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Why Most Data Initiatives

FAIL

Wendy D. Lynch PhD.

Today

- What we mean by failure.
- Why it’s important.
- Why so many projects fail.
- Consequences of failure.
- One suggestion for doing things differently.

It’s not a surprise

MITSloan Management Review Topics

Why 90% of Digital Transformation Projects Fail

Harvard Business Review

Diversity Latest Magazine Ascend Topics Podcasts Video Store

Analytics And Data Science

Companies A
Their Efforts
Data-Driven

by Randy Bean and Thomas H.

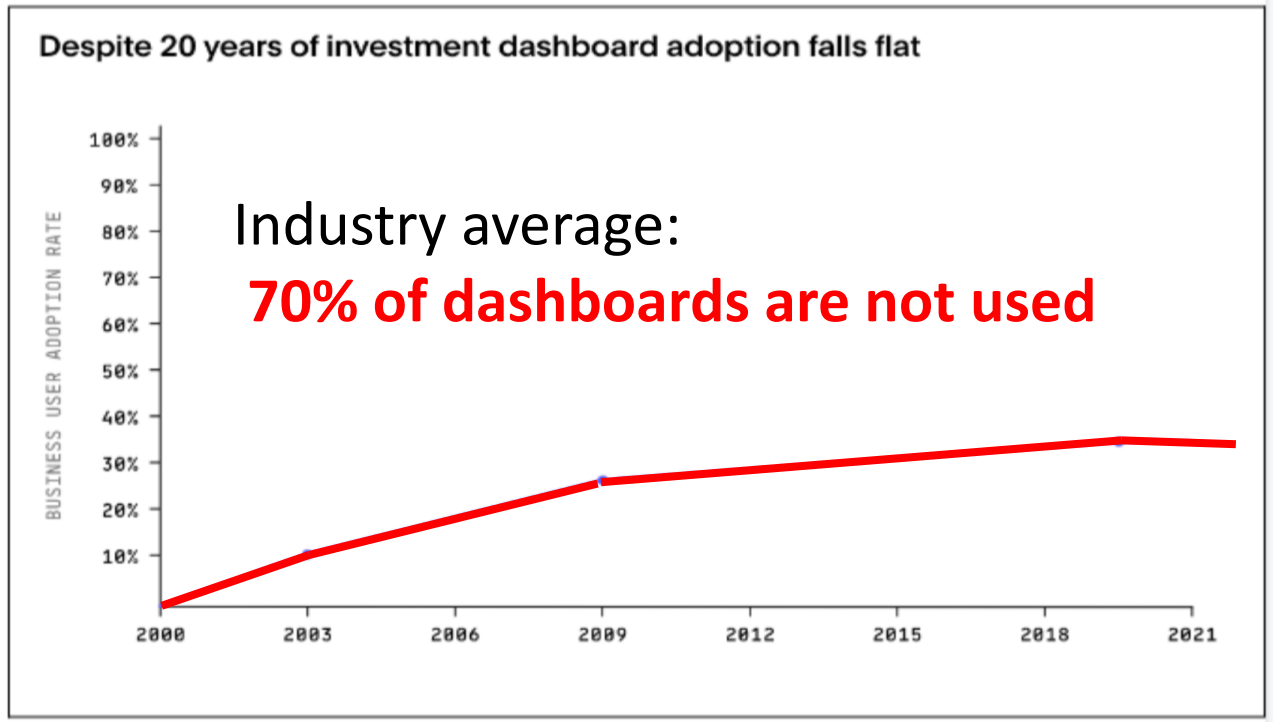
February 05, 2019

MAGAZINE SPRING 2021 ISSUE • RESEARCH FEATURE

Why So Many Data Science Projects Fail to

nced

Despite 20 years of investment dashboard adoption falls flat



Industry average:

70% of dashboards are not used

Forbes

Why Most Machine Learning Applications Fail To Deploy

Forbes Techno

Usama Fayyad Forbes Councils Member

Forbes Technology Council

COUNCIL POST | Membership (Fee-Based)

Apr 10, 2023, 08:45am EDT

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Source: A Decade of Data eBook

rework

What do the experts say?

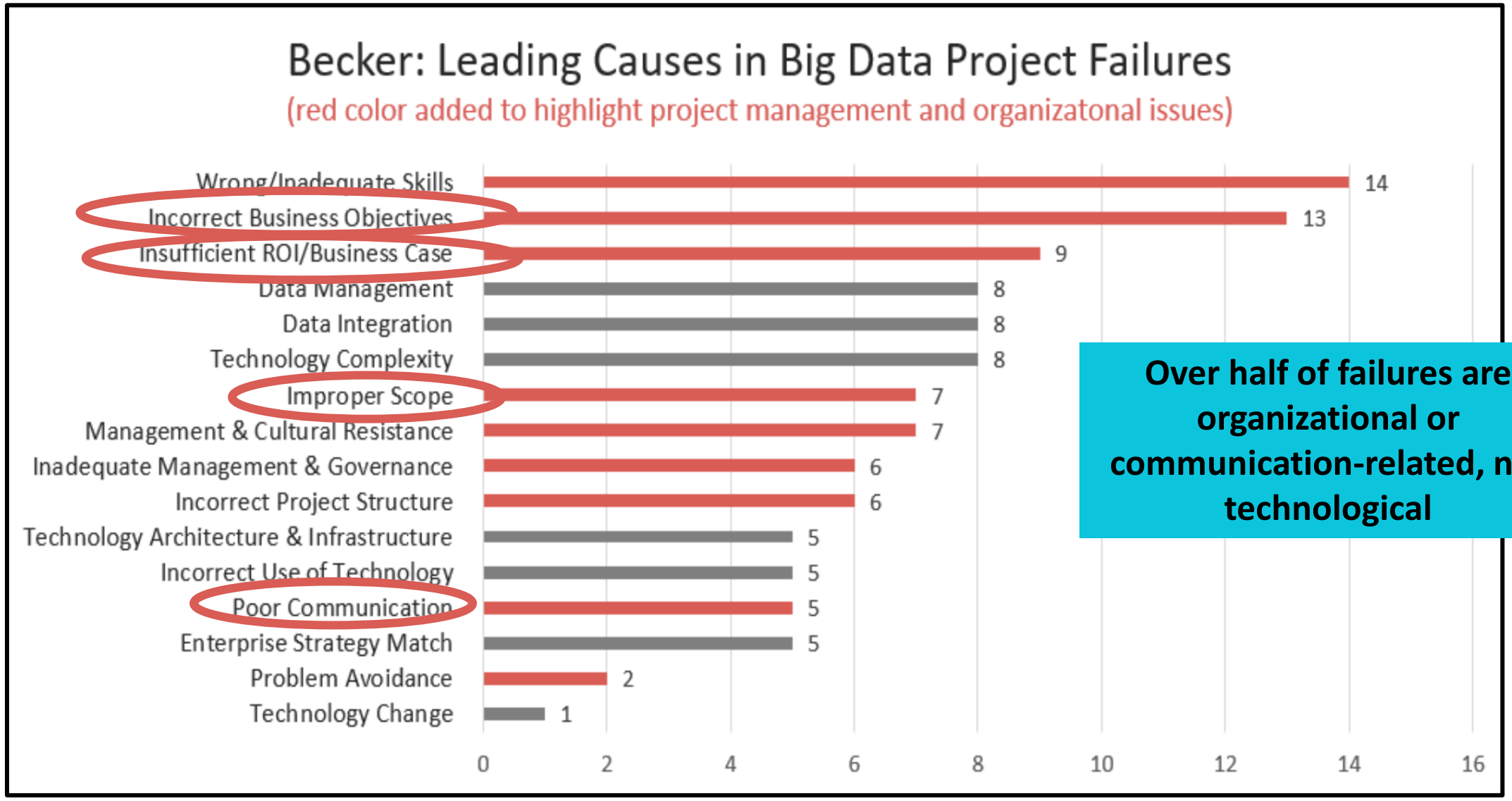
The situation is dire

- **85%** of big data projects fail
- **87%** of data science projects never make it into production
- **80%** of analytics insights deliver no business value
- **50%** of business decisions are made without using data
- **90%** of data transformation projects fail

https://designingforanalytics.com/resources/failure-rates-for-analytics-bi-iot-and-big-data-projects-85-yikes/

Gartner group 2021; Standish Chaos report 2020;
A decade of data;

It’s not the technology. It’s us.



Over half of failures are organizational or communication-related, not technological

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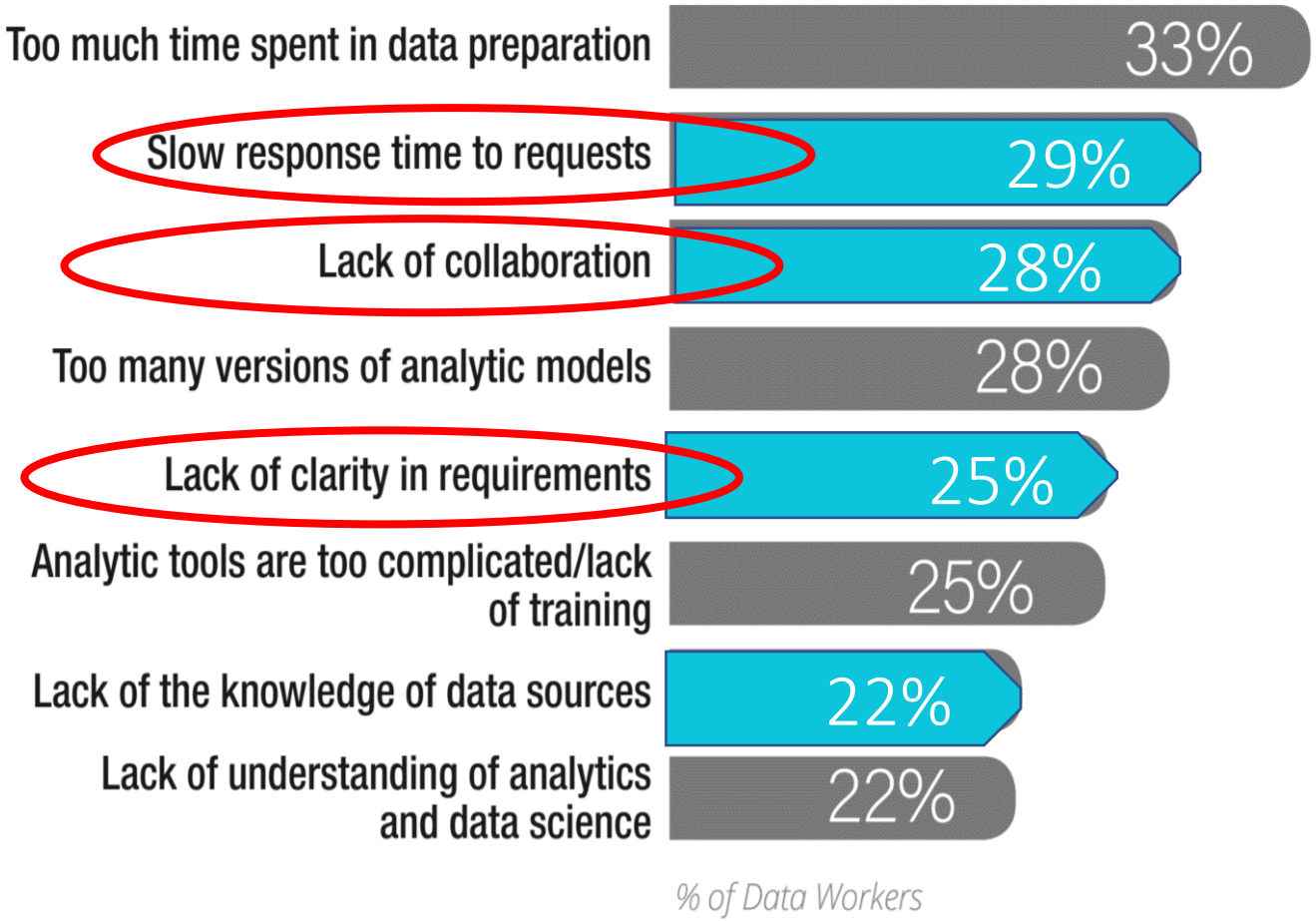
What workers say about failure

Data workers report an average of 44% of their time is wasted.



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Alteryx_State-of-Data-Science-and-Analytics-2019.pdf
https://www.inc.com/jeff-barrett/misusing-data-could-be-costing-your-business-heres-how.html

The problem is less about

insufficient resources

wrong tools or systems

Inadequate technology

And more about how we (don’t) communicate

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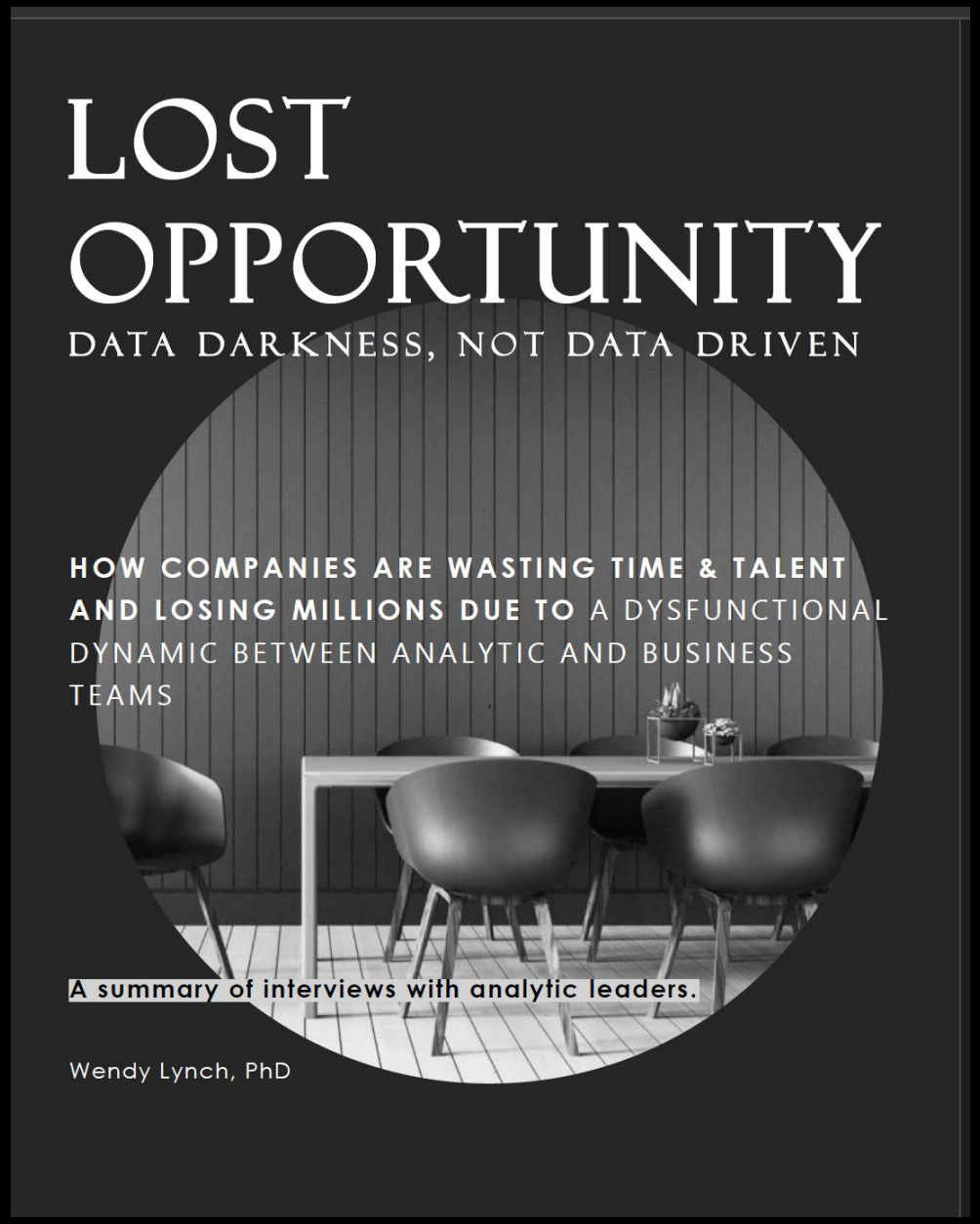


Interviews of 20 Data Analytic Executives

About the dynamic they experience between analytic teams and business teams.

How that impacts analytic teams.

How it limits potential value to the company.

How big of a problem it is.

Why they believe it happens.

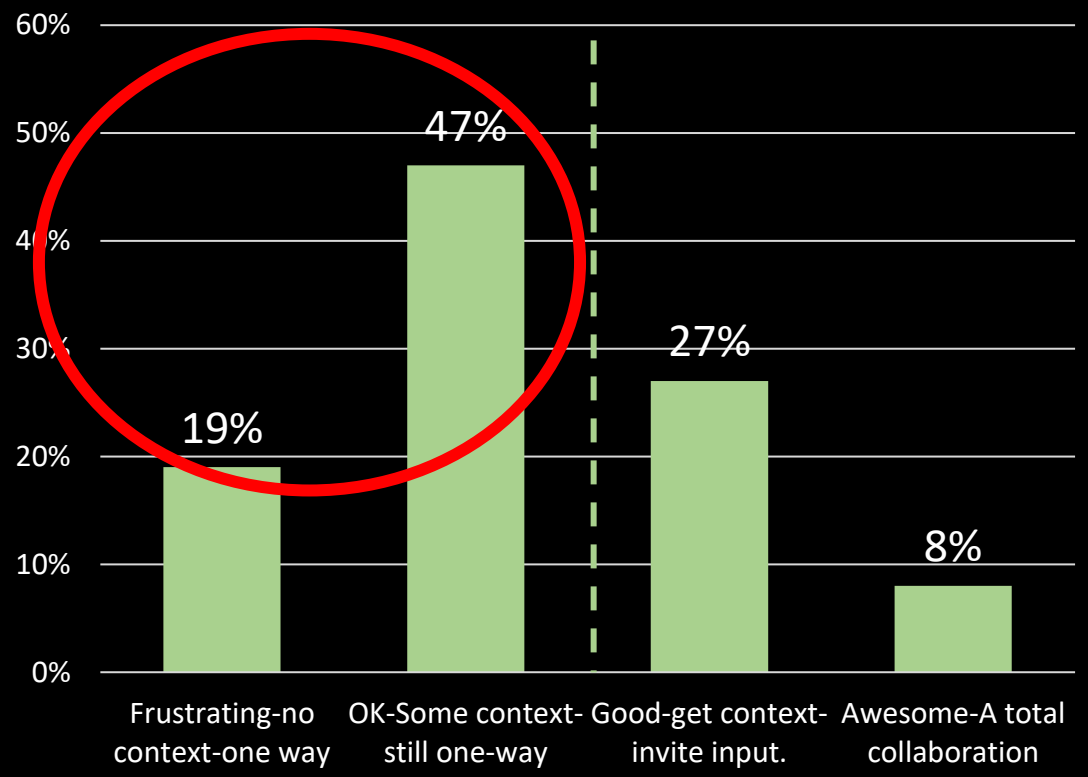
Analytic Leaders: Why This Happens

Urgency-Driven Communication:

- Quick and reactionary communication channels
- Urgent requests limit the time available for clarification, impacting the quality of responses

Pace

Analytic team describes requests from business. Is the process collaborative, do they want your opinion?



"They give me a request with little or no context. They don't ask for my input."

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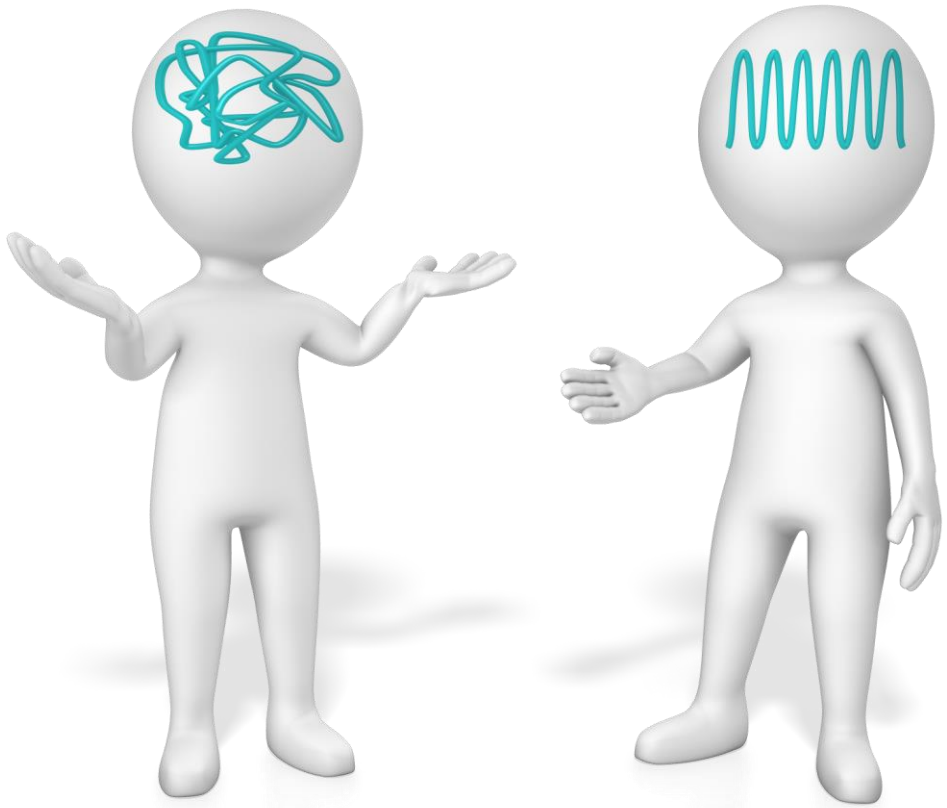
Lack of Comprehension By Business Leaders



Analytic Leaders: Why This Happens

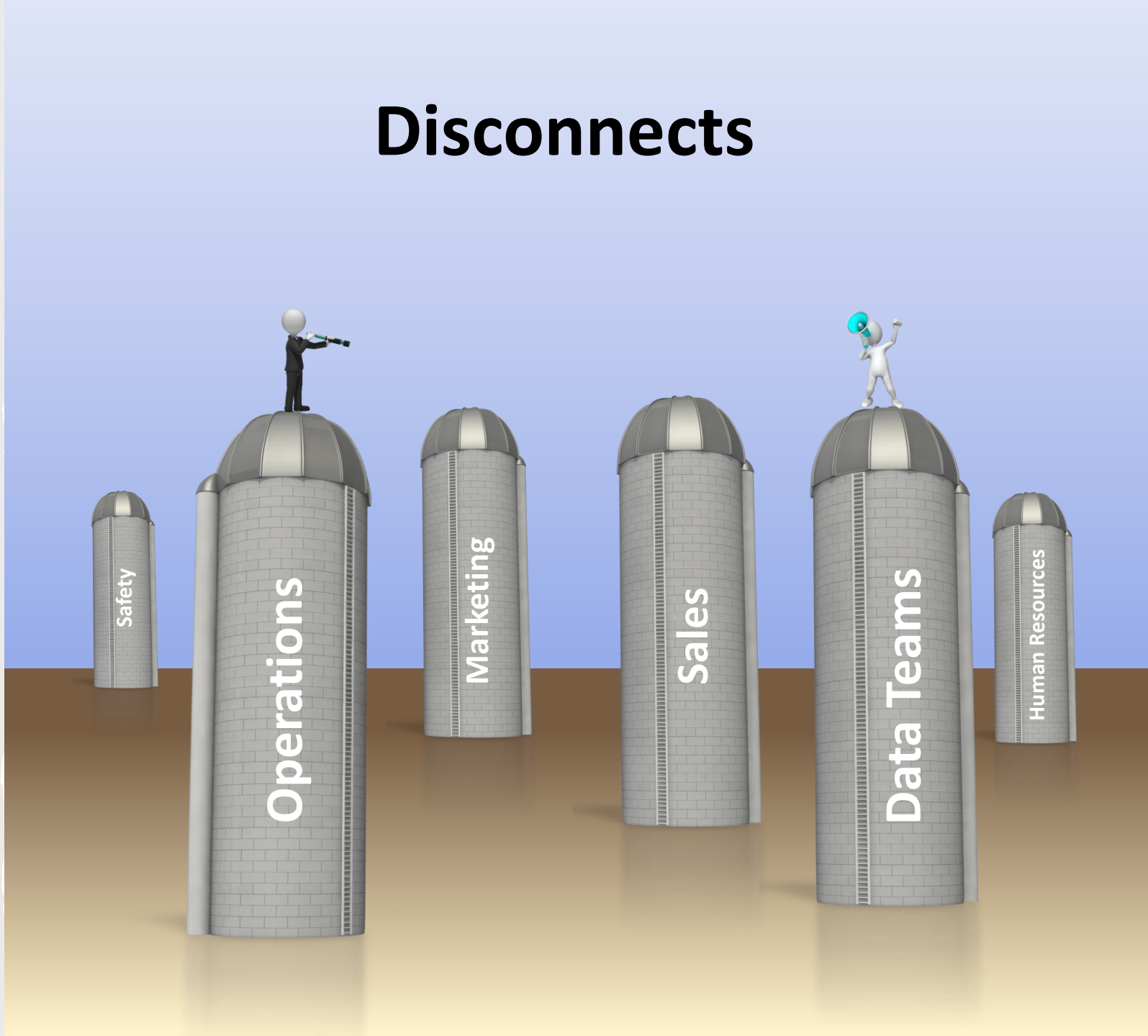
Low Perceived Value:

- Business leaders do not understand or value what analytics can do.
- Business leaders don't trust the data (unless it aligns with their beliefs).
- Analytics may be considered a cost center compared to revenue-generating business teams.
- Analytic leaders don't know how to advocate.

Analytic Leaders: Why This Happens

Organizations are siloed:

- Isolated teams pursue different, disconnected goals.
- Separation leads to competition and lack of coordination.
- The bigger the company, the greater the chances for misunderstanding.



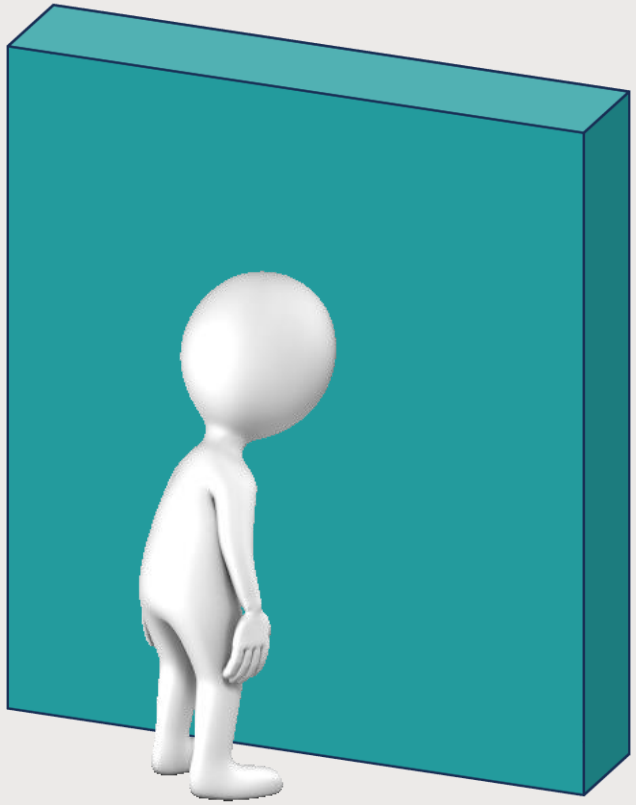
Definitions and Terminology

Analytic Leaders: Why This Happens

Specialized Language:

- **Analytic teams may prioritize what the business asks for rather than what they truly need, leading to inefficiencies.**
- **Terminologies within each team may not be understood by members of the other team.**
- **Assumptions are made about what others mean.**

Consequences for Data Professionals



UNDERAPPRECIATED AND DEMORALIZED

- Morale is adversely affected, leading to burnout.
- Workers feel unappreciated and undervalued.

Wasted time and energy:

- Rework and repeated project modifications because of poor project definition.

Turnover:

- Thinking that the situation will be different elsewhere, they look for another job.

Low team performance:

- Negativity develops. Even a single team member's dissatisfaction can diminish the overall performance.

Cumulative mistrust:

- Begin to worry more about getting it wrong than producing innovative ideas.

Consequences for Business

WAY BEYOND THE NUMBERS

Uninformed decisions and inefficiencies:
Making uninformed decisions.

Pressure on mid-level employees:
Supposed to be data-driven, but don't know how.

Eroded trust:
Begin to doubt validity.

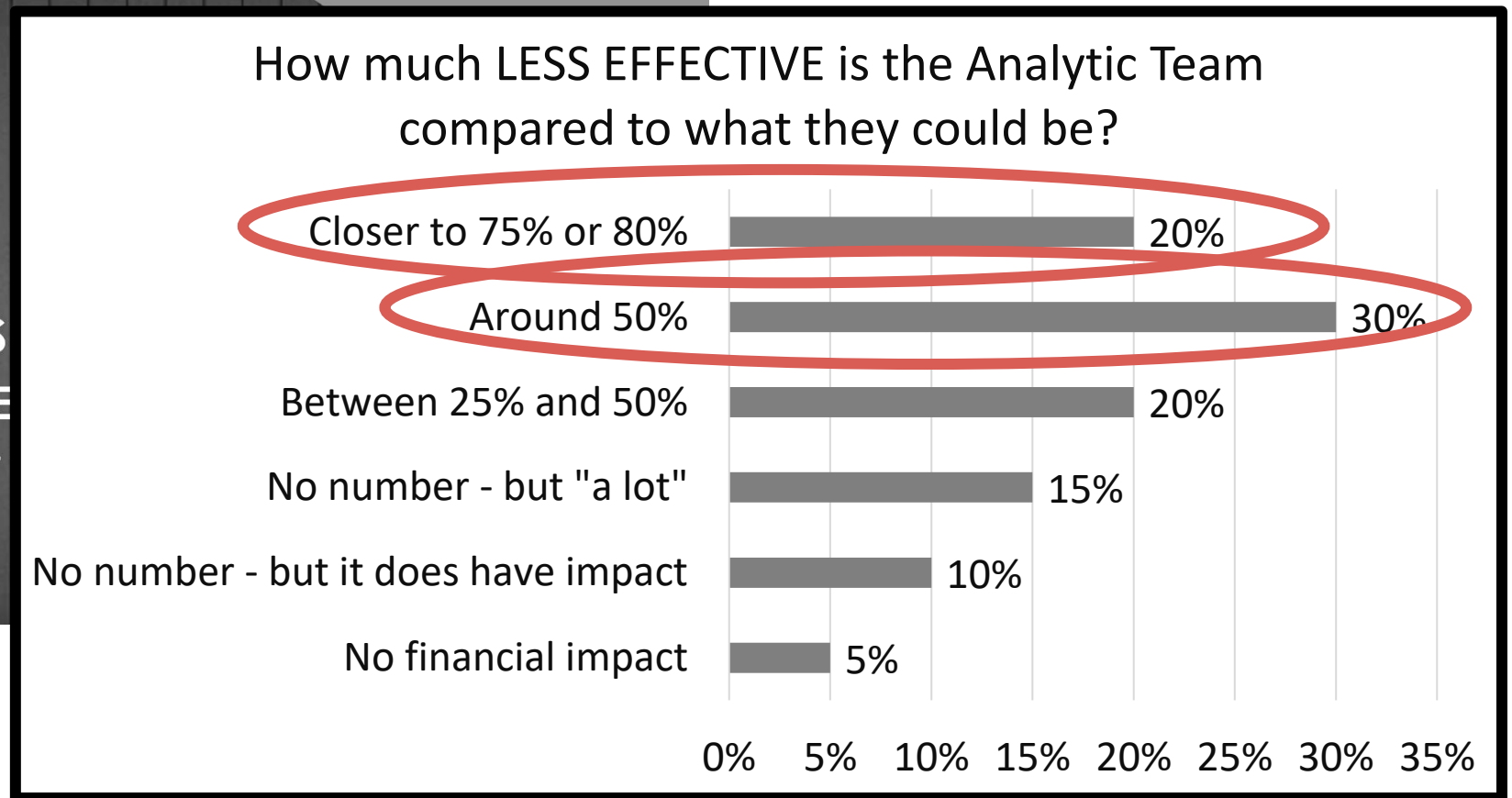
Missed business opportunities:
Stop using internal expertise.

Unnecessary spending on external vendors:
Rely on external experts

LOST OPPORTUNITY

DATA DARKNESS, NOT DATA DRIVEN

HOW COMPANIES ARE WAS
AND LOSING MILLIONS DUE
DYNAMIC BETWEEN ANALYT
TEAMS



A Typical Organization

Business Environment

Talented, capable and well-intended

Talented, capable and well-intended

Analytic Environment

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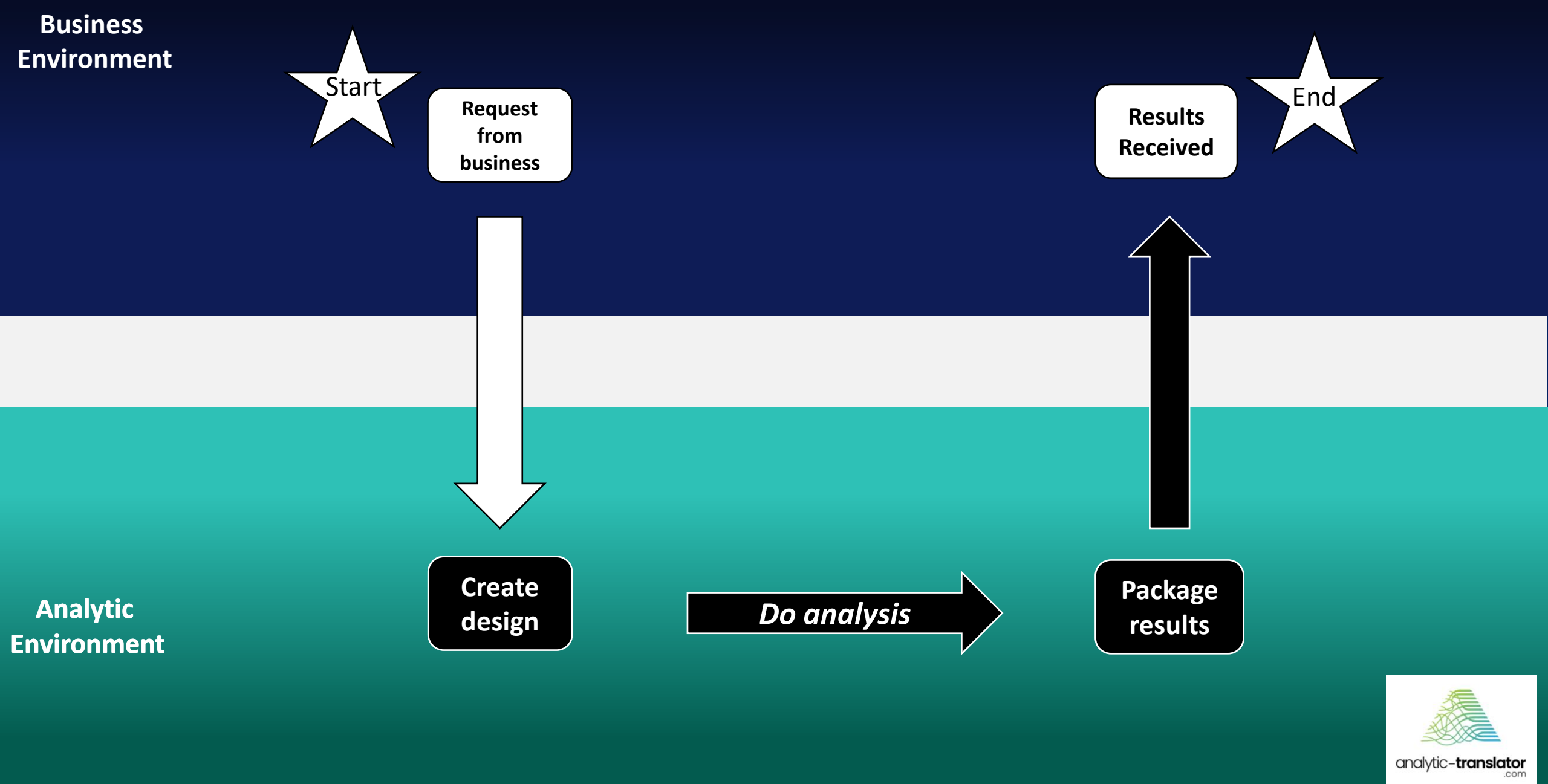
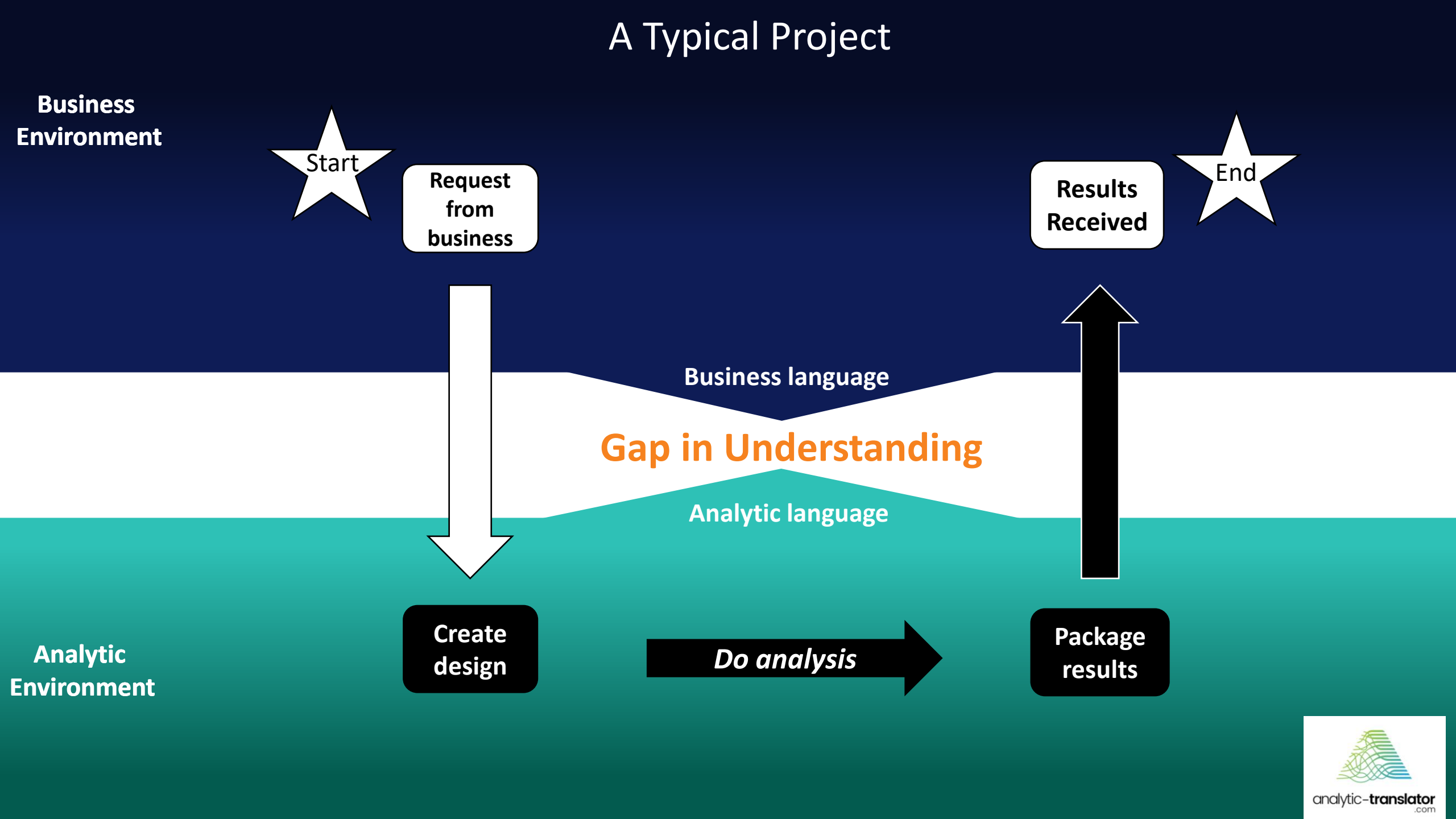
A Typical Project



A Typical Project



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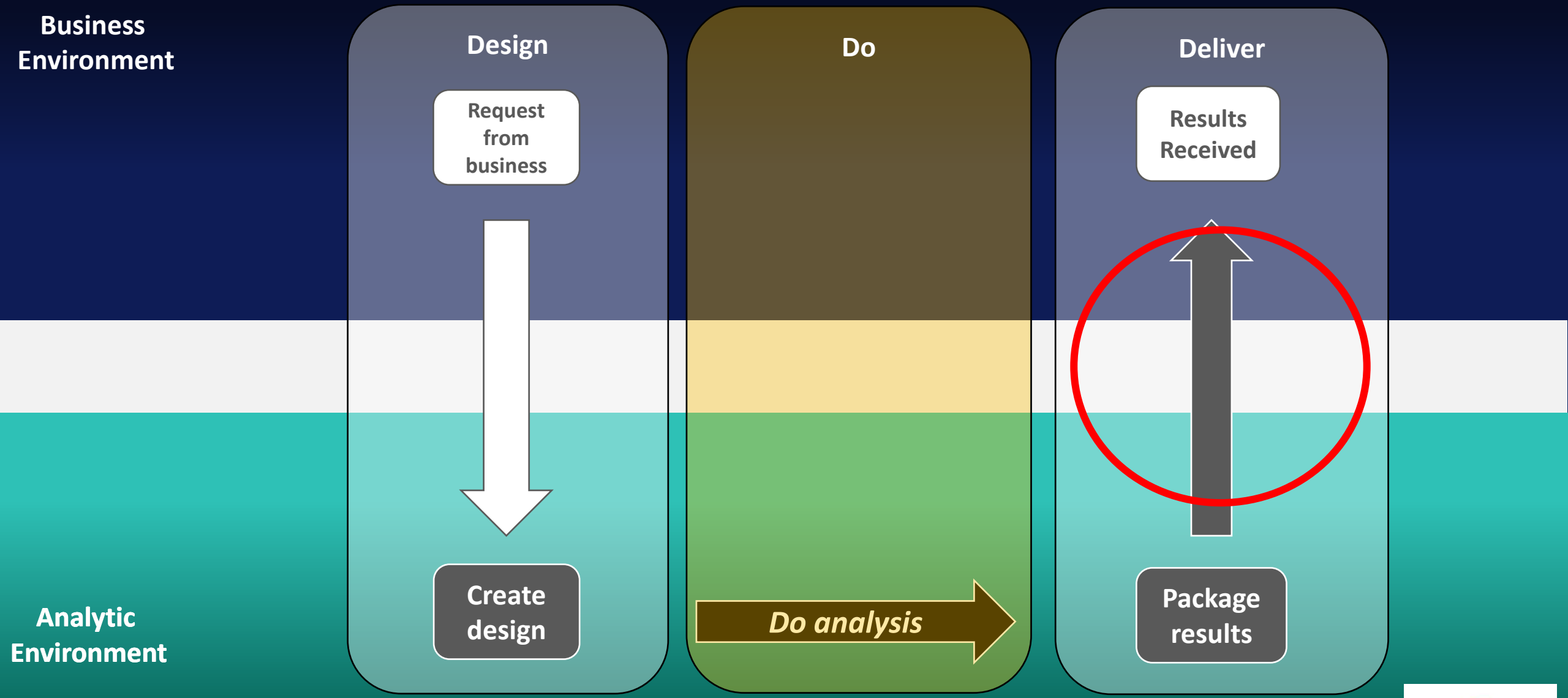
A Typical Project



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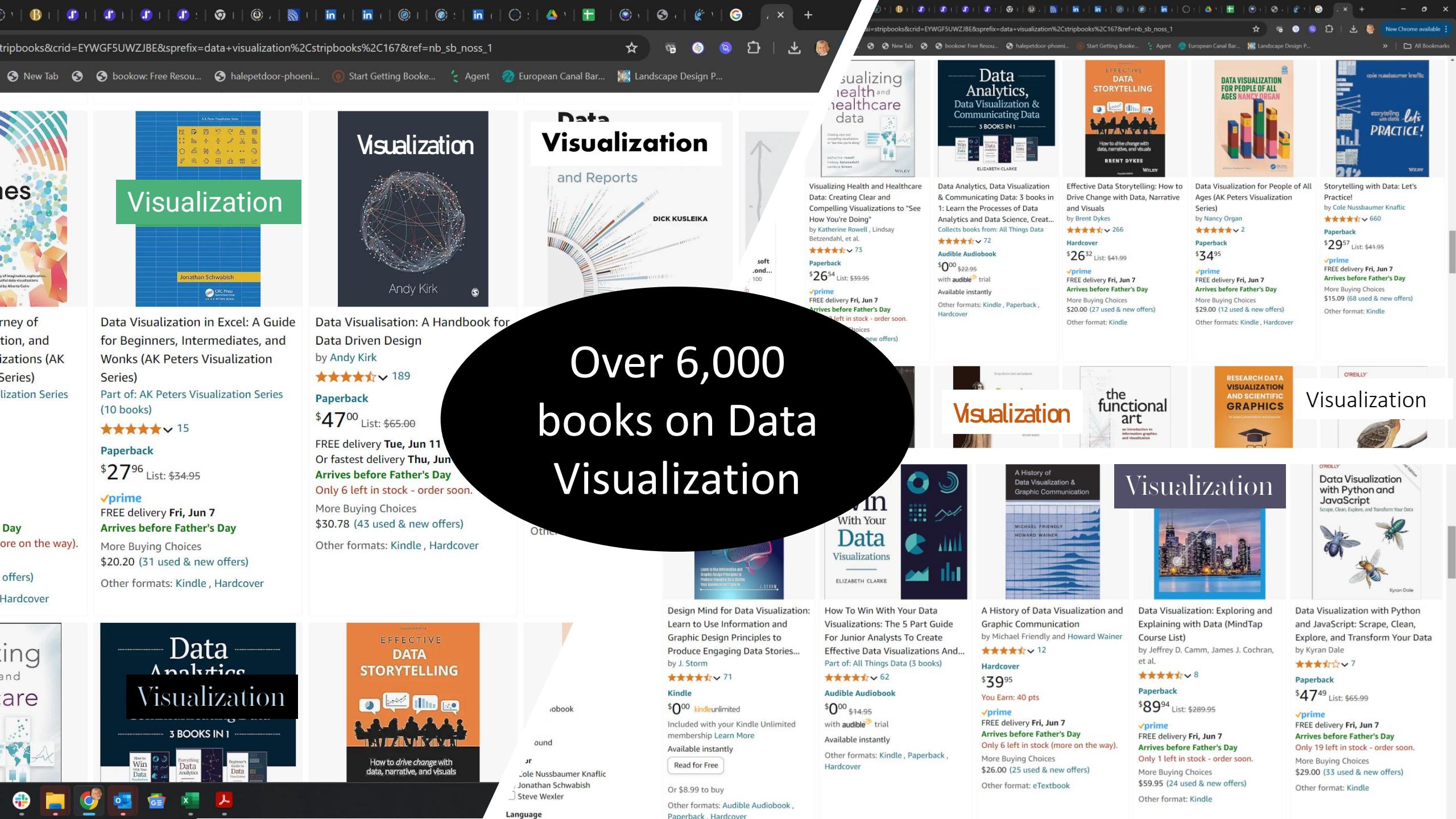
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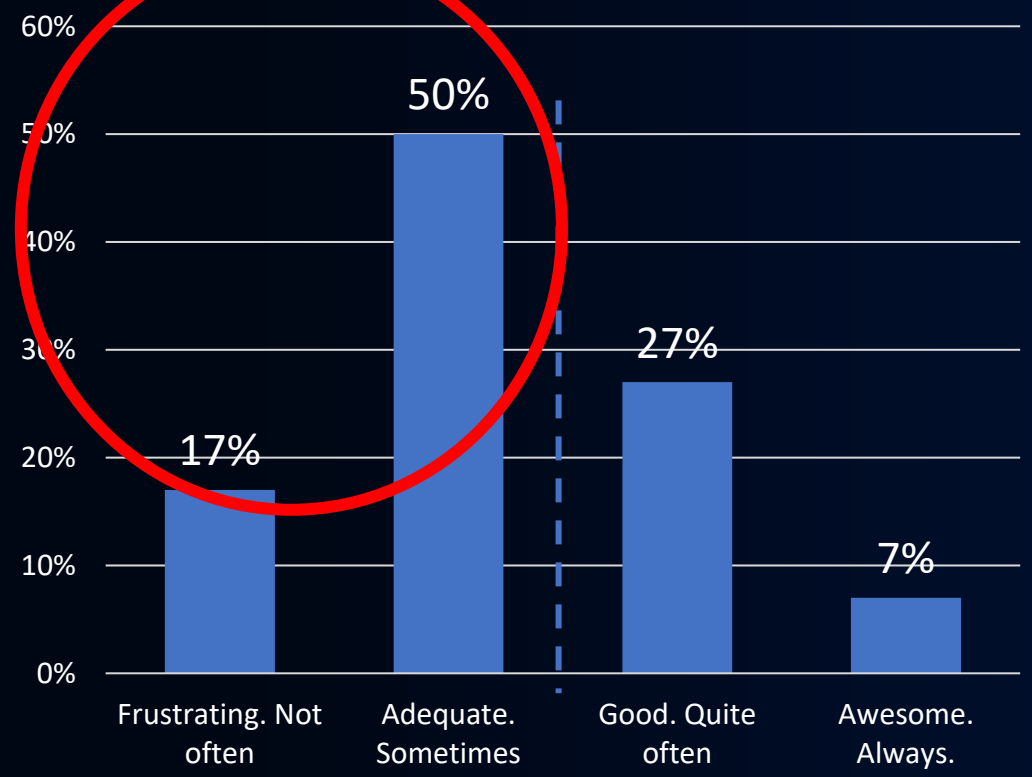
Language

Business describes interactions with data analytic teams. How often you get (and understand) the exact answers you need.



"They don't give me what I need in a way I can understand...."

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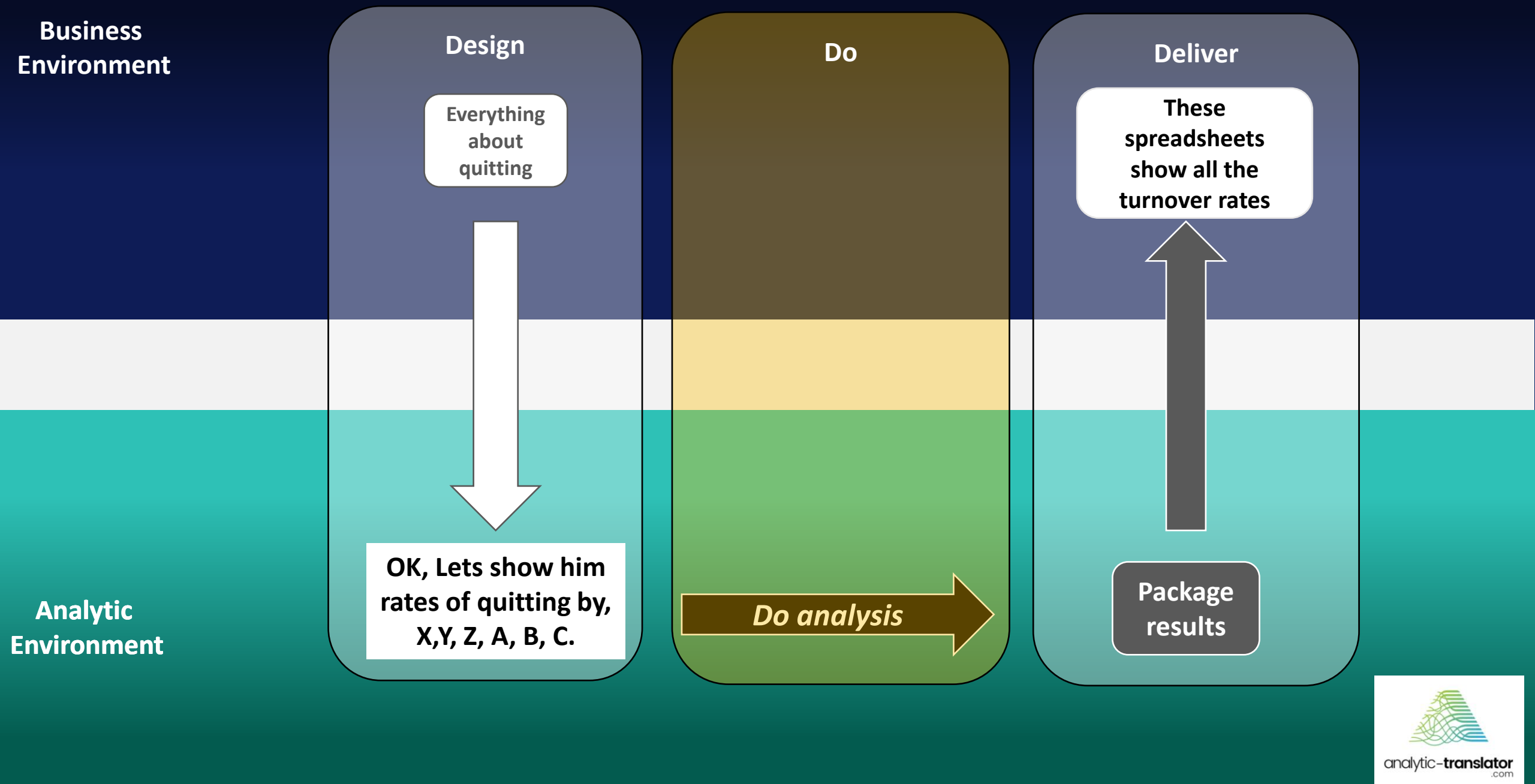
Typical Interactions

Tim. Sr. Director in HR.
(A history of cryptic, urgent requests via email)

"I need all the data you can give me about who is quitting. Can you pull that for me by Thursday?"

A Typical Project



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Typical Interactions

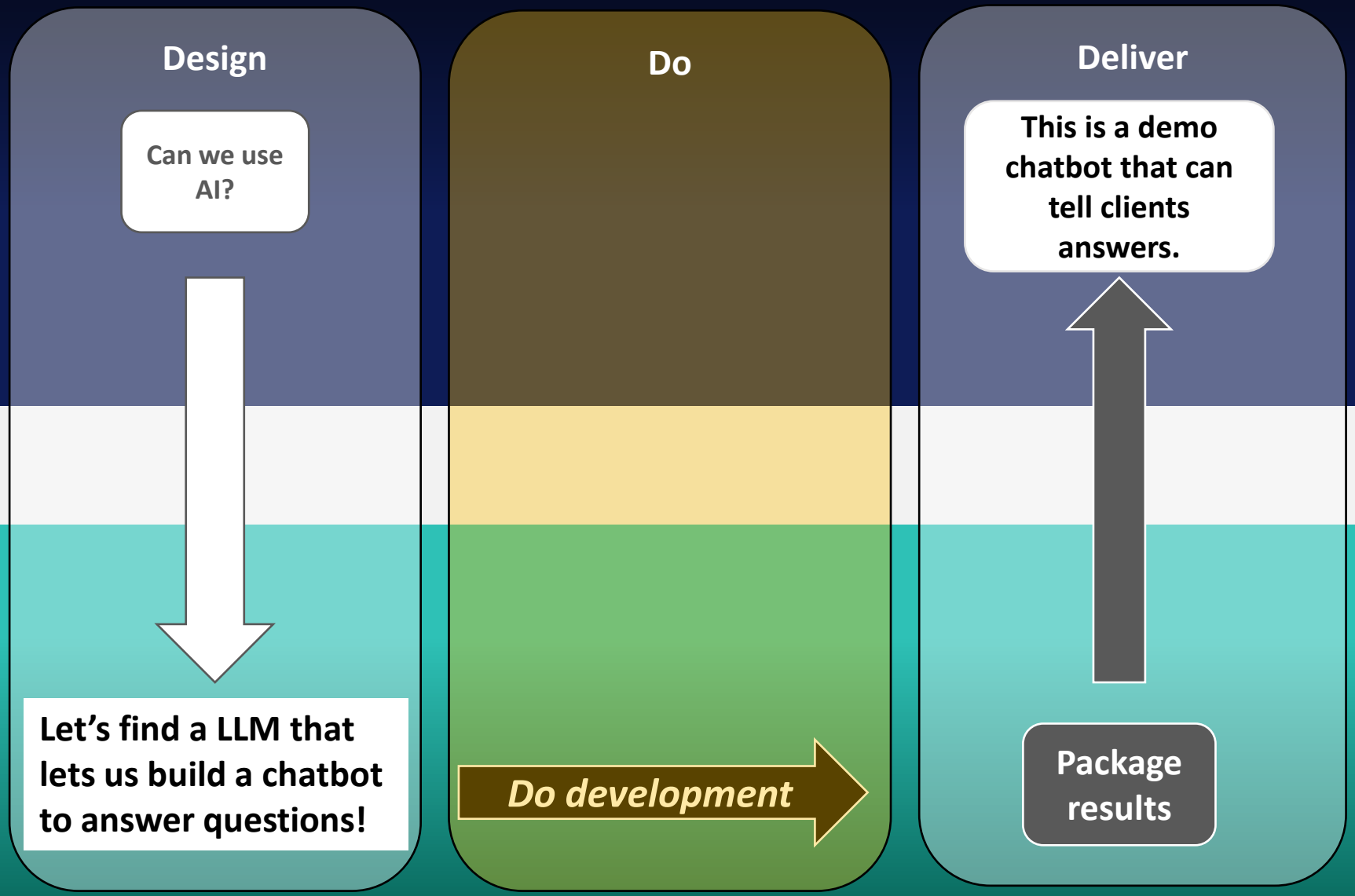
Sarah. CEO of Startup.
(Likes Buzzwords. Wants to be cutting edge)

"We need the client dashboards to be more compelling. Can we use AI to answer their questions?"

A Typical Project

Business Environment

Analytic Environment



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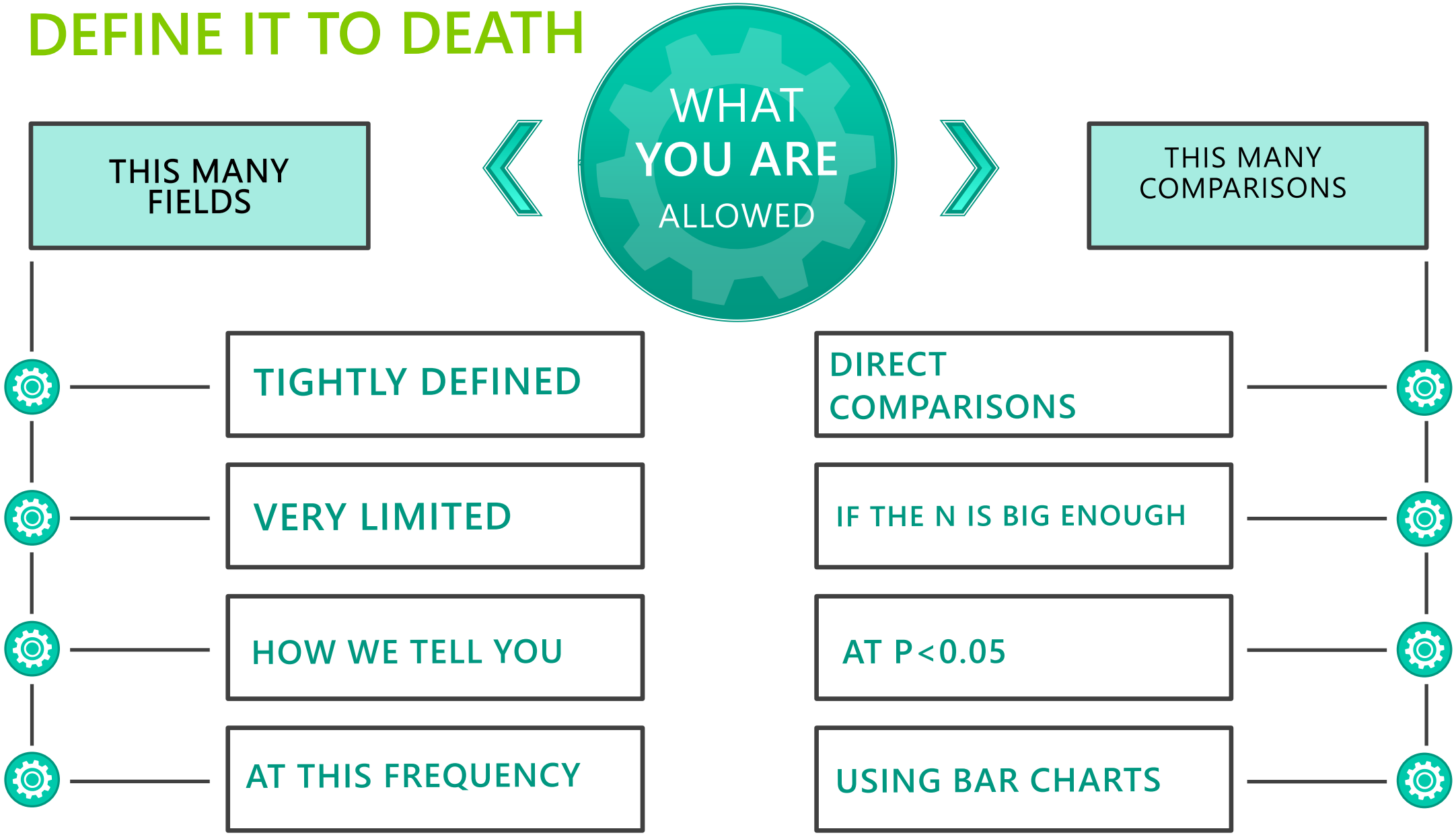
Every day, data teams jump into doing projects, without

- Context
- Adequate definition
- An understanding of goals
- Establishing criteria for decisions

We don’t allow that to happen!

- We define it really carefully,
- And we require that every team member signs off,
- So it it’s wrong, they know whose fault it is!

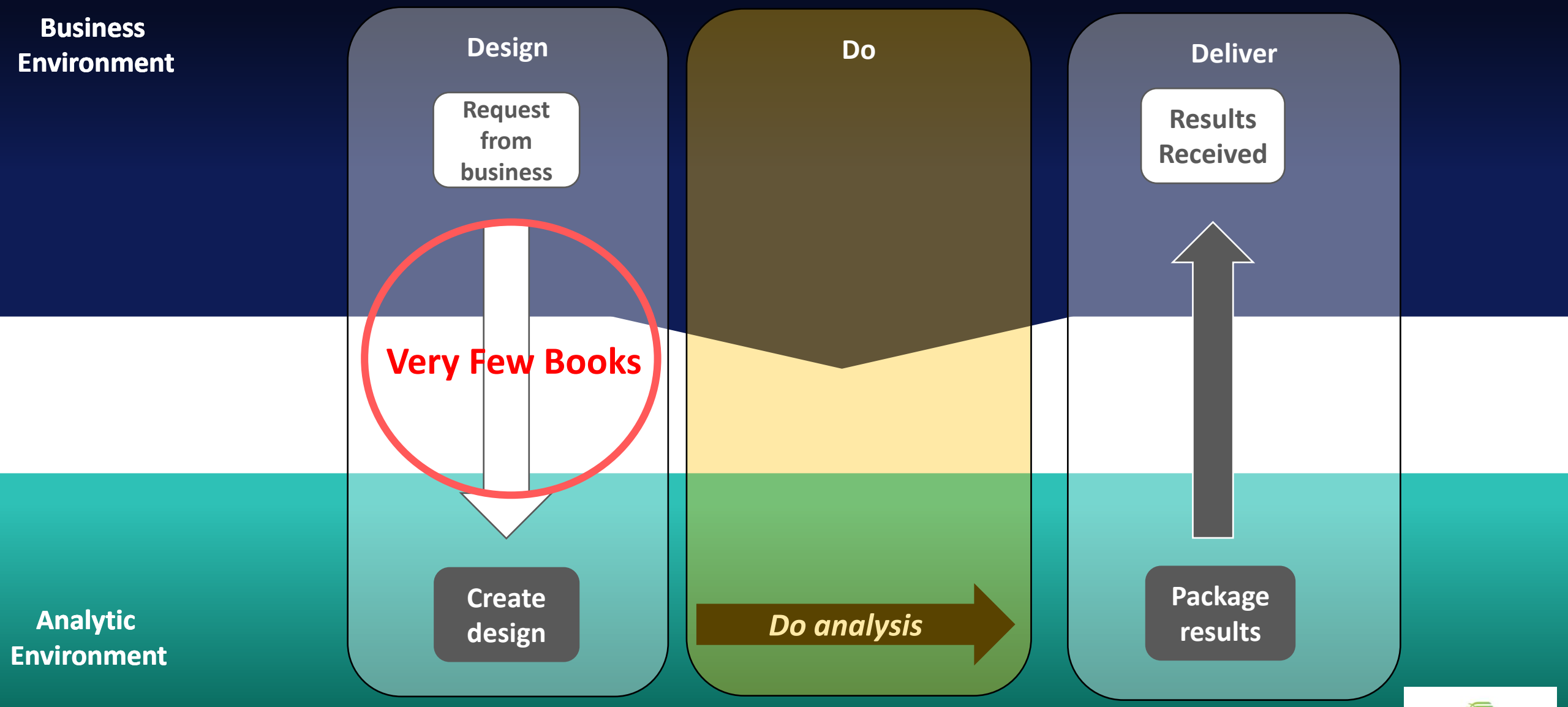
DEFINE IT TO DEATH



Which of these are you likely to know?

The question the business wanted to answer?	Often	Not often
The decisions the business wanted to make?	Often	Not often
Criteria the business would use to make them?	Often	Not often
How else the answers would be used?	Often	Not often
The audiences(s) who would use the answers?	Often	Not often
Requirements (timeframe, format, budget)?	Often	Not often

A Typical Project



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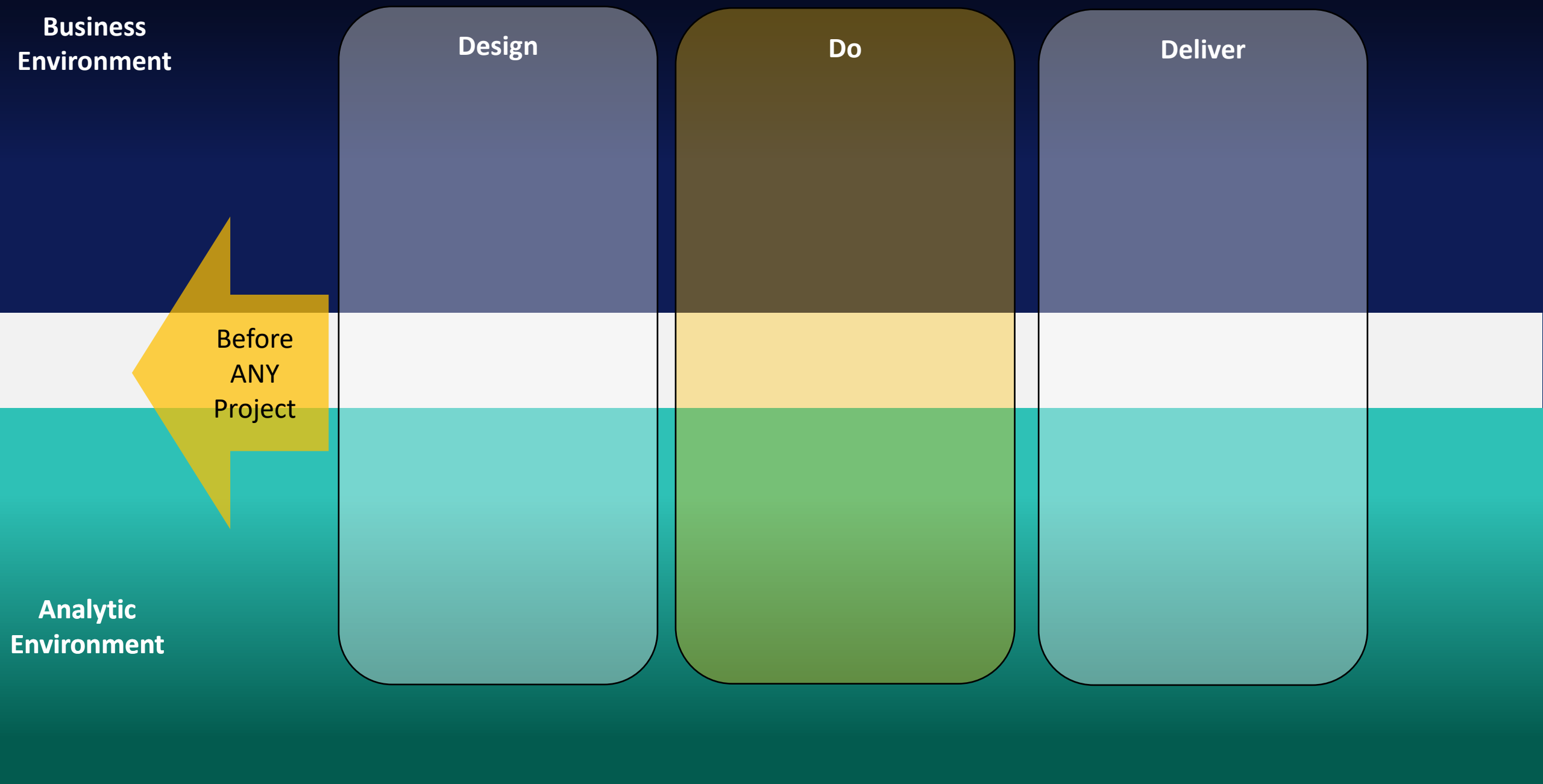


A Conversation

Rapport-Building and Context Discovery

Goal for them:

That they feel

- **Seen,**
- **Heard, and**
- **Understood**

Rapport-Building and Context Discovery

Goals for you:

- Understand their environment in advance
- Assess general literacy
- Build trusting partnership
- Gauge their awareness of possibilities
- Confirming what you've heard

NOT

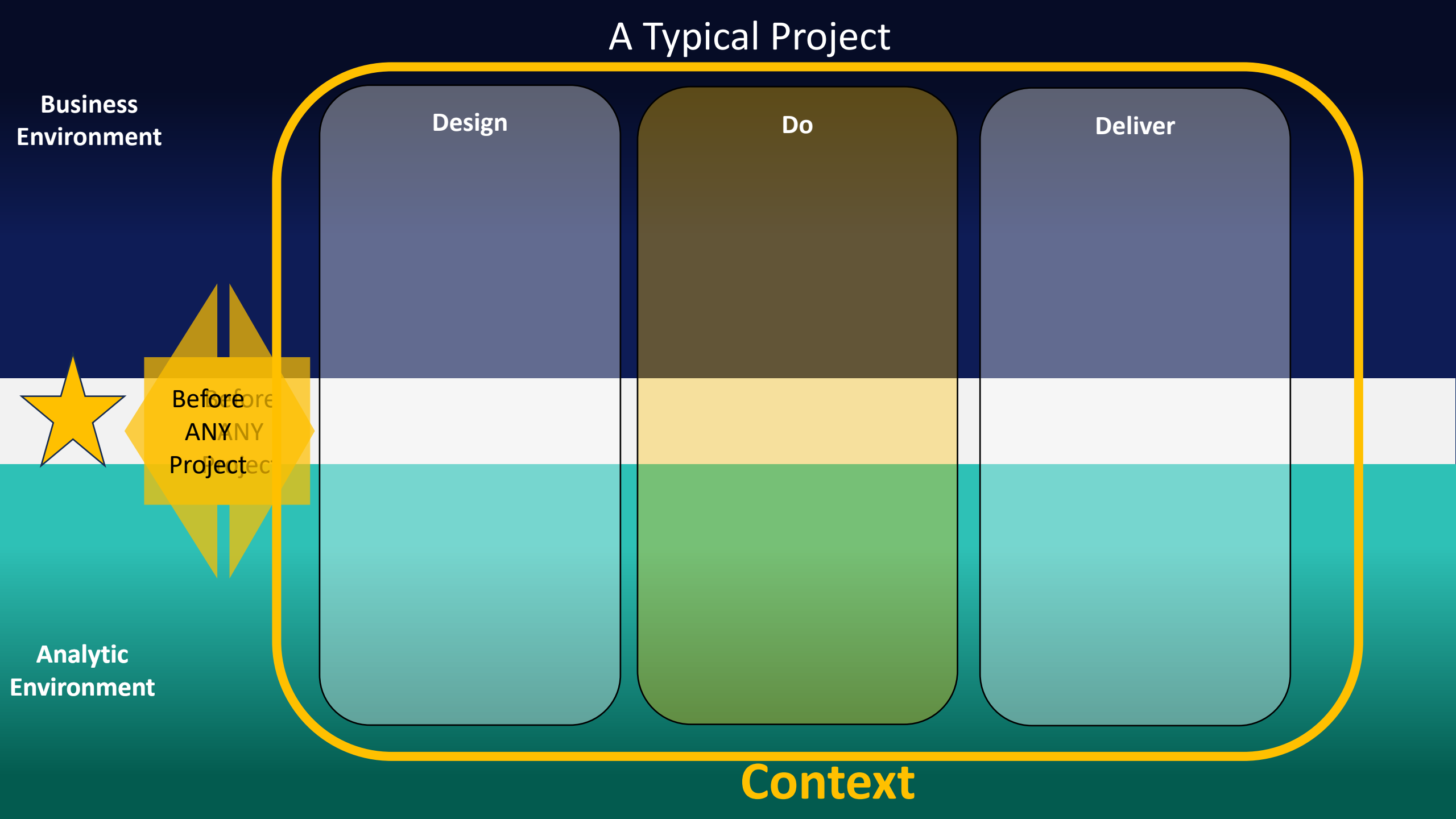
- Offering solutions
- Peppering with detailed questions
- Showing how smart you are

Rapport-Building and Context Discovery

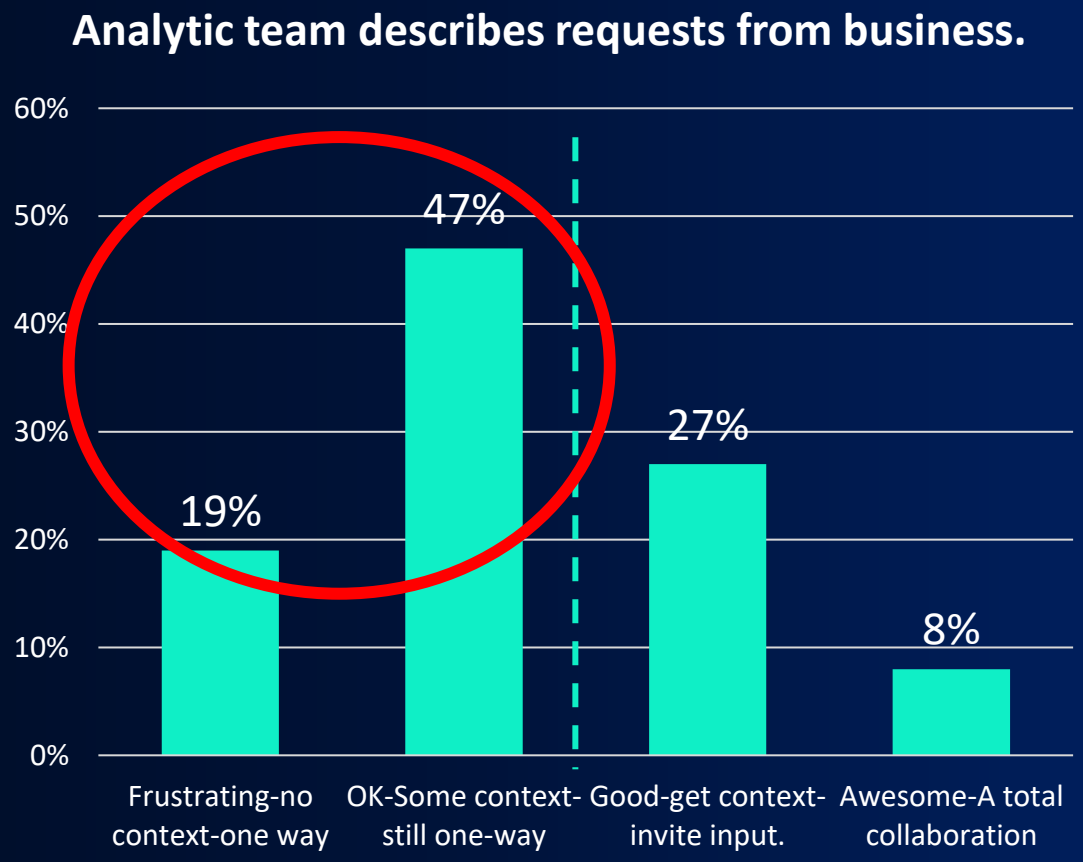
Example questions

- *Tell me about your current priorities.*
- *What else is your team focused on right now?*
- *What challenges do you anticipate in the next few months?*
- *Are there any types of information you wish you had to make your job easier?*
- *If there were ways that the analytic team could help you, what would those be?*
- *Would you be open to a regular check-in?*

A Typical Project



“They give me a request with little or no context.”



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TYPICAL

Tim. Sr. Director in HR.

(A history of cryptic, urgent requests via email)

“I need all the data you can give me about who is quitting. Can you pull that for me by Thursday?”

A: These spreadsheets show all the turnover rates by A, B, C, X, Y, Z.

Context for Tim

Pressure!

- **Executive Leadership wants Tim to offer actionable solutions NOW. They are most interested in people quitting in the first year.**
- **Tim has limited understanding of how analytics help him.**
- **He admitted that he was just going to ask for basic information about who was quitting to see if he could come up with ideas.**
- **What he REALLY needs is a predictive model that anticipates which and why new employees are quitting.**
- **Was the beginning of a productive partnership.**

TYPICAL

Sarah. CEO of Startup.
(Likes Buzzwords. Wants to be cutting edge)

"We need the client dashboards to be more compelling. Can we use AI to answer their questions?"

A: "This is a demo chatbot that can tell clients answers to their questions."

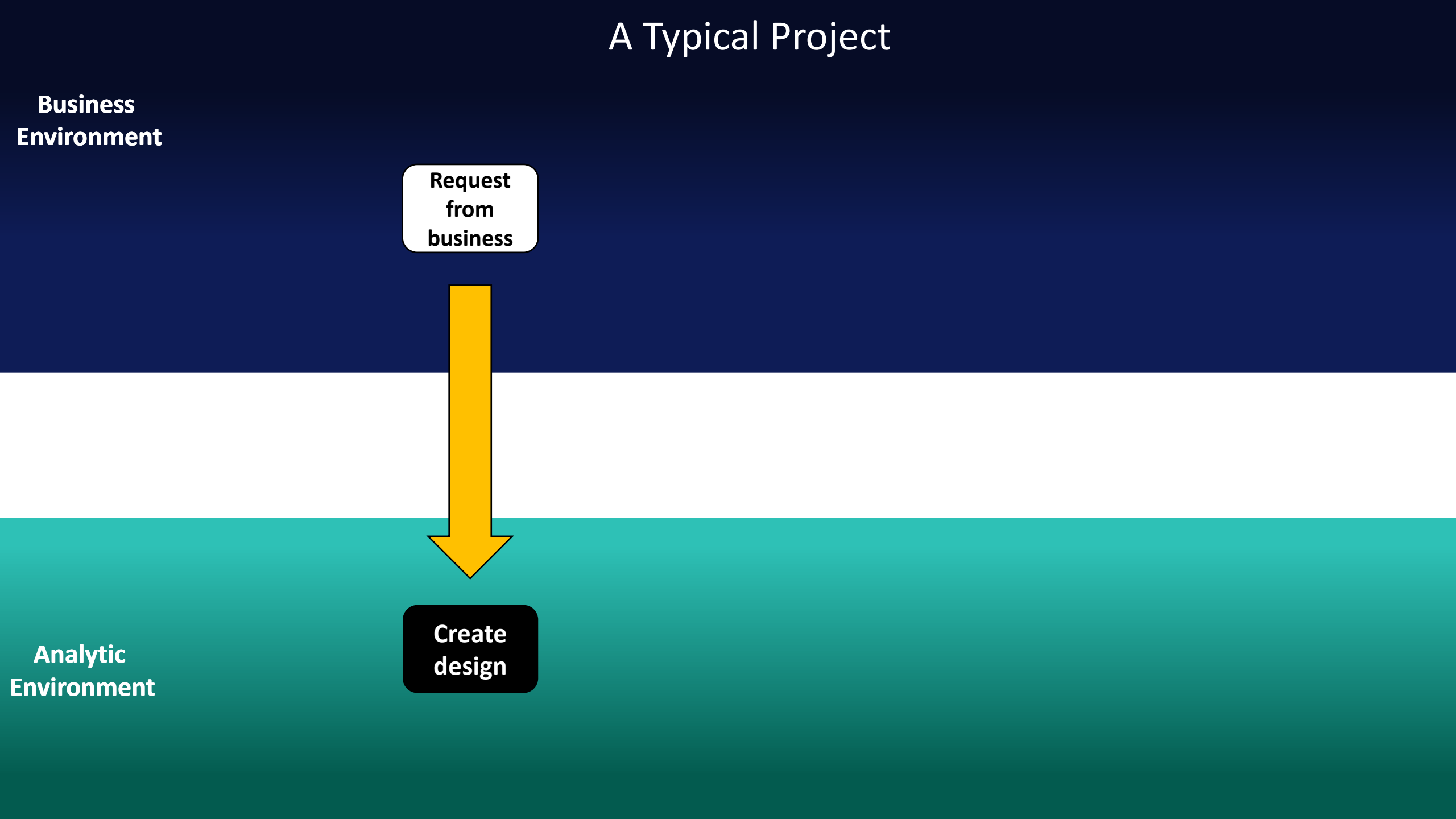
Context for Sarah

Wanting to stand out

- Sarah believes the company's valuation will be much higher if they have an AI component to their solution.
- Sarah has limited understanding of what AI really means.
- She saw a demo where an AI tool could convert simple verbal questions into data queries.
- She was NOT thinking of chat/ dialog capability.
- Started over with better understanding.

When we don’t understand context, it is difficult to define / design what someone needs.

A Typical Project



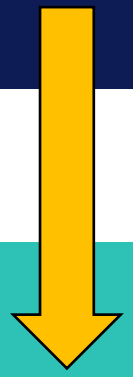
Translation: Business to Analytics

Business Environment

What matters to the business team

IN BUSINESS TERMINOLOGY

- What they want to know
- Decisions they want to make (and criteria)
- How it will be used, and by whom
- Other requirements



Analytic Environment

What matters to the analytic team

IN ANALYTIC TERMINOLOGY

- Whether/how question can be answered
- Whether project is feasible
- If audience expectations can be met
- Other alternatives

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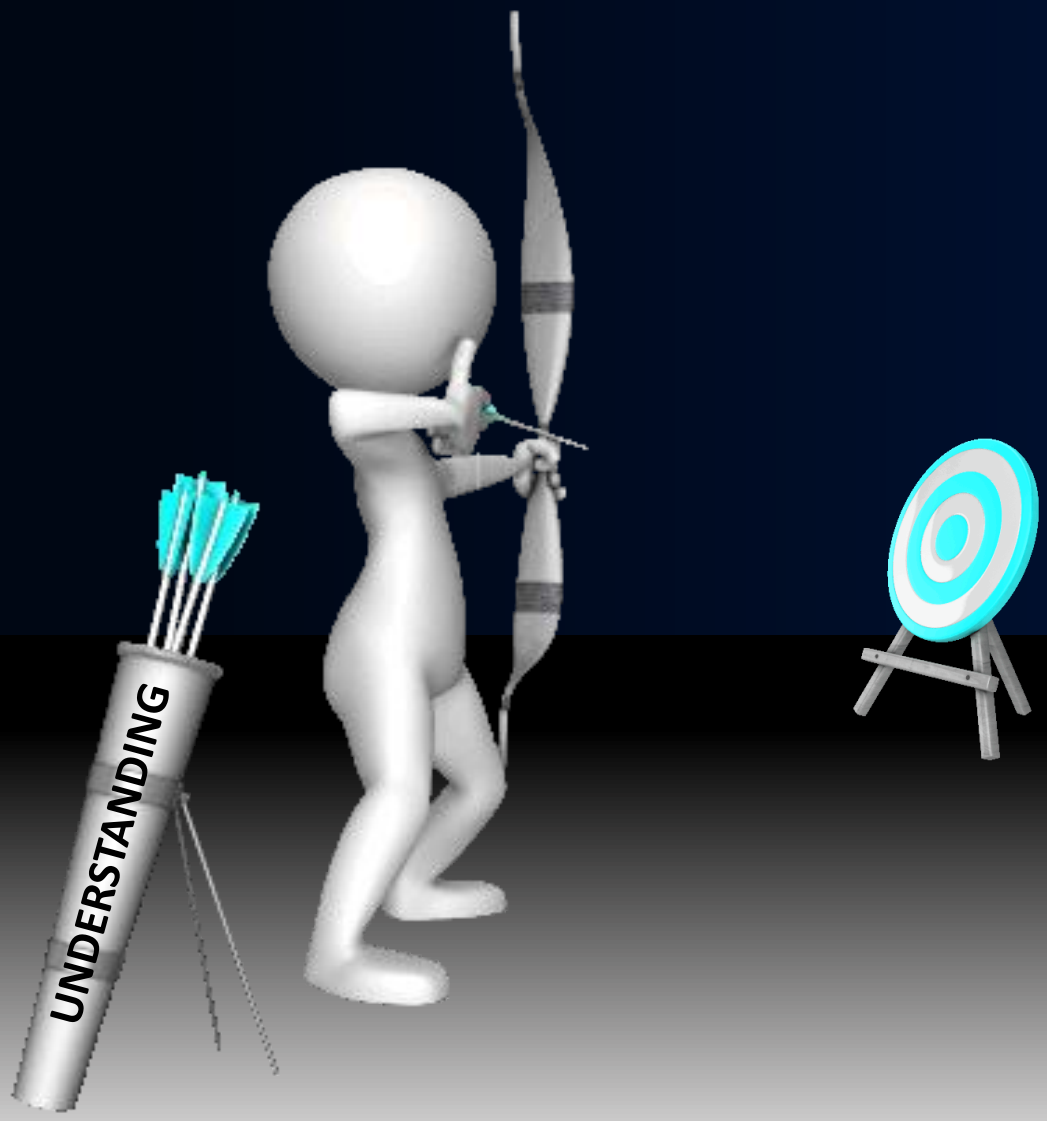

Make data initiatives

hit the target

Start with a conversation

Coming soon to Dataversity!

Training
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Communication for data professionals

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