LIFELENZ

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Business Framing

LifeLenz App Usage (Store Type) 1

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Business Objectives

- Improving user experience and providing prediction on workforce trends

- Methods:
  - Analysing user behaviors based on different store types and AOS.
  - Build a machine learning model to predict future workforce trend.

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Background

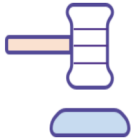
Stakeholders: Customers, LIFELENZ

ONBOARDING

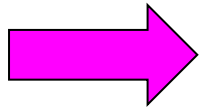
ANALYTIC INTELLIGENCE

SCHEDULING & TIME MANAGEMENT

INSIGHTS & REPORTS



LABOR LAW & COMPLIANCE



- Quick Service Restaurants
- Casual Dining
- Retail
- Manufacturing
- Hospitals & Hospitality companies

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Business Success Criteria

- Construct a model which could predict workforce trends in specific regions and time.
- The model accuracy should higher than baseline model

- Build another model to help managers optimize workforce assignments ahead of time.
- Optimization result should perform better and faster than manual assignment

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Assumptions

Not all stores have already run AOS schedules.

Performance may vary by different locations.

Employees’ behavior will not be affected by other factors like project related surveys.

Stores that run AOS must last for enough time that is useful for affecting employees’ behavior.

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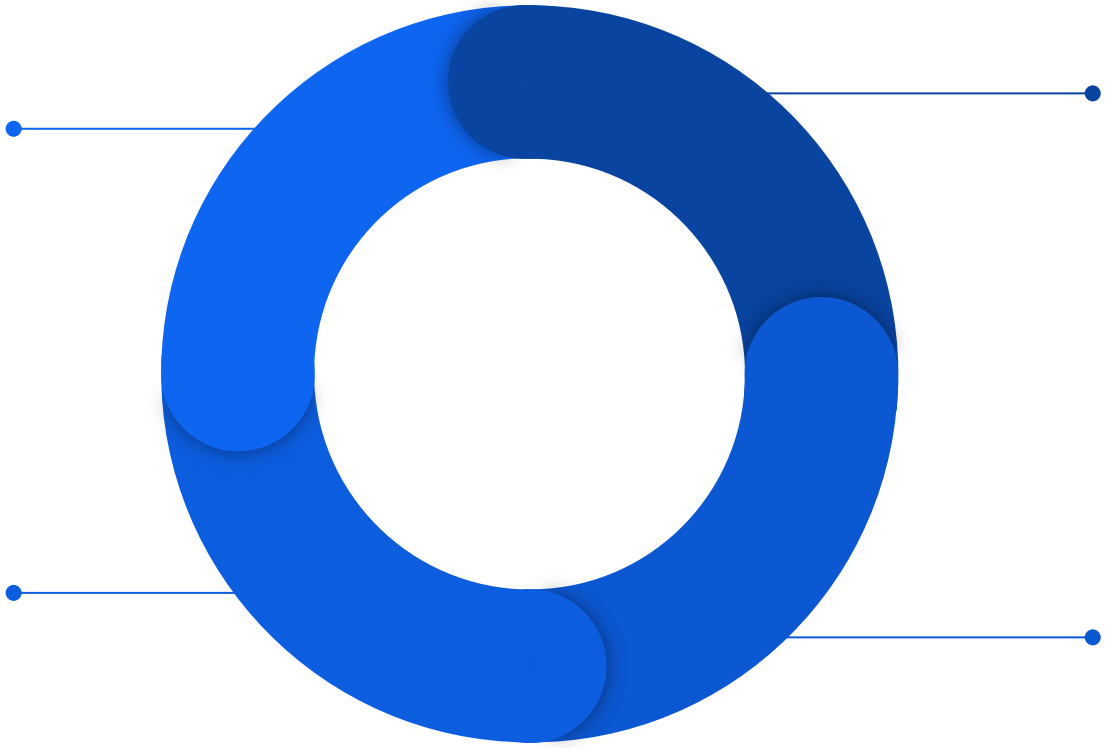
Data Requirements

For AOS:
possible in a few weeks

For User:
historical data, including sl_userId, userType and etc.



For Behavior:
historical data, including sl_hitOrder, sl_hitType and etc

For Location:
historical data, including continent, region, city and etc.

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Data Requirements

Wanted
AOS
AOS_timeStamp
monthlyCost

Location
continent
subContinent
countryIsoCode
region
metro
city

User
sl_userId
userType
M_bounces
language
browser
operatingSystem
deviceCategory

Behavior
sl_hitOrder
sl_hitType
sl_timeStamp
sessionCount
pageTitle
M_timeOnPage
eventCategory
eventAction
eventLabel
M_eventValue

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Data Limitations

- Data related to store type is not available.
- Dataset is huge but skewed. For example, there is only McDonald's in the US as indicated, making the influence of region or store type ambiguous.
- Currently, data related to AOS has not been given and is not promised.
- Dataset is not informative enough, with half of the columns unusable.
- The meaning of some columns are not known, like M_bounces.
- Data related to cost is not available. It’s hard to evaluate the effect of AOS or other factors.

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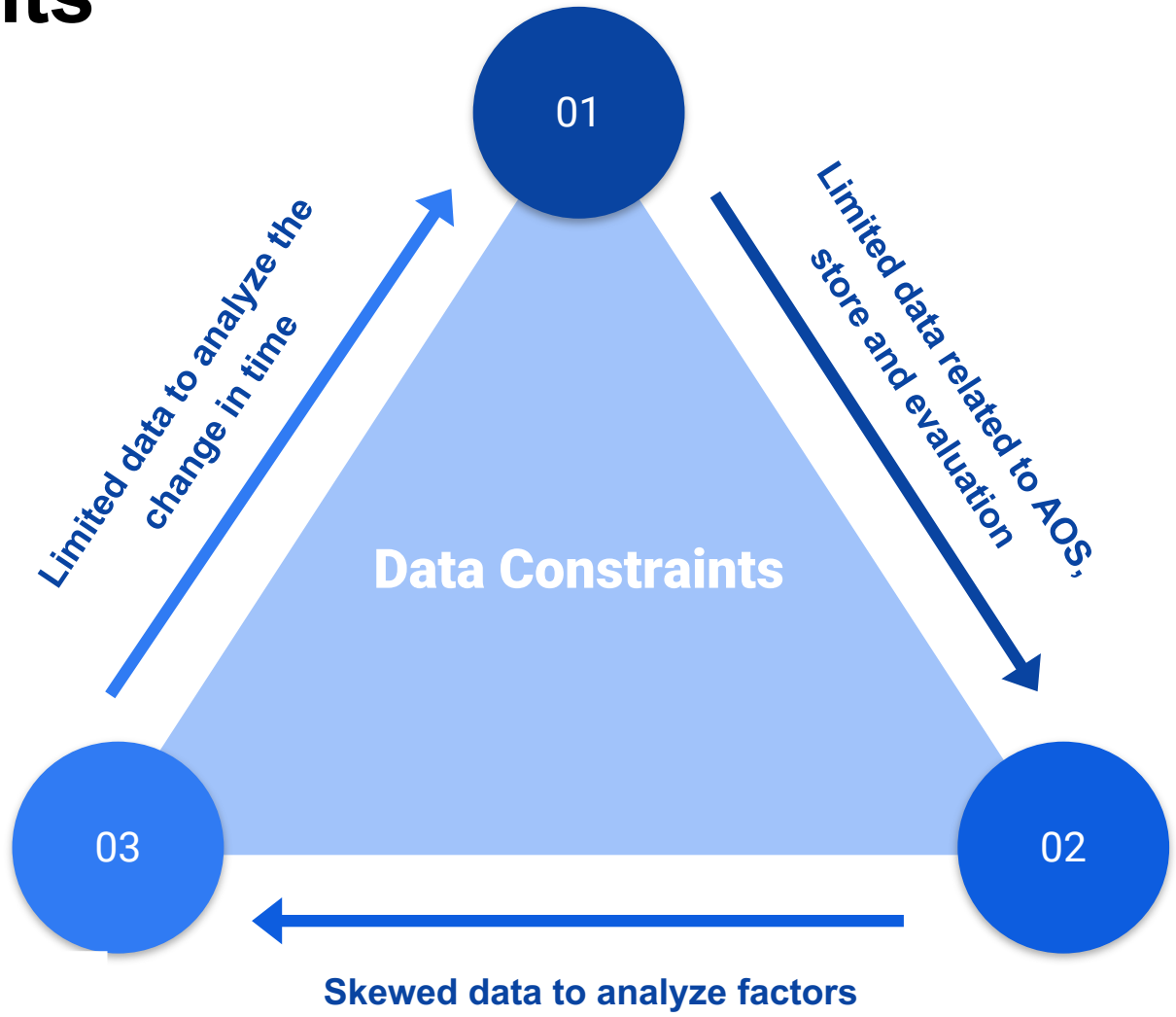
Data Constraints



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Risks & Contingencies

A. Variables selected inconsistent with business objectives

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A deviation in subsequent quantitative analysis

- ★ Take all factors into consideration to select data before modeling,
- ★ Decide each variable one column by one

B. Lack of practical experience & Limitation of data understanding

↓

Considerations related to project may not be comprehensive

- ★ Seek for assistance of the Professor and LIFELENZ staffs
- ★ Cooperate with teammates

C. The initial business objectives are inconsistent with the final modeling result

- ★ Observe whether the result of each step is consistent with original goals and adjust accordingly

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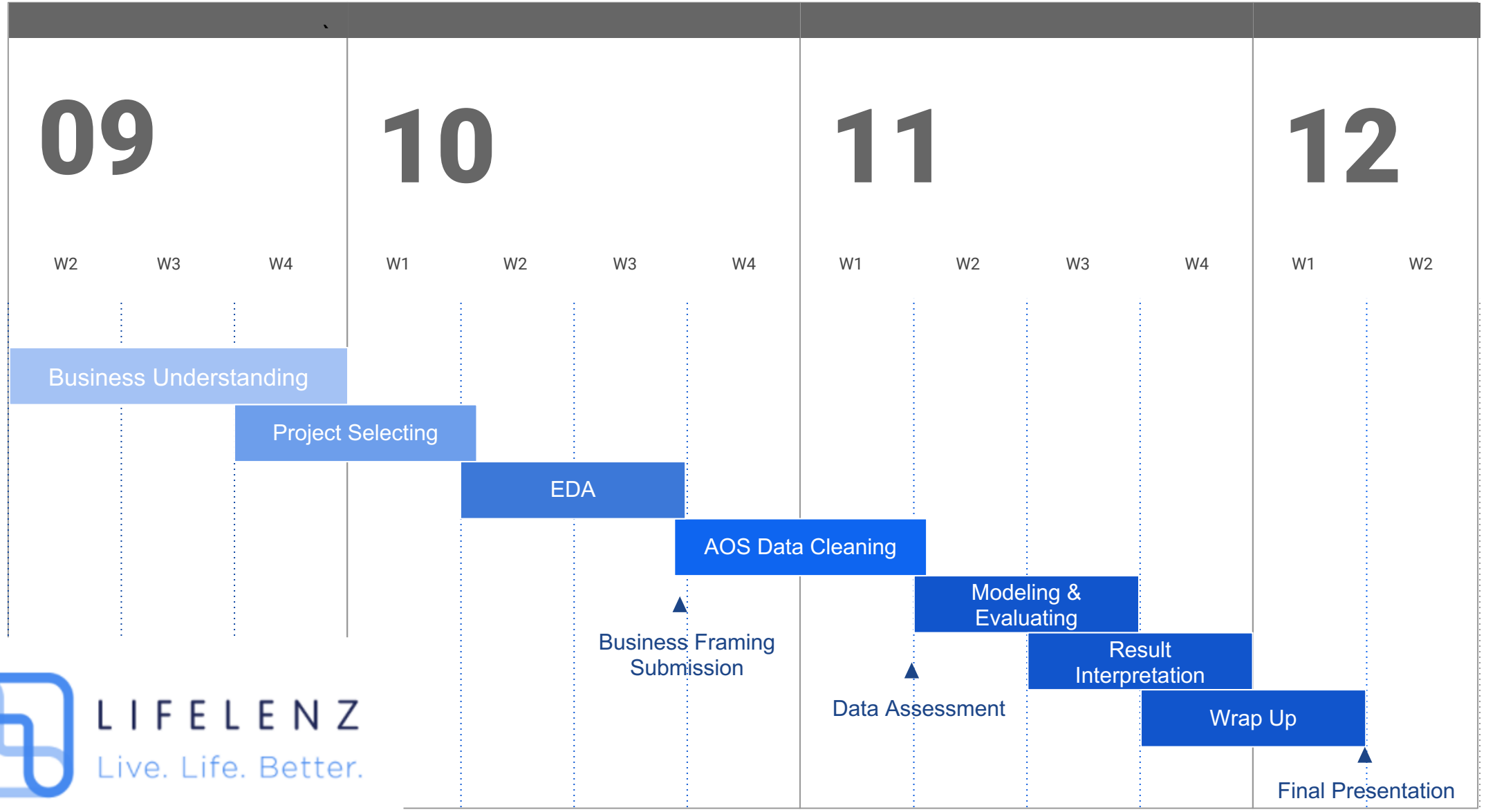
Plan



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THANK YOU

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