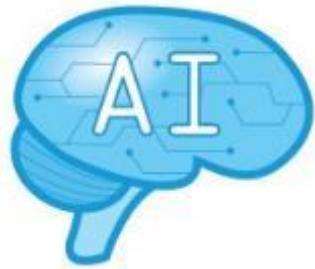




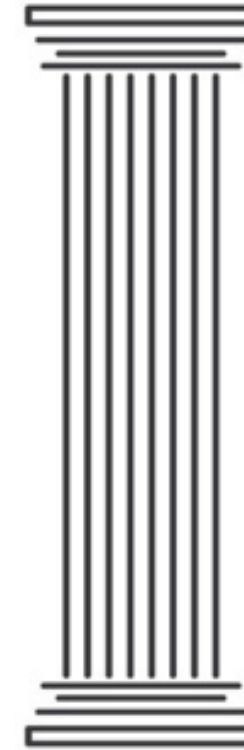
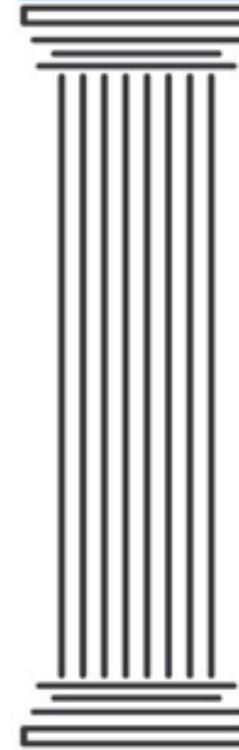
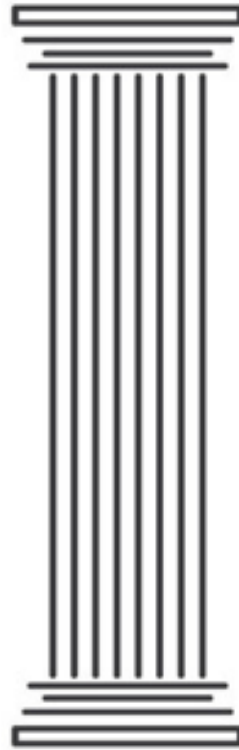
Big Data Analytics

How data changes our way of lives

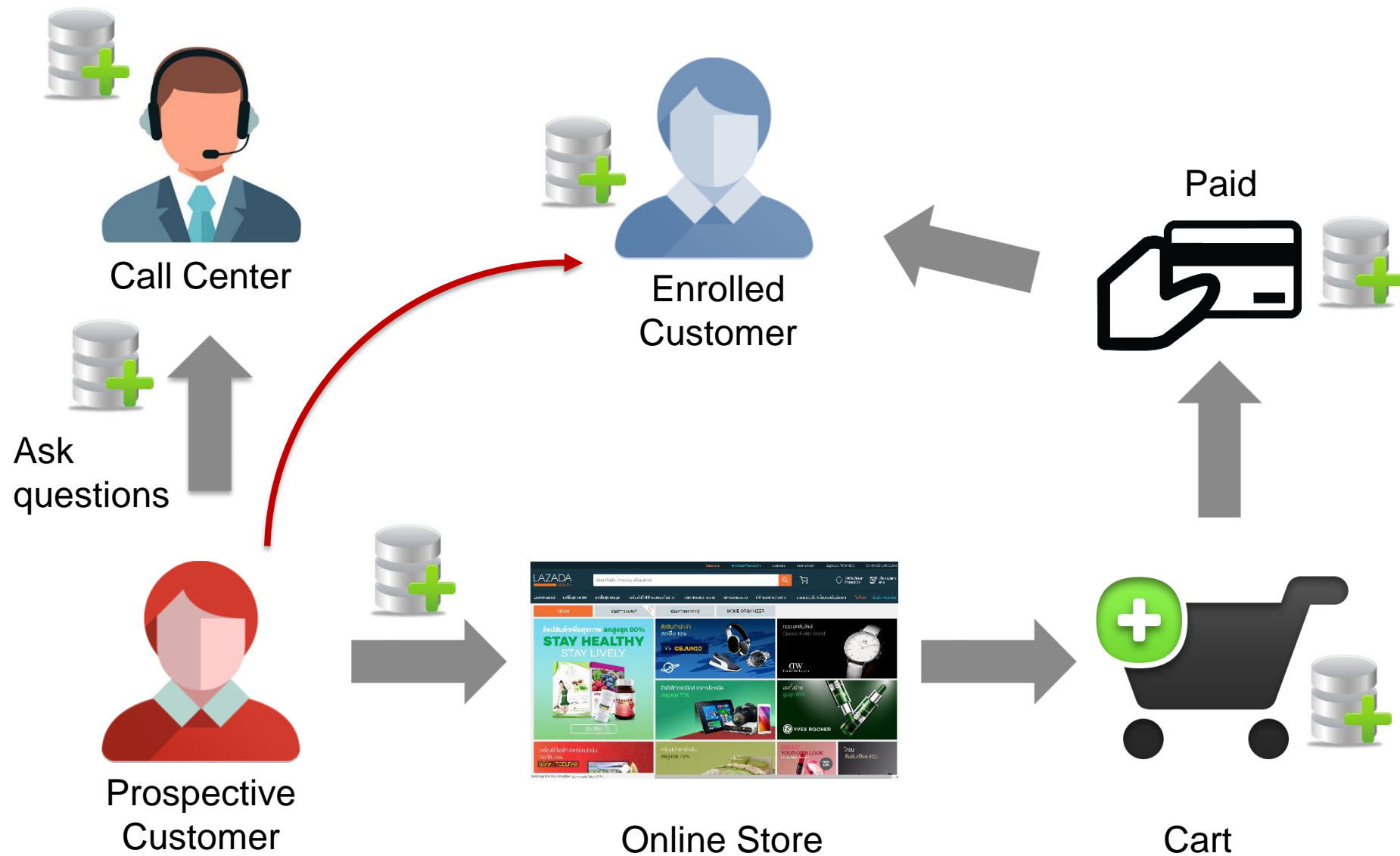


BIG Data

00101011101101010001010110
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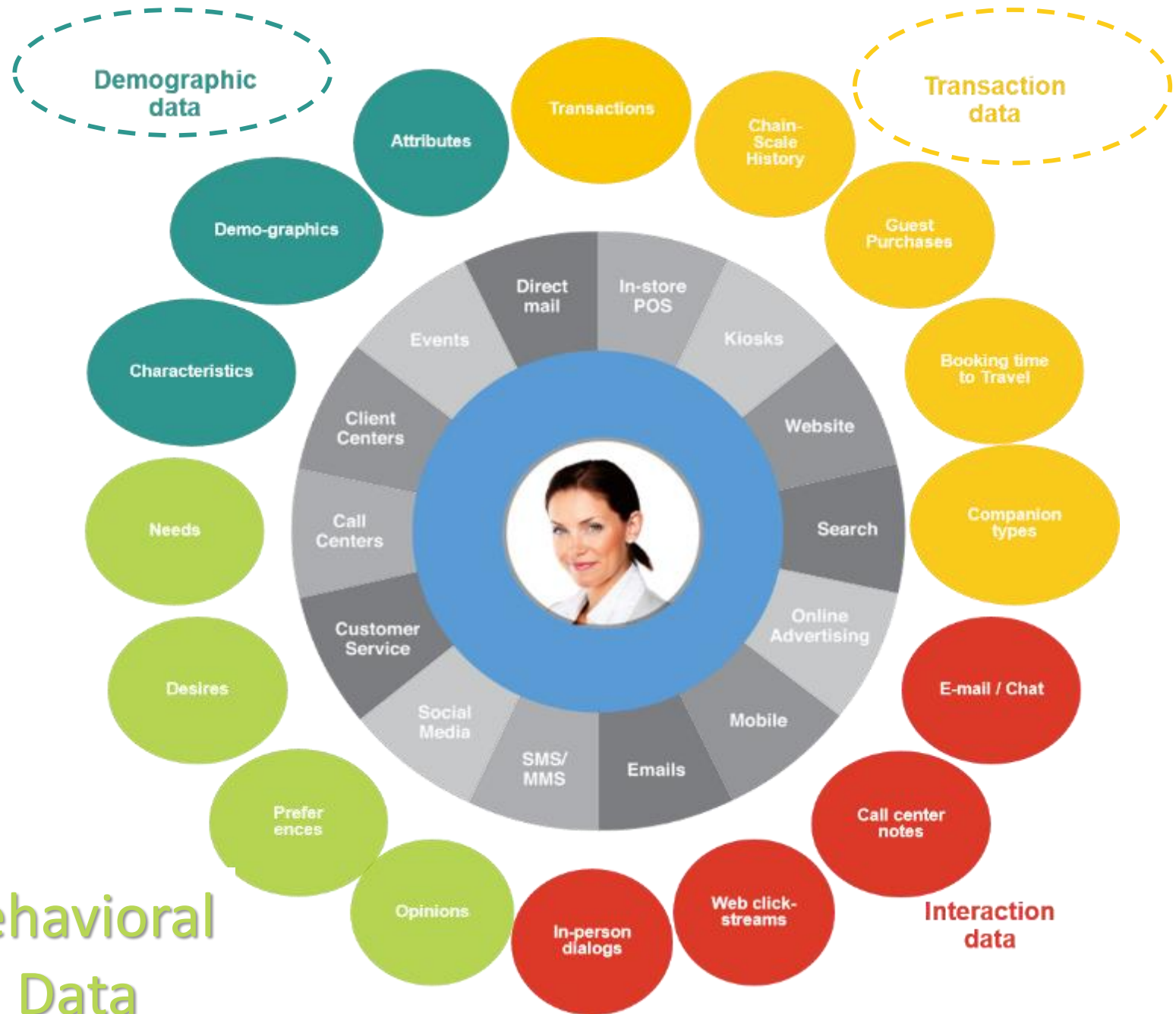


Digital technologies that change our way of lives



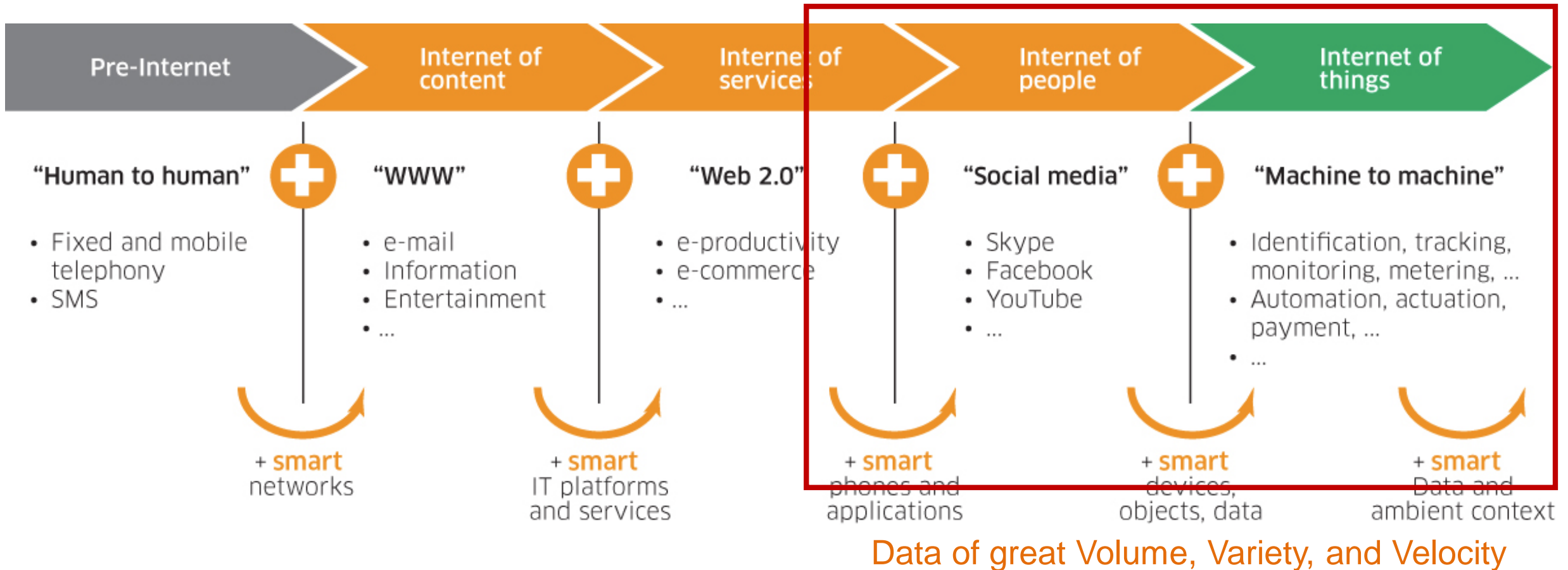
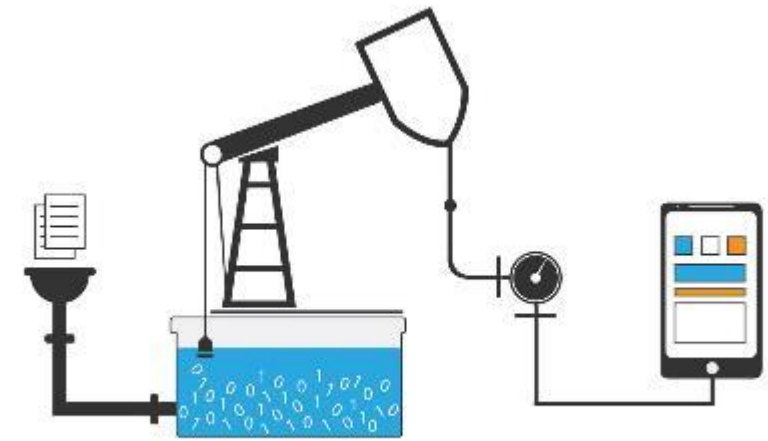
Needs
Desires
Preferences
Opinions

Behavioral
Data



DATA IS THE NEW OIL

The rapid development of technology led to the **explosive growth of data** in almost every industry and business area.



BIG DATA

An umbrella term for all sorts of data



Structured



Unstructured

WHERE TO LOOK FOR DATA



Archives

Scanned documents, statements, medical records, e-mails etc..



Docs

XLS, PDF, CSV, HTML, JSON etc.



Business Apps

CRM, ERP systems, HR, project management etc.



Media

Images, video, audio etc.



Social Networks

Twitter, Facebook, Google+, LinkedIn etc.



Public Web

Wikipedia, news, weather, public finance etc



Data Storages

RDBMS, NoSQL, Hadoop, file systems etc.



Machine Log Data

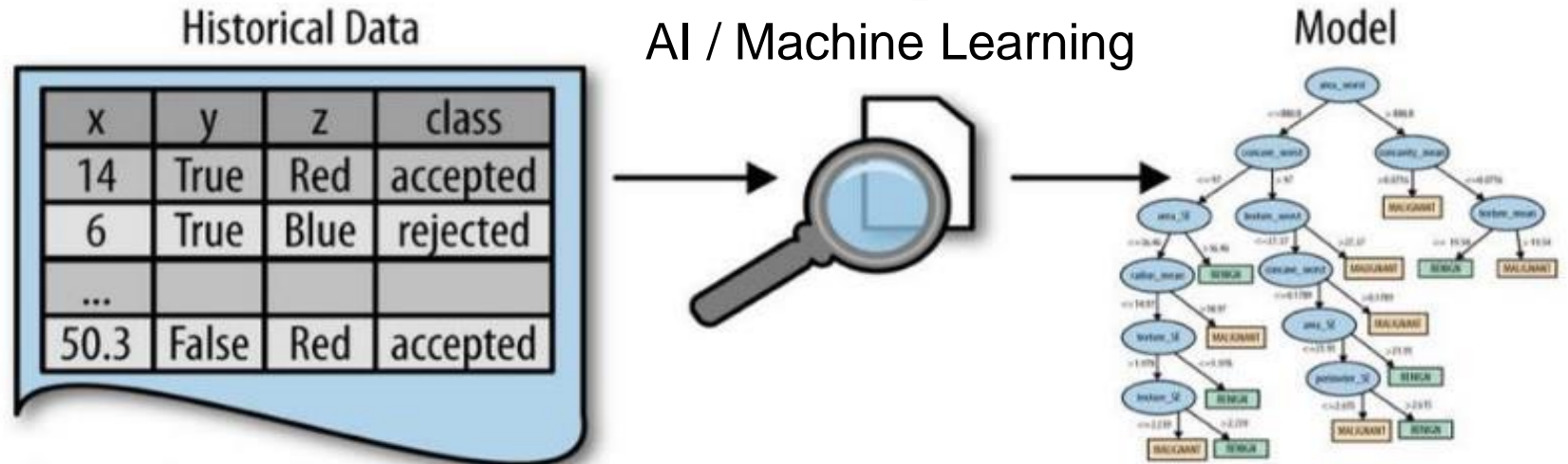
Application logs, event logs, server data, CDRs, clickstream data etc.



Sensor Data

Smart electric meters, medical devices, car sensors, road cameras etc.

PREDICTIVE ANALYTICS



Training data have all values specified

Model is deployed

Mining

Use

Software

New data item

x	y	z	class
30	false	Red	?

New data item has class value unknown (e.g. will customer accept?)

Class: accepted, Probability: 0.88

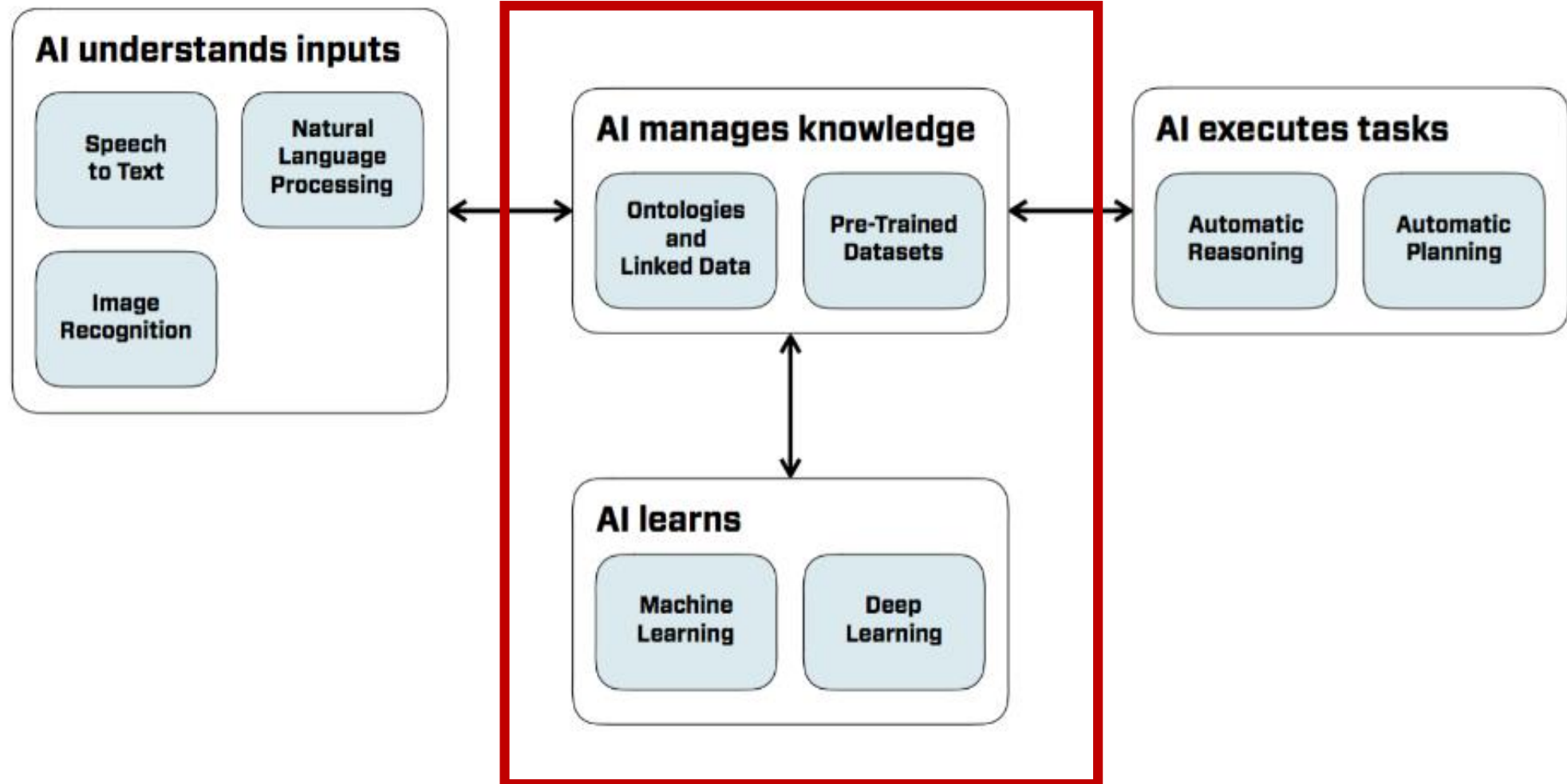
CREDIT SCORING



- First Union Bank deployed a value predicting system that assigns green / yellow / red flag to each customer, based on their predicted lifetime value.
- Service representatives were instructed to waive fee for green customers, and not waive for red customers. For yellow customers, they can make their own judgement.
- This strategy generated over \$100 million in incremental revenue.



MACHINE LEARNING



Real-time Face Recognition

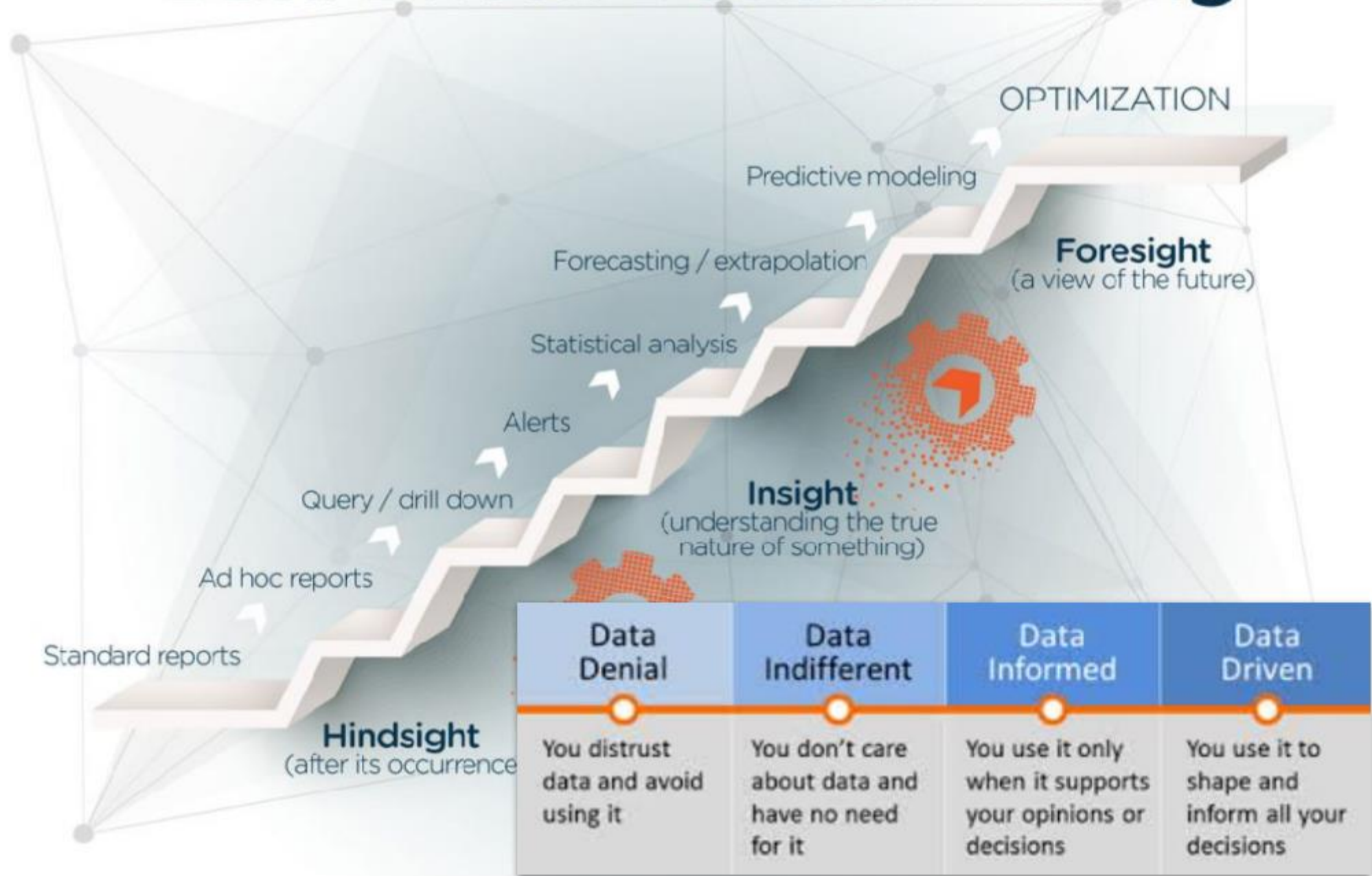




ANSWERING BUSINESS QUESTIONS

- Who are the most profitable customers?
 - A straightforward database query, if “profitable” can be defined clearly.
- Is there really a difference between the profitable customers and the average customer?
 - Statistical Hypothesis testing
- But who really are these customers? Can I characterize them?
 - Automated pattern finding
- Will some new customer be profitable ? How much revenue can I expect?
 - Predictive model of profitability

Data Driven Decision Making

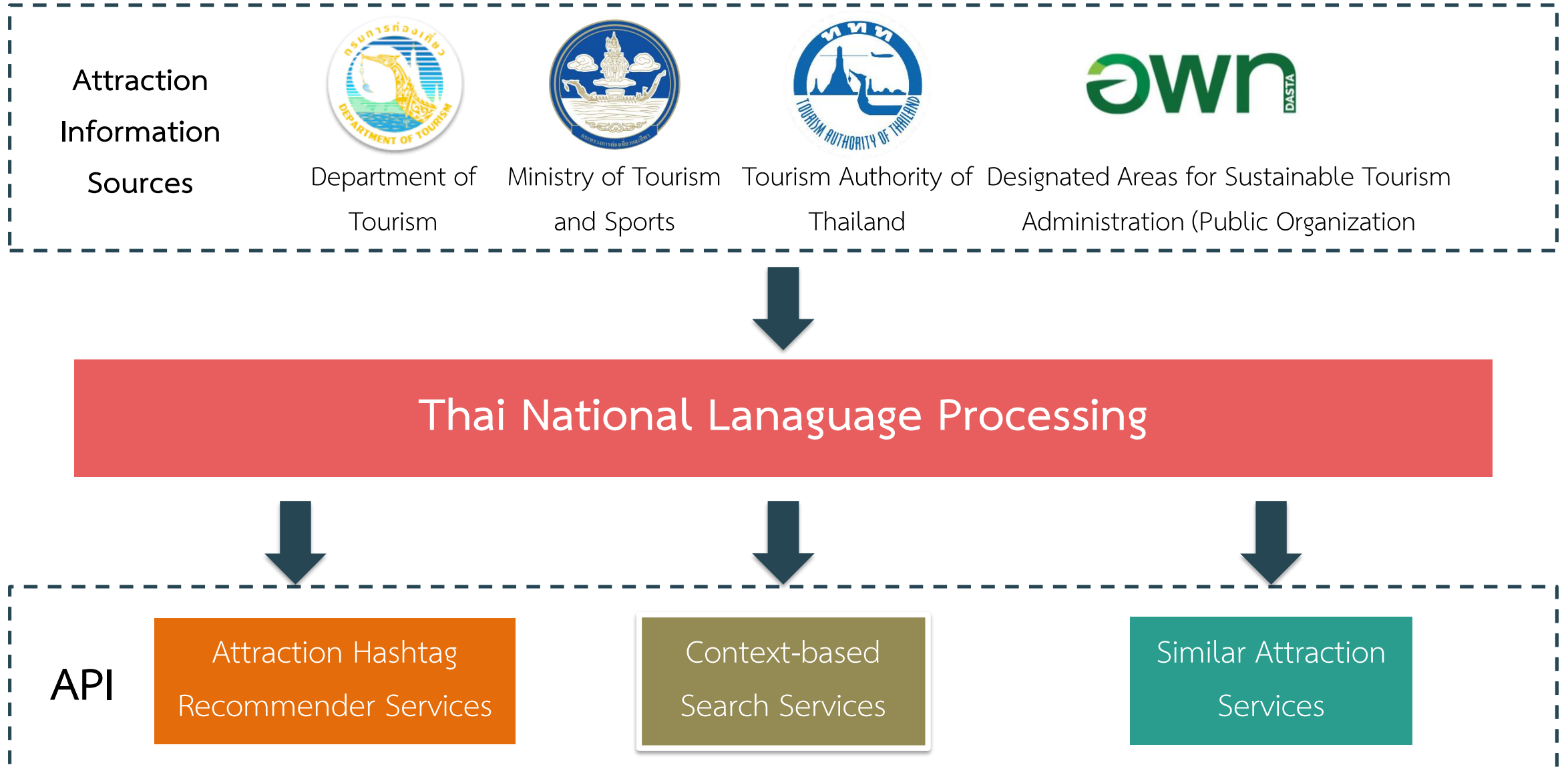


A top-down view of various travel items on a wooden surface. In the top left is a tan straw hat. To its right is a brown leather wallet with a white toy airplane resting on it. Further right is a colorful world map. Below the map is a dark brown notebook with a pair of sunglasses on top. In the center is a silver and black vintage-style camera. To the left of the camera is a white spiral-bound notebook. At the bottom center is a red passport with a yellow globe logo. A white card with a QR code and the text 'ENJOY YOUR FLIGHT' is partially visible at the bottom right. A semi-transparent white circle is overlaid on the left side of the image, containing the text 'Tourism Use Cases'.

Tourism

Use Cases

Attraction Information Services



Hashtag Recommender Services

Attraction Name

Huay-Yang Reservoir (Tapraya National Park)

Attraction Details

อ่างเก็บน้ำที่ไม่เพียงเป็นแหล่งน้ำสำหรับการเกษตรและอุปโภคบริโภคตลอดปี เป็นแหล่งเพาะพันธุ์ปลาน้ำจืด รวมทั้งบรรเทาป้องกันอุทกภัยให้กับชาวสระแก้วเท่านั้น หากยังเป็นสถานที่พักผ่อนหย่อนใจที่รายรอบ ด้วยทัศนียภาพสวยงาม ที่ชาวสระแก้วนิยมมานั่งรับประทานอาหารพร้อมธรรมชาติในคราวเดียวกัน

Recommended Hashtags

>National Park

>Fish Breeding Ground

>Tapraya

>Reservoir

Selected
Hashtags

Nature Attractions >> [National Parks](#)

Breeding Ground >> [Fish Breeding Ground](#)

Save

Smart Search Services: Similar Attractions

Search results on “Kho Good Diving”



ตีฟ้าทัวร์

เกาะภูเก็ต

85% match



บ่อผุดสน็อกกิ้ง

เกาะสมุย

63% match



วีเลิฟเกาะภูเก็ต

เกาะภูเก็ต

54% match

Smart Search Services: Context-based

Search results on “World War”



สุสานทหารสัมพันธมิตร

กาญจนบุรี

85% match



สะพานข้ามแม่น้ำแคว

กาญจนบุรี

63% match



ช่องเขาขาด

กาญจนบุรี

54% match

“Pin”-as-a-Services with attraction details

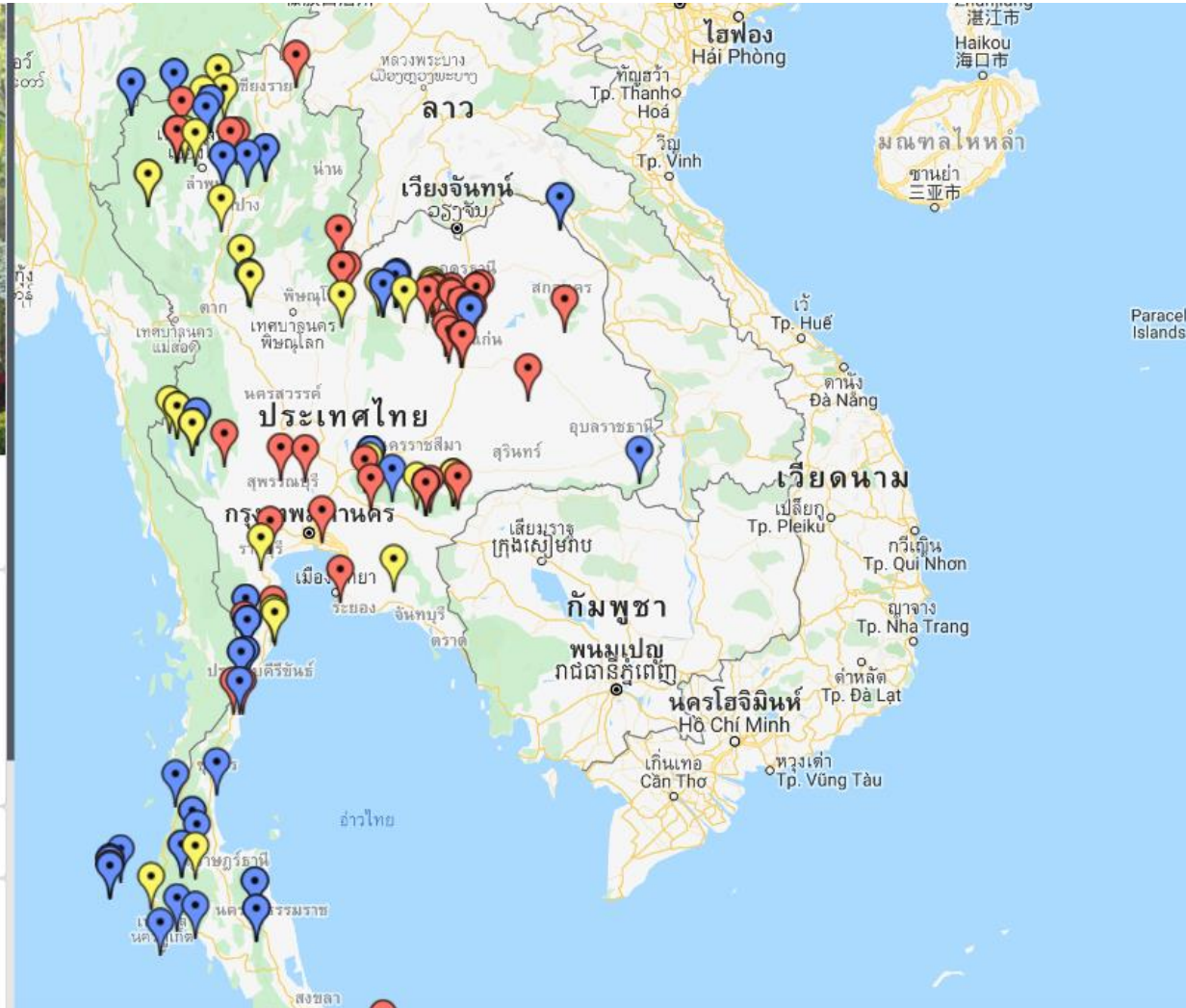


ฐานอิทธิ (พิพิธภัณฑ์อาวุธ เขาค้อ) [ฐาน, 'พิพิธภัณฑ์', 'เขาค้อ']

-  บ้านสิมารักษ์ หมู่ 3 ตำบลทุ่งสมอ อำเภอเขาค้อ จังหวัดเพชรบูรณ์ หมู่ 3 ต.ทุ่งสมอ อ.เขาค้อ จ.เพชรบูรณ์ 67270
-  0552527423 , 055259907
-  Opened: 07:00 - 17:00

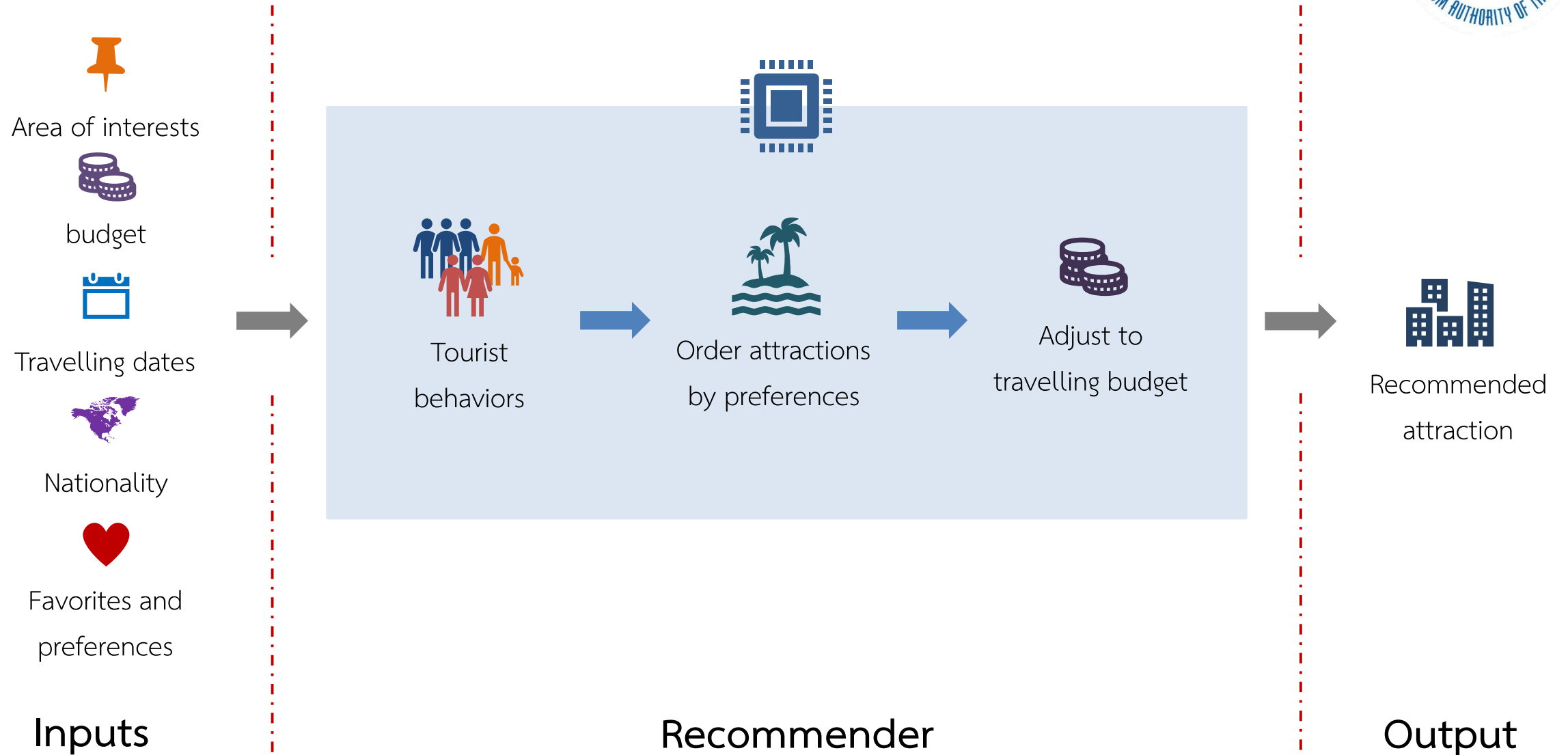
ค่าใช้จ่าย: ไม่มีค่าใช้จ่าย

เหมาะสำหรับ: กลุ่มครอบครัว, กลุ่มวัยทำงาน, กลุ่มนักเรียน นักศึกษา / เยาวชน / วัยรุ่น, กลุ่มศิลปวัฒนธรรม / ประวัติศาสตร์

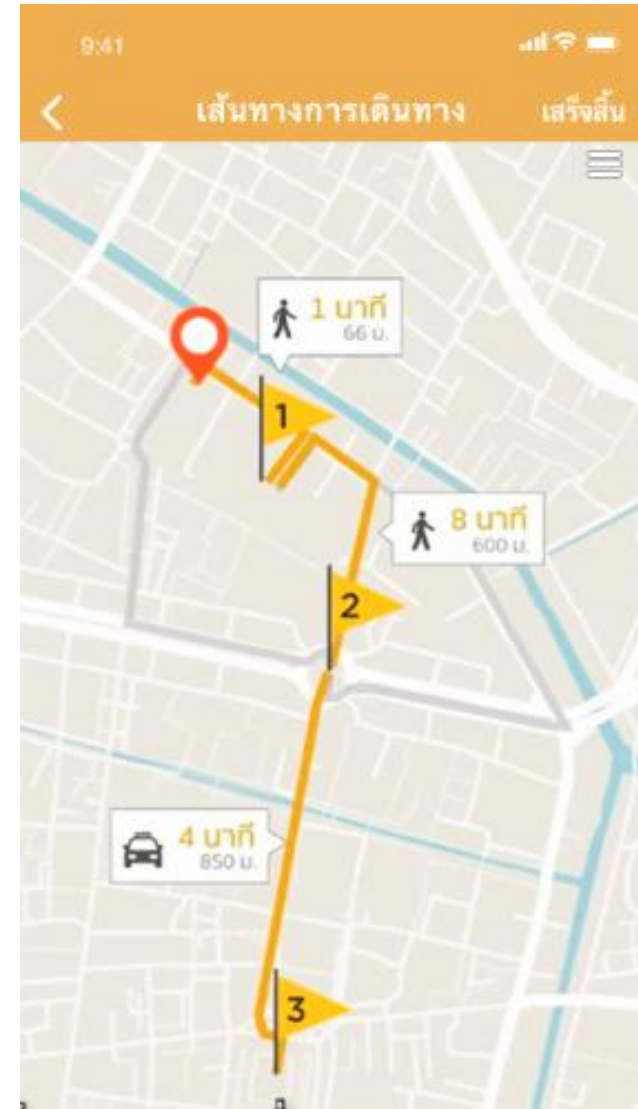




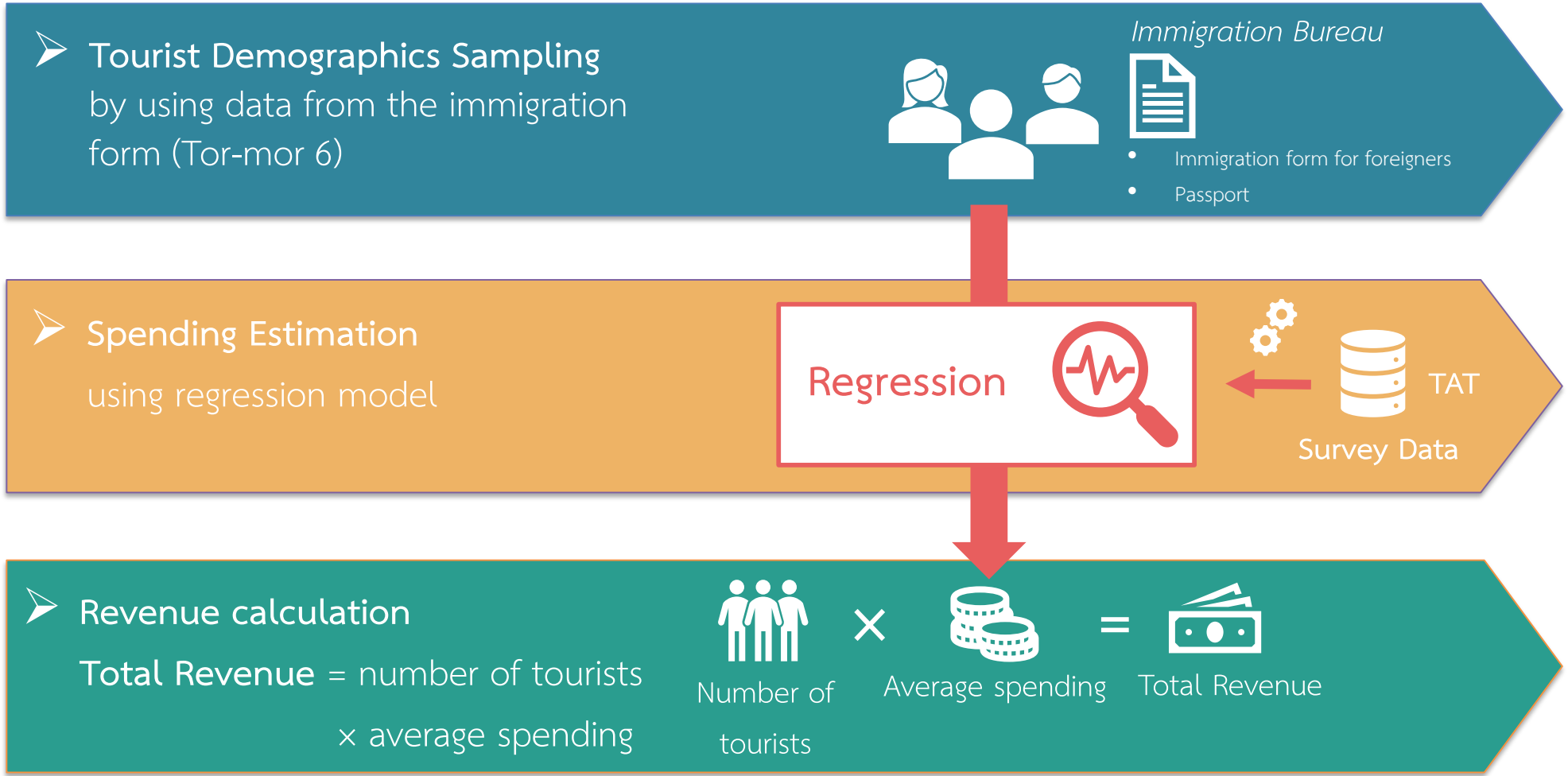
Attractions Recommendation, How ?



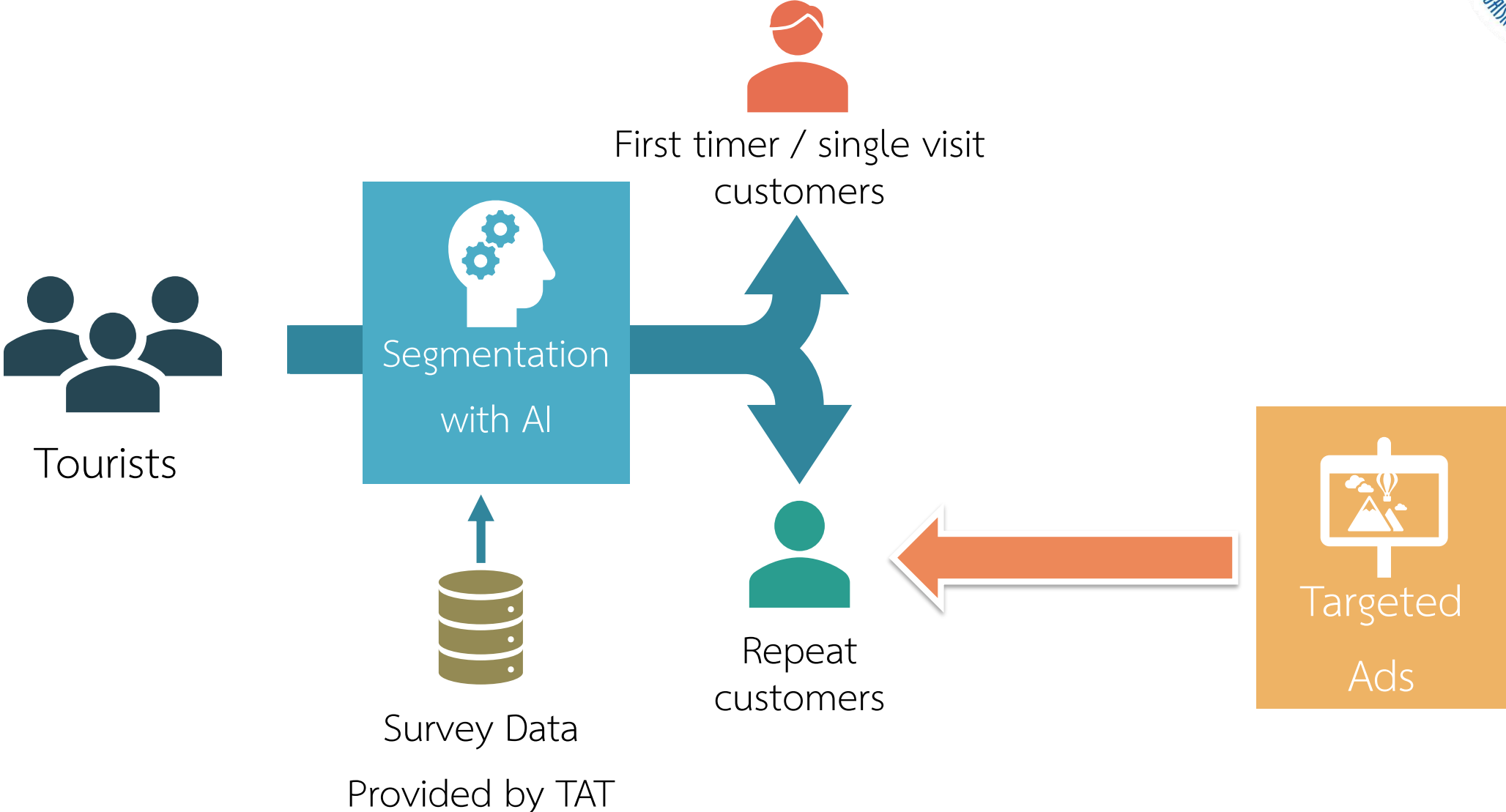
Attractions Recommendation, How ?



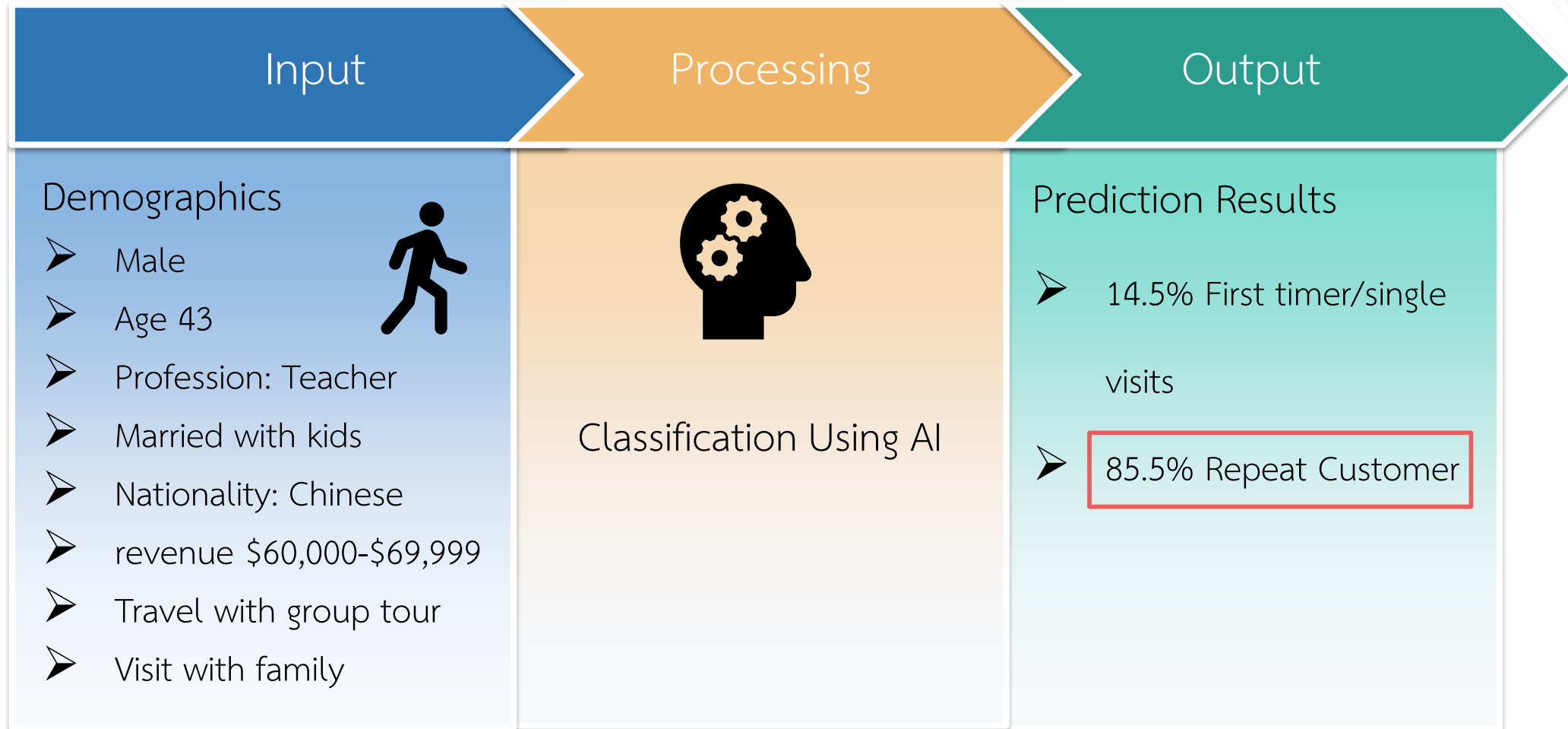
Tourism Revenue Estimation



Repeat Customers for Tourism Sectors



Repeat Customer Prediction

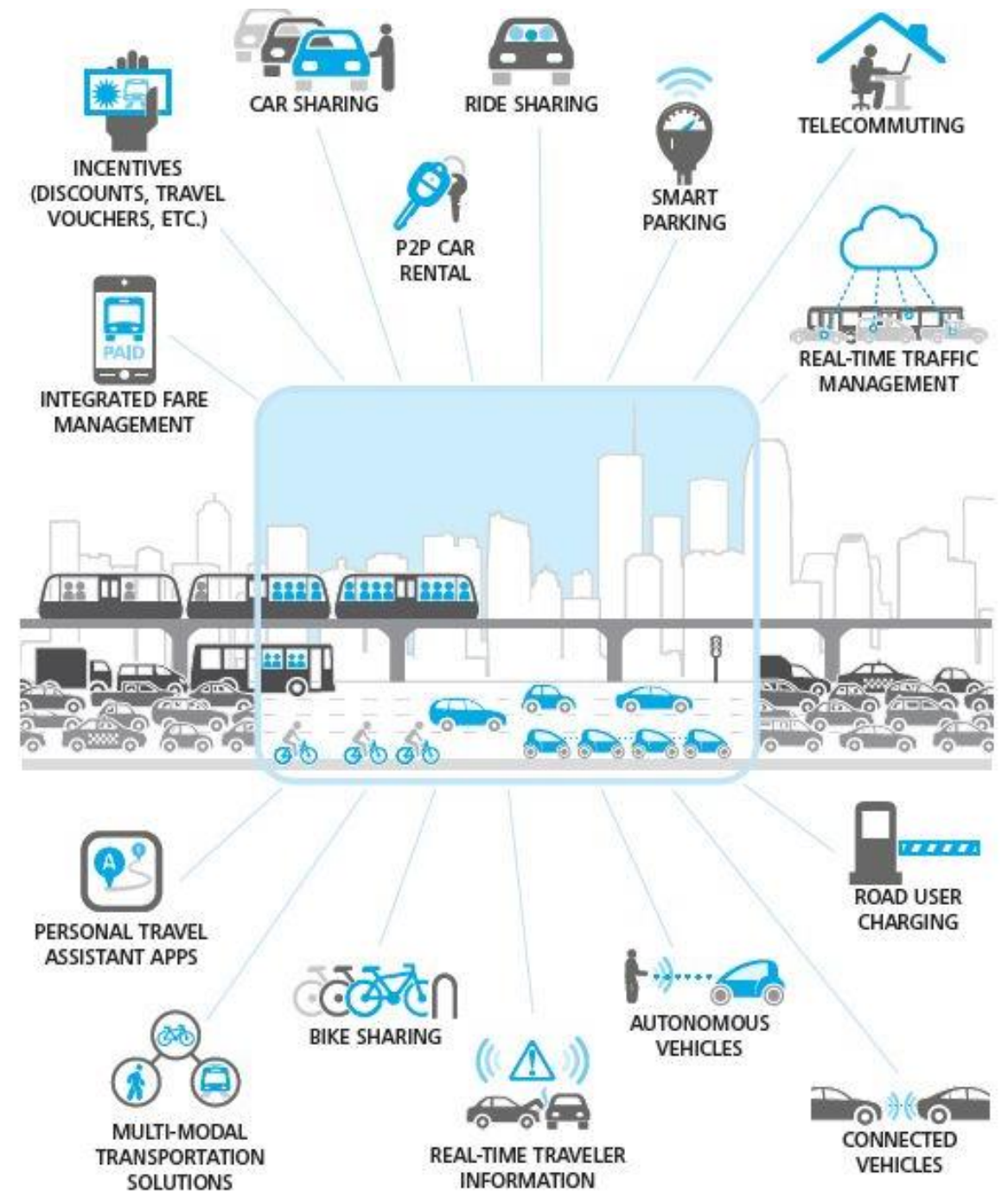




BIG DATA IN LOGISTICS

TRANSPORTATION

Traffic Prediction
Personalized Insurance
Connected Car



The DHL Story

WITH BIG DATA, WE CAN

- Gauge sentiments of the general public towards services
- Make it easier to maintain vehicle fleet
- Find more efficient routes to deliver
- Quicken the last mile shipping
- Make sure drivers are complying with traffic law

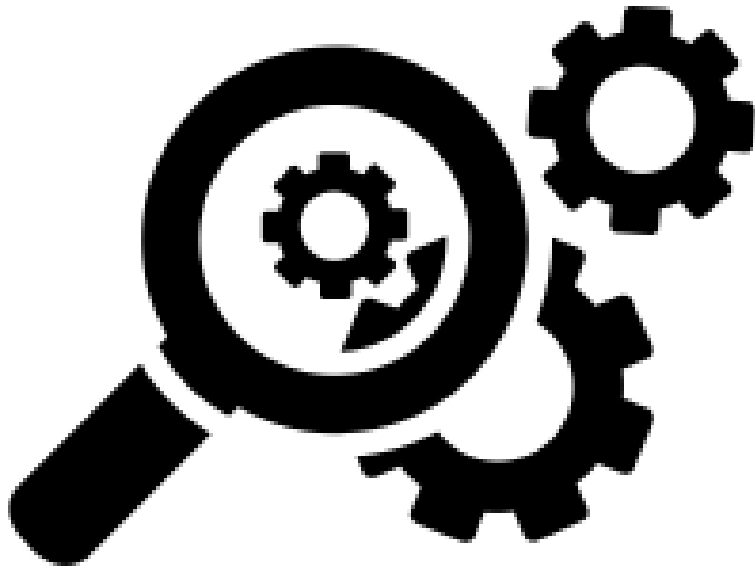


POSSIBLE DATA SOURCES

The DHL Story

- Traditional enterprise data from operational systems
- Traffic & weather data from sensors, monitors and forecast systems
- Vehicle diagnostics, driving patterns, and location information
- Financial business forecasts
- Advertising response data
- Website browsing pattern data
- Social media data

PROCESS OPTIMIZATION



- **Goal:** Streamline operational processes: mail and parcel processing and delivery
- **Predictive analytics:** predict parcel volumes and better determine delivery staff and vehicle requirements through analysis of correlations between external factors such as weather, flu epidemics, Google trends, and shipment data.
- **Predictive maintenance:** Equip new electric vehicles with sensors that track vehicles' vital statistics.

WHERE CAN WE START ?

- Predicting Lifetime Value (LTV)
- Wallet share estimation
- Customer churn analysis
- ★ • Customer segmentation
- Product mix
- Cross selling/Recommendation algorithms
- Up selling
- Channel optimization
- Discount targeting
- Reactivation likelihood
- ★ • Target market
- Adwords optimization and ad buying
- Call center message optimization
- Call center volume forecasting
- Credit Scoring
- Treasury or currency risk
- Fraud detection
- Accounts Payable Recovery
- Anti-money laundering
- Lead prioritization
- Sales Script Analysis
- Demand forecasting
- ★ • Resource optimization
- Resume screening
- Employee churn
- Training recommendation
- Talent management