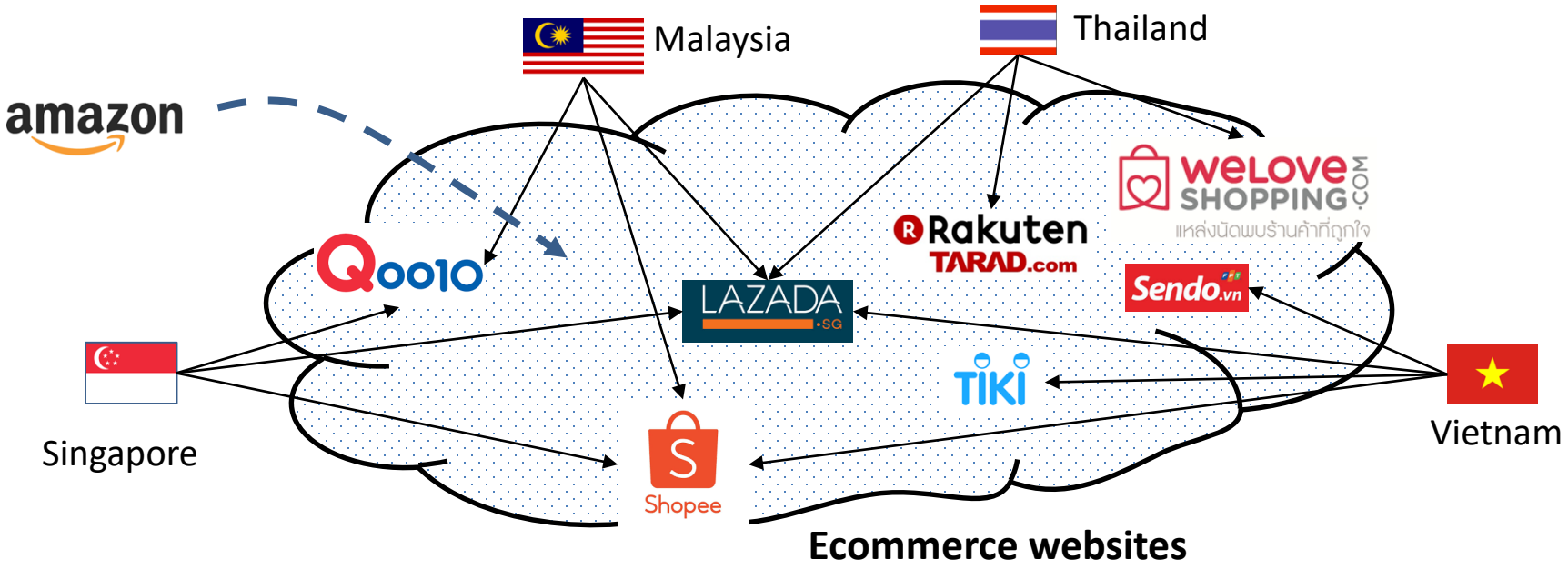
1) Speech → text: ***speech recognition, text correction***, …

2) User intention understanding: ***text analysis, language understanding***, …

3) Searching products by images: ***Image retrieval***, …

4 Mining big data of ecommerce & social knowledge

2. Application and deployment

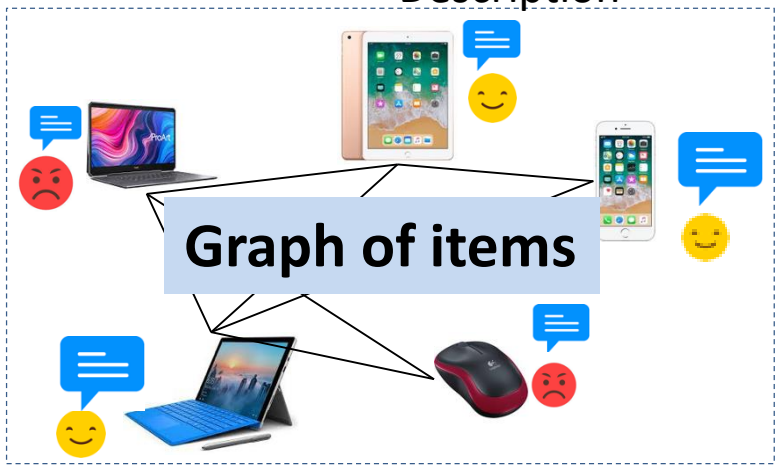


Impact: on Science and Technology

1) Recommender framework

2) Mining big data and social knowledge

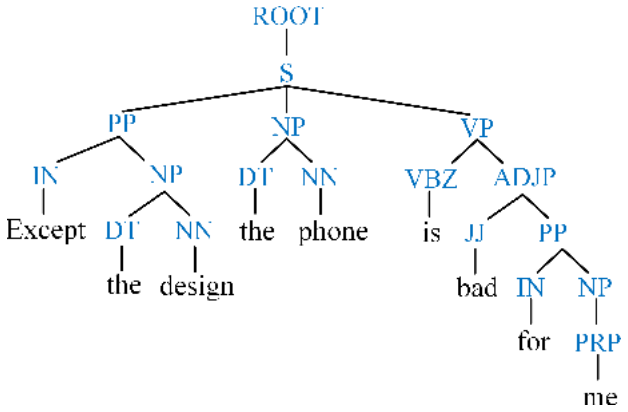
Comments
Description



Recommender system

3) Solutions for

- Natural Language Processing



- Image Processing

Impact: on Societies

- Enhance **consumer** - **retailer** **visibility**

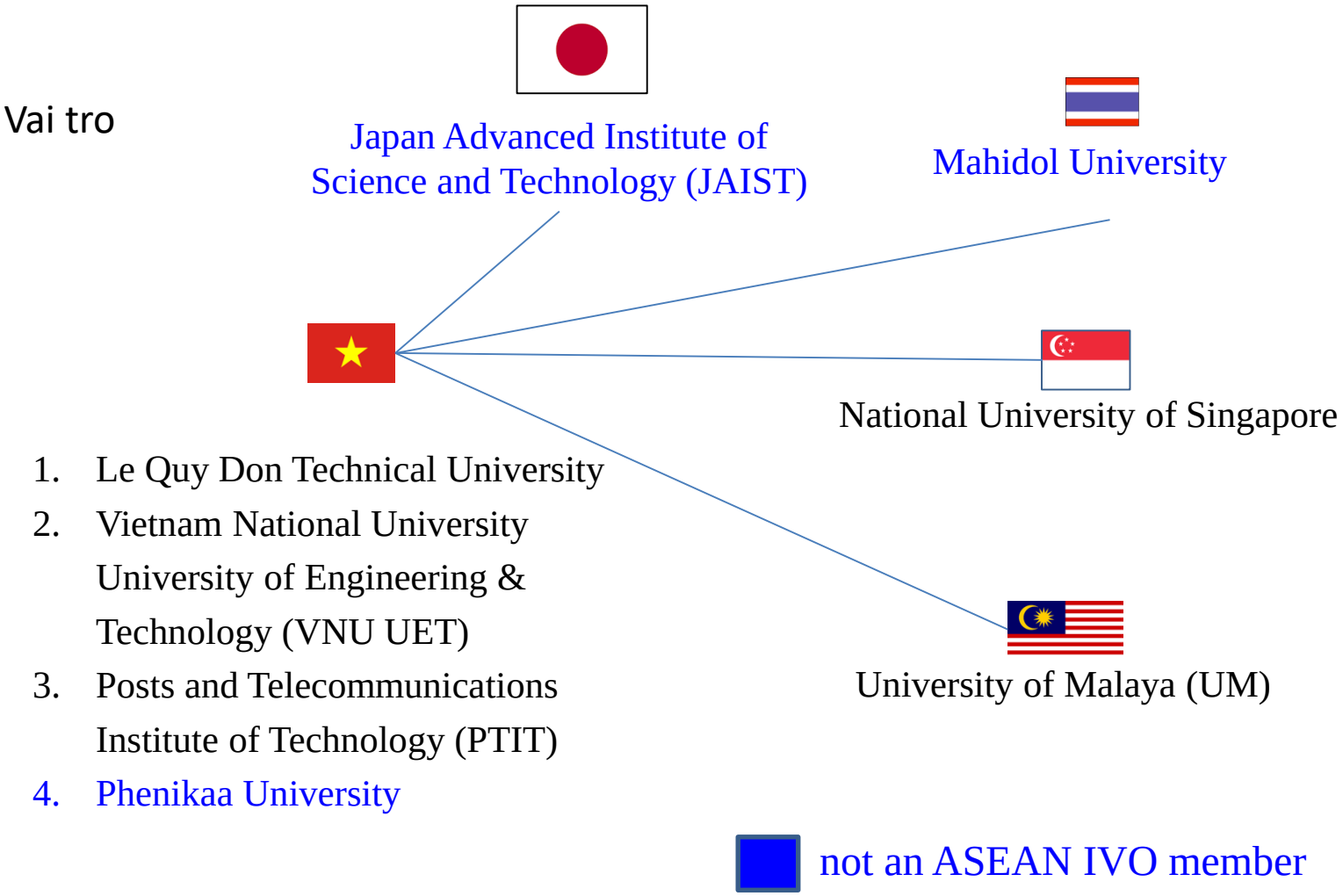
=> motivate ecommerce

- **Consumers**:
  + **Easily** choose suitable products
  + **Buy** product of retailers with best quality, service, price
  + **Save** time and money

- **Retailers**:
  + **Obtain** new customers
  + **Increase** online sales
  + **Adjust** strategies and policies from customers' comments

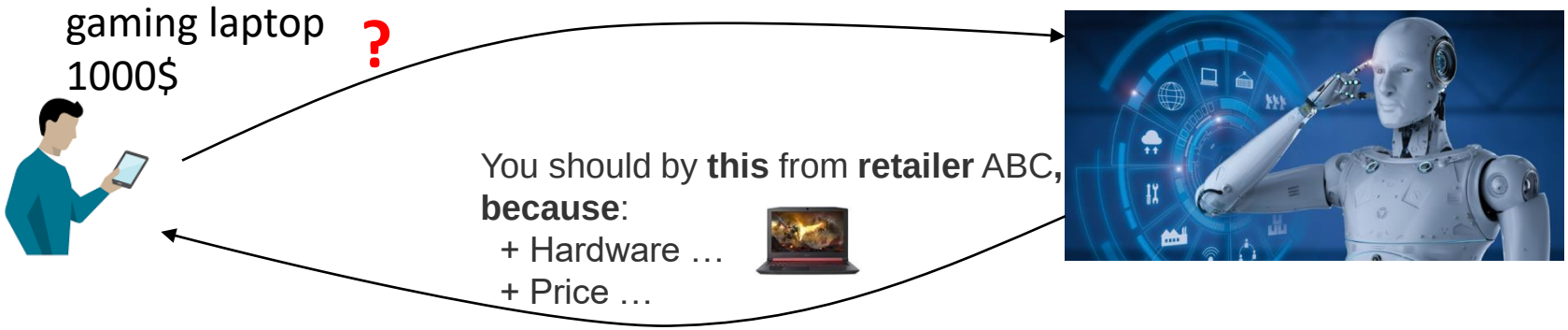
Impact: on collaborations

- Researchers from many institutes and countries



Outcome: Science

1) new application for product recommendation

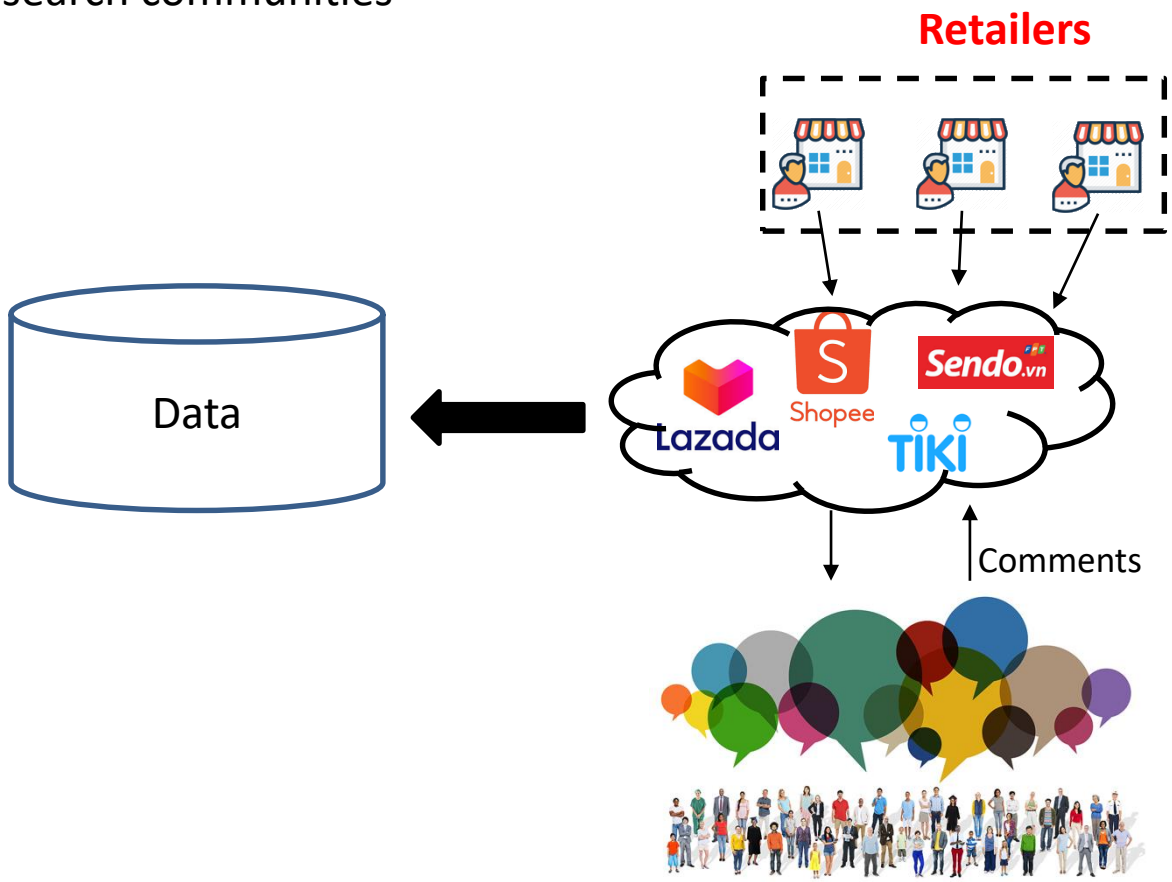


2) New approaches for problems of **natural language, image processing**

+ Information Extraction (query)
+ Language Understanding (comments, product description)
+ Image Retrieval (query)

Outcome: Society

1. **big data** of **ecommerce** for research communities
   + Product descriptions
   + Retailers
   + Customers' comments



2. New partners
   + Vietnam
   + Japan
   + Thailand
   + Singapore
   + Malaysia

Conclusion

1. Targets

+ Building a ***recommender*** system for ***ecommerce***

2. Method

+ Collect ***data*** (products, retailers, comments) from ecommerce websites
+ Analyze input to ***understand*** user ***intention***
+ Recommendation based on:
  - product information
  - user intention
  - social comments

(AI technologies)

3. Scientific and societal impact

+ ***new approaches*** for image, natural language processing
+ ***new application*** for ecommerce
+ ***dataset*** for research communities
+ ***collaborations*** among researchers from institutes and countries

Thank for your attention!

Q & A