

EXERCISES PLAN

#	Name	Purpose	Chapter	Group/Individual
1	Escape Game	understanding the stakeholder voice is not the needs/requirement.	ice breaker	Group or ind.
2	decision paradox game	experiencing prioritisation session. can be linked to goals in conflict (goal tree)	CH1 – Decision process	Group of 5/6 (remove the IT manager role in group of 5)
3	Smart requirement challenge	formulate a smart goal	CH2 – Objectives Approach	Group or ind.
4	Story Behind the Number	need vs requirement. how assumptions are impacting design	CH1 – Key Concepts	Group or ind.
5	What Are We Really Asking For?	classify requirements, needs	CH2 – Key Concepts and Business Analysis	Group or ind.
6	The interview Maze	Simulate interview based on role play	CH2 – interview	Small Group
7	The silent priority	Experience prioritisation when stakeholders are not talking to each other	CH2– Delphi	Group up to 8
8	Don't Fix It Yet	design thinking	CH2 – Design Thinking	Group
9	Brown Cow Model	Create a brow cow model	CH2 – Bown Cow Model	Group or ind.
10	Polish the requirement	Rewriting a requirement based on Crew l'ecritoire	CH2 – Modeling language / Specification	Group or ind.
11	Think with Your Hands	create a low-fi prototype/wireframe	CH 2 – prototypes	Group or ind.
12	Words that decide	remove ambiguities base on syntax and grammar analysis	CH2 – Syntax and Grammar Analysis	Group or ind.
13	Pick your approach	Find the approach based on pros/cons	CH2 – Global	Group or ind.
14	From Business Events to Meaningful Data	modelise from business concept	CH2 – EML	Group
15	Refine a goal	From strategic goals modelize management/operational goals	CH2 – Goal Tree	Group or ind.
16	Make it stick : BI Governance step by step	Create a BI governance Plan	CH 2 – Data governance and CH3 – BI Maturity Models and CH 3 – Create a BI Strategy Step-by-Step	Group or ind.
17	From Mission to Metrics: Build a BI Strategy Step by Step	Create a BI strategy road map	CH3 – Create a BI Strategy Step-by-Step	Group or ind.

Welcome to RE4BIClassCompany.


You've just joined a BI project in crisis.


Somewhere in the analysis, critical elements were missed or wrongly identified, and now the project's success hangs by a thread, the company life depends of it.


Your task: read carefully, connect the information, and think like an investigator. Hidden within the data lies the clue that reveals what went wrong.


But there's more — once **you uncover the truth**, you'll need to **justify your findings to each stakeholder** separately. Adapt your explanation to their perspective, convince them of your requirement, and restore trust in the project.

Be curious. Be strategic. The clock is ticking.

 **From:** Alexandre Martin – Project Manager

 **Date:** Monday, November 10, 2025, 09:12

 **To:** Claire Dubois (Finance Director), Sales & Marketing Team, Customer Service Manager, Logistics Department

 **Subject:** Data Integration Completed – Thanks to Everyone for the Great Team Effort

Dear all,

I'm pleased to announce that the new version of the website, including the customer facing real-time tracking UX and data components has been successfully delivered. This marks an important milestone for our organization, and I'd like to personally thank each of you for your commitment and collaboration throughout this phase.

The data flows are now connected to the live environment, and the dashboards are accessible via the internal portal. Early feedback looks positive, and I'm confident this will bring real value to your respective areas — from financial insights to customer and logistics operations.



Let's take a moment to appreciate this achievement before we move forward with the next stages.

Congratulations again to everyone involved for the hard work and dedication!


Best regards,


Alexandre Martin


Project Manager – RE4BIClassCompany

 +41 22 555 01 44 |  alexandre.martin@re4biclasscompany.com

From: Sophie Laurent – Head of Sales & Marketing

 **Date:** Monday, November 10, 2025, 11:03

 **To:** Alexandre Martin – Project Manager

 **Subject:** RE: Data Integration Completed – Thanks to Everyone for the Great Team Effort

Dear Alexandre,

Thank you for the update — and congratulations to the whole team for reaching this stage! The new interface is truly impressive. It's great to finally have a clear view of our customers' shopping [carts](#) and the ability to track their journey across the website.

That said, we've noticed a little bug. At this stage, we don't have enough events or customer records to identify solid trends or behavioral patterns.



Could we [look into](#) adjusting the level of data capture to gather more information per session? This would really strengthen our marketing insights and help us make better campaign decisions.





Thanks again for the great work — the progress is clearly visible!

Best,

Sophie Laurent

Head of Sales & Marketing – RE4BIClassCompany

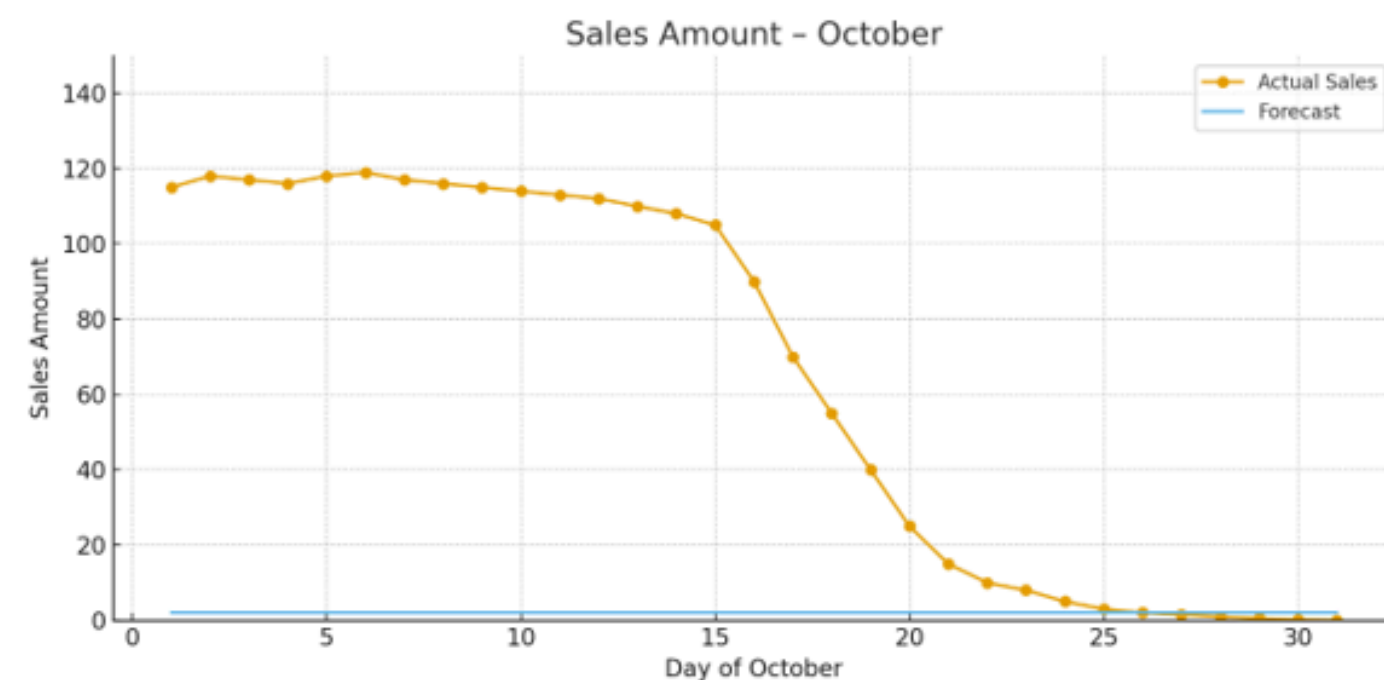
 +41 22 555 02 18 |  sophie.laurent@re4biclasscompany.com

 **From:** Claire Dubois – Finance Director
 **Date:** Monday, November 10, 2025, 11:47
 **To:** Alexandre Martin – Project Manager
 **Subject:** RE: Data Integration Completed – Thanks to Everyone for the Great Team Effort

Dear Alexandre,

Thank you for the update and congratulations to the team for the excellent progress. From a financial perspective, the new reporting tools are particularly valuable — the sales view is clear, fast, and highly efficient. This will greatly support our planning efforts.

However, we have noticed an issue with the line chart scale in the dashboard. The curve appears flattened and almost merged with the axis, which makes the data difficult to interpret.





Could we adjust the scale or review the chart configuration so that the variations in sales are properly visible? This would allow us to fully benefit from the reporting capabilities.

Thank you again for your work and for keeping us updated.

Kind regards,

Claire Dubois

Finance Director – RE4BIClassCompany

 +41 22 555 01 03 |  claire.dubois@re4biclasscompany.com

From: Marc Steiner – Customer Service Manager
Date: Monday, November 10, 2025, 12:22
To: Alexandre Martin – Project Manager
Subject: RE: Data Integration Completed – Thanks to Everyone for the Great Team Effort

Dear Alexandre,

A huge thank you to you and the team — the new version of the website works extremely well, and we can already feel the positive impact on our daily operations.

During customer calls, we now have access to a much richer set of client information, which helps us respond faster and more accurately. The classification of support cases is also very relevant, and it really highlights the quality of our team’s work.

There is just one issue we’ve noticed: the estimated delivery date consistently appears in the past, even though customers are calling to track where their product currently is. If we could correct this, it would significantly improve the customer experience. I’m pretty sure it’s only a formatting issue (it’s international format but can you convert it in US one)

Customer ID

2565

Address

123 myAdress st

Customer First Name

NIP

01210

Customer Last Name

MissAwesomeCustomer

City, State

Paradise City, Somewhere Over The rainbow

Order ID

256969

Delivery Date

11/10/2025

Order Date

15/10/2025

Product

Quantity

Gift

Fluffy Stuffed Puppy

1


☒


Comment/Card


Dear nephew, 25/10/2025 : your day!!! Happy birthday!!


Given the **huge workload** we’re managing right now, your work is truly making a difference. Thanks to this improvement, we’ll even be in a strong position to negotiate a raise at the end of the year!

Best regards,
Marc Steiner
Customer Service Manager – RE4BIClassCompany
+41 22 555 04 87 | marc.steiner@re4biclasscompany.com

 **From:** Julien Meyer – Logistics Manager

 **Date:** Monday, November 10, 2025, 13:10

 **To:** Alexandre Martin – Project Manager

 **Subject:** RE: Data Integration Completed – Thanks to Everyone for the Great Team Effort

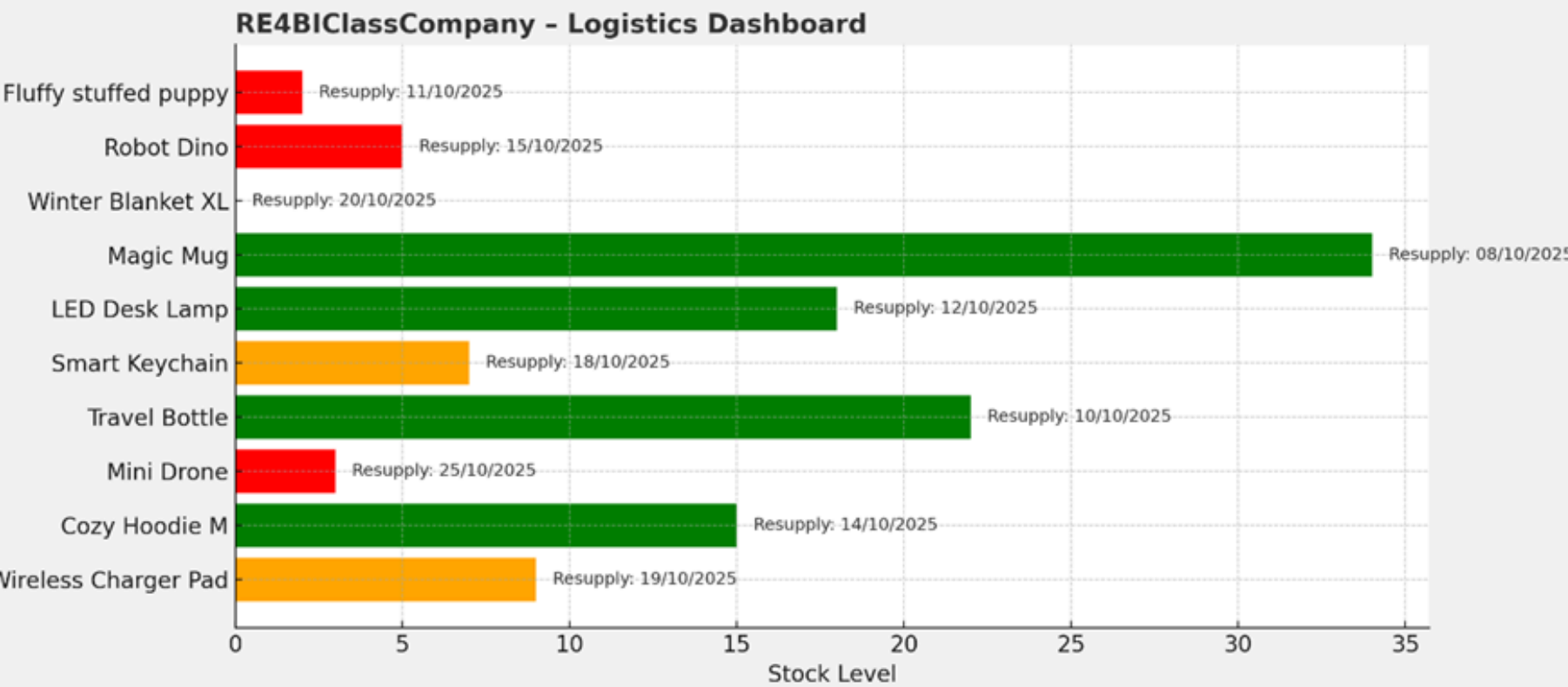
Dear Alexandre,

Thank you for the update, and congratulations to the entire team.

The new interface is excellent — we can now clearly see **when suppliers send out the products**, which is extremely valuable for our operations.

This visibility allows us to **adjust team schedules much more effectively**, ensuring that incoming shipments are handled smoothly and without delay. The dashboards are simple to use and directly support our day-to-day decision-making.

LOGISTICS WEB INTERFACE - STOCK OVERVIEW



Can we change the title to remove the company name?

Great work to everyone involved. This improvement will make a real difference for the logistics department.

Kind regards,
Julien Meyer
Logistics Manager – RE4BIClassCompany
 +41 22 555 06 72 |  julien.meyer@re4biclasscompany.com

Welcome, Amanda!

What do you want to learn today?



COURSES



REQUESTS



COACHES



CAREER PATHS



CERTIFICATIONS



Q&A

CEO Communication



Dear colleagues,

I'm delighted to share some fantastic news with all of you. Thanks to the outstanding creativity and hard work of our Communication & Marketing team, the hashtag #RE4BIClassCompany is now trending on YouTube.

This is a remarkable achievement that gives our company exceptional visibility. The success highlights the talent, energy, and collaborative spirit that drive our organisation forward. Please join me in congratulating everyone involved.

To help us maintain this positive momentum, I invite all employees to take a moment today to visit the video on YouTube. Your views, likes, and comments will help boost its reach even further. Please : make a difference! Thank you for your continued dedication. Let's keep aiming higher!

RESOURCES FOR YOUR ROLE

PMP Certification



Using Excel



Data Analysis



Using Power BI



Delivery
Management



DECISION PARADOX GAME

DECISION MAKING PROCESS



2 STUDENTS DOSSIER

* CONTEXT

You've been called in as a Business Analyst to resolve a decision crisis at BlueStream Logistics. Three KPIs tell three different stories. Executives are divided, deadlines are near, and the project is losing clarity. Review the data carefully and help the team make a decision that aligns with both logic and human judgment.

* EXERCISE

KPI SET A — Operational Efficiency

- On-Time Delivery Rate: 74% (Target: 90%)
- Average Delivery Cost per Order: €17.40 (Down from €19.80)
- Warehouse Utilization: 97% (High congestion)

KPI SET B — Customer Experience

- Customer Complaints: +18% this quarter
- Satisfaction Score (CSAT): 3.4/5 (Down from 4.1)
- Net Promoter Score: -12

Output

After your group discussion, answer briefly:

1. What KPI did you prioritize and why?
2. What bias or emotional factor influenced your decision?
3. Did your team reach consensus easily? Why or why not?
4. What would you need to make a more objective decision?

* REFLEXION What KPI did you prioritize and why? What bias or emotional factor influenced your decision? Did your team reach consensus easily? Why or why not? What would you need to make a more objective decision?

DECISION PARADOX GAME

DECISION MAKING PROCESS

ROLE : PDG

OBJECTIVE Guaranteeing delivery and impact

SECRET BIAS Prefers quick wins

ROLE : Marketing Director

Overvalues visuals

OBJECTIVE Would like to be seen by the CEO

SECRET BIAS

ROLE : Financial Controller

OBJECTIVE Reduce costs

SECRET BIAS Consider BI as an discretionary expense.

ROLE : IT Manager

OBJECTIVE Ensuring data integrity

SECRET BIAS Very protective regarding access.
doesn't want large data access

ROLE : Operations Director

OBJECTIVE Improve delivery performance

SECRET BIAS Wants the marketing director job

ROLE : Analyst

OBJECTIVE Facilitate and document
Must remain neutral but needs to renew
his contract with the IT manager. In case
the IT manager is not present. Consider
any stakeholder can be his/her friend

SECRET BIAS

SMART REQUIREMENT CHALLENGE

TYPES OF NEEDS



3 STUDENTS DOSSIER

* CONTEXT

Budget cut. Data risk. Tight deadline.

BlueStream Logistics must finalize its BI dashboard before the next executive review. The budget has been reduced by 25%, and data reliability issues have emerged. Your task: define one SMART requirement that keeps the project on track despite the constraints. Make it Specific, Measurable, Achievable, Relevant, and Timenbound.

* EXERCISE

In your team, write one SMART requirement that:

1. Responds to a stakeholder need.
2. Fits within the new budget.
3. Reduces risk or uncertainty.
4. Is measurable and testable.

* **REFLEXION** Which constraint was hardest to meet — cost, risk, or time? What made your requirement SMART? How did your team manage risk under pressure? What would you do differently next time?

STORY BEHIND THE NUMBER

TYPES OF NEEDS

* CONTEXT

Numbers speak — but not in plain language. (N)

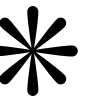
Your mission: interpret the story that hides behind a single KPI. Each number tells a human tale of success, struggle, or silence. By reading between the lines, you'll uncover different levels of needs

* EXERCISE

Pick a KPI and formulate hypotheses to uncover the different layers of needs behind it. Then propose the next phases of requirements based on those hypotheses

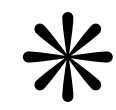
- Temperature of Team Morale: 42°C
- Data Ocean Turbidity: 76%
- Customer Echo Index: 1.4x
- Heartbeat : 58 BPM

* **REFLEXION** What did you learn about the needs behind data? How can storytelling reveal risks or hidden expectations? How will this change how you gather requirements? Write your main insight in one sentence.



WHAT ARE WE REALLY ASKING FOR?

REQUIREMENT CLASSIFICATION



* CONTEXT

In BI projects, teams often mix business goals, user expectations, solution features, and technical constraints as if they were the same thing. This confusion leads to dashboards that don't solve the real problem, endless scope expansion, and misaligned delivery priorities. Learning to classify statements correctly is a core skill in business analysis and requirements engineering.

* EXERCISE

Read each statement below and classify it into one category:

- Business need (why the organization cares)
- Stakeholder/User need (what users expect or struggle with)
- Functional requirement (what the system must do)
- Non-functional requirement (quality constraints: performance, security, usability, etc.)
- Technical requirement/constraint (implementation, architecture, tooling, compliance constraints)

Then write one sentence explaining why you chose that category.

1. "We need to reduce inventory waste by the end of the year."
2. "Store managers want to understand why products expire before being sold."
3. "The dashboard must show expired stock by store, category, and week."
4. "Users should be able to filter results by supplier and delivery date."
5. "The solution must refresh data every 15 minutes during business hours."
6. "The CFO needs a single version of the margin KPI across all regions."
7. "KPIs must be defined and approved before being published."
8. "Only HR and the direct manager can access employee absenteeism data."
9. "The BI platform must use the company's existing SSO (single sign-on)."
10. "The report export must support PDF and Excel formats."
11. "The system must remain usable with 300 concurrent users."
12. "We must comply with GDPR retention rules for personal data."
13. "The data warehouse must be built using the organization's cloud provider."
14. "Customer service agents want alerts when repeat complaints spike."
15. "The system must trigger an alert when complaints increase by more than 10% week-over-week."

* REFLEXION

Which statements were hardest to classify, and why? Which items looked like requirements but were actually needs (or the opposite)? How could misclassifying items 6, 7, or 12 affect governance and decision-making? What would you ask a stakeholder to clarify one ambiguous statement?

BI ROLE-PLAY WORKSHOP

BUSINESS ANALYSIS PROCESS

ROLE : PDG

OBJECTIVE Guaranteeing delivery and impact

SECRET BIAS Prefers quick wins

ROLE : Marketing Director

Overvalues visuals

OBJECTIVE Would like to be seen by the CEO

SECRET BIAS

ROLE : Financial Controller

OBJECTIVE Reduce costs

SECRET BIAS Consider BI as an discretionary expense.

ROLE : IT Manager

OBJECTIVE Ensuring data integrity

SECRET BIAS Very protective regarding access.
doesn't want large data access

ROLE : Operations Director

OBJECTIVE Improve delivery performance

SECRET BIAS Wants the marketing director job

ROLE : Analyst

OBJECTIVE Facilitate and document
Must remain neutral but needs to renew
his contract with the IT manager. In case
the IT manager is not present. Consider
any stakeholder can be his/her friend

SECRET BIAS

THE INTERVIEW MAZE

INTERVIEWS



* CONTEXT

Welcome to the BI Interview Marathon. BlueStream Logistics needs requirements for its new BI system. You are part of the BA team, tasked with interviewing key stakeholders who each see the project differently. Your challenge: ask the right questions, detect bias, and extract meaning.

* EXERCISE

Goal: conduct two short interviews and identify contradictions, hidden assumptions, and missing information.

In group of 3. Cut the cards of the 2nd page and pile them up face down.
Each of you will conduct short interview of 2 stakeholders without seeing the persona card.
The analyst want to discover the agenda/need of the interviewees.

Round	Question asked	Stakeholder answer	Observation/Assumption

* **REFLEXION** Which question uncovered the most insight? What misunderstanding surprised you? Which bias did you detect — yours or the stakeholder's? How could you improve your listening and notentaking skills?

THE INTERVIEW MAZE - CARDS



6 STUDENTS DOSSIER

IT Lead

Description

Technical, structured, risk-averse.

Goal

Maintain stable and secure architecture.

Frustration

Business demands unrealistic delivery speed.

Contradiction

Pushes for standards while keeping undocumented systems.

Hidden Agenda

Wants BI to justify a new data platform.

Operations Manager

Description

Pragmatic, efficiency-obsessed.

Goal

Improve logistics and reduce costs.

Frustration

Dashboards don't reflect real operations.

Contradiction

Demands precision but gives vague requirements.

Hidden Agenda

Wants BI to validate reorganization plans.

Finance Controller

Description

Methodical, detail-oriented, strict.

Goal

Ensure accuracy and audit compliance.

Frustration

KPI definitions keep changing.

Contradiction

Wants automation but resists process change.

Hidden Agenda

Wants BI to automate monthly reports.

Marketing Director

Description

Strategic, creative, ambitious.

Goal

Boost campaign ROI and brand visibility.

Frustration

BI delays slow down decision-making.

Contradiction

Claims to be data-driven but ignores negative insights.

Hidden Agenda

Wants BI to justify a larger marketing budget.

Customer Service Manager

Description

Empathetic, customer-focused.

Goal

Reduce complaints and improve CSAT.

Frustration

Data fails to capture emotions or customer context.

Contradiction

Claims dissatisfaction is rising but lacks proof.

Hidden Agenda

Wants BI to justify hiring more staff.

HR Manager

Description

People-centered, policy-aware.

Goal

Improve engagement and reduce turnover.

Frustration

HR data is fragmented and poorly integrated.

Contradiction

Wants transparency but limits data access.

Hidden Agenda

Wants BI to justify new training programs.

THE SILENT PRIORITY

THE DELPHI METHOD

* CONTEXT

You are part of BlueStream’s future strategy panel. Your mission: forecast which BI priorities will have the greatest impact over the next 5 years. But there’s a twist — you must form consensus without open discussion. Through three silent rounds, your team will learn how structured iteration builds agreement and clarity.

* EXERCISE

Individually, rank the BI priorities below from 1 (most impactful) to 5 (least). (O)
Do not discuss your answers. This round is purely independent judgment.

Data Democratization	Data Quality Automation
Predictive Analytics	Single Source of Truth Initiative
AI Ethics & Transparency	Privacy-by-Design Architecture
Data Literacy Training	Self-Service BI Enablement
Real-Time Dashboards	Employee Behavioral Analytics

what is the impact of hierarchy in the process?
What is the impact of requirement dependencies in the process?
What if you really do not want a requirement to be prioritize, how do you behave?

* REFLEXION

Did your opinion change across rounds? Why? How did the feedback affect your confidence? What did you learn about consensus and independence? How could the Delphi method support BI governance decisions?

THE SILENT PRIORITY

STUDENT SHEET



7 STUDENTS DOSSIER

Round 1			Round 2		Round 3	
Topic	Your Ranking	Group Average	Your Ranking	Group Average	Your Ranking	Group Average
Data Democratization						
Predictive Analytics						
AI Ethics & Transparency						
Data Literacy Training						
Real-Time Dashboards						
Data Quality Automation						
Single Source of Truth Initiative						
Privacy-by-Design Architecture						
Self-Service BI Enablement						
Employee Behavioral Analytics						

THE SILENT PRIORITY - BIAIS CARDS 1/2



7 STUDENTS DOSSIER

Data Enthusiast

Role
Middle manager, heavy BI consumer.

Biases
Overconfidence, simplification bias.

Tendencies
Wants “simple and fast” tools, underestimates complexity.

Impact on Delphi Ranking
Pushes Self-Service BI, Data Democratization, Real-Time Dashboards up, and deprioritizes foundational work like architecture or governance.

Operations Realist

Role
Operations Manager / Logistics Lead.

Biases
Efficiency bias, problem-fixation.

Tendencies
Focuses on bottlenecks, delays, and tangible process issues.

Impact on Delphi Ranking
Ranks Data Quality Automation, Real-Time Dashboards, Single Source of Truth high, and downplays Data Literacy or AI Ethics as “nice but not urgent”.

Visionary Executive

Role
Chief Innovation Officer / Strategy Lead.

Biases
Innovation bias, optimism bias.

Tendencies
Overestimates benefits of new tech and underestimates risks and effort.

Impact on Delphi Ranking
Pushes Predictive Analytics, AI Ethics, Employee Analytics to the top, and deprioritizes Privacy-by-Design or Data Quality Automation as “too technical”.

Marketing Accelerator

Role
Marketing Director.

Biases
Recency bias, innovation-chasing.

Tendencies
Loves new tools, focuses on quick wins and visibility.

Impact on Delphi Ranking
Elevates Predictive Analytics, Self-Service BI, Real-Time Dashboards, and deprioritizes governance or compliance work like Privacy-by-Design.

THE SILENT PRIORITY - BIAIS CARDS 2/2



Empowerment Advocate

Role

HR Manager / Learning & Development.

Biases

Human-centric bias, cultural bias.

Tendencies

Prioritizes engagement, training, and well-being outcomes.

Impact on Delphi Ranking

Ranks Data Literacy Training and Employee Behavioral Analytics high, and tends to undervalue core infrastructure topics like architecture or pipelines.

Compliance Protector

Role

Finance Controller / Legal & Risk.

Biases

Fear bias, compliance bias.

Tendencies

Focuses on risk reduction and audit trails over innovation.

Impact on Delphi Ranking

Pushes Privacy-by-Design, Data Quality Automation, Single Source of Truth up, and resists Data Democratization or Self-Service BI as “dangerous”.

IT Guardian

Role

IT Lead / Data Architect.

Biases

Risk aversion, technical purity bias.

Tendencies

Prioritizes stability, control and standards over usability and speed.

Impact on Delphi Ranking

Ranks Single Source of Truth, Data Quality Automation, Privacy-by-Design high, and pushes Real-Time Dashboards or Data Democratization toward the bottom.

Customer Champion

Role

Customer Service Director / CX Lead.

Biases

Availability bias, emotion-driven bias.

Tendencies

Overweights recent complaints and anecdotal cases.

Impact on Delphi Ranking

Ranks Real-Time Dashboards and Data Literacy high, and underrates Predictive Analytics or Employee Analytics as “too abstract”.

DON'T FIX IT YET

DESIGN THINKING



* CONTEXT

In many projects, teams rush toward solutions as soon as a problem is mentioned.

Dashboards are redesigned, tools are replaced, indicators are added — often without questioning whether the real problem has been correctly understood. Design Thinking offers a different approach. It starts with the user's experience, explores needs and frustrations, and reframes the problem before any solution is discussed. This exercise helps you experience that shift in mindset.

* EXERCISE

You will work in a small group on the following situation:

"Users say the BI dashboard is not useful and rarely consulted."

Your task is to explore this situation using a Design Thinking approach.

Deliverable

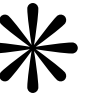
- A short user description
- One reframed problem statement
- A list of alternative perspectives or ideas

* REFLEXION

- At which step did your understanding of the problem change?
- Which assumptions were hardest to let go of?
- How did focusing on the user alter your thinking?
- How could this approach improve requirement definition and BI design?

BROWN COW LAB

BROWN COW MODEL



9 STUDENTS DOSSIER

* CONTEXT

You are working with a cattle farmer who relies on a dashboard to monitor herd health, productivity, and operational risks.

The data is available and technically correct, but the way it is presented influences how the farmer understands the situation and acts upon it. In this exercise, you will analyze a dashboard prototype to understand how visual design, KPI selection, and layout affect decision-making.

* EXERCISE

Your objective is not to change the data, but to critically analyze how the information is displayed and how this influences user behavior.

Work individually first, then in a small group.

1. Observe the dashboard HOW-NOW
2. Interpret the design and needs behind WHAT -NOW
3. Identify risks and blind spots to propose a futur WHAT- FUTUR
4. Propose improvements for the futur HOW-FUTUR

* REFLEXION

- Which quadrant was the hardest to complete? Why?
- At which step did your understanding of the problem change?
- How would your solution differ if you skipped one quadrant?

BROWN COW LAB

BROWN COW MODEL



9 STUDENTS DOSSIER



POLISH THE REQUIREMENT

CREW L'ECRITOIRE



* CONTEXT

In many projects, requirements fail not because the solution is wrong, but because the requirement was poorly written.

Vague wording, implicit assumptions, and missing justification create misunderstandings, rework, and hidden risks.

To address this, analysts need a disciplined writing structure that forces them to clarify: who the requirement is for, why it exists, what is actually required, and how success can be verified. The CREW method (Context, Rationale, Requirement, Witness) provides such a structure.

It acts as a writing “desk” that supports clear thinking before technical design begins

* EXERCISE

“We need a more efficient dashboard for management”.

Your task is to rewrite this statement into a complete and unambiguous requirement using the CREW structure.

Step 1 – Context : Describe the situation in which the requirement applies: Who is concerned? In which activity or process? At what moment?

Step 2 – Rationale : Explain why this requirement exists: What problem does it address? What difficulty or limitation is currently observed?

Step 3 – Requirement: Formulate the requirement itself: Use clear, precise language Avoid technical solutions unless explicitly required Ensure the meaning cannot be interpreted in multiple ways

Step 4 – Witness (Verification): Define how the requirement can be verified: What observable result proves it is satisfied? Under which conditions can it be checked?

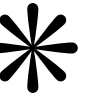
Your final output should be a single, coherent CREW requirement, readable and understandable without additional explanation.

* REFLEXION

- Which part of the CREW structure was the most difficult to fill in? Why?
- Did the structure reveal assumptions you initially took for granted?
- How did separating rationale from the requirement change your formulation?
- In what way does this method reduce ambiguity and project risk?

THINK WITH YOUR HANDS

PROTOTYPES



* CONTEXT

In many projects, solutions are discussed in abstract terms: documents, specifications, or verbal explanations.

This often hides misunderstandings and delays feedback until it is too late.

Prototyping offers a different approach. By making ideas visible early, even in a rough form, teams can test assumptions, uncover missing requirements, and align understanding before investing heavily in development.

This exercise uses low-fidelity prototyping to support thinking and discussion, not aesthetic design.

* EXERCISE

You are asked to create a simple prototype for the following situation: “Users say they need a better way to understand and act on performance data.” Your goal is not to build the final solution, but to explore what ‘better’ might mean.

Step 1 – Clarify Assumptions

Before drawing anything, discuss: Who is the user? In which situation will the prototype be used? What decision or action should it support? Write down your assumptions.

Step 2 – Build a Low-Fidelity Prototype. Create a rough prototype: Use paper, sticky notes, or basic shapes Focus on structure, information, and interactions Avoid details such as colors, fonts, or aesthetics The prototype should be easy to change or discard.

Step 3 – Test and Refine Present your prototype to another group or to the class: Explain what the prototype is supposed to support, Collect feedback and questions, Adjust the prototype based on what you learned

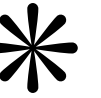
Deliverable One low-fidelity prototype, A short list of assumptions tested, insights gained, questions that remain open

* REFLEXION

- What assumptions did the prototype make visible?
- Which misunderstandings appeared once the prototype was shown?
- How did feedback change your understanding of the problem?
- How can prototyping reduce risk in requirements engineering?

WORDS THAT DECIDE

SYNTAX AND GRAMMAR ANALYSIS



* CONTEXT

In many projects, misunderstandings do not come from technical complexity, but from poorly written sentences.

Words such as fast, simple, regular, or as soon as possible may seem harmless, yet they often hide multiple interpretations.

In requirements engineering, grammar and syntax are not secondary details. They define who is responsible, what is expected, and under which conditions something is considered acceptable. This exercise helps you learn to read requirements critically, not just write them.

* EXERCISE

You are given a set of ambiguous statements, for example:

1. "The dashboard should be updated regularly."
2. "Users can quickly access relevant data."
3. "The system must provide alerts when necessary."
4. Your task is to analyze and improve these statements.

The actor is explicit, the action is clear, conditions and criteria are stated precisely, no subjective or undefined terms remain. Your rewritten sentence should be understandable without additional explanation.

Deliverable

For each original sentence:

- A short analysis of the ambiguity
- One reformulated, unambiguous version

* REFLEXION

- Which type of ambiguity was the most frequent (actor, timing, condition, quality)?
- How did grammar influence responsibility and interpretation?
- What habits should you change when writing requirements?
- How does poor wording increase cost and risk in projects?

PICK YOUR APPROACH

BUSINESS ANALYSIS TECHNIQUES

To surface a collective solution. When collaboration is easy.

Difficult collaboration. Preliminary work required. Trained analyst.

Difficult collaboration. Influence issues.

To surface a collective solution. When collaboration is easy. Creativity required.

Interface definition, User experience focus.

Business process well defined. Basic KPI definition. Availability challenges.

To surface a collective solution. Easy to implement in AGILE methods.

Business process definitions. Operational reporting.

Functional stakeholders have difficulty explaining needs; tacit knowledge.

Analysis by SME; complement other approaches.

Existing architecture in place; understand constraints.

UI visualization required; tenders.

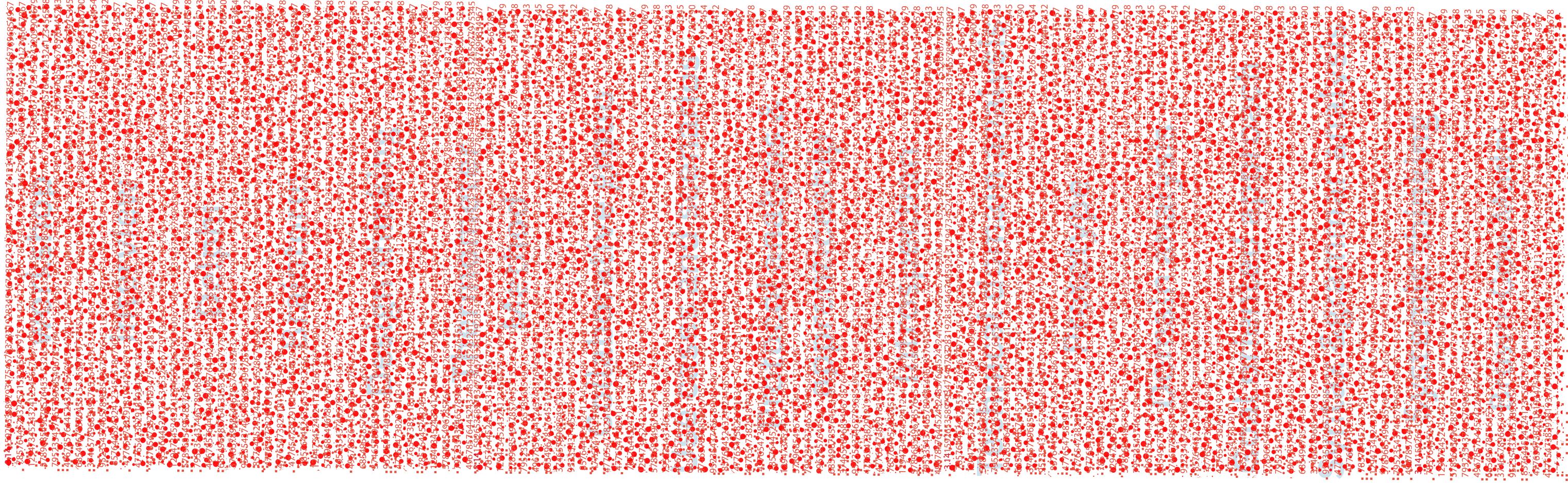
Legal constraints; standards.

Aligning solution with strategy; manage scope; trained analyst.

Complement other approach; minimize ambiguities.

Understand impact of decisions; manage system holistically.

Improving existing solutions; scope not defined; change management focus.



FROM BUSINESS EVENTS TO MEANINGFUL DATA

ELM



* CONTEXT

Before data can be stored, reported, or analyzed, it must first be understood. Many modeling problems arise because teams focus too early on tables, fields, and technical structures, without clarifying what the business is actually talking about. The ELM (Entity–Lifecycle–Model) helps avoid this trap. It represents how a business entity comes into existence, changes state, and eventually disappears, based on meaningful business events. This exercise helps you practice thinking in lifecycles, not schemas.

* EXERCISE

You are given the following business situation:
“A dairy farm tracks cattle from birth until they leave the farm. Animals may be vaccinated, become sick, produce milk, and eventually be sold or transferred.”
Your task is to model this situation using the ELM approach.

Step 1 – Identify the EntityDetermine. the main business entity: What is the central object of interest? What exists over time and changes state? Write down one primary entity.

Step 2 – Identify States. List the main states this entity can be in. Examples of guiding questions: When does the entity start to exist? Which stable situations can it be in? When does it stop being relevant?

Step 3 – Identify Events. Identify the events that cause transitions between states: What business actions or occurrences trigger a change? Which events are meaningful from a business perspective? Use verbs, not system actions.

Step 4 – Build the ELM Diagram. Draw an ELM diagram showing: The entity, Its states, The events linking the states, Keep it simple and readable.

Deliverable

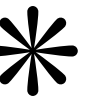
- One ELM diagram representing the entity lifecycle
- A short explanation of: chosen states, key events

* REFLEXION

- Which stats were the hardest to define? Why?
- Did you identify events that were initially implicit?
- How does ELM modeling differ from traditional data modeling?
- How can this model support BI, governance, or traceability?

REFINE A GOAL

GOAL TREE APPROACH



* CONTEXT

Your organization has defined the following strategic goal: "Increase the customer satisfaction score by 5% by the end of Q2."
Top management expects this objective to be translated into action across the organization. Your task is to transform this high-level intent into a coherent and operational goal structure.

* EXERCISE

1. Write the strategic goal at the top of your page or model.
2. Identify 2 to 4 management-level goals that contribute directly to this strategy.
3. For each management goal, define 1 to 3 operational goals.
4. Ensure that:
 - Each goal has a clear meaning
 - Each goal is written in univocal language (no ambiguity)
 - The level of granularity is appropriate to its position in the tree

You may draw the goal tree freely, as long as relationships are explicit.

what is the impact of hierarchy in the process?

What is the impact of requirement dependencies in the process?

What if you really do not want a requirement to be prioritize, how do you behave?

* REFLEXION

- Which goals were the hardest to formulate clearly?
- Where did you detect possible conflicts or ambiguities?
- What would happen if one operational goal were optimized at the expense of the others?

SURROGATION

GOAL TREE VS KPI



* CONTEXT

BlueStream’s executive team claims success will come from “increasing customer engagement by 25% this Goal: Determine if the KPI is clear, measurable, and achievable.

- In group of 3, proceed to the KPI tribunal

* EXERCISE

KPI Statement: “Increase customer engagement by 25% this quarter.”

Background:

- Engagement has been flat for two quarters.
- The term 'engagement' is used inconsistently across teams.
- No prior baseline or tracking mechanism was defined.
- Executives expect fast results to please investors.
- The marketing team collects data weekly; IT updates monthly.

Prosecutor Argue that the KPI is unrealistic, vague, or politically driven. Focus on lack of data, ambiguity, or hidden agendas.

Defender Argue that the KPI is valid or can be improved. Propose refinements to make it measurable or achievable.

Judge Evaluate arguments objectively and score KPI credibility (0–5). Lead the final verdict discussion and record the decision. (A)

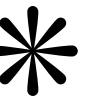
Criterion	Score (0-5)	Notes

* REFLEXION

- What was the strongest argument in the debate?
- Did you change your opinion during the discussion? Why?
- What makes a KPI truly objective and measurable?
- How can debates like this improve BI governance? (Reflect on TRIAL process.)

MAKE IT STICK: BI GOUVERNANCE STEP BY STEP

CREATE BI GOVERNANCE STEP BY STEP



17 STUDENTS DOSSIER

* CONTEXT

Without governance, BI becomes a factory of conflicting numbers: different definitions, hidden assumptions, and decisions based on politics rather than evidence. Governance is what makes BI consistent, trusted, and sustainable.

* EXERCISE

Using the same case as the strategy exercise, build BI governance step-by-step:

Step 1 — Scope & principles

Define what is governed (KPIs, definitions, data access, quality, changes) and 3 guiding principles.

Step 2 — Roles & ownership

Assign who owns what (KPI owner, data owner, steward, IT custodian, sponsor).

Step 3 — Decision rights

Define who can create/approve/retire KPIs and who approves definition changes.

Step 4 — Data quality controls

Choose 3 quality rules (e.g., completeness, timeliness, accuracy) and set simple thresholds + monitoring responsibility.

Step 5 — Change & escalation

Define how a KPI change request is submitted, reviewed, approved, communicated, and escalated when conflict arises.

Deliverable

A one-page governance summary with: roles, decision rights, quality rules, and change/escalation flow.

* REFLEXION

- Which ownership decisions were most political? Why?
- Where could governance become too heavy—and how did you avoid it?
- What happens if KPI definitions change silently?
- Which single governance rule would you enforce first to create trust?

FROM MISSION TO METRICS: BUILD A BI STRATEGY STEP BY STEP

CREATE BI STRATEGY STEP BY STEP



18 STUDENTS DOSSIER

* CONTEXT

Many BI initiatives fail because they start with tools and reports instead of strategy. Organizations invest in dashboards without clarifying what decisions they want to improve, which outcomes matter, and how to prioritize efforts.

A BI strategy provides structure. It connects mission and priorities to decision needs, measurable results, data feasibility, and a delivery roadmap. This exercise guides you through that process step by step.

* EXERCISE

You are advising “Aurora Food Aid”, an NGO that distributes food packages across multiple regions. Demand is rising, funding is unstable, and operations must remain transparent to donors.

Your mission: build a BI strategy that improves decision-making and reporting while staying realistic with limited resources.

Step 1 — Clarify Mission and Stakeholders. Identify: The mission in 1 sentence, 3–5 key stakeholders (donors, operations, field teams, leadership, finance)

Output: stakeholder list + mission statement.

Step 2 — Identify Decision Needs. For each stakeholder, define key decisions BI should support, such as: Where to allocate resources next month? Which regions show the highest unmet demand? Which suppliers are unreliable?

Output: 5–8 decision questions.

Step 3 — Define BI Objectives and KPIs. Convert decision needs into strategic objectives and measurable KPIs.

Example: Objective: improve delivery reliability KPI: on-time delivery rate, shortage incidents, supplier lead time variance

Output: 3–5 BI objectives + 2 KPIs per objective.

Step 4 — Data and Capability Check. List potential data sources and gaps: Existing spreadsheets? ERP? partner data? manual logs?

- Data quality risks? ownership? missing definitions?

Output: data inventory + top 3 risks.

Step 5 — Roadmap and Priorities. Create a simple roadmap: Quick wins (0–3 months), Build foundations (3–6 months), Scale and govern (6–12 months)

Output: 3-phase roadmap with priorities and rationale.

Deliverable: A one-page BI Strategy Summary containing: Mission + stakeholders, Decision needs, BI objectives + KPIs, Data sources + gaps, Roadmap

* REFLEXION

- Which stakeholder’s needs were hardest to translate into KPIs? Why?
- Which objectives felt strategically important but data-wise unrealistic?
- Where did you see potential conflicts (transparency vs speed, cost vs quality, donors vs operations)?
- How does this exercise change your view of BI as a strategic capability?

FROM MISSION TO METRICS: BUILD A BI STRATEGY STEP BY STEP

CREATE BI STRATEGY STEP BY STEP

* MISSION & STRATEGIC INTENT

_PURPOSE OF BI (WHY DOES IT EXIST?):



18 STUDENTS DOSSIER

* KEY STAKEHOLDERS

WHO WILL USE BI OR BE IMPACTED BY IT?

Stakeholder role	Interests

* KPIS & INDICATORS

HOW WILL SUCCESS BE MEASURED?

BI Objective	KPI	Why it Matters

* DECISION NEEDS

WHICH DECISIONS SHOULD BI IMPROVE?

Decision	Question	Stakeholder

* DATA SOURCES & FEASIBILITY

WHAT DATA IS NEEDED AND WHAT ARE THE RISKS?

Data Source	Available Y/N	Quality/Risks

* BI OBJECTIVES

WHAT SHOULD BI ACHIEVE TO SUPPORT THESE DECISIONS?

BI Objective	Linked Decision

* PRIORITIES & ROADMAP

WHAT COMES FIRST, AND WHY?

Timeframe	Focus	Rationale
0-3 months		
3-6 months		
6-12 months		