



REPUBLIC OF TUNISIA
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
UNIVERSITY OF SFAX



TENDERS OBSERVATORY : NEWS & TENDERS OPPORTUNITIES

PRESENTED FOR THE PURPOSE OF OBTAINING THE NATIONAL ENGINEERING DIPLOMA IN DATA
AND DECISION SYSTEMS

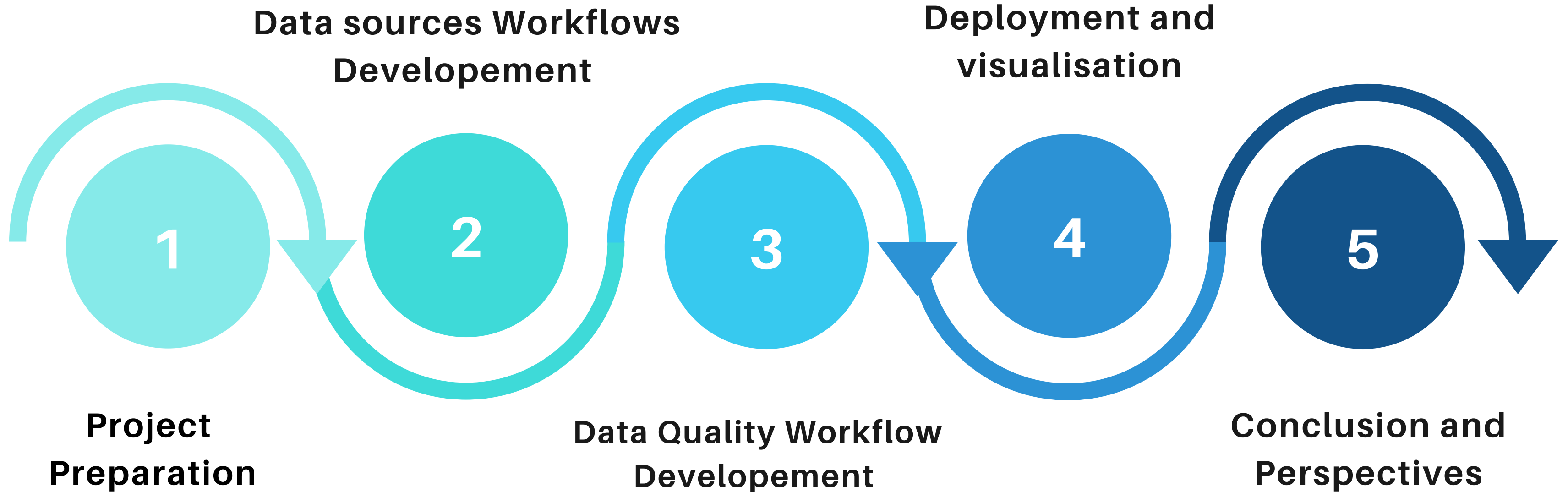
PREPARED BY: GHAITH KRIFA

SUPERVISED BY : TAREK BEN SAID & FAROUK JAZIRI

ACADEMIC YEAR
2024 - 2025



PLAN





PROJECT PREPARATION



HOSTING COMPANY

Founded on 2020, specializing in agricultural commodity expertise and market intelligence





BUSINESS UNDERSTANDING

- What is tender ?



Announcement

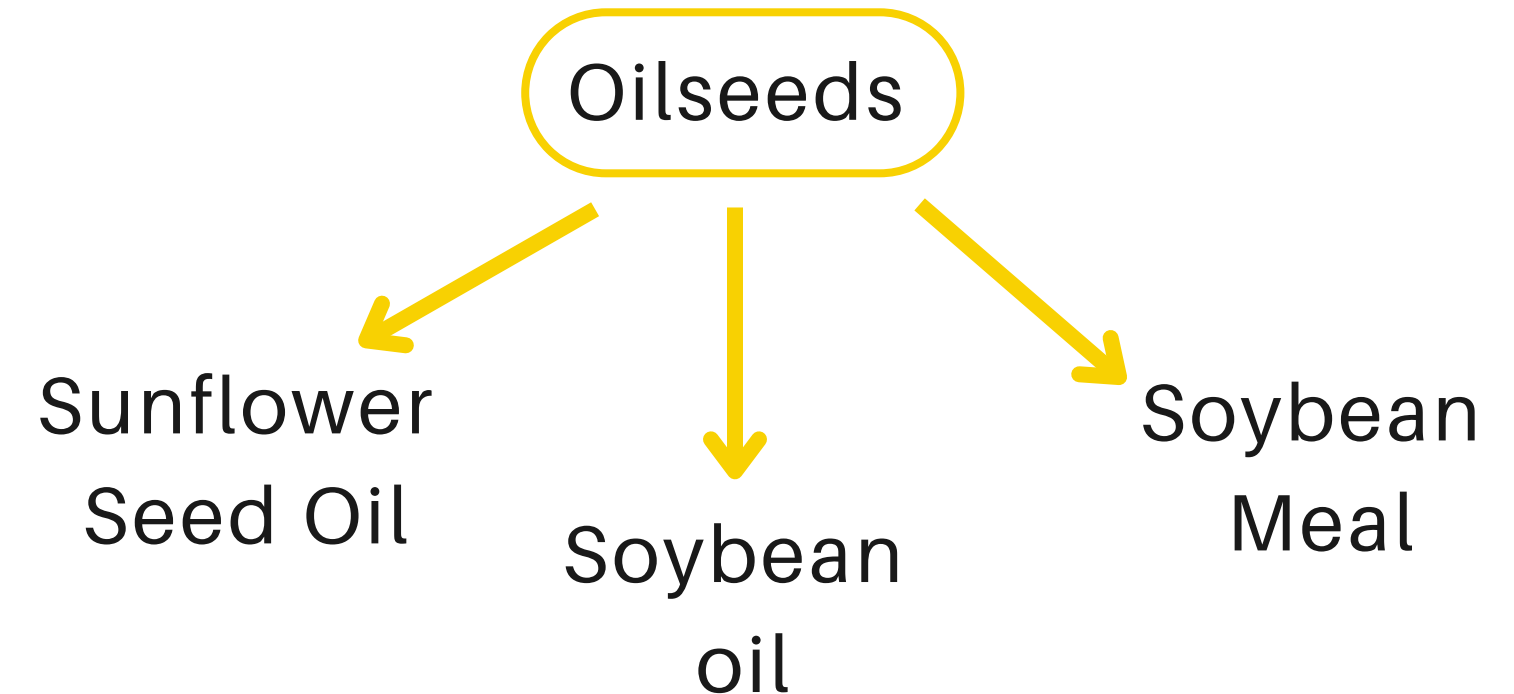
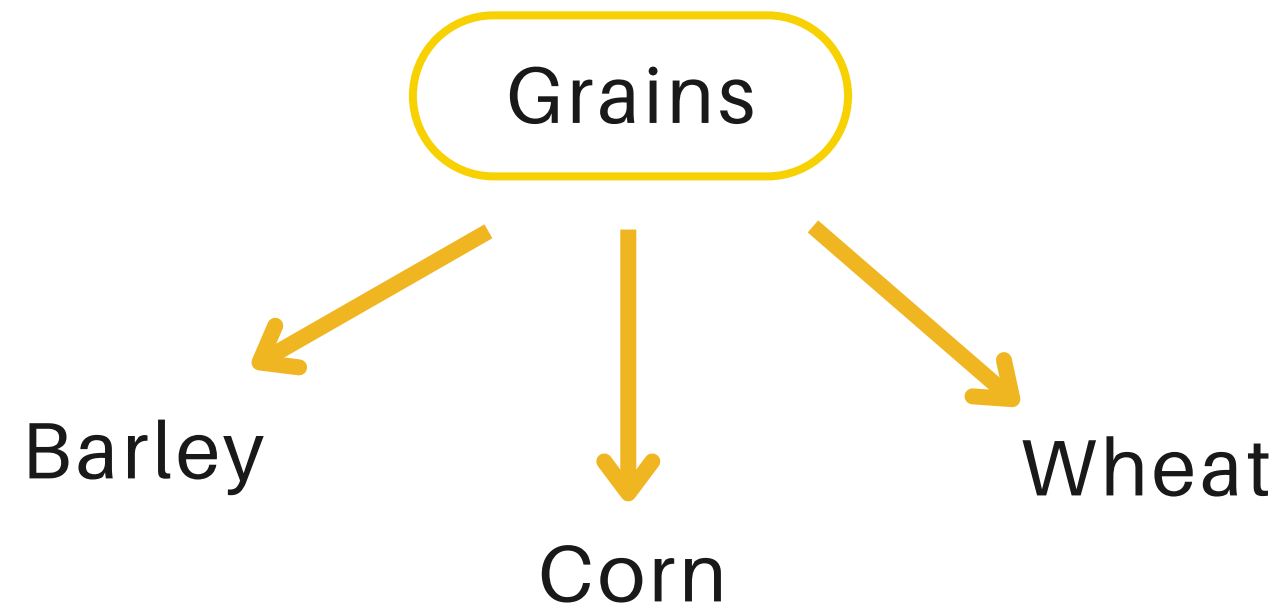


Offers



Result

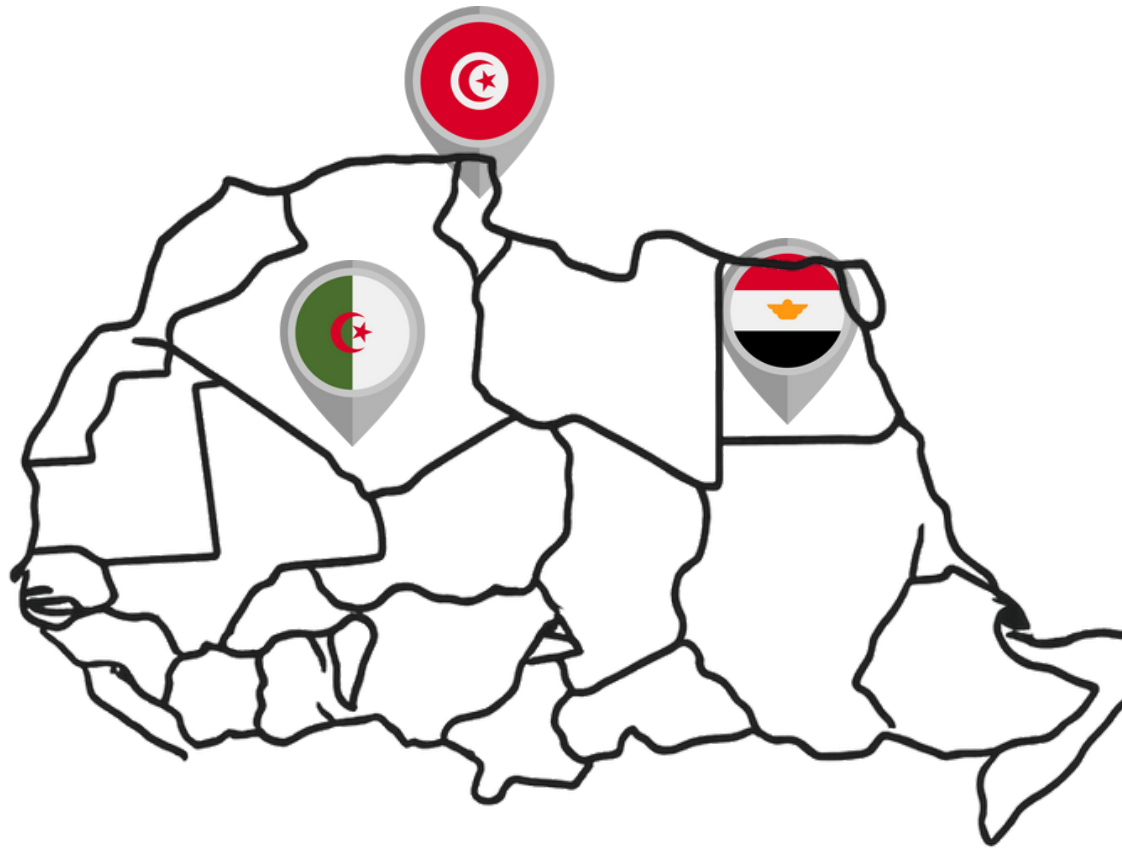
- Our business focus on :



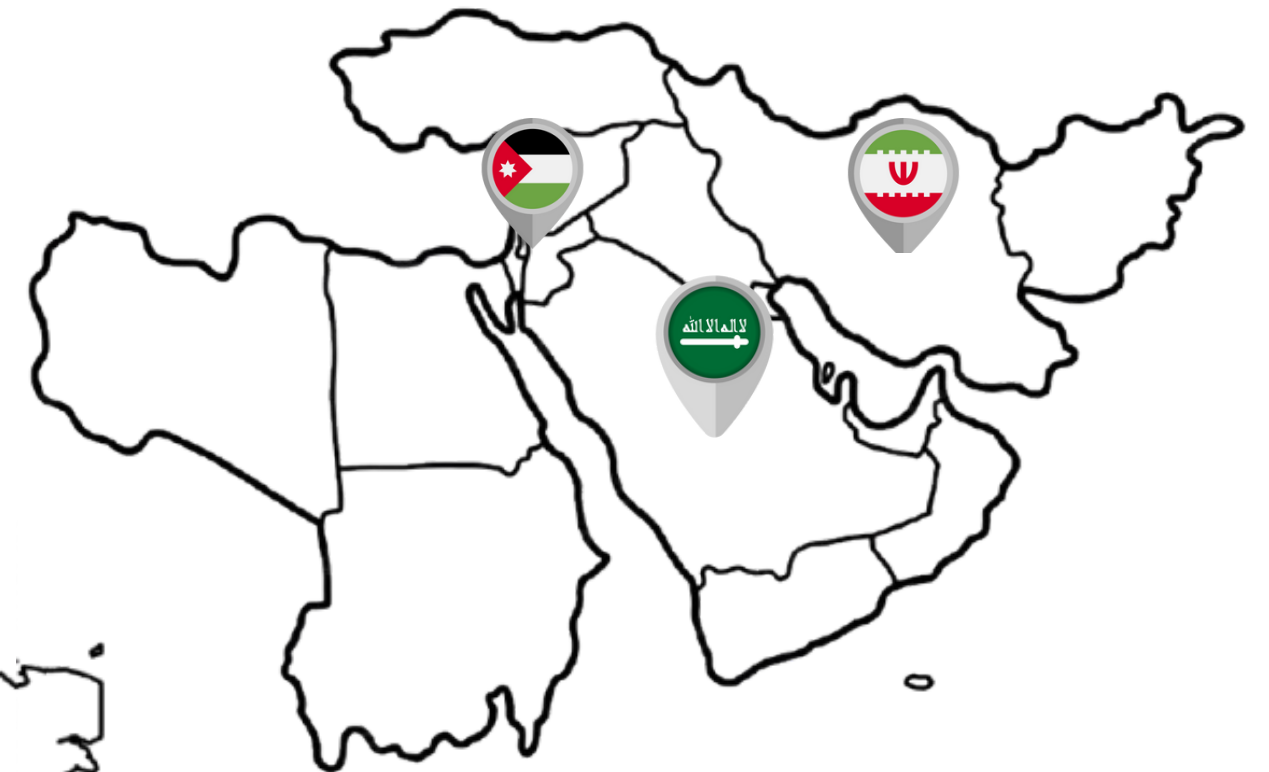


BUSINESS UNDERSTANDING

North Africa



Middle East



Asia





OVERVIEW OF EXISTING WORK

We have three data sources for collecting tender data

Data collection process

- Analyze tender descriptions & extract key information.
- Verify if there is missed information that is mentioned in other data sources
- Verify the consistency of information across different sources.
- Check other sources to see if additional tenders have been published.

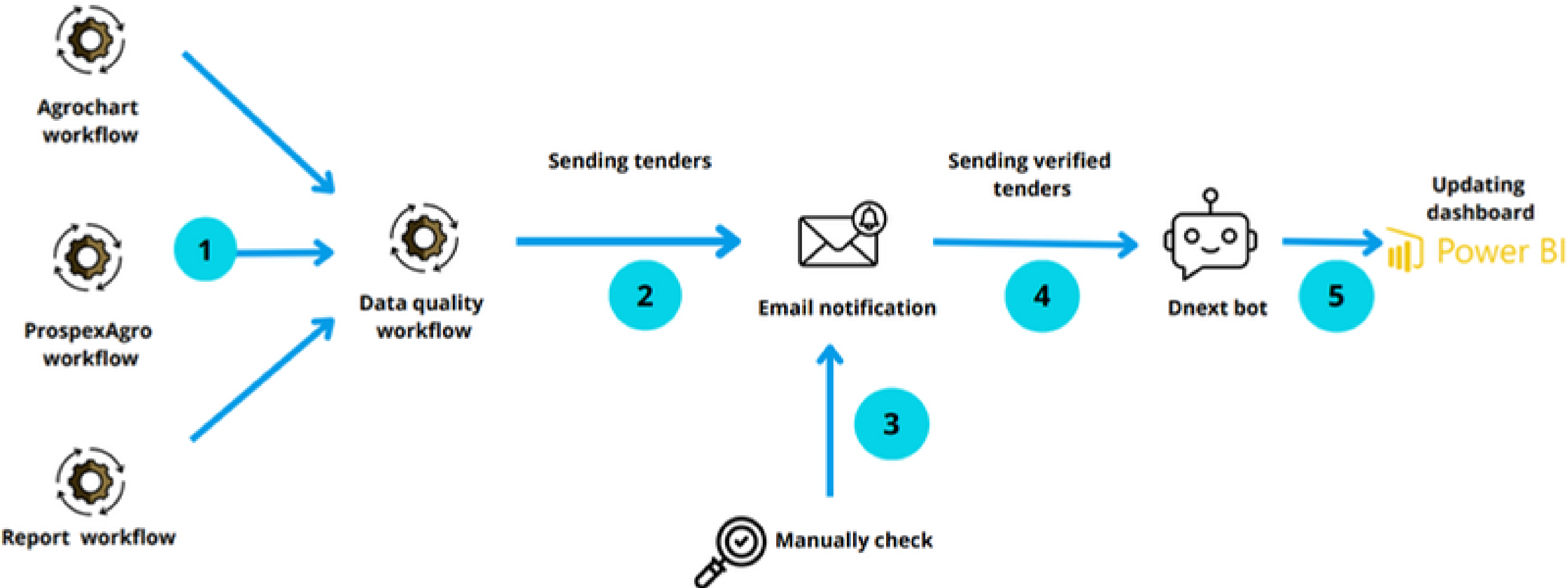


LIMITATIONS

- Manual process involves several complex steps.
- Consumes significant time, delaying real-time updates to our dashboards.
- Risks of human error

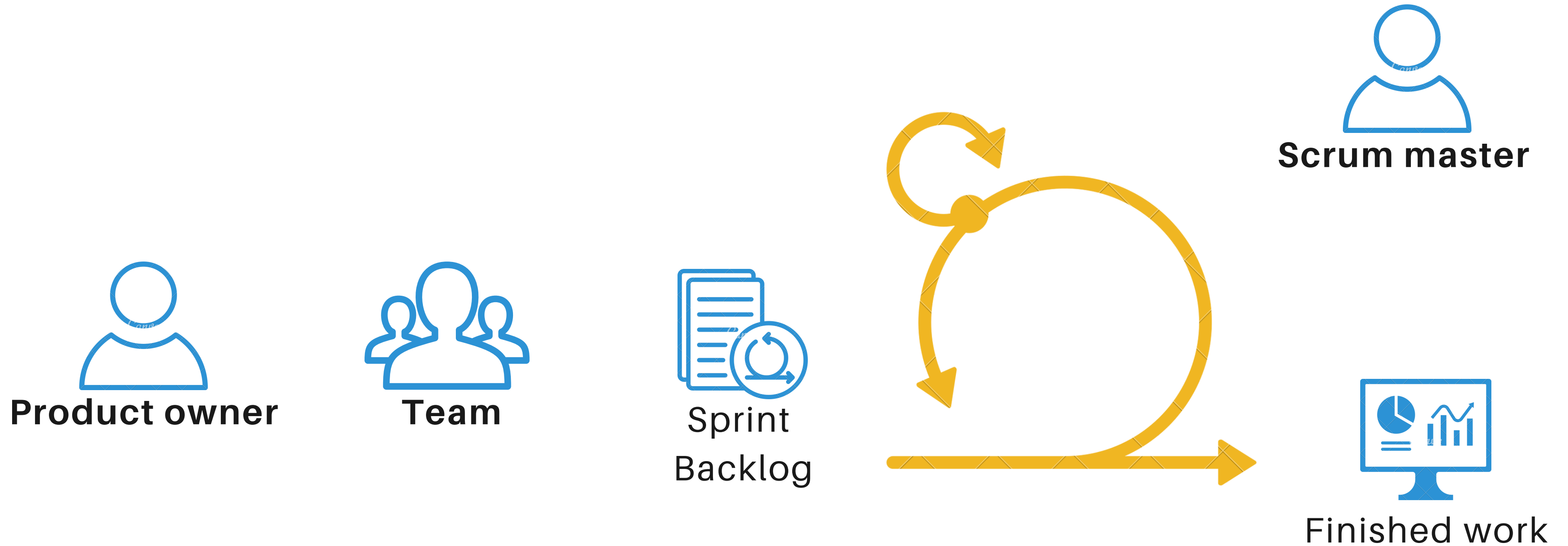


PROPOSED SOLUTION



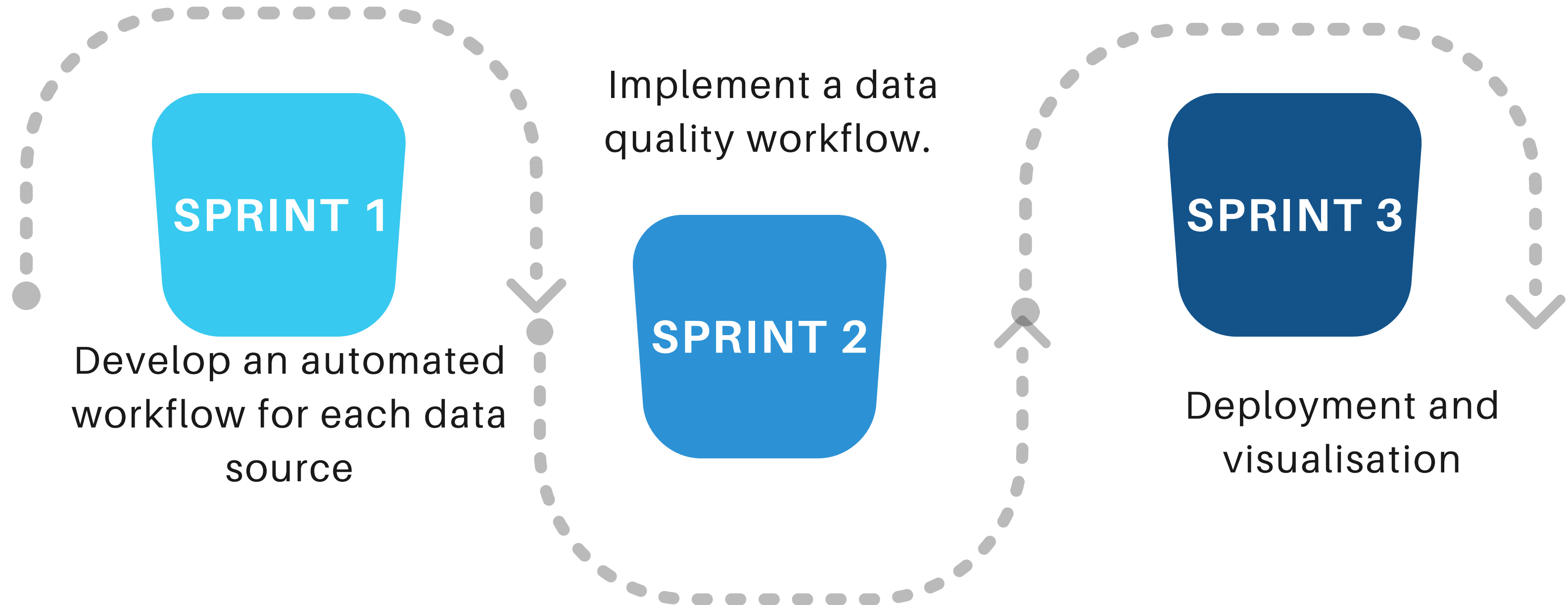


PROJECT MANAGEMENT WITH SCRUM





SPRINT PLANNING





DEVELOPMENT ENVIRONMENT



A blue rounded square icon with the text "SPRINT 1" inside.

SPRINT 1

**Developing an automated
workflow for each data source**

REPORT WORKFLOW

WEEKLY REPORT (MAY 19, 2025)

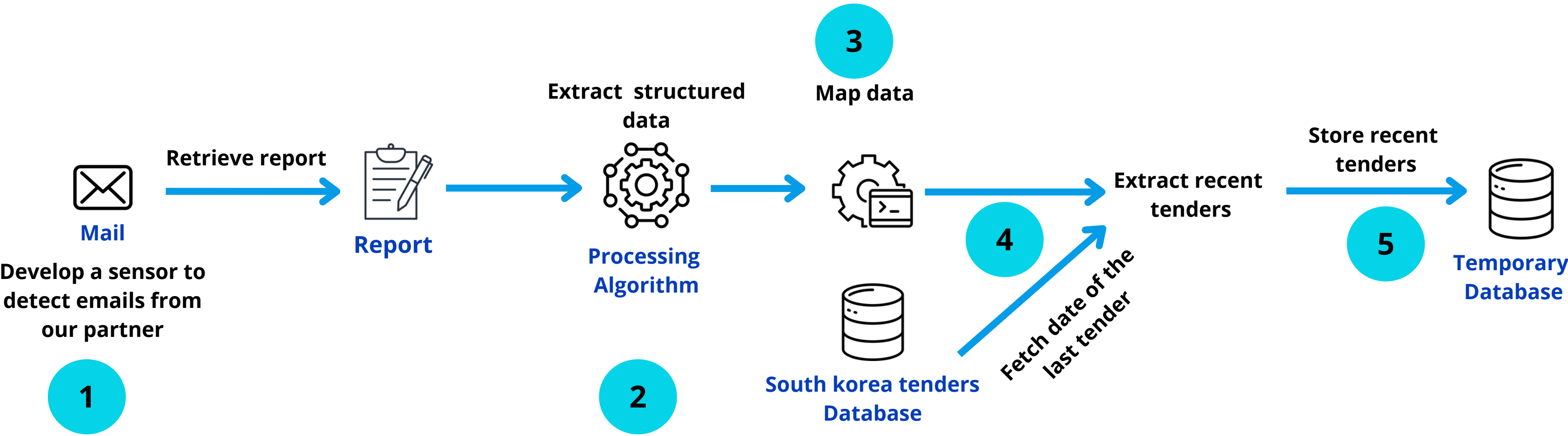
CORN	PURCHASE DETAIL				NEXT DEMAND(ESTIMATED)
	PURCHASE DATE	ETA	SUPPLIERS	PRICE AND TERMS	
NOFI	MAR 27, 2025	JUL 20, 2025	POSCO	65K 10% / 252.49 / 1.50 / WW	SHIPMENT : SEP 20, 2025 ETA BSS - PNW : AUG 18 - SEP 6 - USG : JUL 29 - AUG 17 - SAM : JUL 24 - AUG 12 - SAF : AUG 3 - AUG 22
	APR 30, 2025	AUG 3, 2025	PAN OCEAN	65K 10% / 248.70 / 1.25 / WW	
	APR 30, 2025	AUG 20, 2025	CJIA	65K 10% / 248.70 / 199.30CU / 1.50 / WW	
	MAY 7, 2025	AUG 30, 2025	ADM	66K 10% / 242.96 / 1.25 / WW	
	MAY 14, 2025	SEP 10, 2025	MITSUMI	65K/55K 10% / 234.46 / 1.50 / SAM/SAF	
MFG	APR 29, 2025	JUL 28, 2025	ADM	66K 10% / 252.33 / 1.25 / WW	SHIPMENT : SEP 10, 2025 ETA BSS - PNW : AUG 8 - AUG 27 - USG : JUL 19 - AUG 7 - SAM : JUL 14 - AUG 2 - SAF : JUL 24 - AUG 12
	MAY 2, 2025	AUG 15, 2025	CHS	67K 10% / 248.40 / 1.25 / WW	
	MAY 6, 2025	AUG 5, 2025	MITSUMI	65K 10% / 243.30 / 1.25 / WW	
	MAY 6, 2025	AUG 10, 2025	ADM	66K 10% / 242.97 / 1.25 / WW	
	MAY 6, 2025	AUG 20, 2025	BUNGE	65K 10% / 243.30 / 1.25 / WW	
FLC	FEB 26, 2025	MAY 30, 2025	MITSUMI	67K 10% / 257.69 / 1.50 / WW	SHIPMENT : SEP 15, 2025 ETA BSS - PNW : AUG 13 - SEP 1 - USG : JUL 24 - AUG 12 - SAM : JUL 19 - AUG 17 - SAF : JUL 29 - AUG 17
	MAR 13, 2025	JUN 15, 2025	ADM	66K 10% / 251.80 / 1.50 / WW	
	MAR 27, 2025	JUL 10, 2025	CHS	65K 10% / 252.49 / 1.50 / WW	
	APR 3, 2025	JUL 30, 2025	MITSUMI	65K 10% / 248.49 / 1.50 / WW	
	APR 30, 2025	AUG 25, 2025	ADM	66K 10% / 248.49 / 1.25 / WW	
KFA INCHON (FBG)	FEB 26, 2025	MAY 20, 2025	CHS	65K 10% / 257.29 / WW	SHIPMENT : SEP 20, 2025 ETA BSS - PNW : AUG 18 - SEP 6 - USG : JUL 29 - AUG 17 - SAM : JUL 24 - AUG 12 - SAF : AUG 3 - AUG 22
	MAR 13, 2025	JUN 20, 2025	CHS	68K 10% / 251.50, 175.00CK / WW	
	APR 3, 2025	JUL 15, 2025	POSCO	65K 10% / 250.90 / WW	
	APR 30, 2025	AUG 5, 2025	MITSUMI	65K 10% / 248.69 / WW	
	MAY 7, 2025	AUG 30, 2025	CHS	67K 10% / 242.90 / WW	
KFA BUSAN	FEB 6, 2025	APR 20, 2025	OLAM	63K 10% / 258.49 / 1.50 / WW	SHIPMENT : SEP 20, 2025 ETA BSS - PNW : AUG 18 - SEP 6 - USG : JUL 29 - AUG 17 - SAM : JUL 24 - AUG 12 - SAF : AUG 3 - AUG 22
	FEB 25, 2025	MAY 20, 2025	CJIA	65K 10% / 261.50 / 1.00 / WW	
	MAR 12, 2025	JUN 15, 2025	POSCO	65K 10% / 248.74 / 1.25 / WW	
	MAR 28, 2025	JUL 15, 2025	CARGILL	68K 10% / 252.99 / INCL / WW	
	MAY 5, 2025	AUG 20, 2025	LDC	65K 10% / 247.99 / INCL / WW	

Key Advantages

Easy to process

May include tenders not published by other sources

Report Workflow Architecture



AGROCHART WORKFLOW

Advantages

- AgroChart is the most consistent data source
- AgroChart provides data on offers and results of tenders.

Challenges

- AgroChart provides data as textual description

Taiwan bought 100,000 MT US wheat

Taiwan Flour Millers' Association purchased 100,000 MT of US milling wheat in a tender on Thursday, March 27.

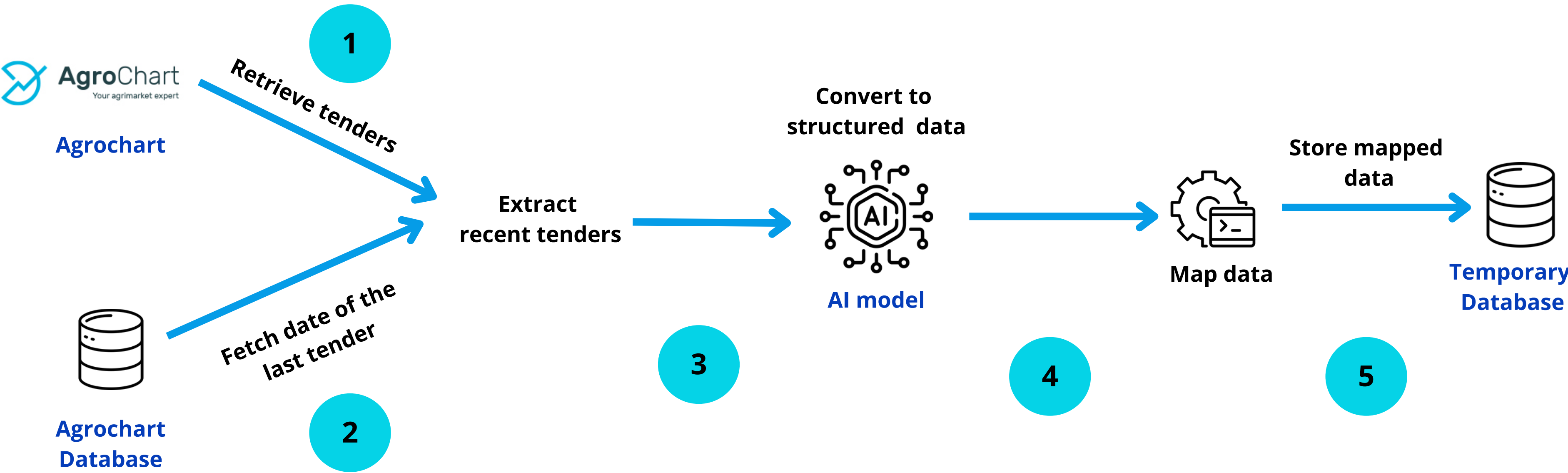
The first 50,000 MT consignment has a freight charge of 39.3 \$/mt for ocean shipping from the US Pacific Northwest coast to Taiwan for May 24-June 17 shipment:

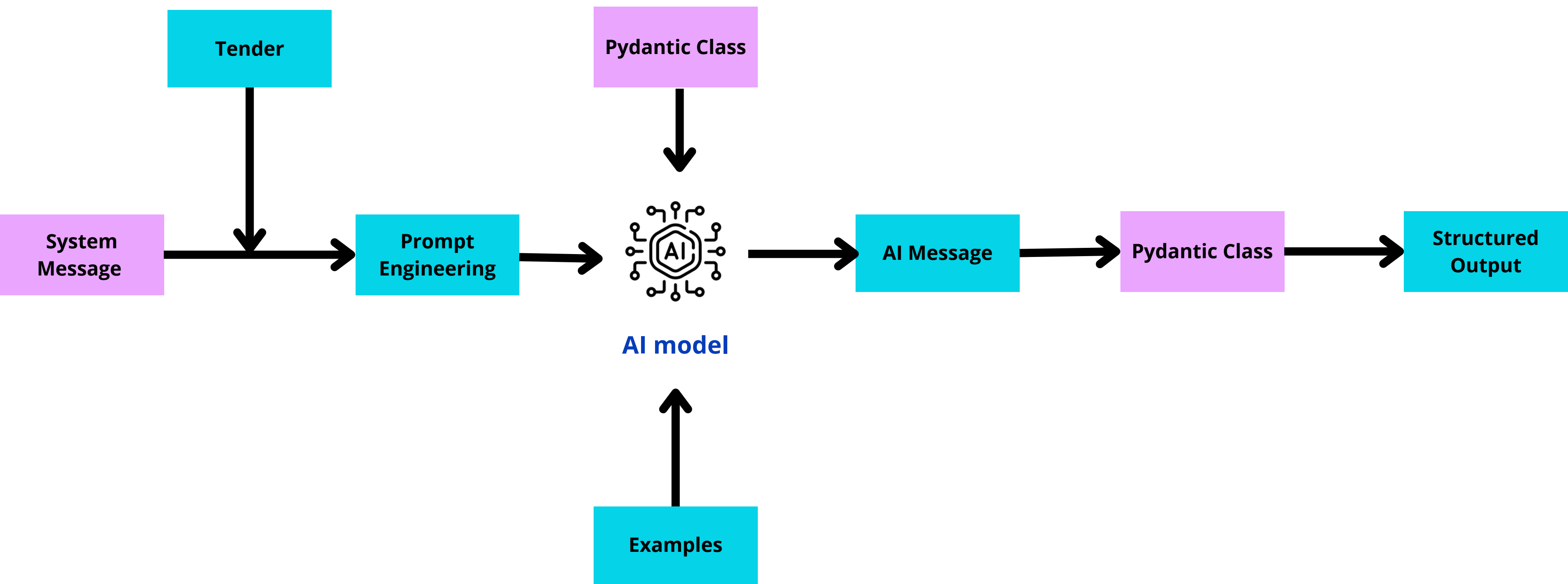
- 32,950 MT of DNS 14.5% at 280.24 \$/mt fob from ADM
- 10,325 MT of HRW 12.5% at 267.12 \$/mt fob from CHS
- 6,725 MT of SW 8.5-10% at 236.26 \$/mt fob from CHS

The second 50,000 MT consignment has a freight charge of 39 \$/mt for ocean shipping from the US Pacific Northwest coast to Taiwan for June 16-30 shipment:

- 32,805 MT of DNS 14.5% at 277.63 \$/mt fob from Cargill
- 10,520 MT of HRW 12.5% at 257.36 \$/mt fob from Cargill
- 6,675 MT of SW 8.5-10% at 239.13 \$/mt fob from Cargill

Agrochart Workflow Architecture





Model performance

- 30 documents containing a total of 100 tenders

Field	Deepseek R1	Mistral Small	Mistral Medium
Number of tenders extracted in one text	95%	98%	100%
Reported date	100%	100%	100%
Country	100%	100%	100%
Product	100%	100%	100%
Quality	98%	93%	95%
Price	99%	95%	98%
Delivery start	95%	93%	96%
Delivery end	98%	98%	98%
Quote type	98%	93%	96%
Delivery term	95%	95%	95%
Company	95 %	90%	98%
Currency	100%	100%	100%
Unit	100%	100%	100%
Origin	100%	100%	100%
Tenderer	100%	100%	100%

Model performance

Taiwan Flour Millers' Association purchased 99,200 MT of US milling wheat in a tender on Thursday, May 8.

The first 49,850 MT consignment has a freight charge of 32.49 \$/mt for ocean shipping from the US Pacific Northwest coast to Taiwan for July 5-18 shipment:

34,550 MT of DNS 14.5% at **294.11 \$/mt FOB** from Viterra

8,600 MT of HRW 12.5% at **254.16 \$/mt FOB** from United Grain Corporation

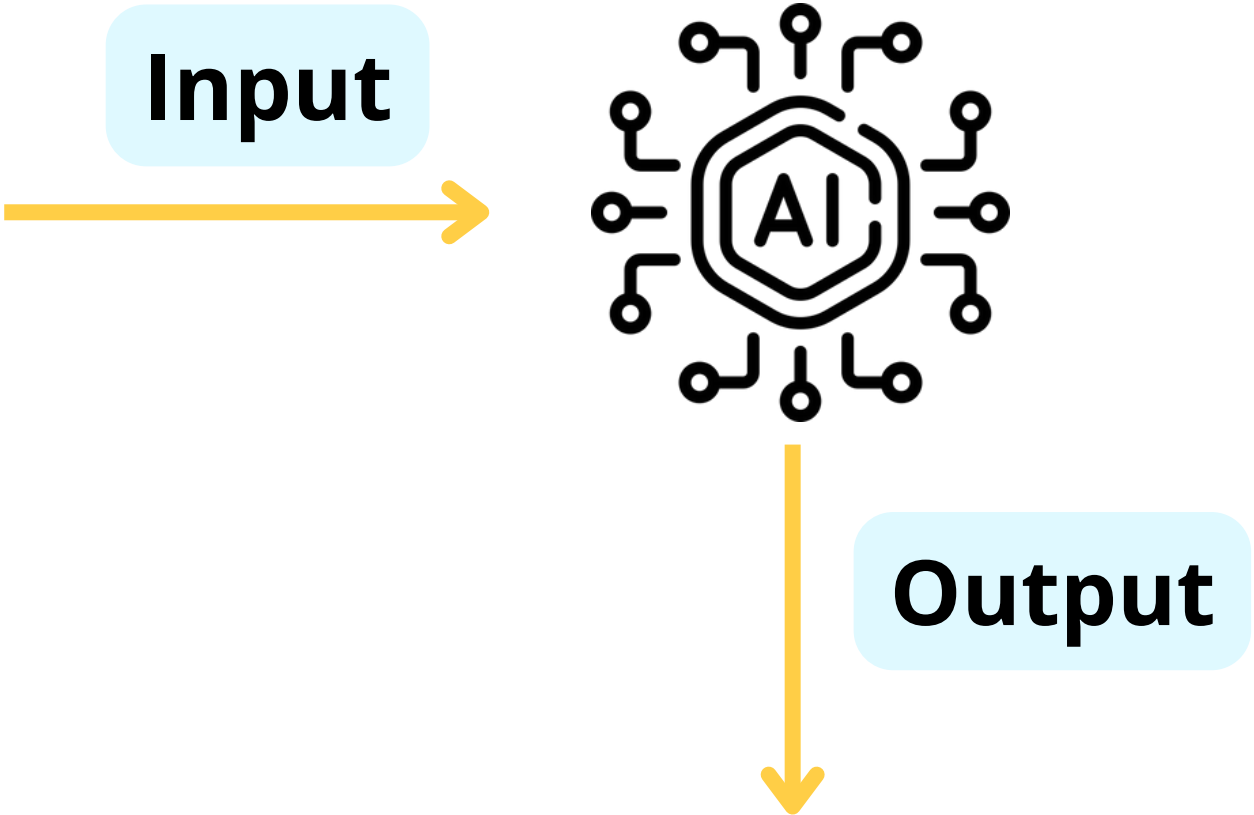
6,700 MT of SW 8.5-10% at **243.77 \$/mt FOB**

The second 49,350 MT consignment has a freight charge of 33.03 \$/mt for ocean shipping from the US Pacific Northwest coast to Taiwan for July 22-August 5 shipment:

34,100 MT of DNS 14.5% at **284.01 \$/mt FOB** from Bunge

9,350 MT of HRW 12.5% at **248.61 \$/mt FOB** from United Grain Corporation

5,900 MT of SW 8.5-10% at **244.58 \$/mt FOB** from United Grain Corporation



date	country	tenderer	product	quality	company	origin	delivery_st	delivery en	quantity kmt	price	currency	unit	delivery term	Quote type
7 août 2025	Taiwan	Taiwan Flour M	wheat	DNS 14.5%	Viterra	US	5 juil. 2025	18 juil. 2025	34550	326.60	\$	MT	CNF	close
7 août 2025	Taiwan	Taiwan Flour M	wheat	HRW 12.5%	United Grain Corpor	US	5 juil. 2025	18 juil. 2025	8600	286.65	\$	MT	CNF	close
7 août 2025	Taiwan	Taiwan Flour M	wheat	SW 8.5-10%		US	5 juil. 2025	18 juil. 2025	6700	276.26	\$	MT	CNF	close
7 août 2025	Taiwan	Taiwan Flour M	wheat	DNS 14.5%	Bunge	US	22 juil. 2025	5 août 2025	34100	317.04	\$	MT	CNF	close
7 août 2025	Taiwan	Taiwan Flour M	wheat	HRW 12.5%	United Grain Corpor	US	22 juil. 2025	5 août 2025	9350	281.64	\$	MT	CNF	close
7 août 2025	Taiwan	Taiwan Flour M	wheat	SW 8.5-10%	United Grain Corpor	US	22 juil. 2025	5 août 2025	5900	277.61	\$	MT	CNF	close

Advantages

- This source is the first to publish tender data, sometimes up to 4-5 days ahead of other sources

Challenges

- Provides various information related to agriculture
- publishes diverse tender-related content
- Tender data is presented in an unstructured text format,

ProspexAgro Channel messages

DAILY TENDER DIGEST – MAY 28TH

Algeria ONAB – Corn Tender

- Up to 120K MT animal-feed corn, optional origins.
- Price-offer deadline: May 28.
- Previous tender: 80K MT, closed May 21, no deal.
- Origins now optional (not just Argentina/Brazil).
- Shipment: 3 lots, 30K-40K MT each, June 15-30.
- Thin May participation; port delays raised costs.

Iran SLAL – Animal-Feed Corn, Soymeal and Barley Tenders

- Unknown volumes.
- Tenders date: May 26.
- Target 120K MT each.
- Est: up to 240K MT corn (4 × 60K), up to 240K MT soymeal (4 × 60K), about 180K MT barley (3 × 60K).
- Prices N/A.
- Shipment July–Aug.

- Corn: Brazil, Europe, russia, Ukraine, Black Sea incl. Turkey.
- Barley: EU, russia, Ukraine, Black Sea incl. Turkey/Kazakhstan.
- Soybean: Brazil or Argentina.

- Sanctions complicate payments.
- Payment via 2 banks (Iraq & Turkey).

Taiwan MFIG – Corn Tender

- 65K MT Brazilian yellow feed corn from CJ International.
 - \$ 165.90¢/bu c&f over Chicago Dec 2025.
 - Lowest U.S. offer: 175.00¢/bu (Agrex).
 - Lowest Argentine offer: 180.45¢/bu (ADM) – accepted only if ≥4¢/bu below next.
 - Offers: 7×U.S., 6×Brazil, 2×Argentina; none .
 - Shipment: Jul 21–Aug 9 (U.S. Gulf/Brazil/Argentina) or Aug 5–24 (PNW/S. Africa).
 - Last tender Apr 29: 65K MT U.S. corn.
- [#DailyTenderDigest](#) [#TenderDigest](#) [#Tenders](#) [#Tender](#) [#Corn](#) [#Soymeal](#) [#Barley](#) [#AnimalFeed](#) [#Shipping](#) [#Algeria](#) [#Iran](#) [#Taiwan](#) [#Brazil](#) [#Argentina](#) [#russia](#) [#Ukraine](#) [#Turkey](#) [#Kazakhstan](#) [#BlackSea](#) [#ONAB](#) [#SLAL](#) [#MFIG](#) [#CJInternational](#) [#Agrex](#) [#ADM](#)

FORECAST: OIL WORLD

Global Oilseeds & VegOil 2024/25 Snapshot

According to Oil World:

- Soybeans:
 - Production: 418.4 Mt (+1.9 vs prev; +23.1 YoY).
 - 169 Mt (154.6) | 118.84 Mt (113.27) | 49 Mt (flat).
 - Crush 350.73 Mt (330.31).
 - Stocks 121.63 Mt (109.67).
 - 47.5 | 34.26 | 10.6.
 - Rapeseed/Canola:
 - Production: 75.52 Mt (80.27).
 - 16.93 (20.17) | 3.73 (4.63) | 6.45 (6.57).
 - Crush 77.2 Mt (+0.8 MoM; < 77.78 prev yr).
 - 24.45 Mt (-1.1).
 - Stocks 11.64 Mt (-1.7 YoY, 3-yr low).
 - 3.22 Mt (-1.77) .
 - Sunflower Oil:
 - Demand under pressure global use 22.1 Mt vs record 23.6 Mt (-1.5 Mt).
- [#Oilseeds](#) [#VegOil](#) [#Soybeans](#) [#Rapeseed](#) [#Canola](#) [#SunflowerOil](#) [#OilWorld](#) [#Brazil](#) [#USA](#) [#Argentina](#) [#EU](#) [#Ukraine](#)

1 1 1

28 11:30

[Laisser un commentaire](#)

TENDER

Bangladesh – Wheat Tender

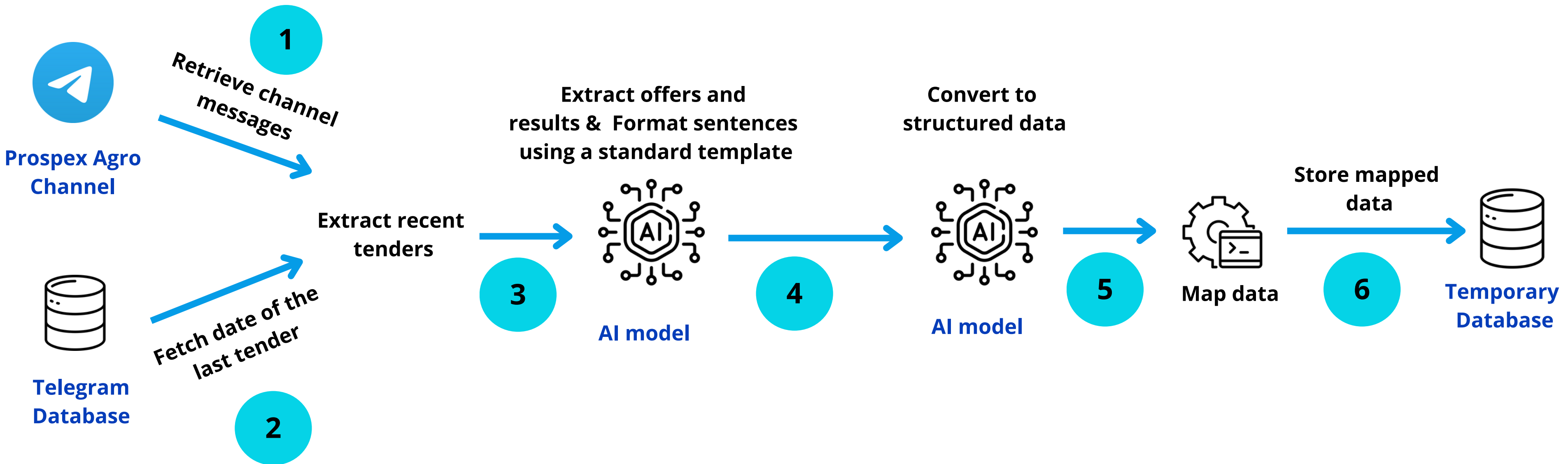
- 50K MT milling wheat (any origin; excluded).
 - Offer deadline: June 22.
 - CIF liner out (seller pays unloading).
 - Ship 40 days post-award.
- [#Bangladesh](#) [#Israel](#) [#Wheat](#) [#MillingWheat](#) [#Tender](#) [#CIF](#) [#Shipping](#) [#GrainTrade](#)

1 1 1

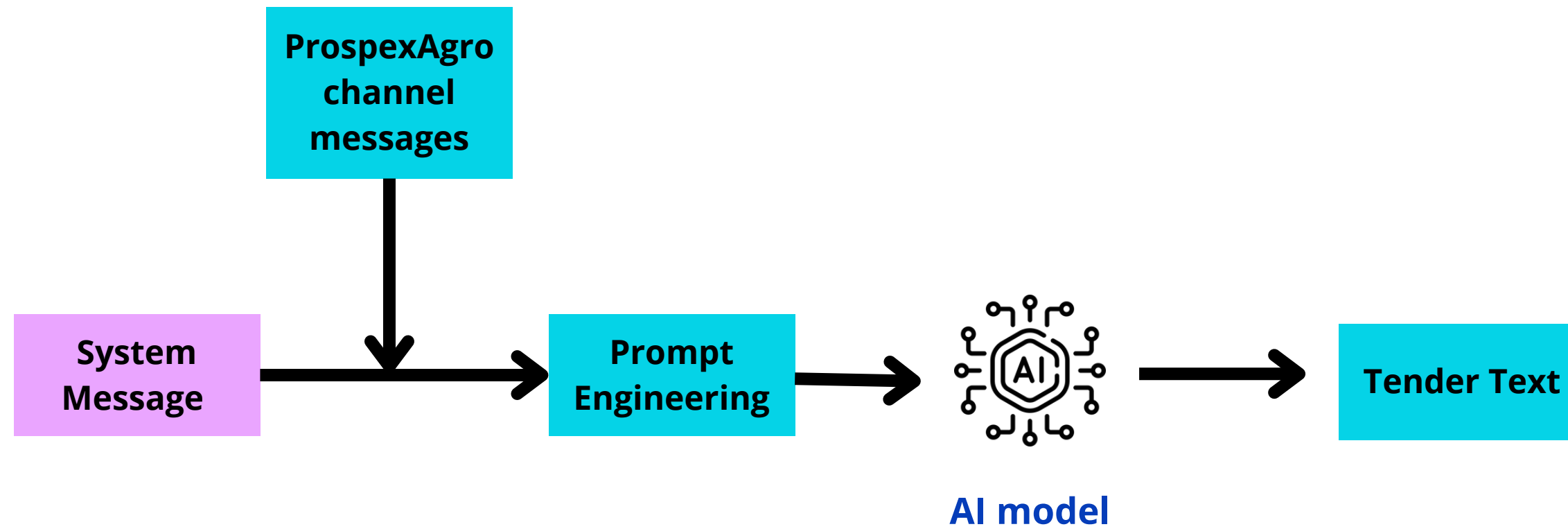
9 18:04

[Laisser un commentaire](#)

ProspexAgro Workflow Architecture



Tender Text Extraction/reformulation Approach



MODELS PERFORMANCE

- 15 messages containing announcements, offers, and results simultaneously
- 10 messages containing only announcements
- 15 messages containing results or a combination of offers and results.

➔ **These 15 messages include a total of 35 tenders**

Metric	Deepseek R1	Mistral Medium
Including sentences that indicate offers/results of tenders	99%	99%
Total information supposed to be mentioned in output text	95%	93%
Filtering out tenders announcement	100%	100%
Average speed of answer	20 seconds	5 seconds

Model performance

DAILY TENDER DIGEST – MAY 28TH 📅

1

Algeria ONAB – Corn Tender 🇩🇿

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2

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- Tenders date: May 26.
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- Corn: Brazil, Europe, Russia, Ukraine, Black Sea incl. Turkey.
- Barley: EU, Russia, Ukraine, Black Sea incl. Turkey/Kazakhstan.
- Soybean: Brazil or Argentina.

- Sanctions complicate payments.
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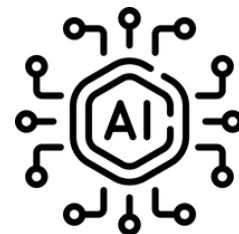
3

Taiwan MFIG – Corn Tender 🇹🇼

- 65K MT Brazilian yellow feed corn from CJ International.
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- Lowest Argentine offer: 180.45¢/bu (ADM) – accepted only if ≥4¢/bu below next.
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- Shipment: Jul 21–Aug 9 (U.S. Gulf/Brazil/Argentina) or Aug 5–24 (PNW/S. Africa).
- Last tender Apr 29: 65K MT U.S. corn.

#DailyTenderDigest #TenderDigest #Tenders #Tender #Corn #Soymeal #Barley
 #AnimalFeed #Shipping #Algeria #Iran #Taiwan #Brazil #Argentina #Russia #Ukraine
 #Turkey #Kazakhstan #BlackSea #ONAB #SLAL #MFIG #CJInternational #Agrex #ADM

Input



Output

- Iran's SLAL purchased about 120K MT animal-feed corn on May 26.

- 60K MT animal-feed corn from Brazil
- 60K MT animal-feed corn from Europe
- 60K MT animal-feed corn from Russia
- 60K MT animal-feed corn from Ukraine

- Iran's SLAL purchased about 120K MT soymeal on May 26.

- 60K MT soymeal from Brazil
- 60K MT soymeal from Argentina

- Iran's SLAL purchased about 180K MT barley on May 26.

- 60K MT barley from EU
- 60K MT barley from Russia
- 60K MT barley from Ukraine

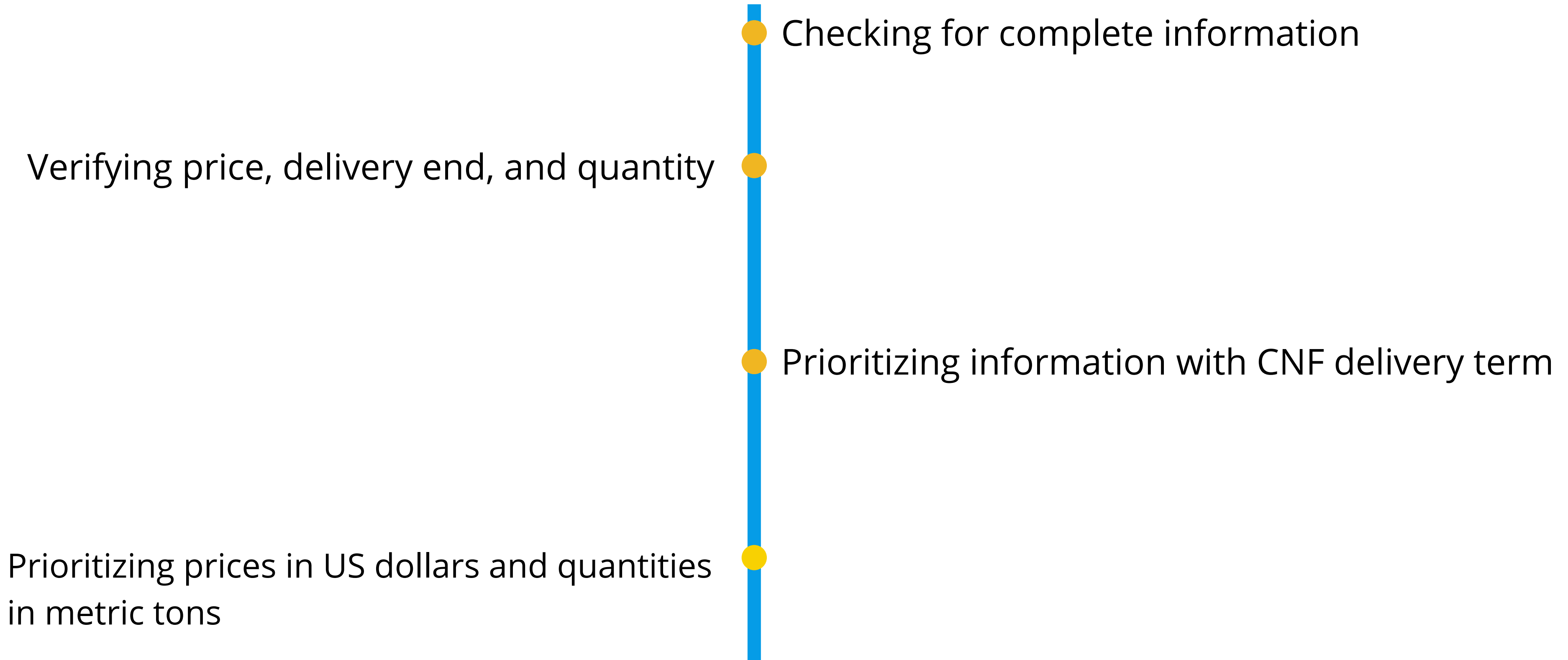
Taiwan's MFIG purchased about 65K MT Brazilian yellow feed corn from CJ International at 165.90¢/bu c&f over Chicago Dec 2025 for July 21–Aug 9 shipment.

- Other trading houses participated in the tender with their offers:
- 65K MT Brazilian yellow feed corn from Agrex at 175.00¢/bu
- 65K MT Brazilian yellow feed corn from ADM at 180.45¢/bu

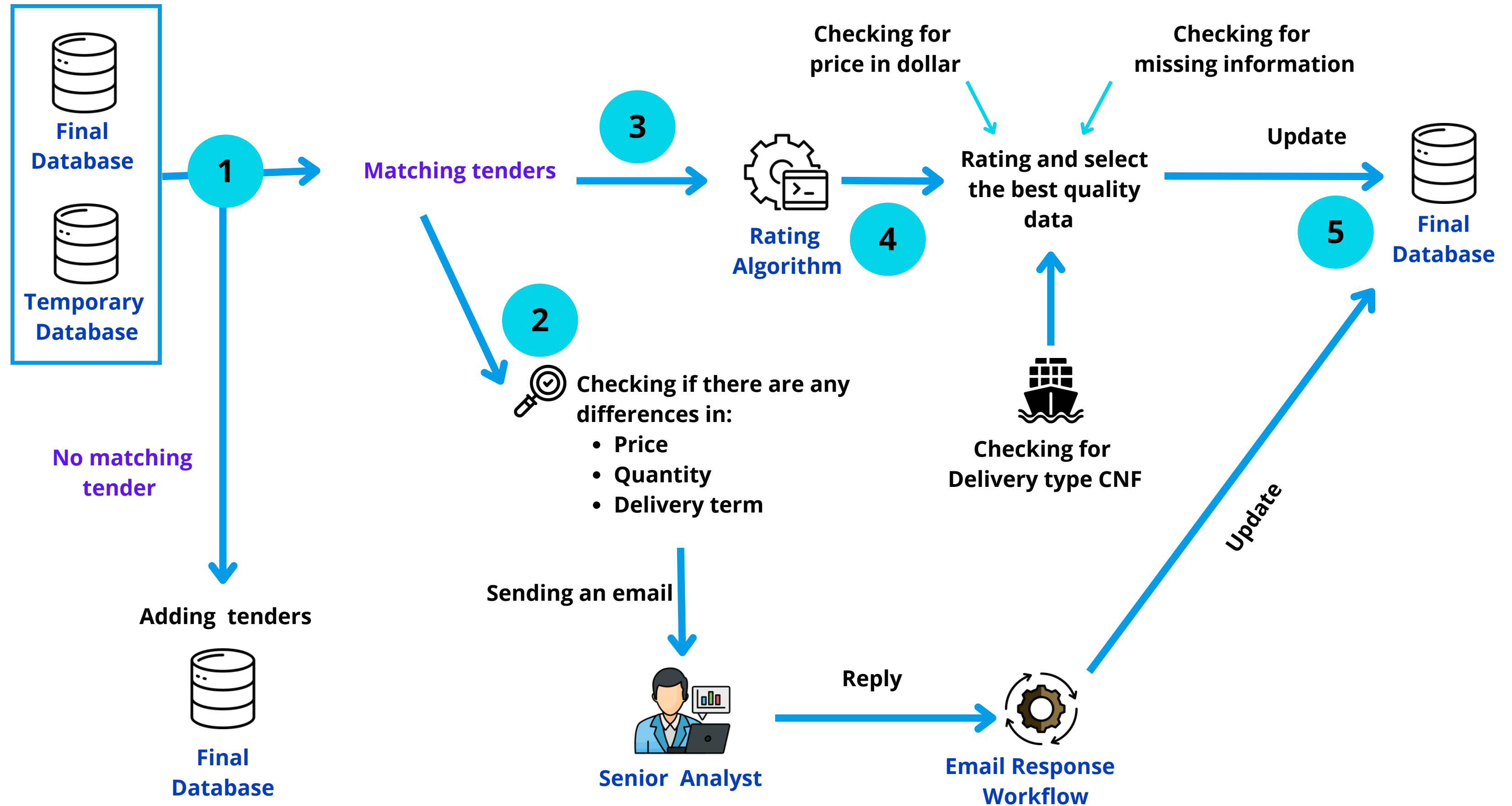
A blue rounded square icon with the text "SPRINT 2" inside in white.

SPRINT 2

**Implement a data quality
workflow**



Data Quality Workflow Architecture



AUTO-DETECTING DECISIONS FROM REPLIES

Dear Pablo

I hope this message finds you well.

The table below presents the same tender received from various sources, with differences in the Price:

Price Differences

The percentage of similarity between these two tenders is: 99.84%

Index	date	country	tenderer	product	quality	company	origin	delivery_start	delivery_end	quantity	price	currency	unit	delivery_term	Quote_type	creation_date
1	05/28/2025	taiwan	MFIG	CRN	feed	CJIA	BRA	07/21/2025	08/09/2025	65000	241.0	\$	MT	CNF	close	2025-05-29
2	05/28/2025	taiwan	MFIG	CRN	feed	CJIA	BRA	07/21/2025	08/09/2025	65000	250.0	\$	MT	CNF	close	2025-05-28

Which option should I choose?

Option 1 : 1.

Option 2 : 2.

Option 3 : No.

Note :

1: Update the tender with index 1.

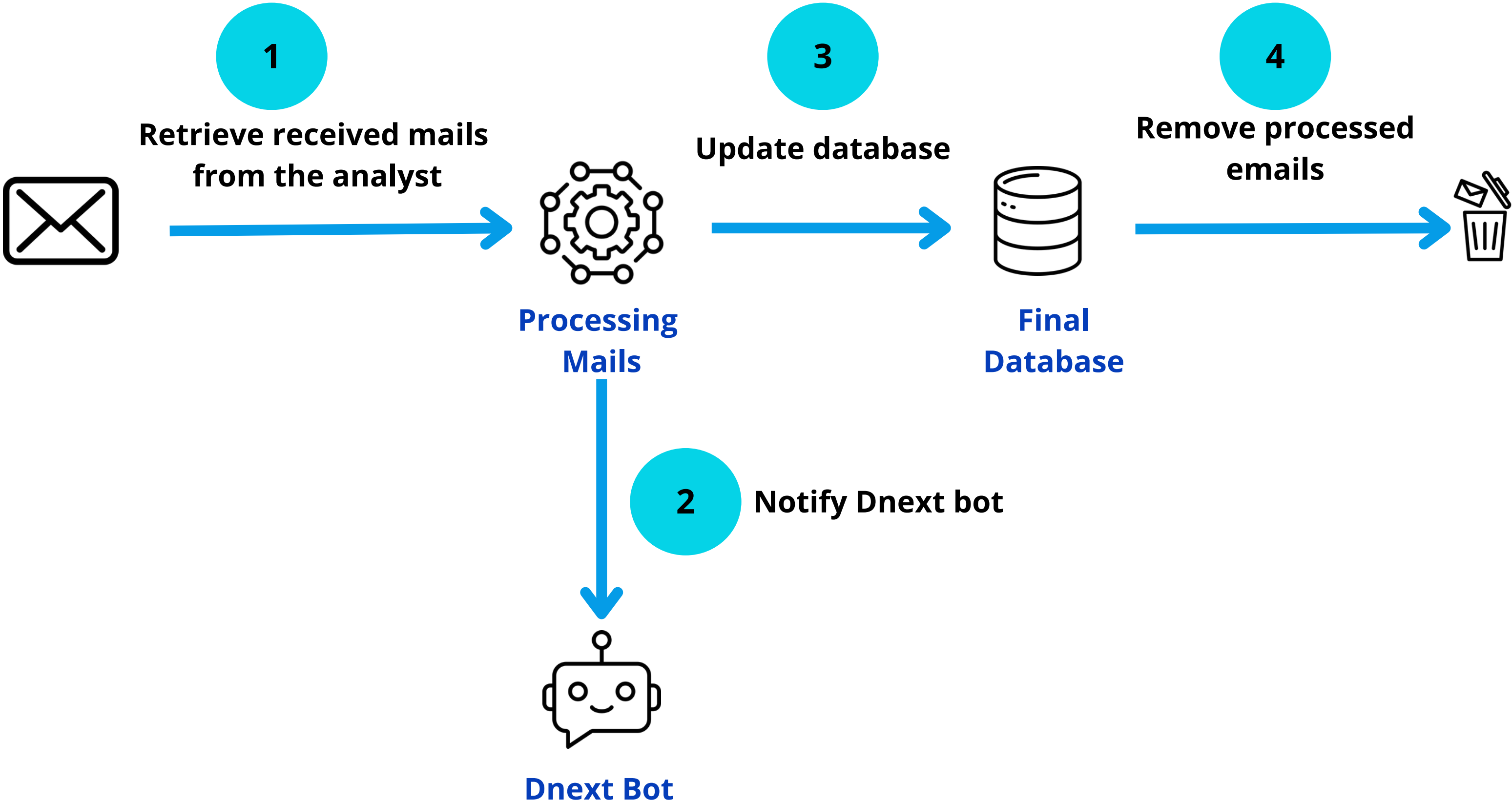
2: Update the tender with index 2.

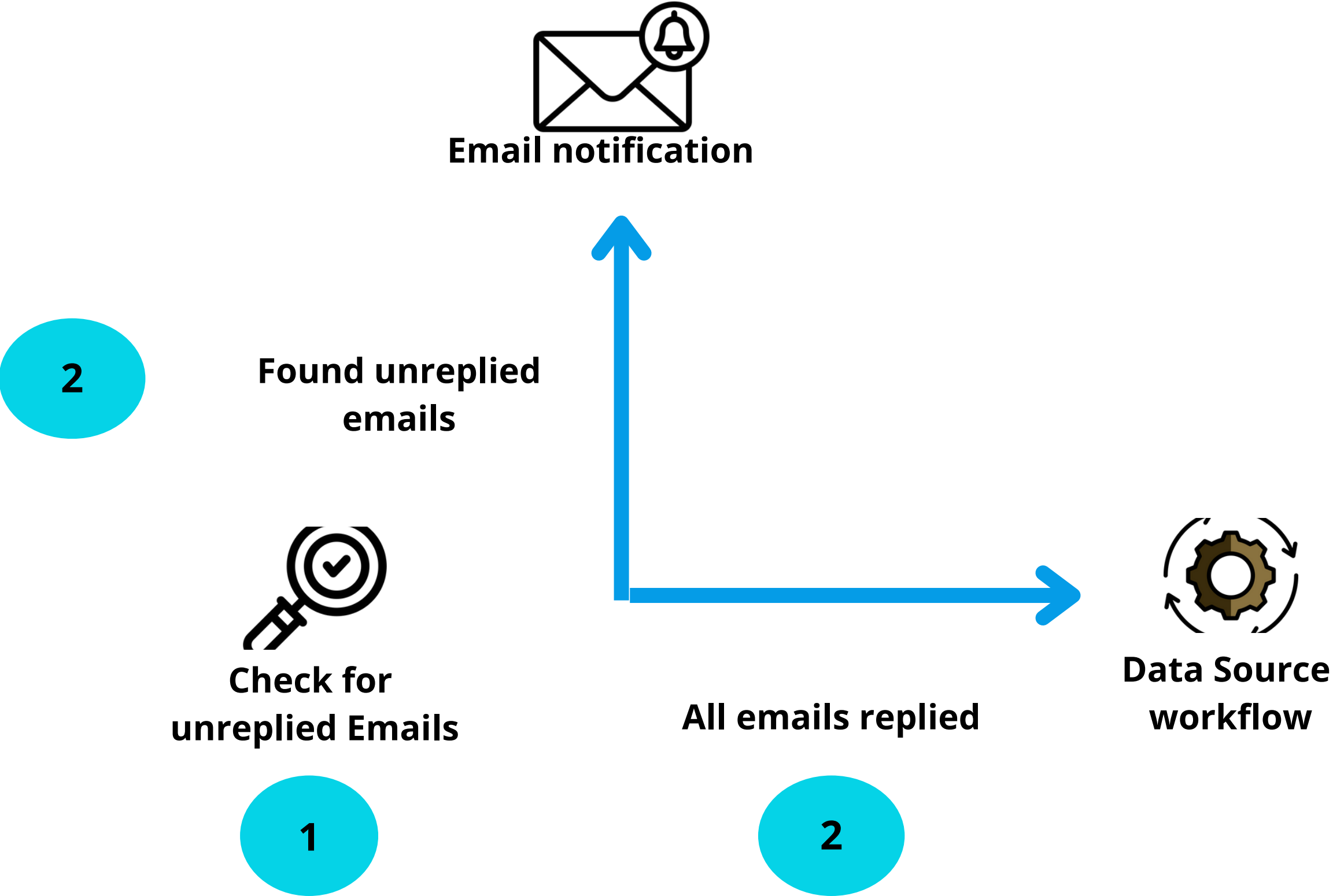
No: Save both tenders because they are not the same.

Please let me know which tender I should choose.

Best regards.

PROCESSING ANALYST DECISION







SPRINT 3

Deployment and visualisation

- AgroChart workflow runs twice daily at 11:00 AM and 4:00 PM.
- Prospex workflow runs twice daily at 11:30 AM and 3:30 PM.
- PDF Report workflow runs once a week, every Monday at 11:00 AM.
- Data Quality workflow is triggered whenever one of the data source workflows is executed.
- Analyst Decision workflow runs every two hours throughout the day.



Power BI Report



CASE STUDY: ANALYSIS OF EGYPT'S SOFT WHEAT PURCHASING STRATEGIES

Egypt Soft Wheat Purchase history for the crop year 2023





CASE STUDY: ANALYSIS OF EGYPT'S SOFT WHEAT PURCHASING STRATEGIES

Month	Quantity	Unit Price	Total
May	645.000	247,98	159.947.100
June	55.000	229	12.595.000
Sum			172.542.100

Month	Quantity	Unit Price	Total
May	55.000	247,98	13.638.900
June	645.000	229	147.705.000
Sum			161.343.900

11.198.200 \$

=

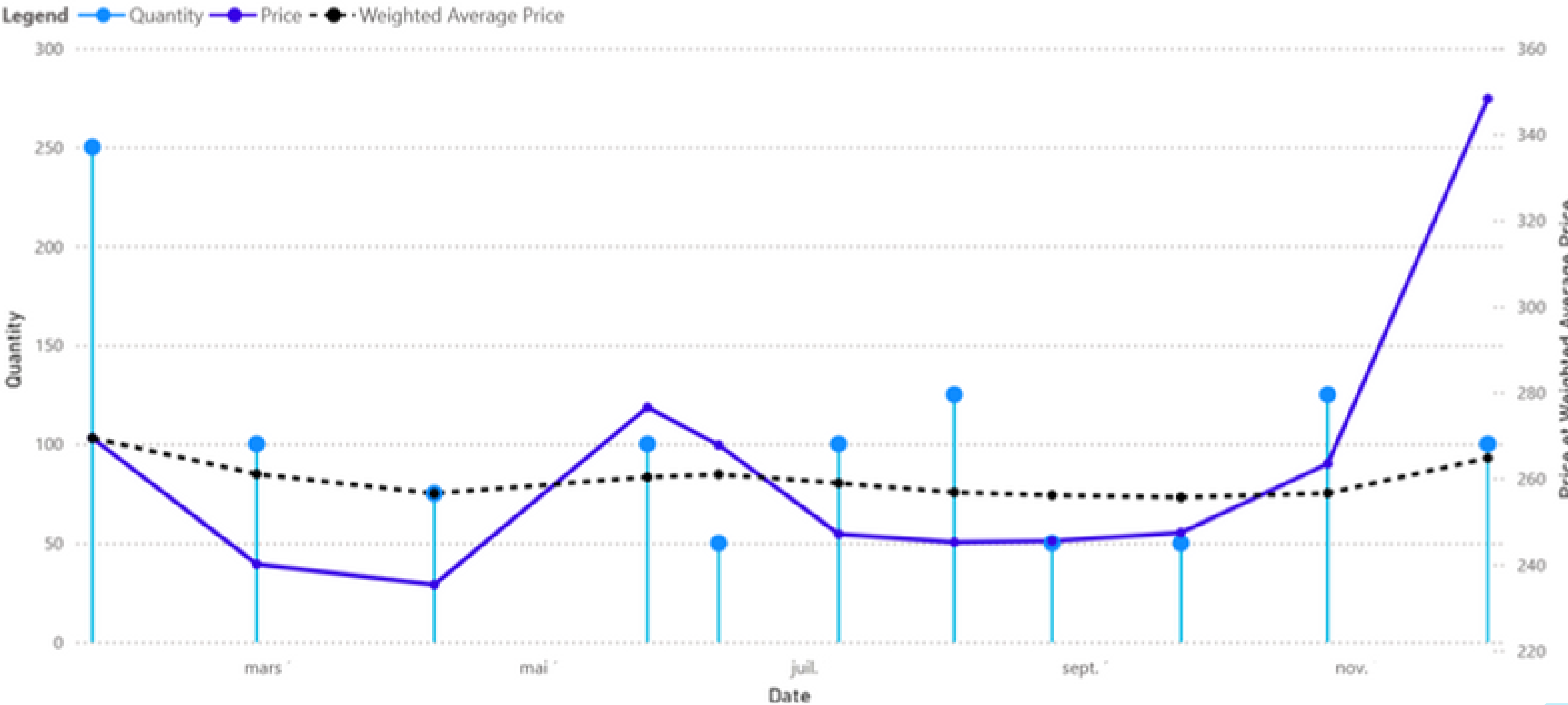
557,184,388 EGP





CASE STUDY: ANALYSIS OF TUNISIA'S SOFT WHEAT PURCHASING STRATEGIES

Tunisia Soft Wheat Purchase history for the crop year 2024





CONCLUSION

CONCLUSION & PERSPECTIVES



**THANK YOU FOR YOUR
ATTENTION**

Appendix

TENDER MATCHING

Field	Weight (wf)	Field	Weight (wf)
Date	0	Delivery End	1
Country	4	Quantity	1
Tenderer	4	Price	1
Product	4	Currency	0
Quality	1	Unit	0
Company	1	Delivery Term	1.5
Origin	1	Quote Type	2
Delivery Start	1		

$$\text{Sim}(T^{(1)}, T^{(2)}) = \frac{\sum_f w_f \text{sim}_f(T^{(1)}, T^{(2)})}{\sum_f w_f}$$

$$\theta = 85\% \quad \text{Sim}(T^{(1)}, T^{(2)}) \geq \theta$$

RATING ALGORITHM

● Required score

- Required Fields Check: date, country, product , price, delivery end, quantity and delivery term.

-All required fields are present → The score is 7

-If at least one required field is missing → The score is 0

● Non-required score

- Non-Required Fields Scoring: Each non-required field we contribute to adds 1 point to the non-required score

● Duplicate Value

-Subtracts 1 point

$$\text{FinalScore} = \text{RequiredScore} + \text{NonRequiredScore} - \text{DuplicatePenalty}$$