ELEVATING
ENTERPRISE
DATA LITERACY

Literacy Is a Two-Way Street

The Case for Both Business and Data Literacy

Data Into Solutions

Wendy D. Lynch PhD.

One way…. From Data to Nirvana

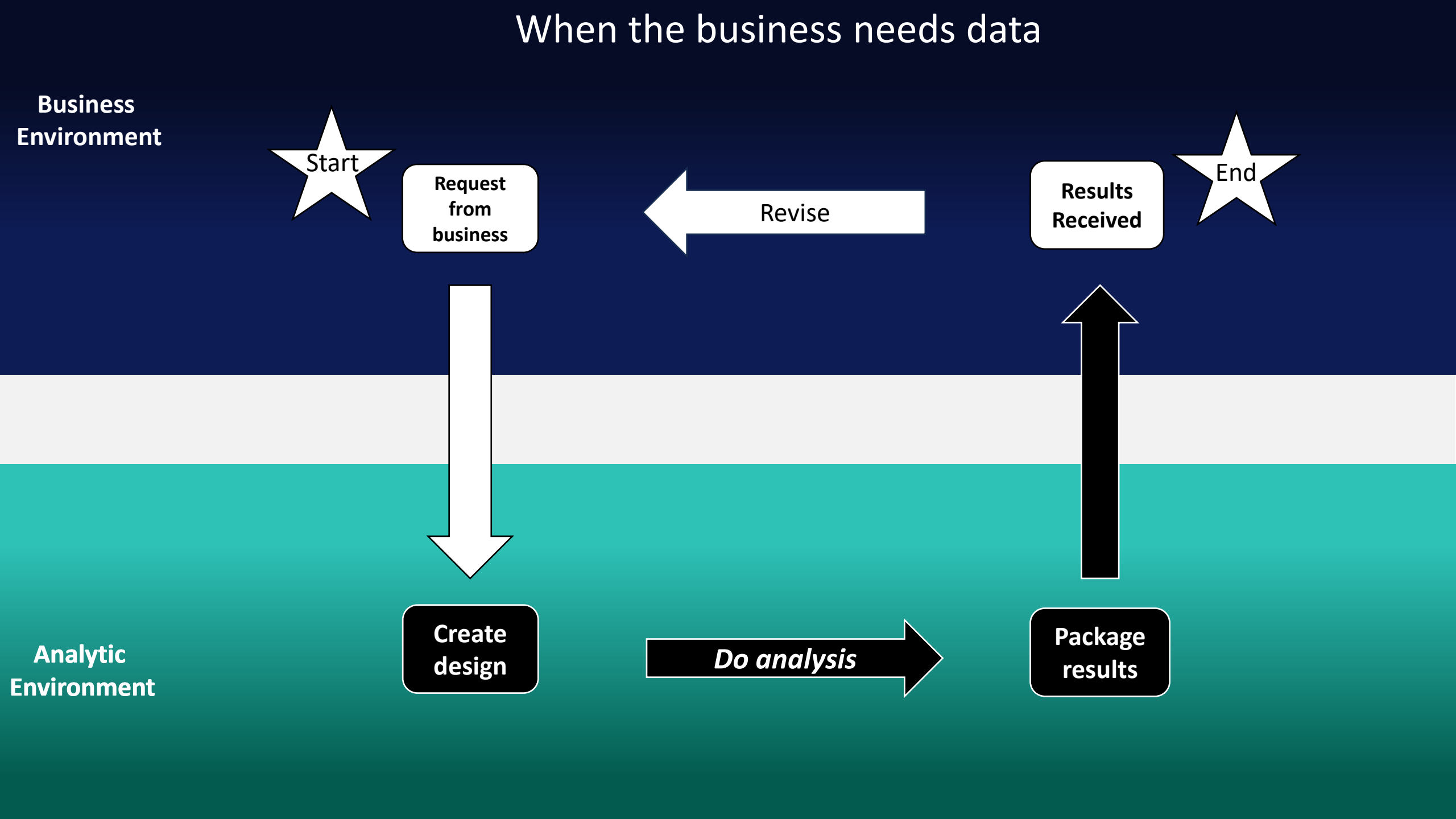
Where are we trying to go?
Analytics
Data inputs
Biz outcome
Many places
At the same time

When the business needs data

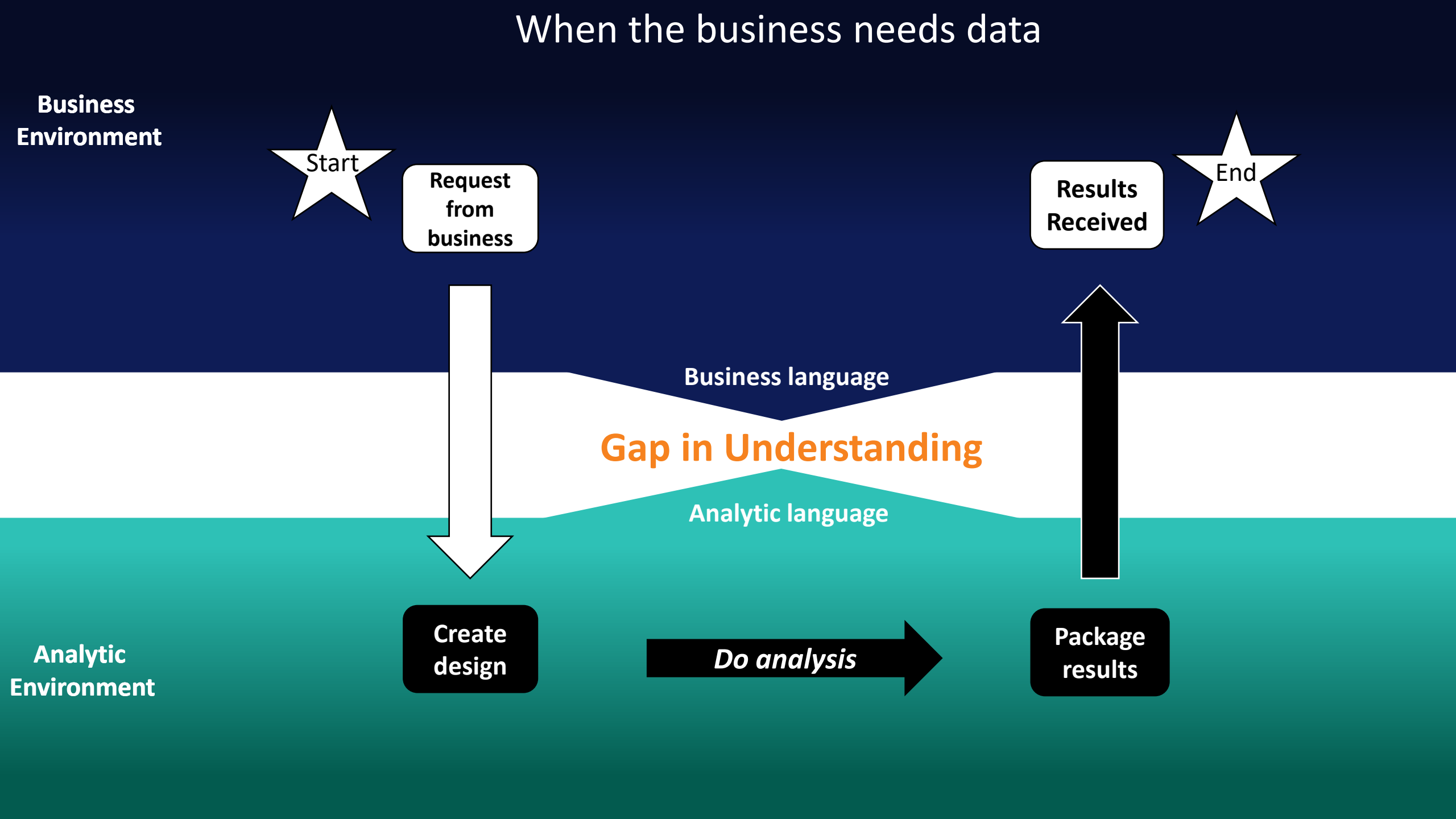
Business Environment

Analytic Environment

When the business needs data



When the business needs data



Sometimes it’s not the way we think of literacy

It’s more than words

It’s context

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“I need a dashboard

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“We need to trim the budget…..”

"I need a dashboard that shows comparative performance across locations ....."

"We need to trim the budget....."

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Earnings

Every day
in corporations around the world
there are literally millions of
requests where the two teams
don’t understand each other.

Revenue

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Business leaders want

Timely, innovative insights from data

That deliver measurable value

More data awareness

More business awareness

Data Teams want

Meaningful, challenging work

That is appreciated and valued

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The problem is not

insufficient resources

wrong tools or systems

It’s seeing things one way

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How Analytic Translators Handle This Challenge

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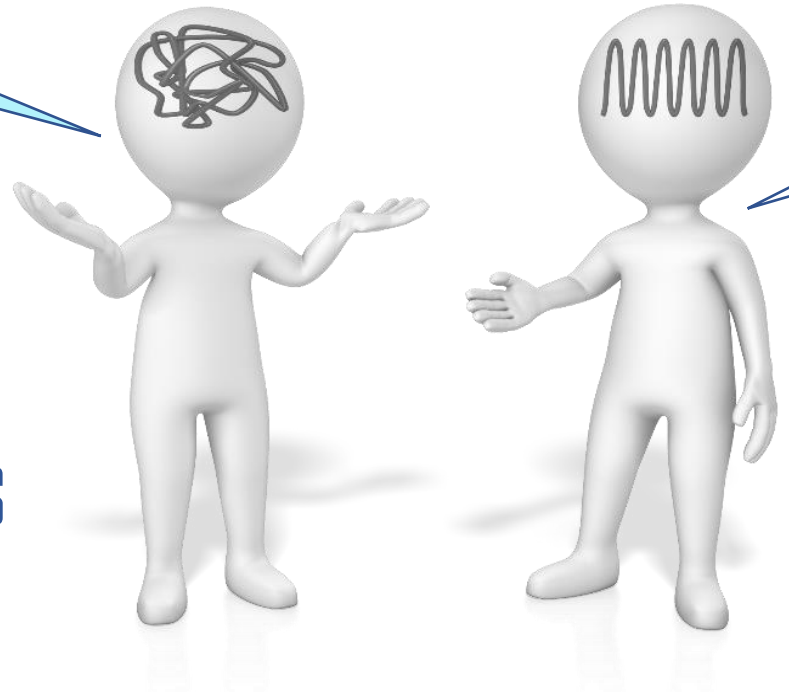
Let's appreciate our differences.....

$$ ($$) *EBITA* **P:E**
NET REVENUE KPI

$$\sigma = \sqrt{\frac{\sum(x_i - \mu)^2}{N}}$$

$p < .001$. R^2



Business Leaders

Data Scientists

.....speak different languages

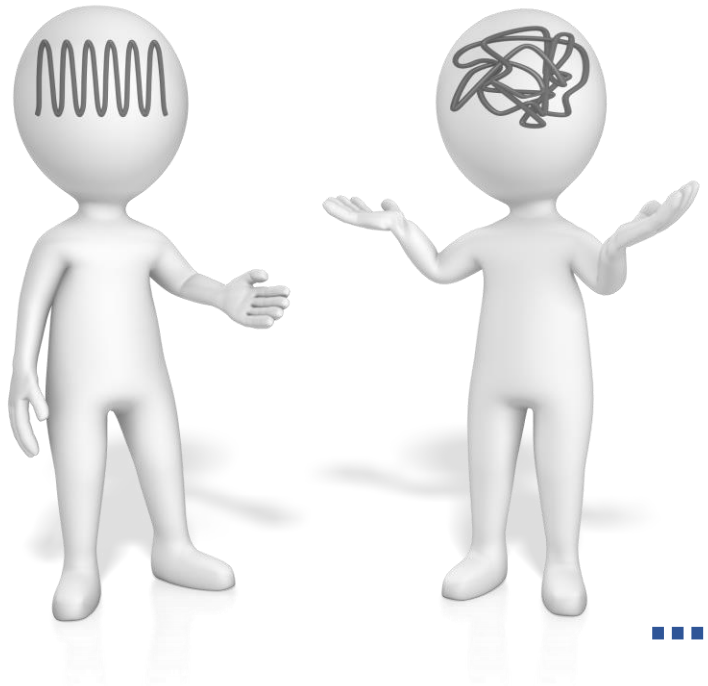
Let's appreciate our differences.....

Business Leaders

ESTJ

Personality

Extroverted
obServant
Thinking
Judging



Data Scientists

Personality

Introverted
iNtuitive
Thinking
Prospecting

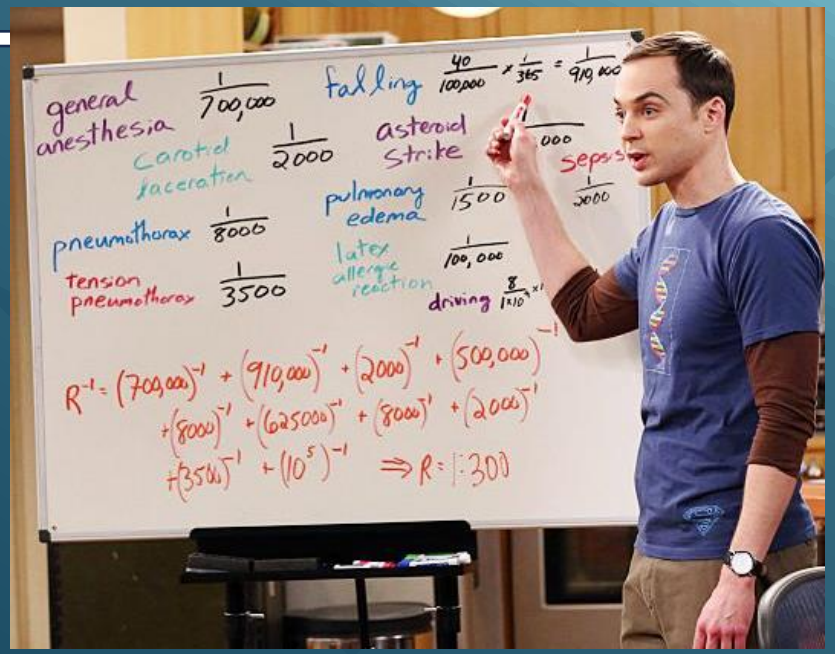
INTP

www.16personalities.com

.....attract different types

There is a good reason for each style

Does your product improve employee performance?



Yes.
Next question.

Our analysis controlled for demographics, tenure, previous performance, location and job type. And we did a time series analysis removing seasonality, transforming the outcome into a binomial, showing that participants had significantly higher likelihood of improvement at a P-value of 0.02.

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.....trained in very different ways

Business Leaders

Trained to clear and action oriented:

- Differentiators
- Opportunities
- Decisions
- Pivots
- Actions for success

Not trained

- Advanced statistics
- Communication skills

Data Scientists

Trained to formally doubt results:

- Reasons you may be wrong
- Quantifying likelihood of error
- Limitations
- Uncertainties
- Potential bias

Not trained

- Business management
- Communication skills

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..... Different preferences (how people will hear us)

Want to deliver results:

Simple
Clear
Understandable
Indisputable
Convincing.

So clear it needs no explanation

Business Leaders

Want people to understand:

Complex possibilities
Something new and different
How interesting this is
That this is unique
That we used advanced techniques.

So interesting everyone wants an explanation

Data Scientists

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What we know
about each other

AND

How we talk
to each other

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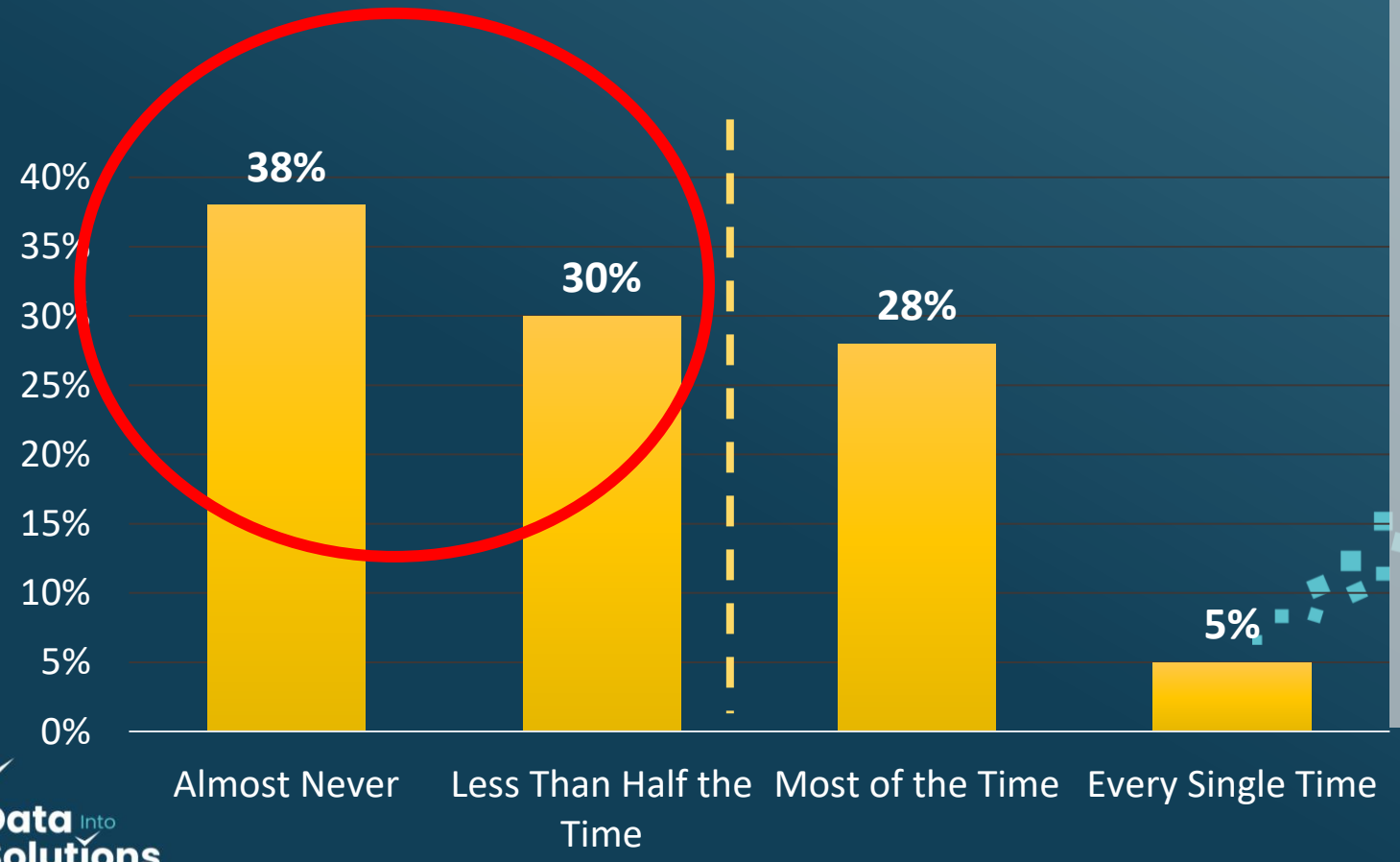
When you get a request...

How often are you able to provide the exact answer they want, the first time, with no rework?



"I answered 'most of the time.'

Because, technically, I did give them exactly what they asked for.

Even though it wasn't what they wanted."

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What happens without two-way understanding

Both directions

- **Expectations of mind-reading**

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Expertise requires unique terminology

CFOs
Pilots
Artists
Social media marketers

WITHIN A PROFESSION
Insider language unites

BETWEEN PROFESSIONS
Insider language divides

We need to BOTH:

- work to understand priorities
- avoid assuming others know

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What happens without two-way understanding

Both directions

- **Expectations of mind-reading**
- **Insider jargon**

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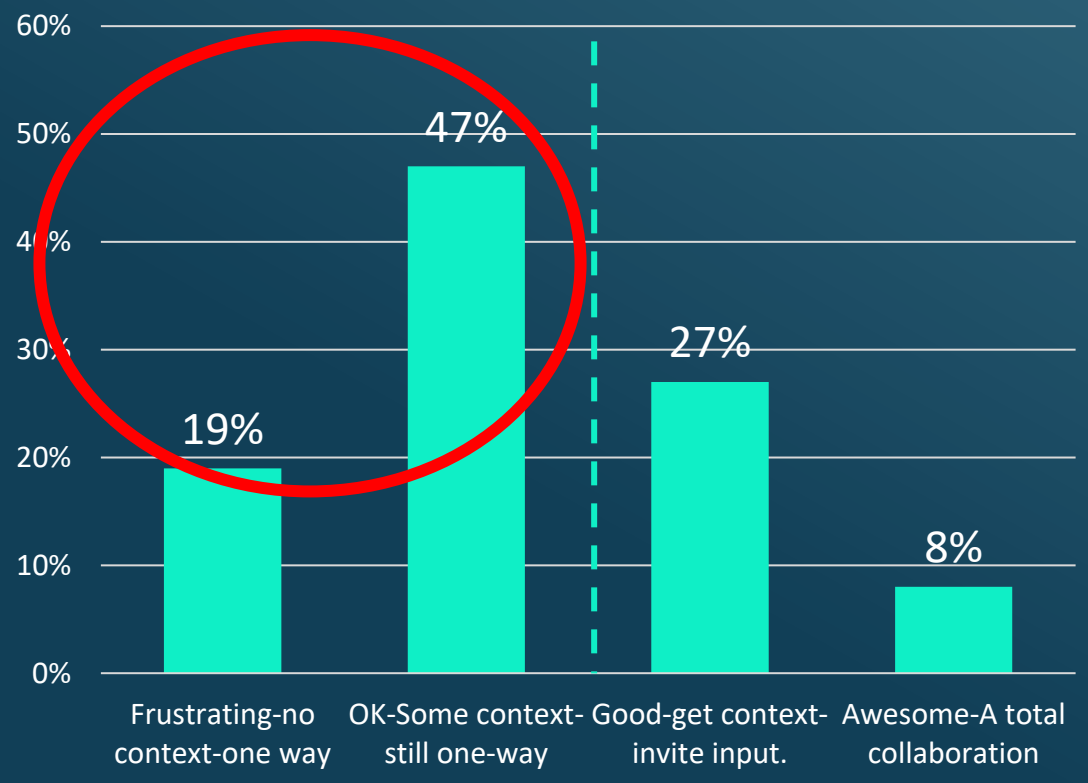
Analytic team describes requests from business.



“They give me a request with little or no context. They don’t ask for my input.”

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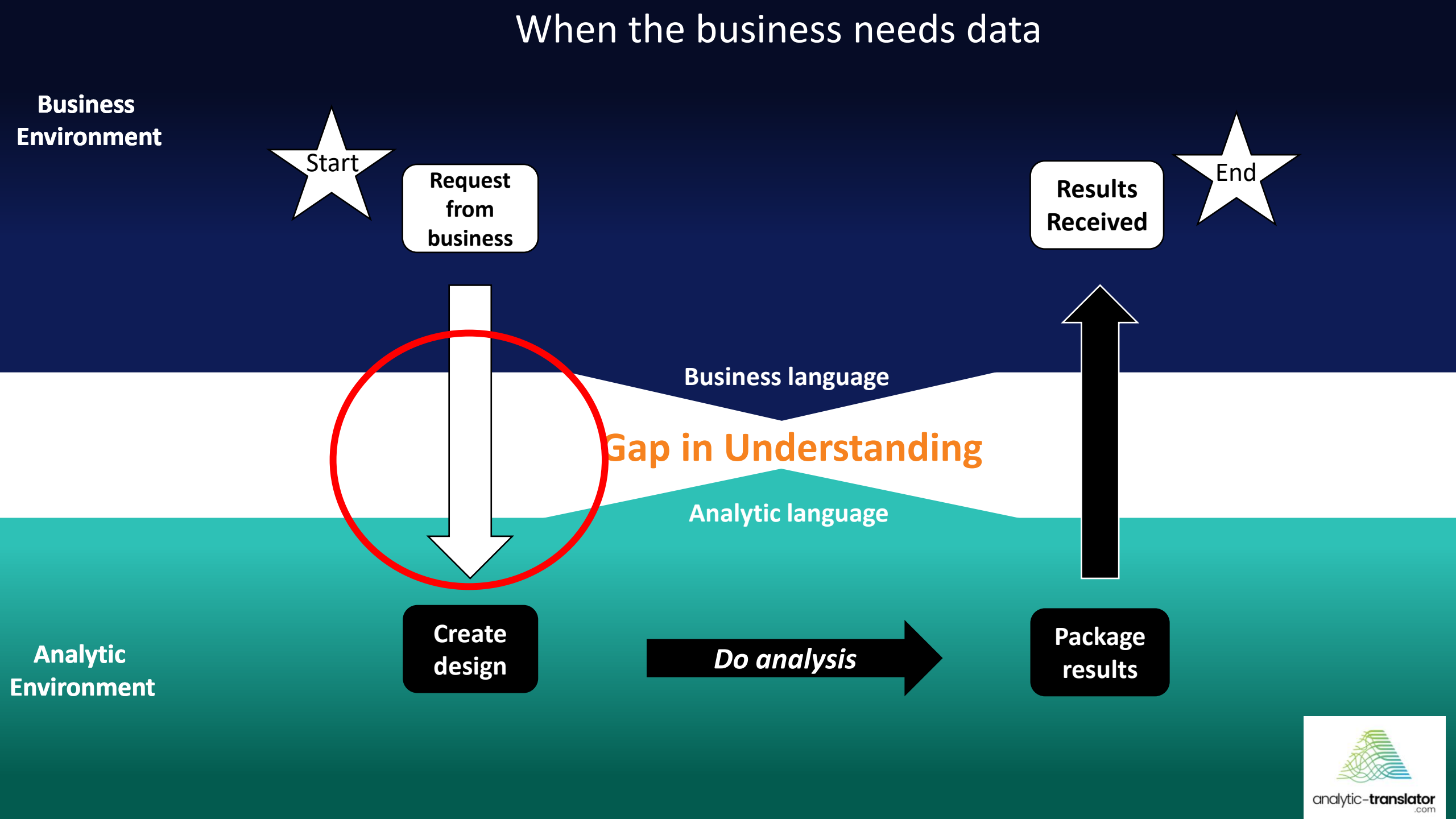
When the business needs data

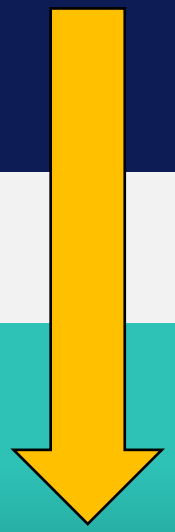


analytic-translator.com

When the business needs data

Business Environment

Request from business



Create design

Analytic Environment

How is the request made?

- **cryptic**
- **rushed**
- **one-way**
- **transactional**
- **ultra-urgent**

What happens without two-way understanding

Both directions

- **Expectations of mind-reading**
- **Insider jargon**

Business to Analytics

- **Drive-bys**

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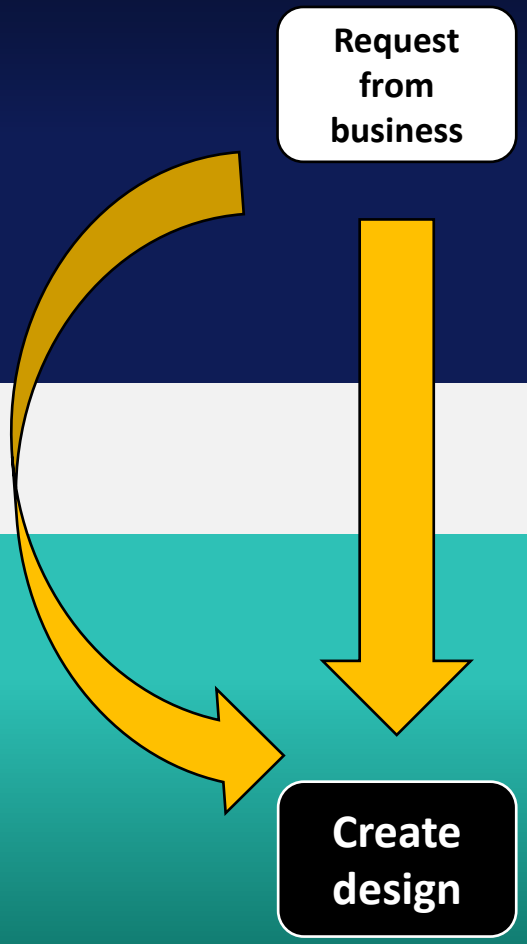
When the business needs data

Business Environment



Analytic Environment

How are changes communicated?

- **delayed**
- **unacknowledged**
- **dismissive**
- **unappreciated**

"Oh, we forgot to tell you we don't need that"

What happens without two-way understanding

Both directions

- **Expectations of mind-reading**
- **Insider jargon**

Business to Analytics

- **Drive-bys**
- **Fire drills**

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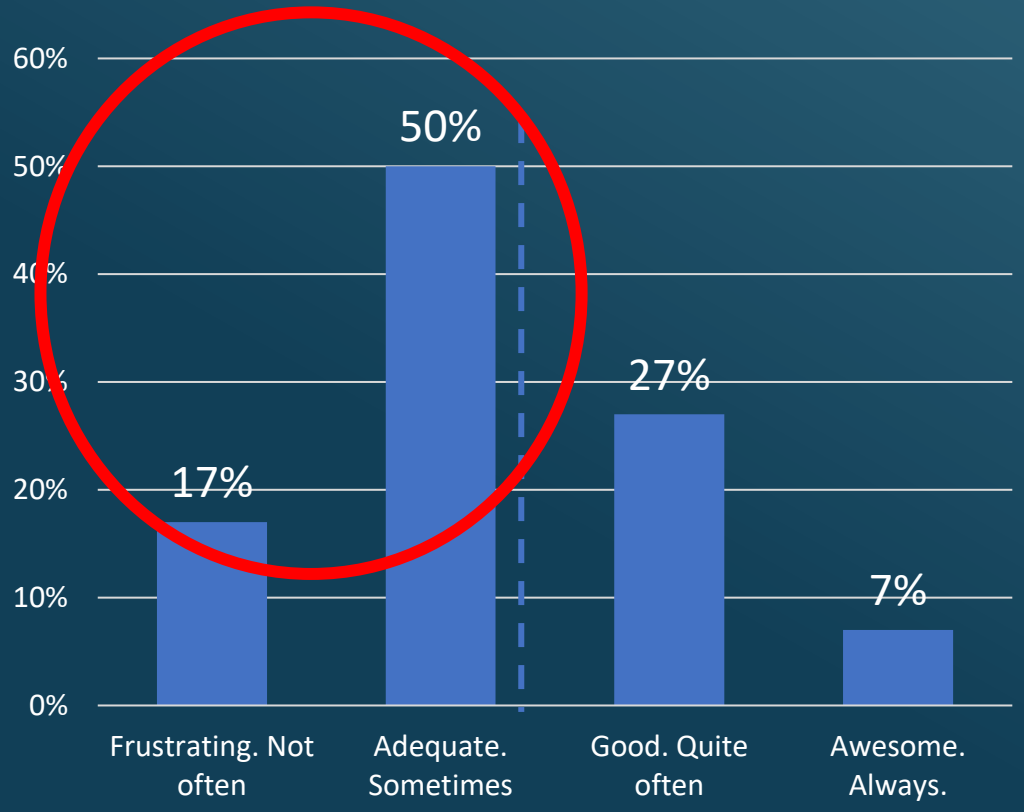
Business describes interactions with data analytic teams. How often you get (and understand) the exact answers you need.



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

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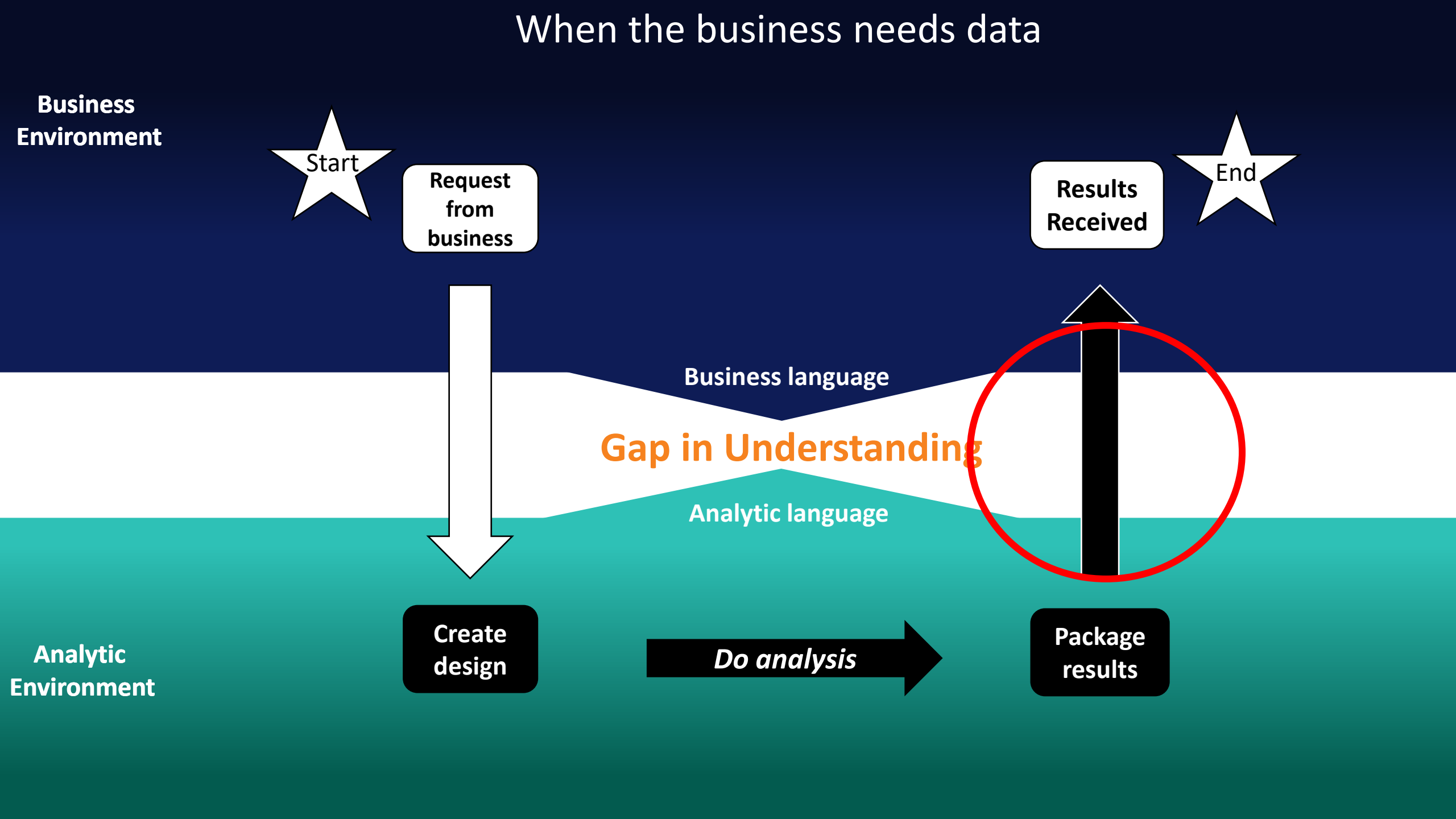
When the business needs data



When the business needs data

Business Environment

Which results are emphasized (first)?

- **Those who enrolled improved significantly.**
- **Enrollment was lower than we hoped.**

Results Received

Create design

Do analysis

Package results

Analytic Environment

What happens without two-way understanding

Both directions

- Expectations of mind-reading
- Insider jargon

Business to Analytics

- Drive-bys
- Fire drills

Analytics to Business

- Granades or buried treasure

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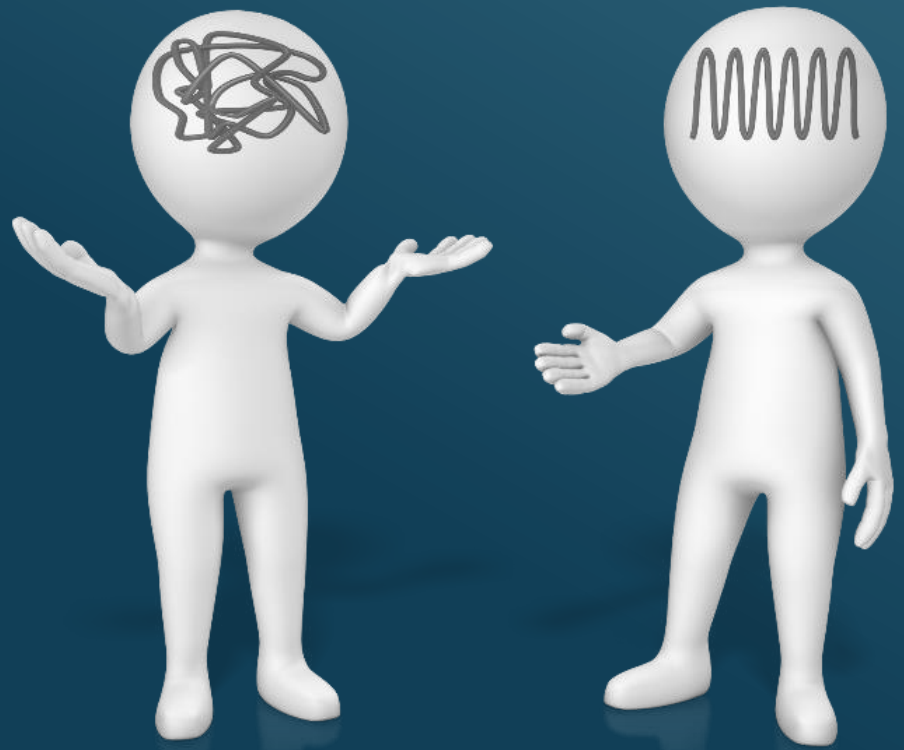
Uh, what?



We did a logarithmic transformation to minimize heteroscedasticity, then once we confirmed homogeneity of variance, performed gradient boosting…

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What happens without two-way understanding

Both directions

- Expectations of mind-reading
- Insider jargon

Business to Analytics

- Drive-bys
- Fire drills

Analytics to Business

- Granades
- Polysyllabic = smart

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How we fix these

1. Two-way Literacy

   Identify and prioritize what matters to others.

2. Time

   A few minutes to clarify is better than weeks of rework.

3. Skills

   Learn to clarify with questions that uncover context.

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Simple, yet powerful, tools

- Open-ended invitations
  - Say more about…..
  - Can you tell me more about how this came up?
  - When you say _____……
- Questions to explore levels of meaning
  - How will that be useful?
  - How will you decide?
  - How will you know?

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Think of an important question
your organization needs to answer using data.

Jot it down.

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Keep that question in mind as I ask you a few things:

How did that question come up?
How will the answer be useful?
Who might be interested in the answer, and why?
How will you know it has been answered satisfactorily?
What is the important time frame for this questions?
Should anything specific be included or excluded?
Is there anything else we might need to know first?

Did any of these questions make you want to adjust how you worded your first question?

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Key aspect of analytic translation:

The first thing someone says is not the full answer and

Probably NOT what really matters.

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Terminology is not enough

- Words we choose
- What those words mean (to them)
- What matters about them
- How we deliver them
- What the context is

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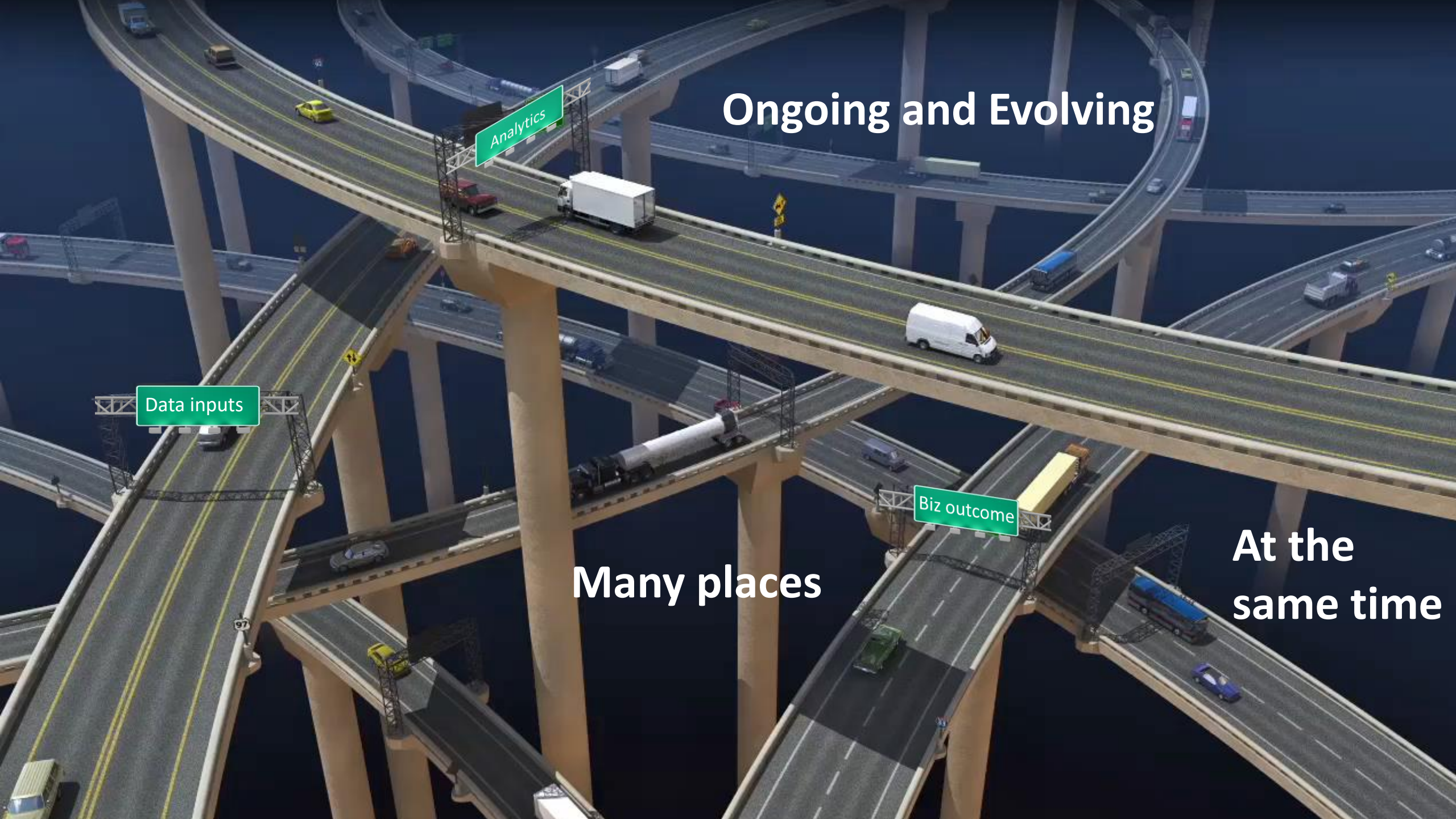
Ongoing and Evolving
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Business leaders want

Timely, innovative insights from data

That deliver measurable value

What We All Want

Data Teams want

Meaningful, challenging work

That is appreciated and valued

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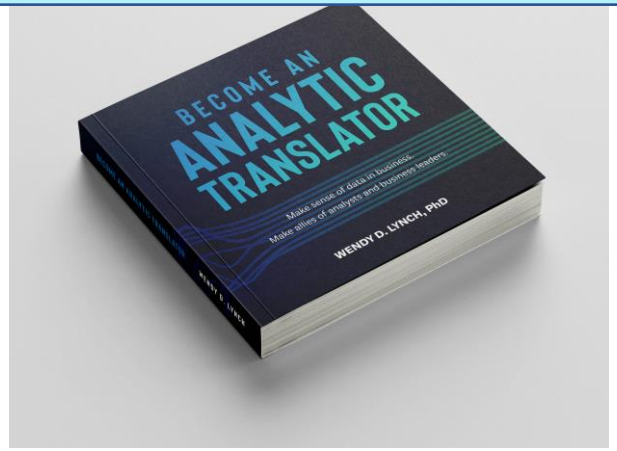
Personalized, Live Training



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Your thoughts, comments, questions?