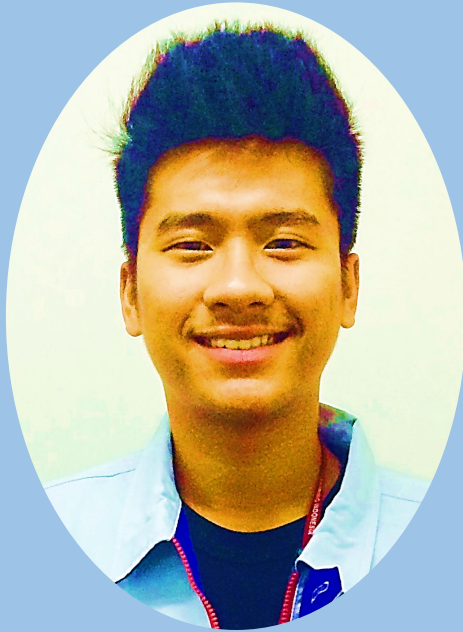Suggestion System

Product Evaluation
(Goguchi & New Model)
Through Big Data Analysis

HEZRON YERIDO
PRODUCT BUSINESS MANAGEMENT DIVISION

Participant Profile
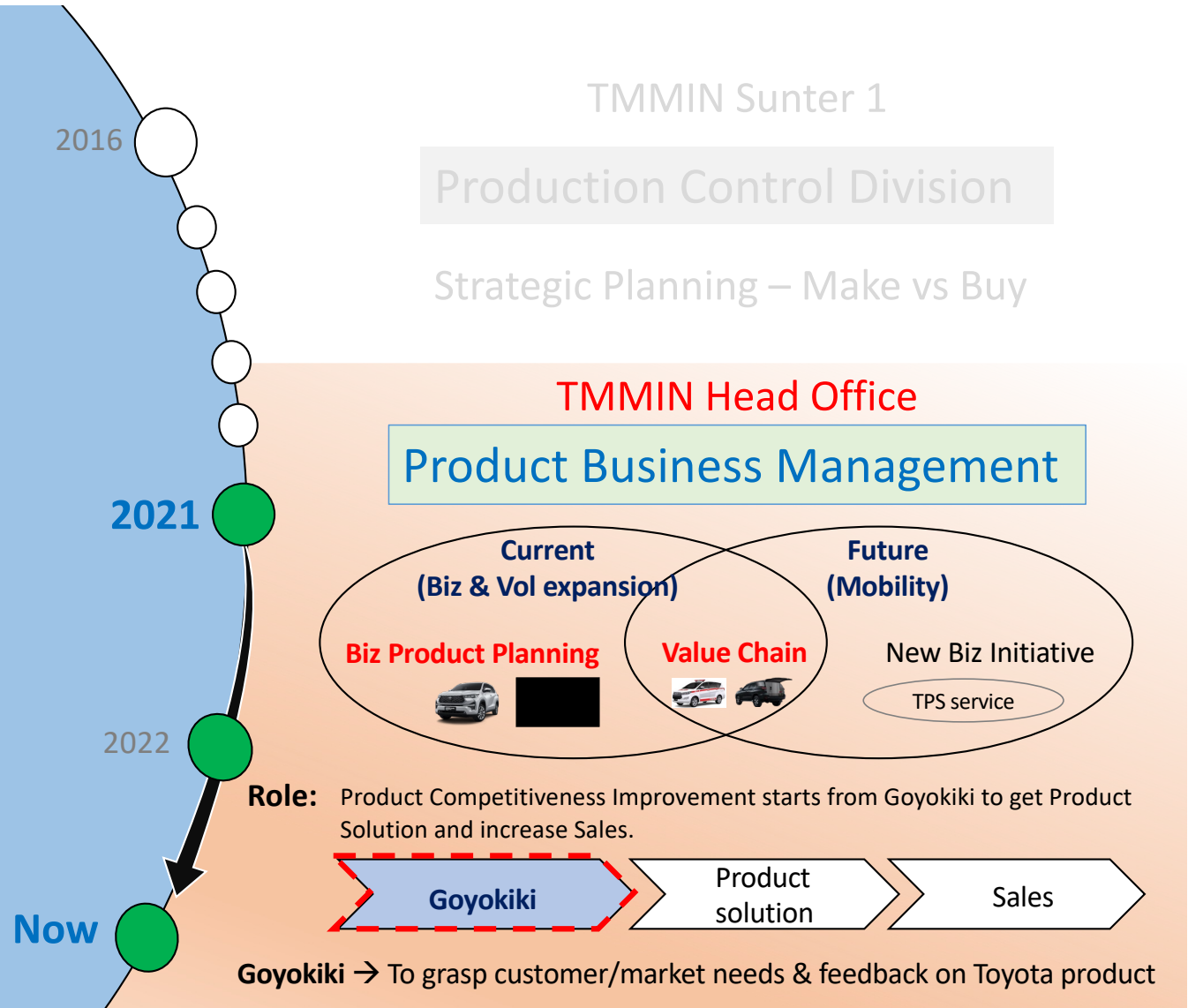
2016

2021

2022

2023

Hezron Yerido

TMMIN Sunter 1

Production Control Division

Strategic Planning – Make vs Buy

Participant Profile

Hezron Yerido

2016

2021

2022

Now

TMMIN Sunter 1

Production Control Division

Strategic Planning – Make vs Buy

TMMIN Head Office

Product Business Management

Current (Biz & Vol expansion)

Future (Mobility)

Biz Product Planning

Value Chain

New Biz Initiative

TPS service

Role: Product Competitiveness Improvement starts from Goyokiki to get Product Solution and increase Sales.

Goyokiki → Product solution → Sales

Goyokiki → To grasp customer/market needs & feedback on Toyota product

Current Condition

Current Goyokiki (EBS) of Innova Zenix

Product Launch — ⭐ **Early birth survey (EBS)** — Kairyou

N — N+ 6-10 ① — N+ 12

Interview | Surveys

Offline method
③ ④

Selected customer
②

10 cities

Intercity coverage
③
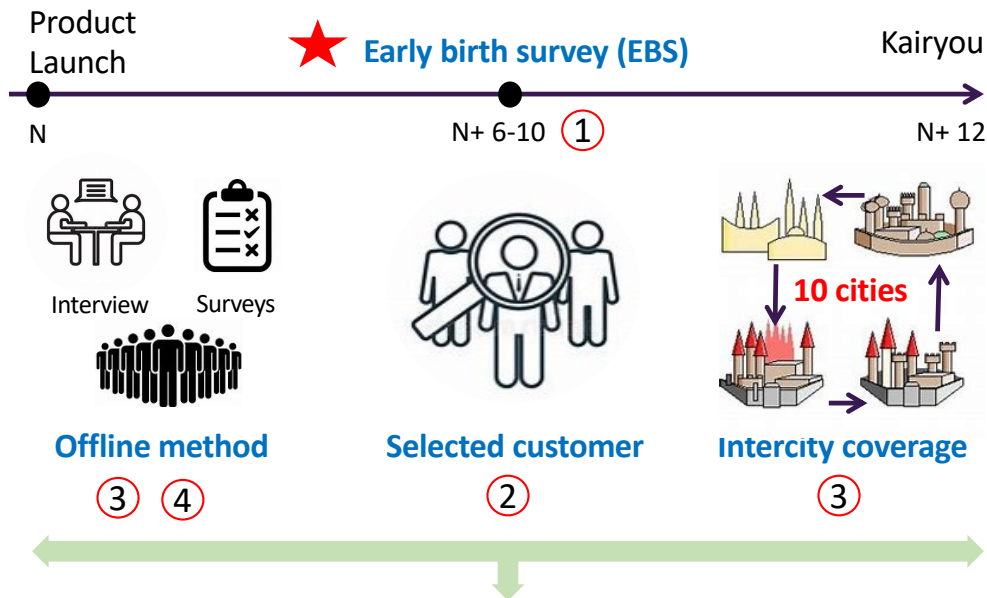
① Goyokiki period → **4 months (Long lead time)**

② Respondent coverage → **relatively small**

③ Cost → **Relatively high** (domestic travel)

④ Resources (MP) → **TAM, TMMIN, TDEM**

Division Habit/Culture

Team Member — Sharing info — Group
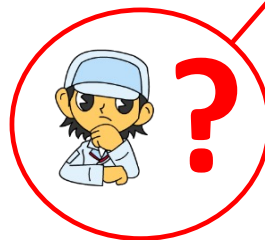
Theme: economics, health, **customer voice**, biz situation, etc

revi2m 16w
Belakang yg lama mirip calya, yg baru mirip rush 😂
Reply   See translation
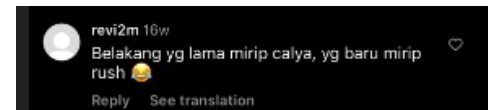
Comment at Fitra Eri Post on Innova Zenix
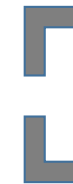
Inspiration for Goyokiki

Is it possible to grasp customer voice in social media, online forum etc on Toyota Product?

Along with Company Hoshin, try to execute Goyokiki idea

Idea #1

Desktop study (capture cust voice in social media)

- Manual data collecting
- High time consumed ❌

Idea #2

Promote **New Way of Working** in capturing thousands of **cust. voice** in **online platform** thru **Big Data Analysis**

BIG DATA ✔

Big Data Analysis Framework

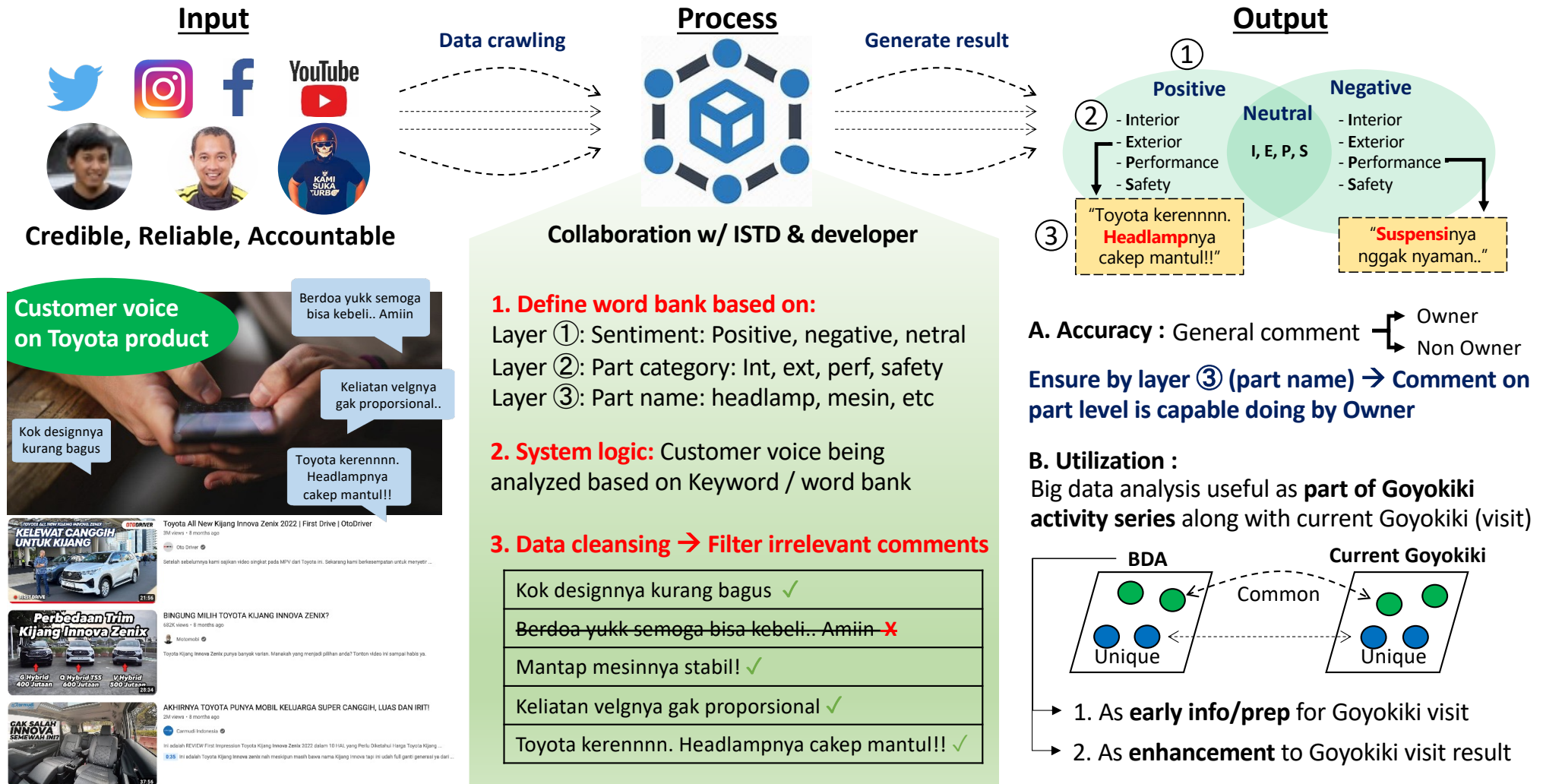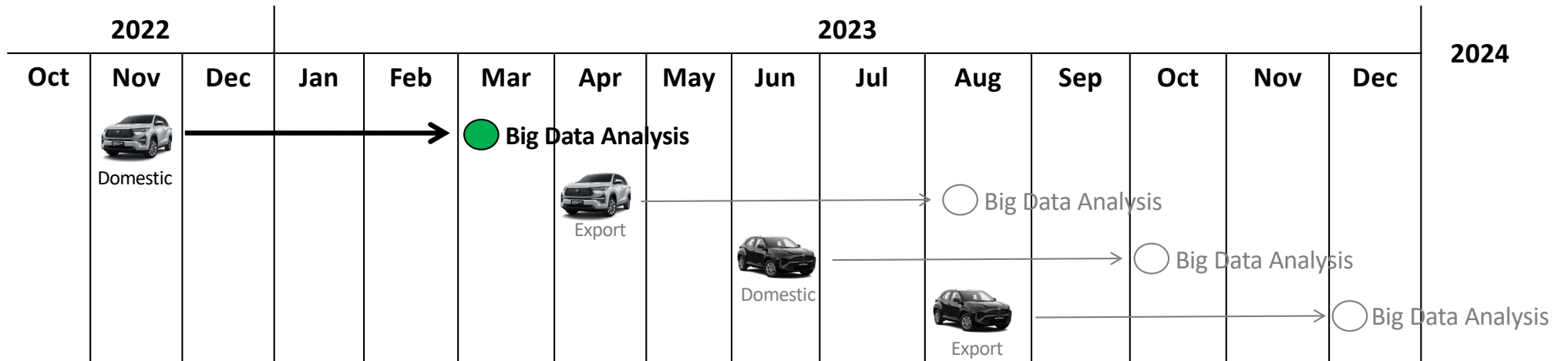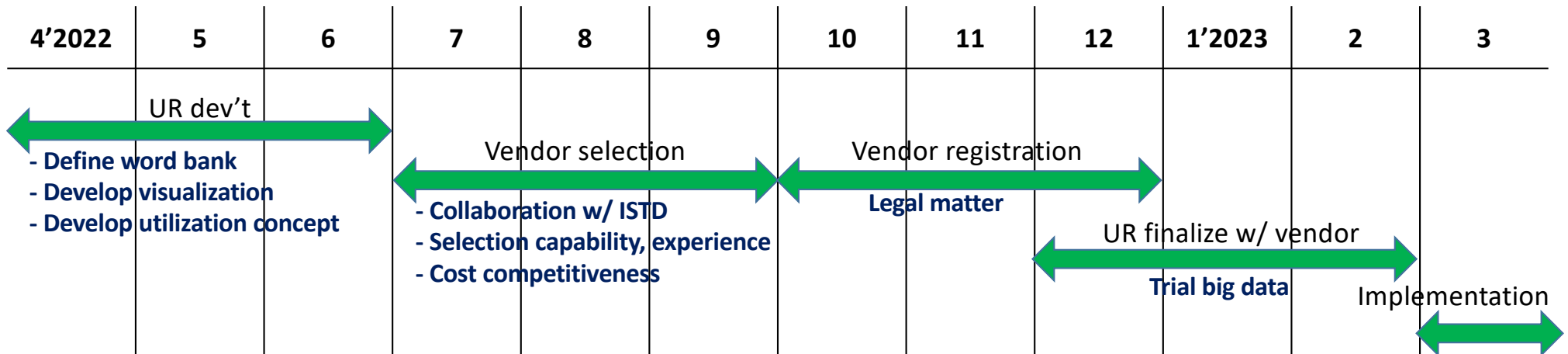## Input

Credible, Reliable, Accountable

Customer voice on Toyota product

- Kok designnya kurang bagus
- Berdoa yukk semoga bisa kebeli.. Amiin
- Keliatan velgnya gak proporsional..
- Toyota kerennnn. Headlampnya cakep mantul!!

Toyota All New Kijang Innova Zenix 2022 | First Drive | OtoDriver
3M views · 8 months ago
Oto Driver
Setelah sebelumnya kami sajikan video singkat pada MPV dari Toyota ini. Sekarang kami berkesempatan untuk menyetir...

BINGUNG MILIH TOYOTA KIJANG INNOVA ZENIX?
682K views · 8 months ago
Motomobi
Toyota Kijang Innova Zenix punya banyak varian. Manakah yang menjadi pilihan anda? Tonton video ini sampai habis ya.

AKHIRNYA TOYOTA PUNYA MOBIL KELUARGA SUPER CANGGIH, LUAS DAN IRIT!
2M views · 8 months ago
Carmudi Indonesia
Ini adalah REVIEW First Impression Toyota Kijang Innova Zenix 2022 di HAL yang Perlu Diketahui Harga Toyota Kijang ...
0:35 Ini adalah Toyota Kijang zenix nah meskipun masih bawa nama Kijang Innova tapi ini udah full ganti generasi ya dari ...

Process

Data crawling → → **Generate result**

Collaboration w/ ISTD & developer

1. Define word bank based on:
Layer ①: Sentiment: Positive, negative, netral
Layer ②: Part category: Int, ext, perf, safety
Layer ③: Part name: headlamp, mesin, etc

2. System logic: Customer voice being analyzed based on Keyword / word bank

3. Data cleansing → Filter irrelevant comments

Kok designnya kurang bagus ✓
~~Berdoa yukk semoga bisa kebeli.. Amiin~~ ✗
Mantap mesinnya stabil! ✓
Keliatan velgnya gak proporsional ✓
Toyota kerennnn. Headlampnya cakep mantul!! ✓

Output

①

Positive
- **I**nterior
- **E**xterior
- **P**erformance
- **S**afety

Neutral
I, E, P, S

Negative
- **I**nterior
- **E**xterior
- **P**erformance
- **S**afety

②

③
"Toyota kerennnn. **Headlamp**nya cakep mantul!!"

"**Suspensi**nya nggak nyaman.."

A. Accuracy : General comment → Owner / Non Owner

Ensure by layer ③ (part name) → Comment on part level is capable doing by Owner

B. Utilization :
Big data analysis useful as **part of Goyokiki activity series** along with current Goyokiki (visit)

BDA — **Common** — **Current Goyokiki**
Unique — — Unique

→ 1. As **early info/prep** for Goyokiki visit
→ 2. As **enhancement** to Goyokiki visit result

Milestone Activity

	2022								2023							2024
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		

Domestic

⬤ **Big Data Analysis**

Export → ◯ Big Data Analysis

Domestic → ◯ Big Data Analysis

Export → ◯ Big Data Analysis

Development Plan & Role

4'2022	5	6	7	8	9	10	11	12	1'2023	2	3

UR dev't

- Define word bank
- Develop visualization
- Develop utilization concept

Vendor selection

- Collaboration w/ ISTD
- Selection capability, experience
- Cost competitiveness

Vendor registration

Legal matter

UR finalize w/ vendor

Trial big data

Implementation

Plan

Do

Check

Action

1. Dashboard Result

a) 3 Layer visualization analysis:

Sentiment Analysis 1st layer

Part Category 2nd layer

Part Name 3rd layer

Sentiment
434 137 89
Positive Negative Neutral

Category (+)
281 130 217 22 10
E I P S A

Exterior (+)
5% 12% 22% 26%
Lampu Gagah Design Model

only 1st layer captured and visualized:

Sentiment Analysis 1st layer

Sentiment
434 137 89
Positive Negative Neutral

Part Category 2nd layer

Category (+)
130 217
E I P S A

Part Name 3rd layer

Exterior (+)
12% 22% 26%
Lampu Gagah Design Model

a) Difficult to capture and visualized part level with current comment filtering order:

Sentiment → Part Category ✖ → Part ✖

Part Category → Part ✖

Too many general comments → too much effort to find part level

Temporary countermeasure:
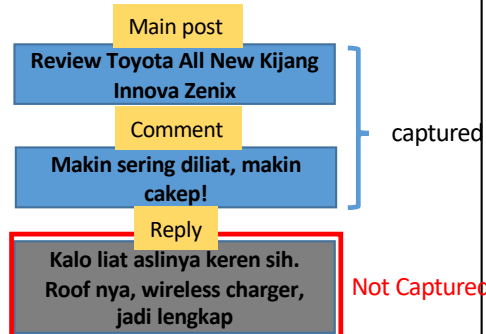a) Reverse filtering order:

Part → Category → Sentiment

Easier to capture customer voice on part level (automaticly include part category and sentiment voice)

b) Manually collect data to generate 2nd layer & 3rd layer → manual visualization

b) Customer voice in social media

b) Captured main post & comments, but didn't capture replies.

Main post
Review Toyota All New Kijang Innova Zenix

Comment
Makin sering diliat, makin cakep!

captured

Reply
Kalo liat aslinya keren sih. Roof nya, wireless charger, jadi lengkap

Not Captured

b) Main post mostly **not represent customer voice** on social media --> **discussion mostly happen in in comment replies**
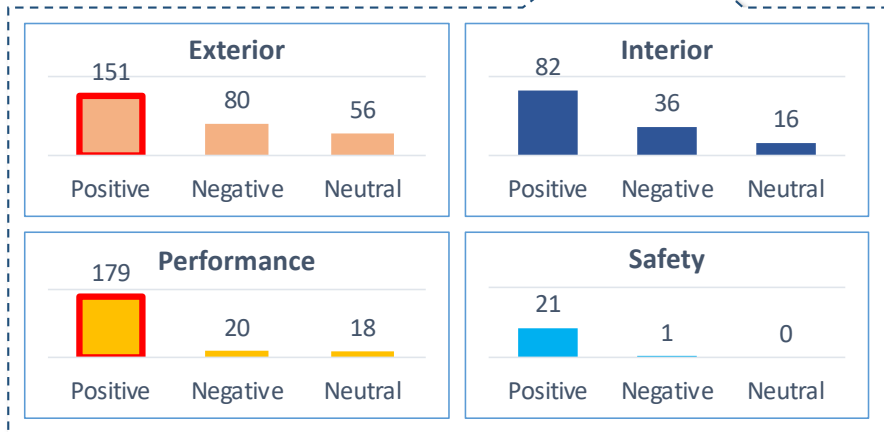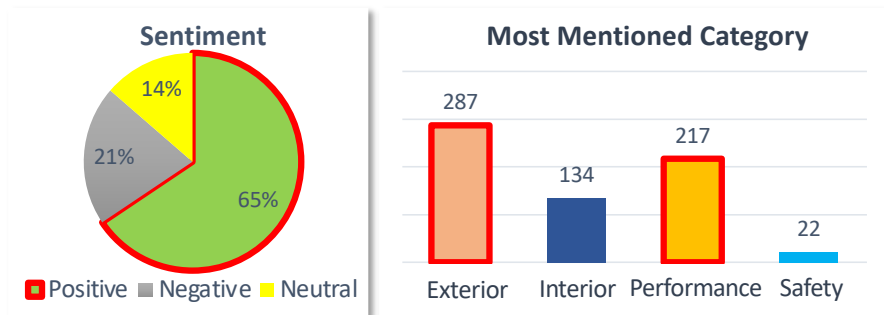
b) Crawling data until comment replies

Toyota All New Kijang Innova Zenix 2022 | First Drive | OtoDriver
Oto Driver · 3M views · 8 months ago

Comments

@ronyfebrianto2999 · 7mo ago
Awalnya liat body Innova baru B aja, tapi makin sering liat review di yutub makin lama makin cakep kok, dan lebih proper, berasa SUV, dan terkait pakai CVT, menurut pendapat pribadi kalo hanya dipakai di perkotaan dan jalanan nanjak biasa rasanya worth it sih... Dan yang paling suka kabinnya makin gede, bisa bawa banyak orang. Hehehe

Captured

Replies

@mtaulipelelu3995 · 7mo ago
Klo liat aslinya keren sih. Tapi ya namanya jg mobil baru wkwk

Captured

Dashboard Interface (Big Data Analysis)

TOYOTA INDONESIA
PT Toyota Motor Manufacturing Indonesia

Sentiment Counts

TOTAL MENTIONS	TOTAL ENGAGEMENT	UNIQUE AUTHORS	POSITIVE MENTIONS	NEGATIVE MENTIONS	NEUTRAL MENTIONS
7,871 ▼23%	78,641 ▼26%	1,757 ▼20%	2,969 ▼29%	206 ▼32%	4,696 ▼18%

Positive, Negative, Neutral Sentiment

HOURLY DAILY MONTHLY

2 k
1.50 k
1 k
500
0

14. Jul   15. Jul   16. Jul   17. Jul

● Neutral ● Positive ● Negative

SOURCE OF MENTIONS

MENTION ▼

3.673 Instagram ▼27%
3.243 Blogs & Forums ▼19%
607 News ▼24%
348 Youtube ▲1%
0 Tiktok ▼100%
0 Twitter ▼100%
0 Facebook ▼100%

Popular Posts / Comments

POPULAR MENTIONS

BE ber.kendara 🔘 — July 16, 2023 20:37
PT Toyota Astra Motor memastikan akan menjual GR Corolla di Tanah...
👍4.548 🔁0 💬108 👁0 📈4.656 👥0

BE ber.kendara 🔘 — July 16, 2023 20:37
PT Toyota Astra Motor memastikan akan menjual GR Corolla di Tanah...
👍4.548 🔁0 💬108 👁0 📈4.656 👥0

BE ber.kendara 🔘 — July 16, 2023 20:37
PT Toyota Astra Motor memastikan akan menjual GR Corolla di Tanah...
👍4.548 🔁0 💬108 👁0 📈4.656 👥0

NA Nadir Araçlar 🔘 — July 14, 2023 18:12
Toyota Supra IV Fabrika verileri ! 3.0i 24 V T-turbo (Araç Sto...
👍1.819 🔁0 💬16 👁0 📈1.835 👥0

SOCIAL SHARE OF VOICE **Source**

MENTION ▼

Facebook 0.0%
Twitter 0.0%
Tiktok 0.0%
Youtube 4.4%
News 7.7%
Instagram 46...
Blogs & Forums ...

Most Mentioned Keywords

WORDCLOUD

transmisi, manual, plat, innova, kaki, kondisi, rush, indonesia, cek, info, mobilbekas, biga, interior, full, bekas, cash, asli, pakai, mobil, harga, honda, suzuki, ban, avanza, jok, yaris, new, kredit, unit, kediri, mesin, free, body, service, tukar, motor, pajak, garansi, juta, surat, lengkap, velg, daihatsu, warna, promo, tambah, original, agya, angsuran

Potential number of people who came across related mentions

6.248.389 ▼22%

REACH VS MENTIONS

HOURLY DAILY MONTHLY

● Mention ● Reach

14. Jul 15. Jul 16. Jul 17. Jul

Gender

GENDER ESTIMATE BY CHANNEL

📷 69.09 % | 30.91 % — 1058 users
▶ 83.07 % | 16.93 % — 254 users
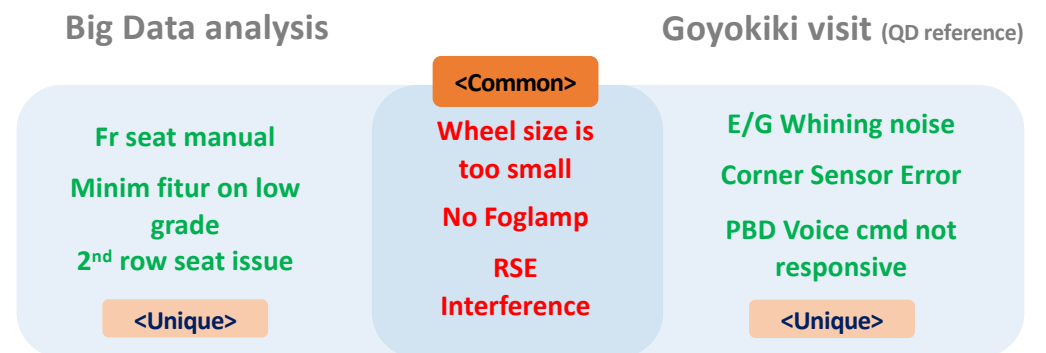
● Male ● Female

ESTIMATE GENDER

Female 28 %
Male 72 %

Total : 1312

Implementation Result

Domestic (Innova Zenix) → SOP Nov'22   (Data Crawling Period → Dec'22 – Feb'23)

Sentiment

- ■ Positive
- ■ Negative
- ■ Neutral

14%
21%
65%

Most Mentioned Category

Exterior	Interior	Performance	Safety
287	134	217	22

Exterior

Positive	Negative	Neutral
151	80	56

Interior

Positive	Negative	Neutral
82	36	16

Performance

Positive	Negative	Neutral
179	20	18

Safety

Positive	Negative	Neutral
21	1	0

1. Market Acceptance (Top/Most Comment)

Big Data analysis   **Goyokiki visit** (QD reference)

<Common>

Big Data analysis	<Common>	Goyokiki visit
New panoramic roof	Tampilan exterior	Camera 360
Wireless charger	Performa Hybrid	Kenyamanan AC
Interior nuansa gelap	Kenyamanan duduk	Kemudahan tuas transmisi
	Kelegaan ruang	
	TSS	

<Unique>   **<Unique>**

2. Market Feedback (Top/Most Comment)

Big Data analysis   **Goyokiki visit** (QD reference)

<Common>

Big Data analysis	<Common>	Goyokiki visit
Fr seat manual	Wheel size is too small	E/G Whining noise
Minim fitur on low grade	No Foglamp	Corner Sensor Error
2nd row seat issue	RSE Interference	PBD Voice cmd not responsive

<Unique>   **<Unique>**

Yokoten Plan & Next Action

Item	Division	Activity	Due date
1. Yokoten internal TMMIN	PBMD	Implementation product evaluation for next project with improved process: 1. Yokoten → **B-SUV Domestic** 2. Function Expansion → **Conversion (Domestic & Export)** 3. Function Expansion → **Accessories (C-MPV Export, Fortuner Export, etc)**	Aug'23
	QD	Sharing Big Data Analysis Tools & combine w/ QD goyokiki result	Aug'23
2. Collab w/ TAM	TSD	Sharing Big Data Analysis result & grasp feedback for improvement/collaboration	Sep'23

Improvement Item (Big Data Tools)

No	Item	Action	Due Date
1	**Machine learning**	Ensure machine learning captured reply comment in beginning	
2	**Sentiment accuracy**	Update vendor bank word with more slang word	Aug'23
3	**User requirement**	Dashboard output follow latest UR (automatic generate visualization)	

Next Implementation Target
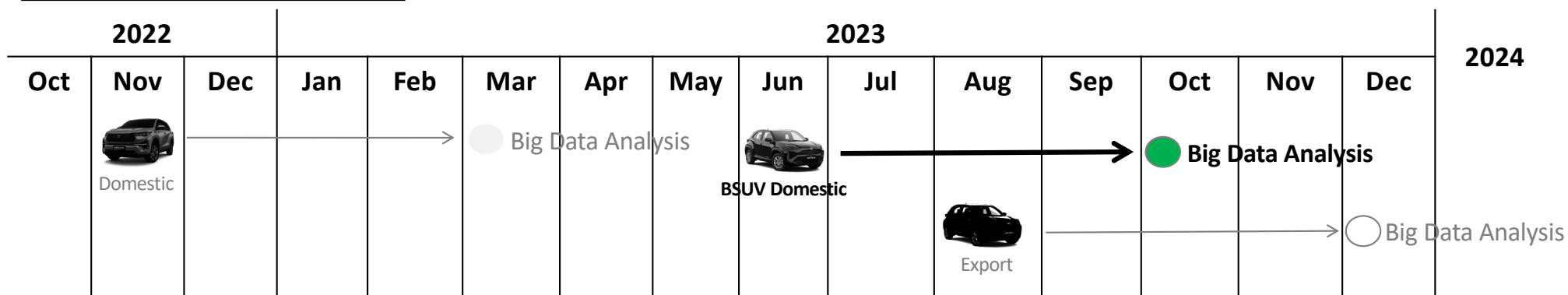
Benefit Big Data Analysis

(Productivity)

Online Activity

⬇

More Flexible
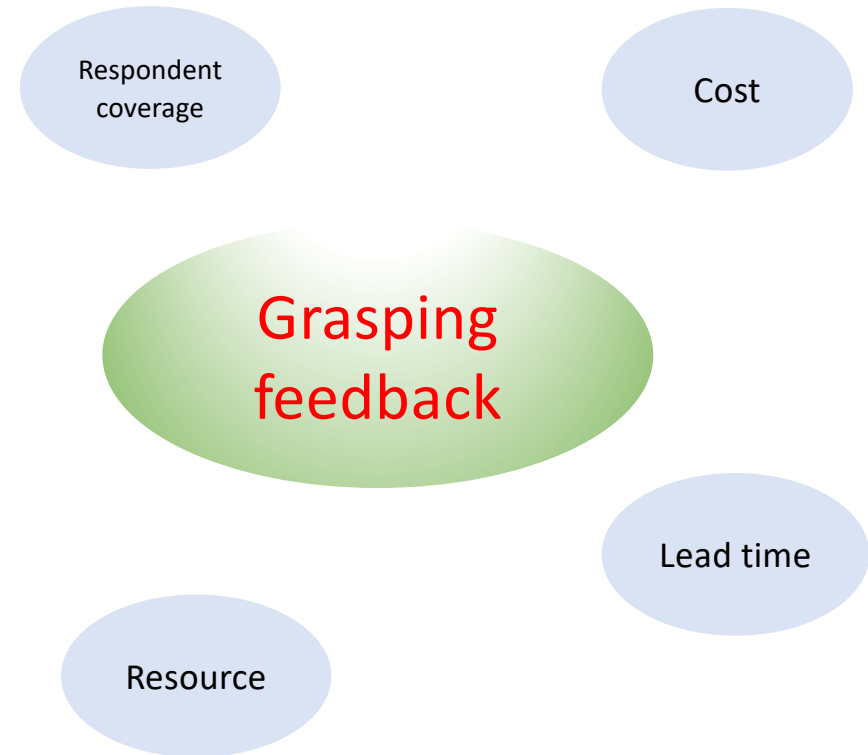
Respondent coverage

Cost

Grasping feedback

Lead time
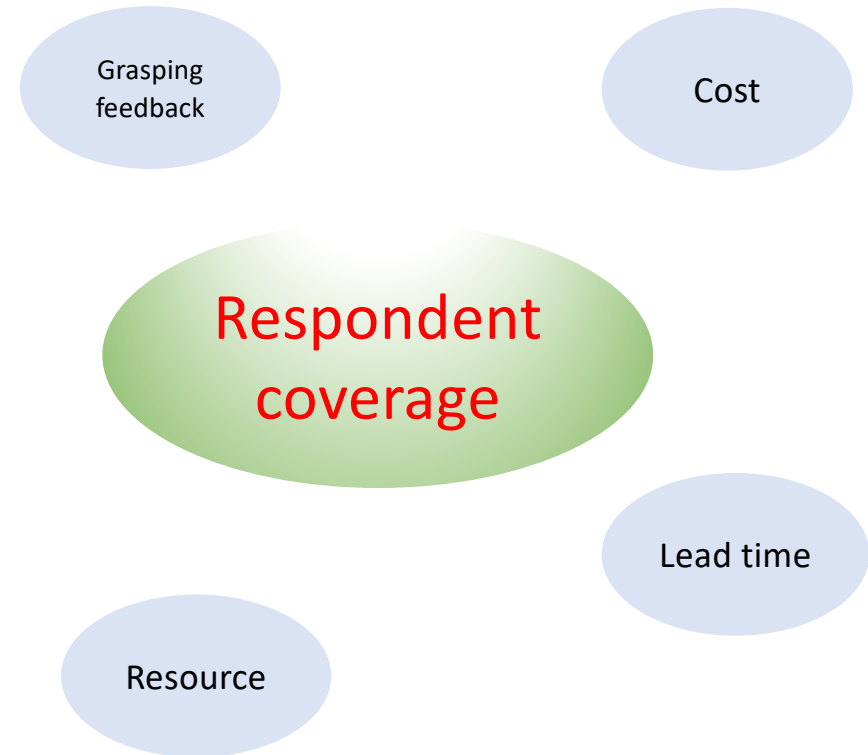
Resource

Benefit Big Data Analysis

(Cost)

**Less Resource
(system only)**

⬇

Save > 100 Mio IDR
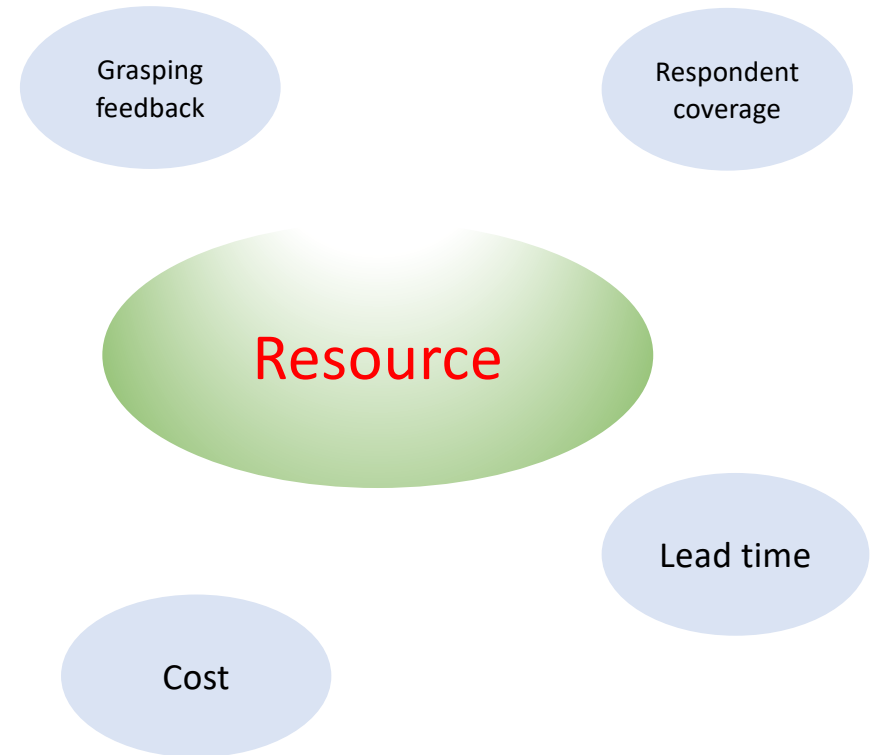
Grasping feedback

Respondent coverage

Cost

Lead time
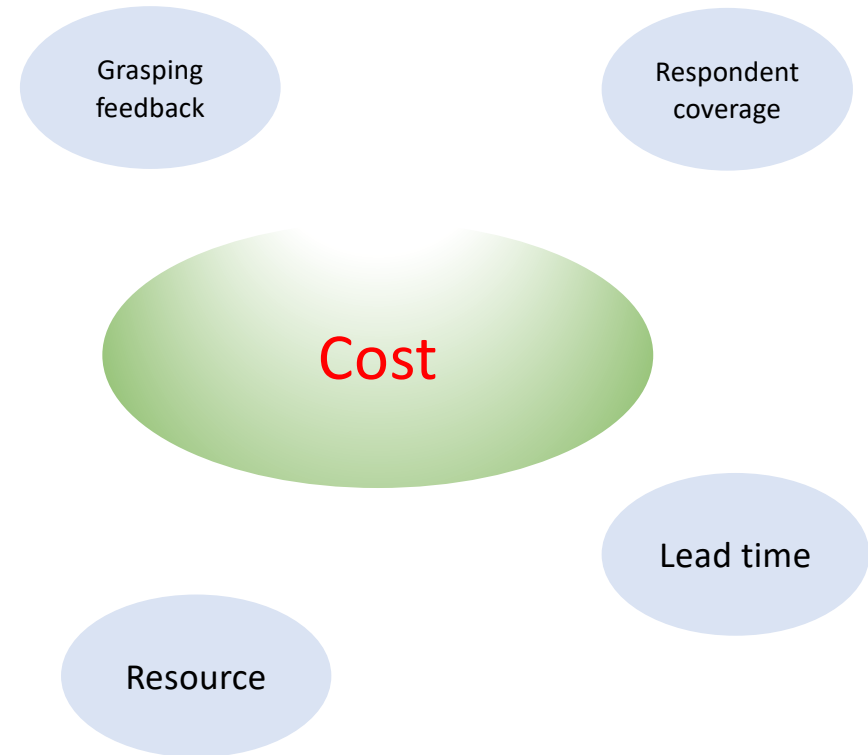
Resource

Benefit Big Data Analysis

(Productivity)

2 member only

90% less resource

Benefit Big Data Analysis

(Productivity)

1 Month activity

⬇

3 month faster than current

Grasping feedback

Respondent coverage

Lead time
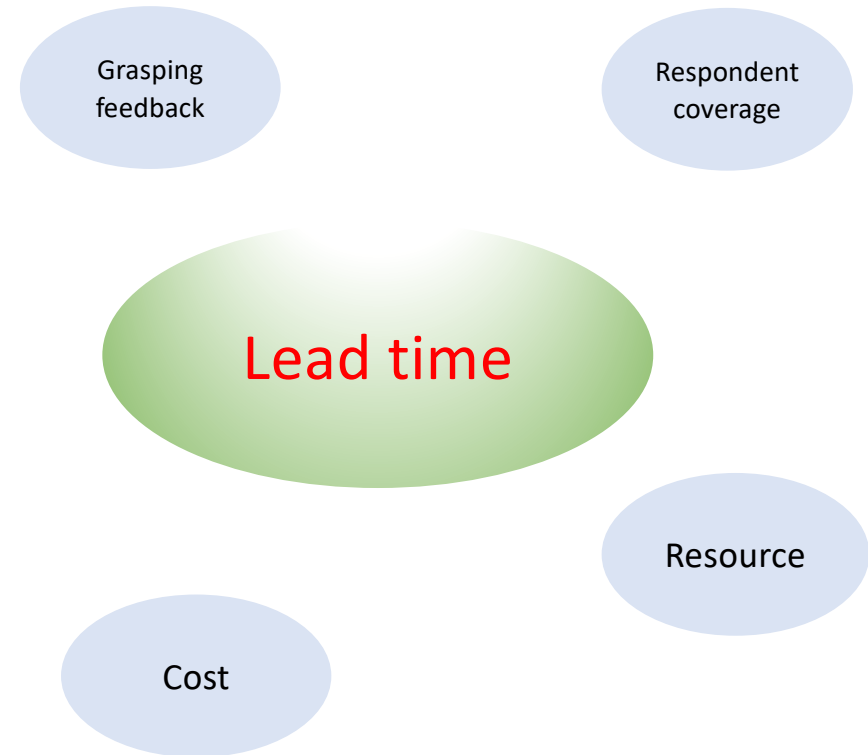
Resource

Cost

Big data analysis is **New Way of Working** as part of Current Goyokiki activity series which **cheaper & efficient** to **enhance current goyokiki in grasping customer voice** more **flexible, wider scope, less lead time & resource** (cost & MP)

Thankyou.