Designing and Building Metric Trees

Abhi Sivasailam
Mar 2023

Why?

What's the point of "data" anyway?

Most of the value of "data" is answering 4 questions.

1. What happened? ➜ *Descriptive Analytics*

2. Why did it happen? ➜ *Root Cause Analytics*

3. What's going to happen? ➜ *Predictive Analytics*

4. What should we do next? ➜ *Prescriptive Analytics*

*What's the best way to answer these questions
<u>easily</u>, <u>quickly</u>, and <u>often</u>?*

Organizations are simply input-output systems...

Inputs

fx

Outputs

...described by a Fundamental Formula...

Inputs

Outputs

fx *Profit = [Leads] x [CVR] x [ACV] – 1.0[COGS]*

...comprised of Metrics, Relationships, and Weights.

Inputs
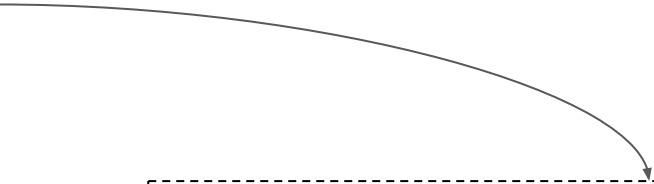
Metrics, **Relationships**, and **Weights**

fx *Profit = [Leads] x [CVR] x [ACV] - 1.0[COGS]*

Outputs

The answers lie within.

1. What happened?

2. Why did it happen?
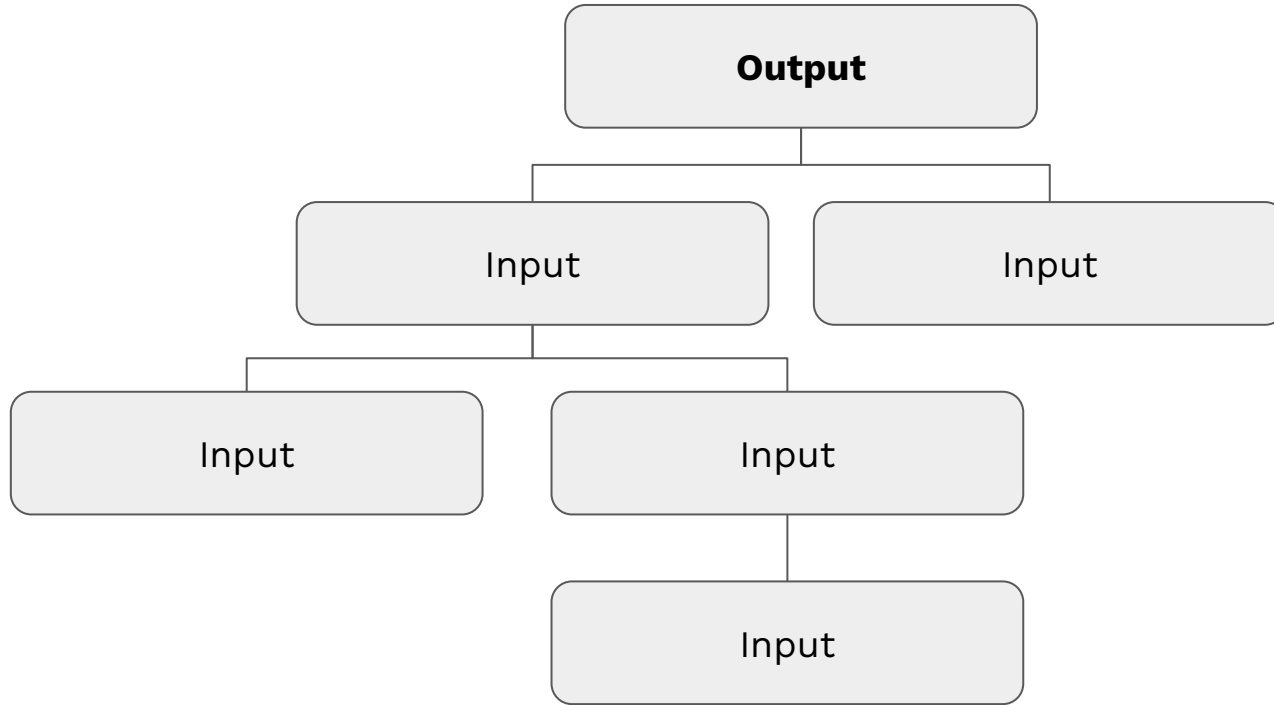
3. What's going to happen?

4. What should we do next?

fx *Profit = [Leads] x [CVR] x [ACV] - 1.0[COGS]*
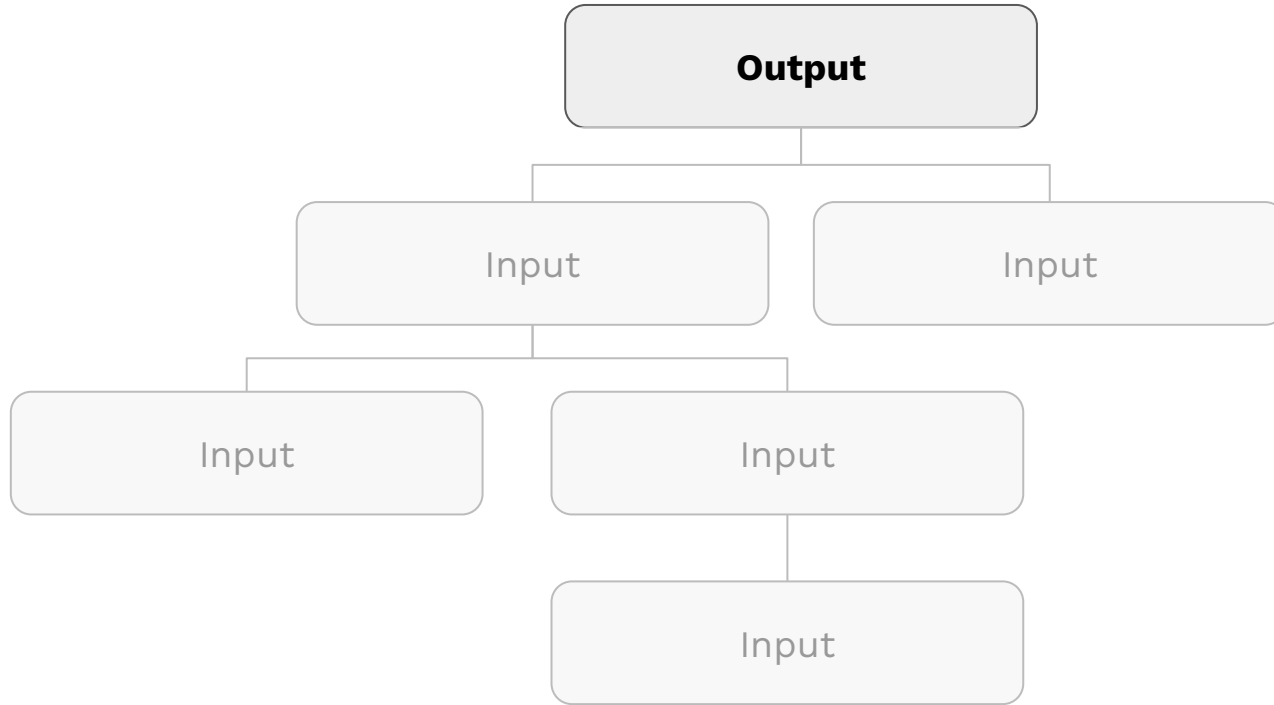
*The raison d'etre for Data teams is to help companies **define**, **understand**, **evolve**, and **<u>operationalize</u>** their growth model.*
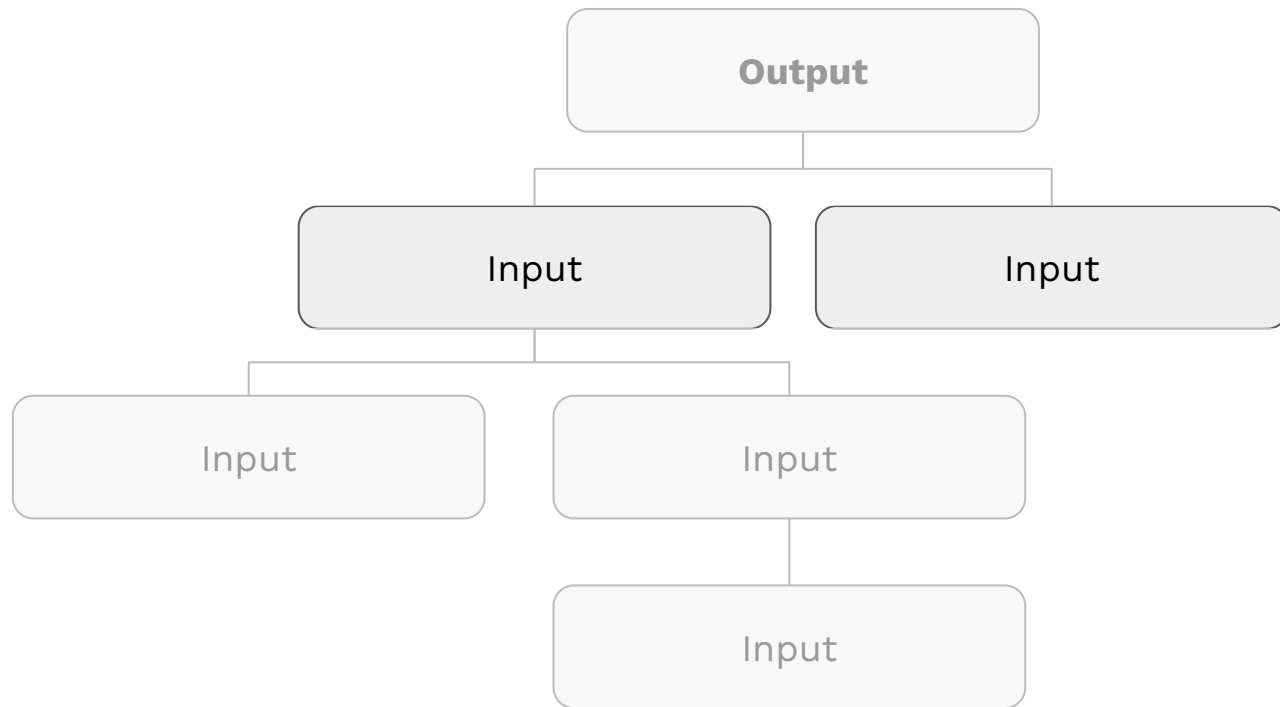
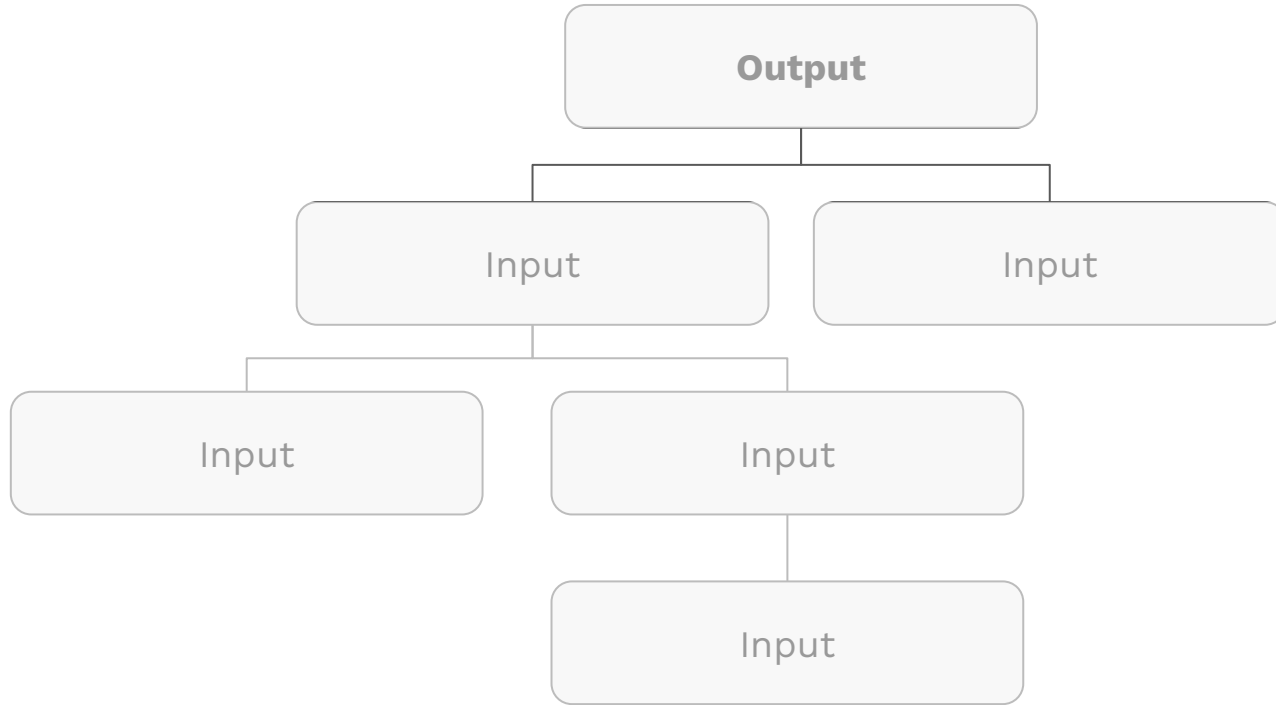# Metric Trees.

A logical representation of a growth model.

Comprised of **Outputs**.

Inputs.

And **Relationships.**

```
                        ┌─────────────────┐
                        │     Output      │
                        └─────────────────┘
                ┌────────────────┴────────────────┐
        ┌─────────────────┐              ┌─────────────────┐
        │      Input      │              │      Input      │
        └─────────────────┘              └─────────────────┘
        ┌───────┴────────┐
┌─────────────────┐  ┌─────────────────┐
│      Input      │  │      Input      │
└─────────────────┘  └─────────────────┘
                            │
                     ┌─────────────────┐
                     │      Input      │
                     └─────────────────┘
```

Where should we begin?

From the top; three types of Outputs.

Customer Value	Financial	Strategic

Metric Trees in the wild usually start with $$$

Revenue

Outputs decompose into Inputs.

Revenue

Components

Influences

Outputs

Inputs

Components are mathematical identities.

Revenue

Customers

ASP

Leads

Win Rate

Customers = [Leads] x [Win Rate]

Influences have a contingent relationship.

```
                    ┌─────────────────┐
                    │     Revenue     │
                    └─────────────────┘
                             │
            ┌────────────────┴────────────────┐
    ┌───────────────┐                 ┌───────────────┐
    │   Customers   │                 │      ASP       │
    └───────────────┘                 └───────────────┘
            │
     ┌──────┴──────┐
┌──────────┐  ┌──────────┐
│  Leads   │  │ Win Rate │
└──────────┘  └──────────┘
                   │
            ┌──────────────┐
            │ Speed to Lead │      *Win Rate ~ [t] x [Speed to Lead]*
            └──────────────┘
```
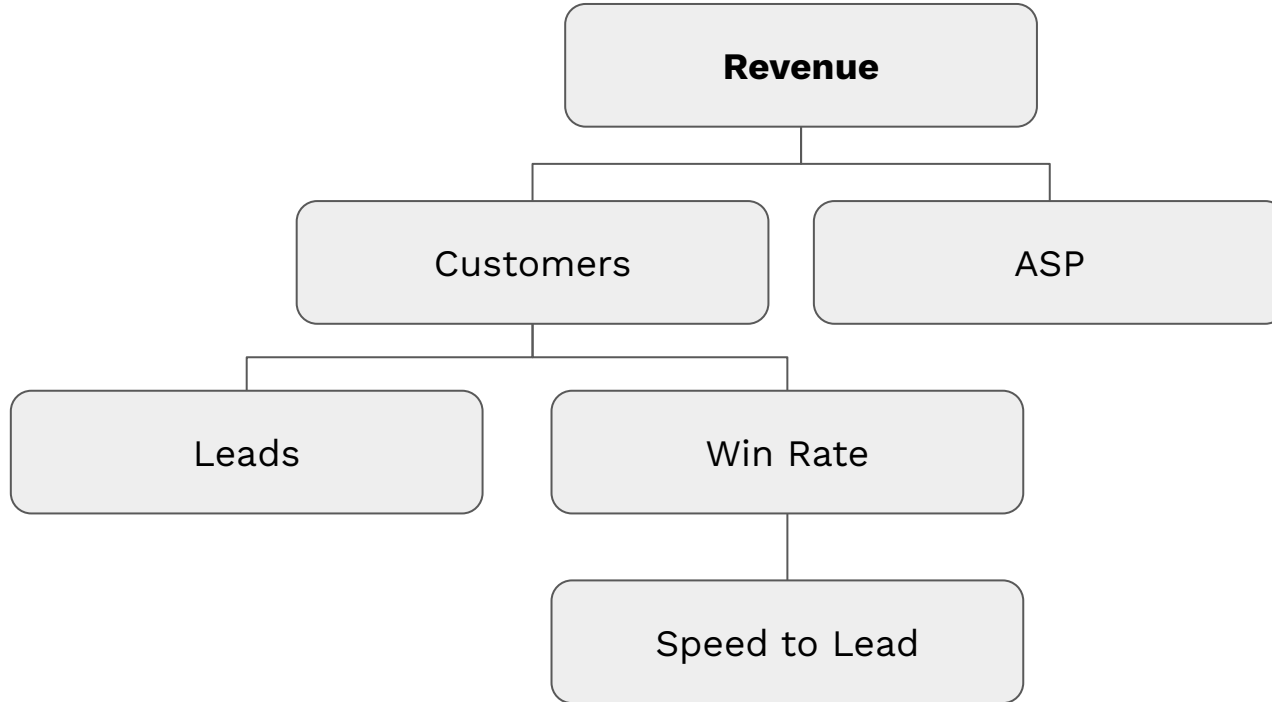
And those relationships have properties.

All Inputs have *dimensions*.
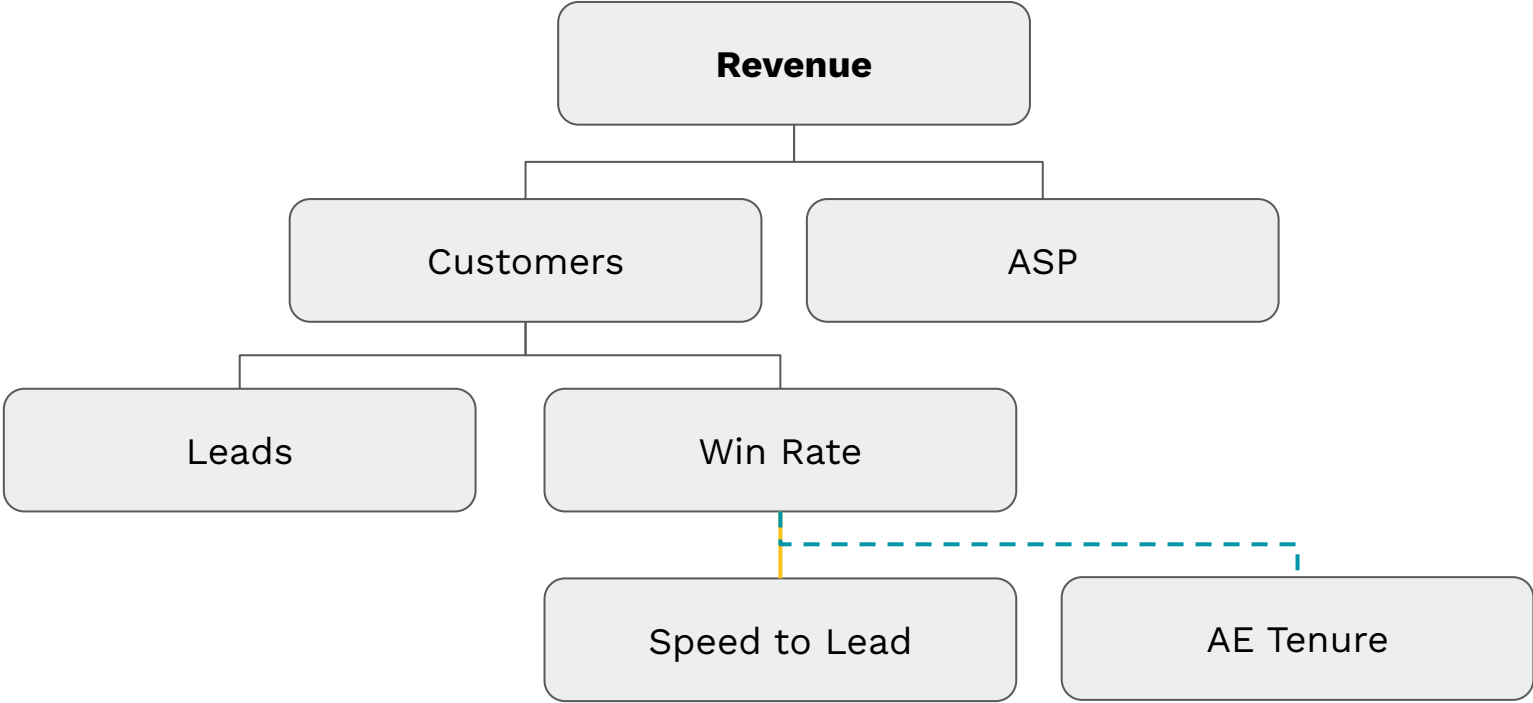
Applications and Extensions.

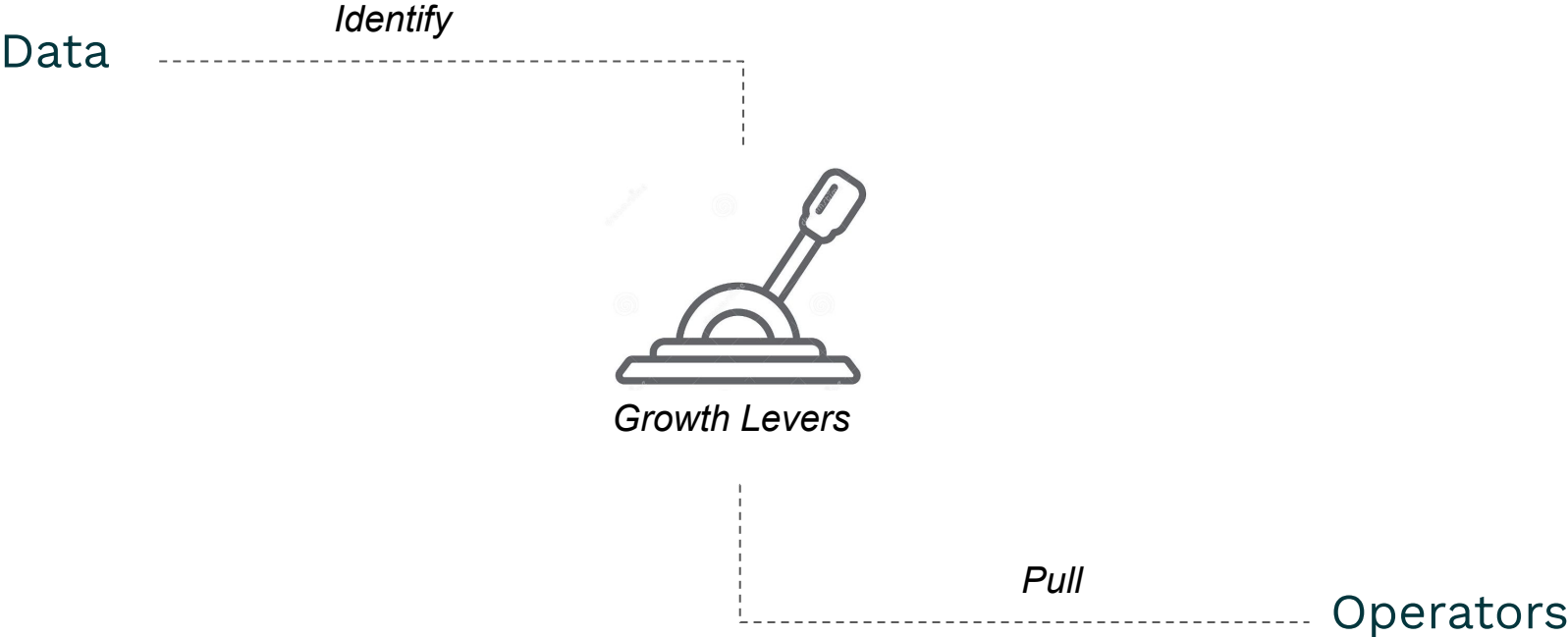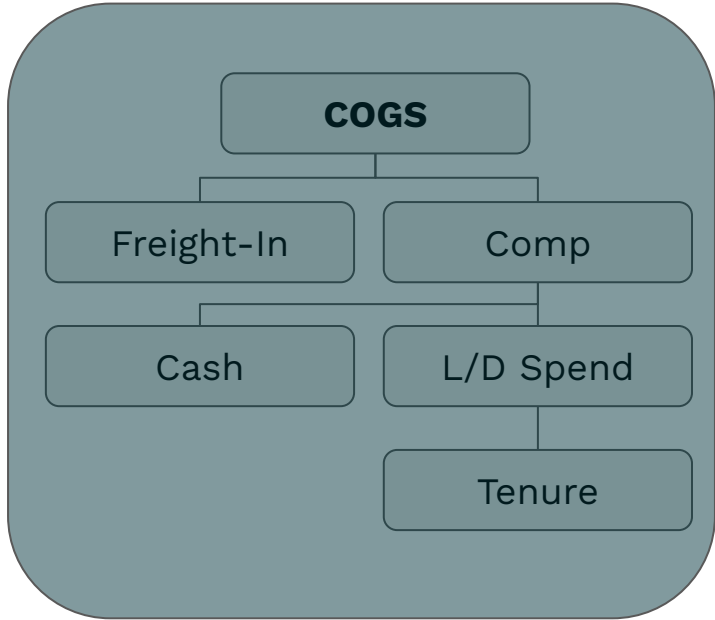# Use Case: Onboarding Artifact
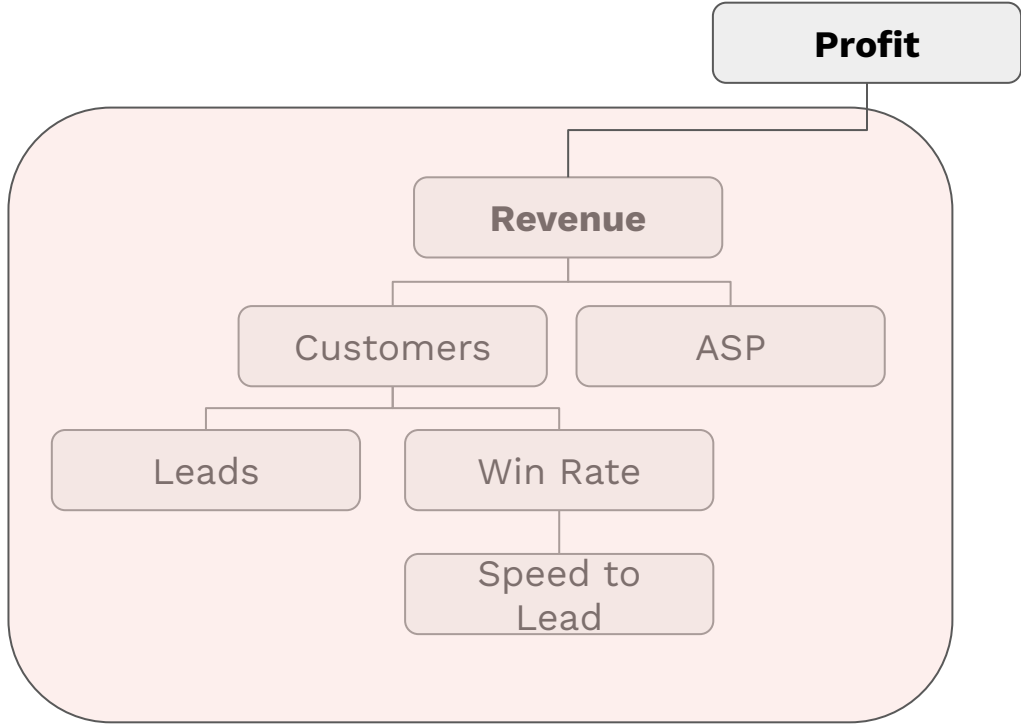
Use Case: Gateway to Knowledge Repo

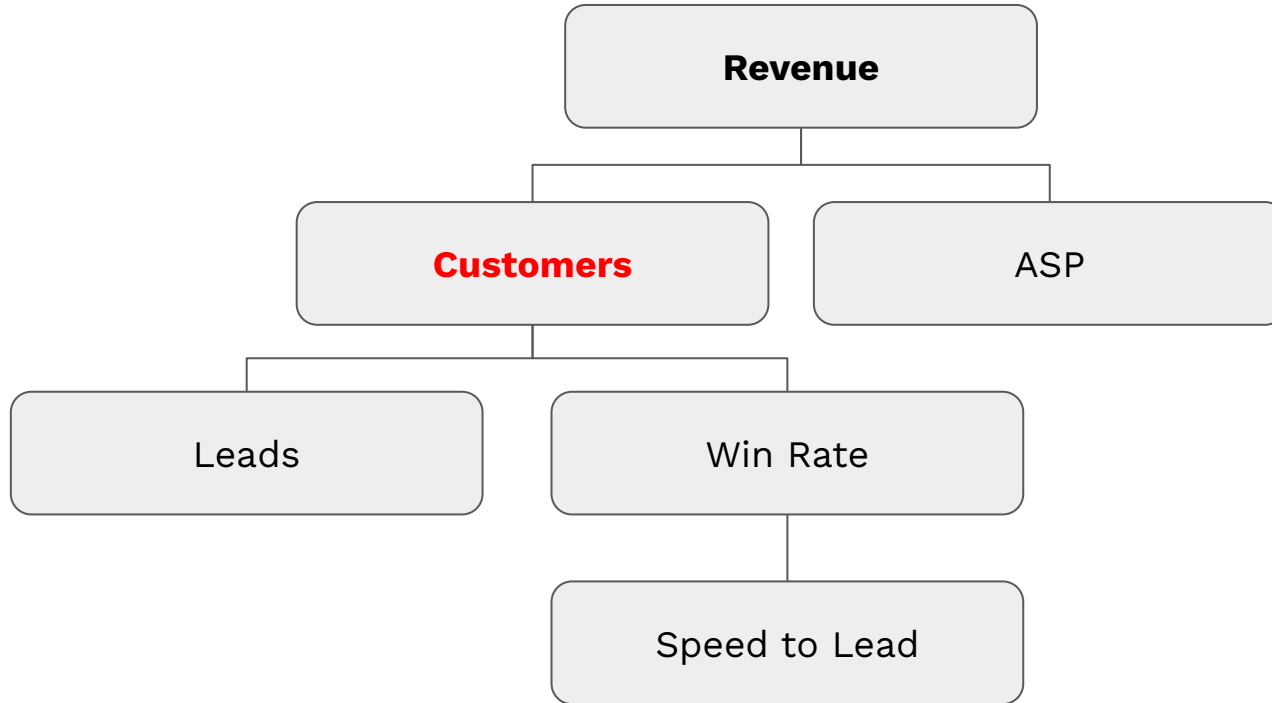# Use Case: Mission Statement for Data Teams

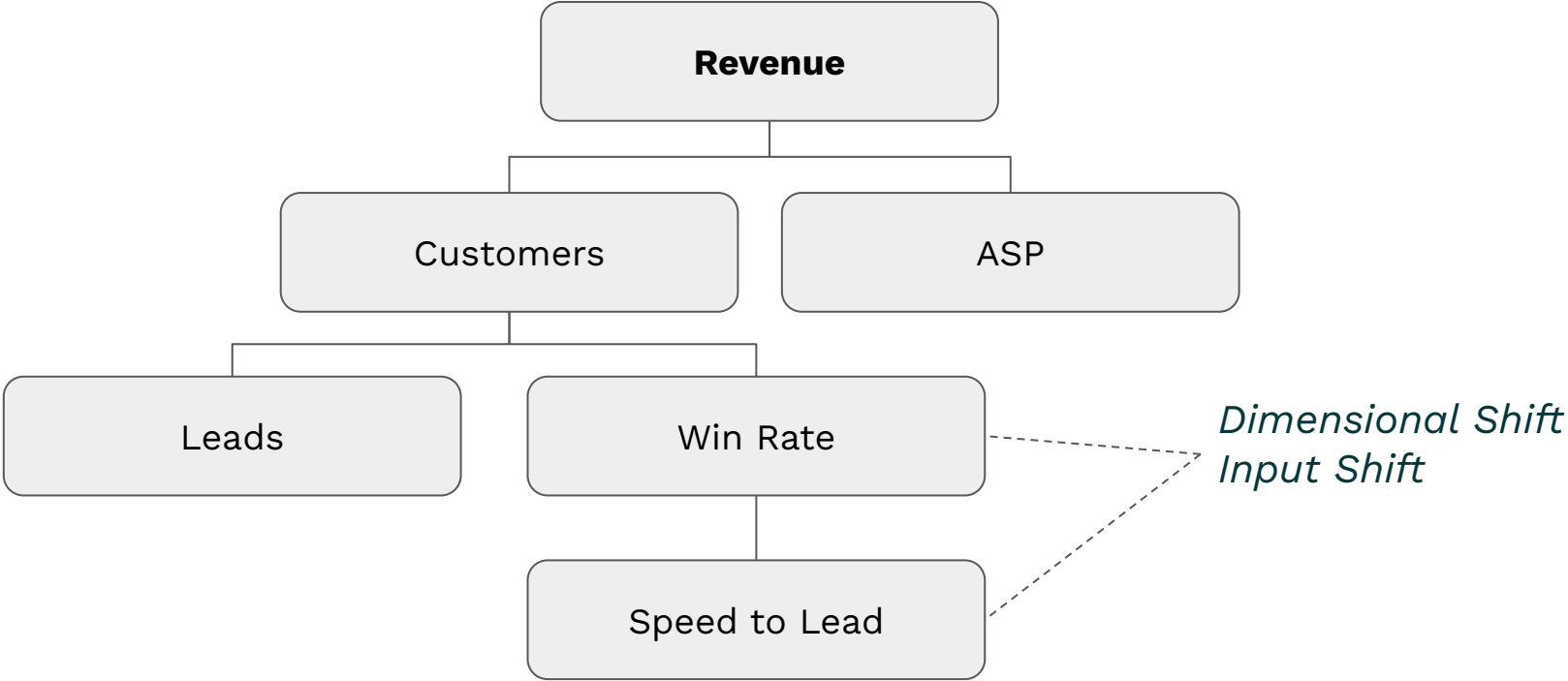Data ----------- *Identify*

Growth Levers

Pull

Operators

Use Case: Dashboarding
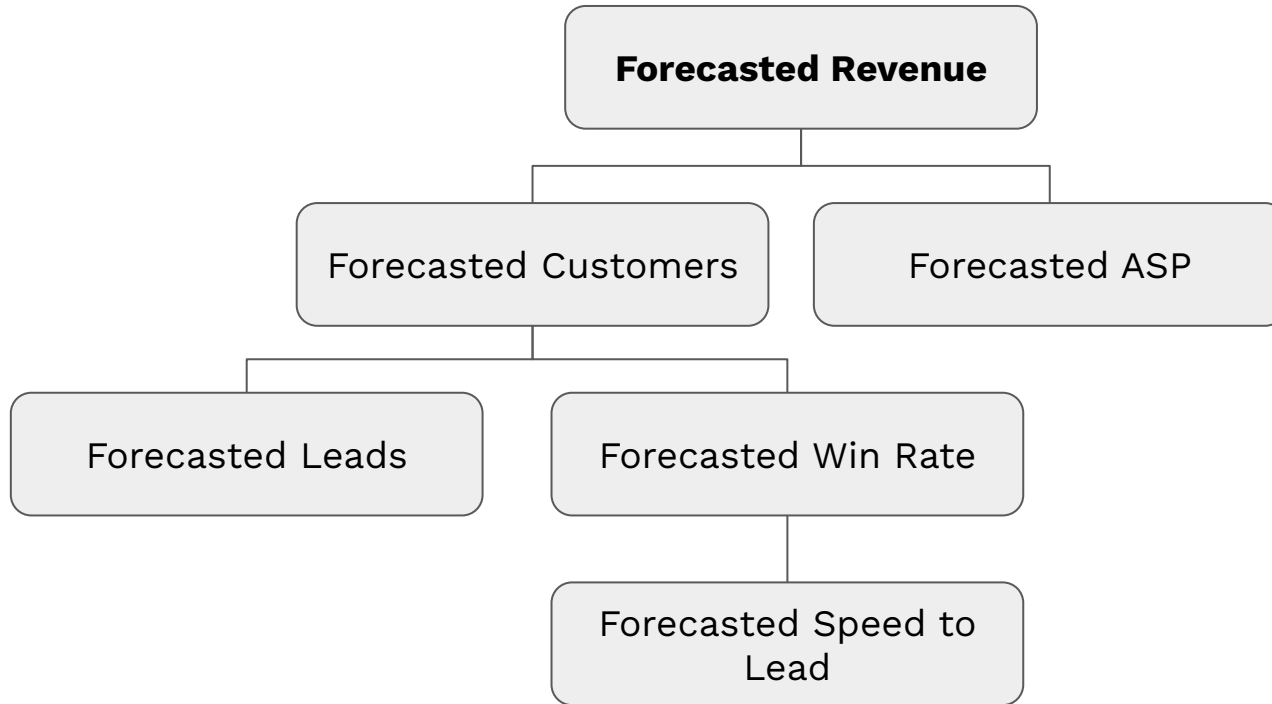
Use Case: Business Reviews

Use Case: Root Cause Analysis

Use Case: Forecasting

Making it easy.

Businesses aren't ❄️

User Examples   Resources ⌄ | **Docs**

B2B SaaS
Net MRR

NetMRR

Relevant Functions	Themes
Finance	Revenue Growth Accounting Totals

Business Definition

The delta in Total Recurring Revenue between the prior period and the current one.

Expression

$$\{NewMRR_t\} + \{ExpMRR_t\} - \{ContMRR_t\} - \{ChurnMRR_t\}$$
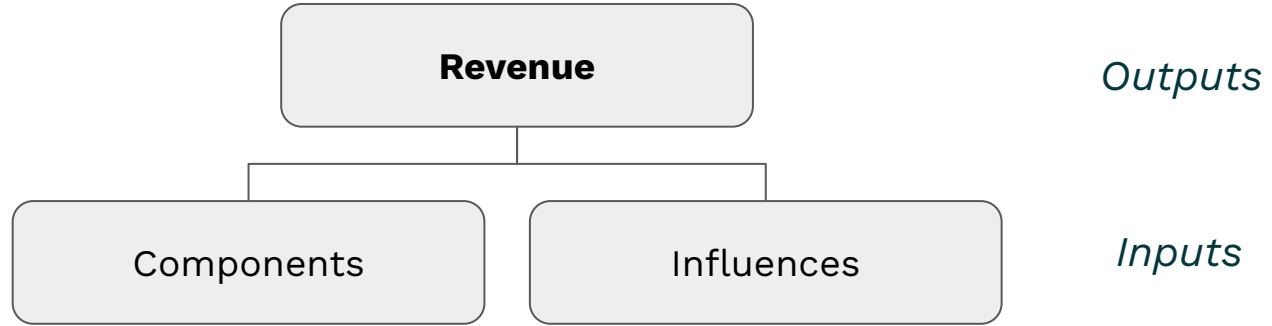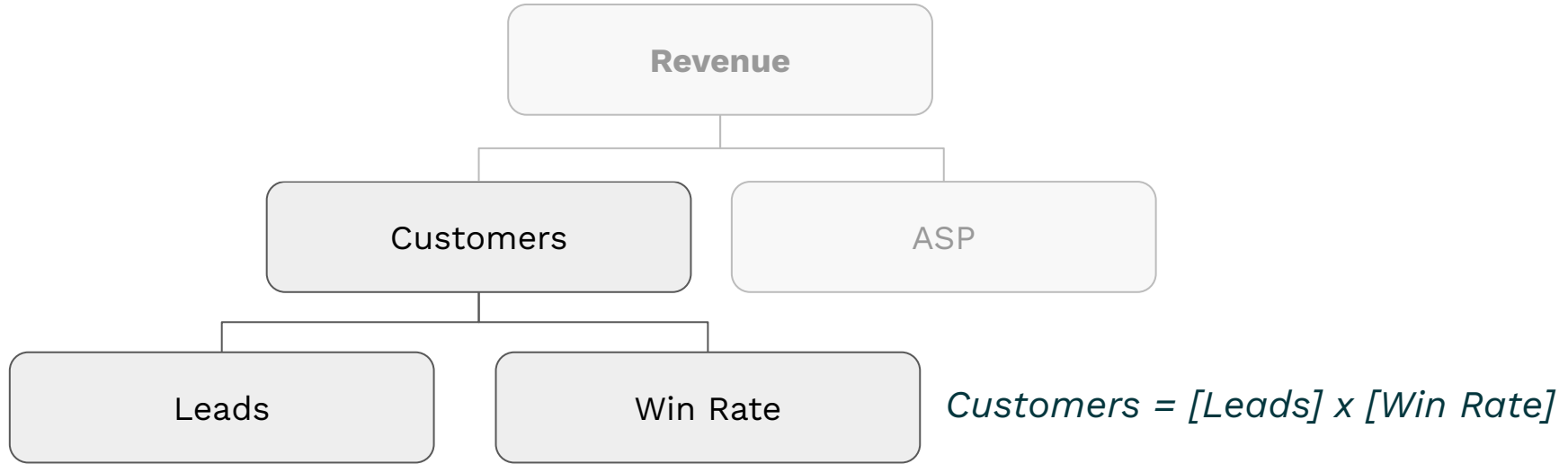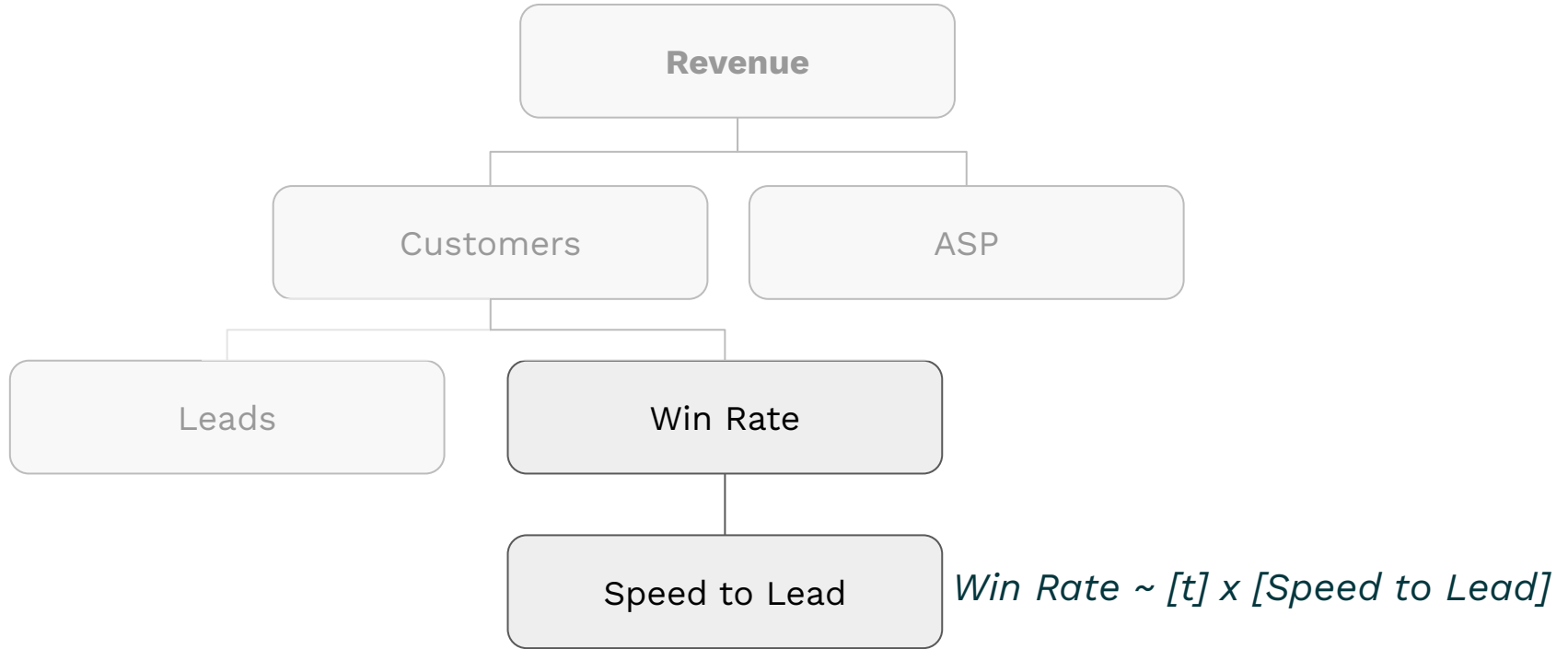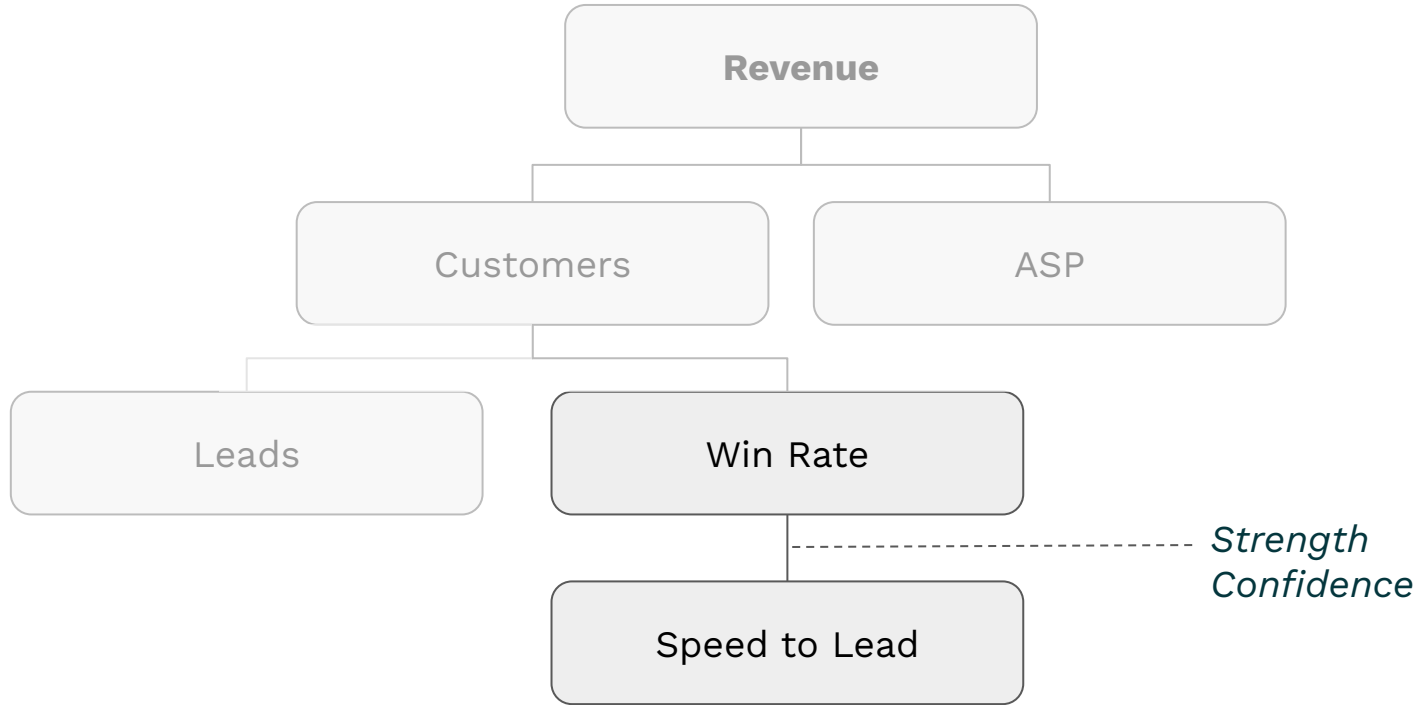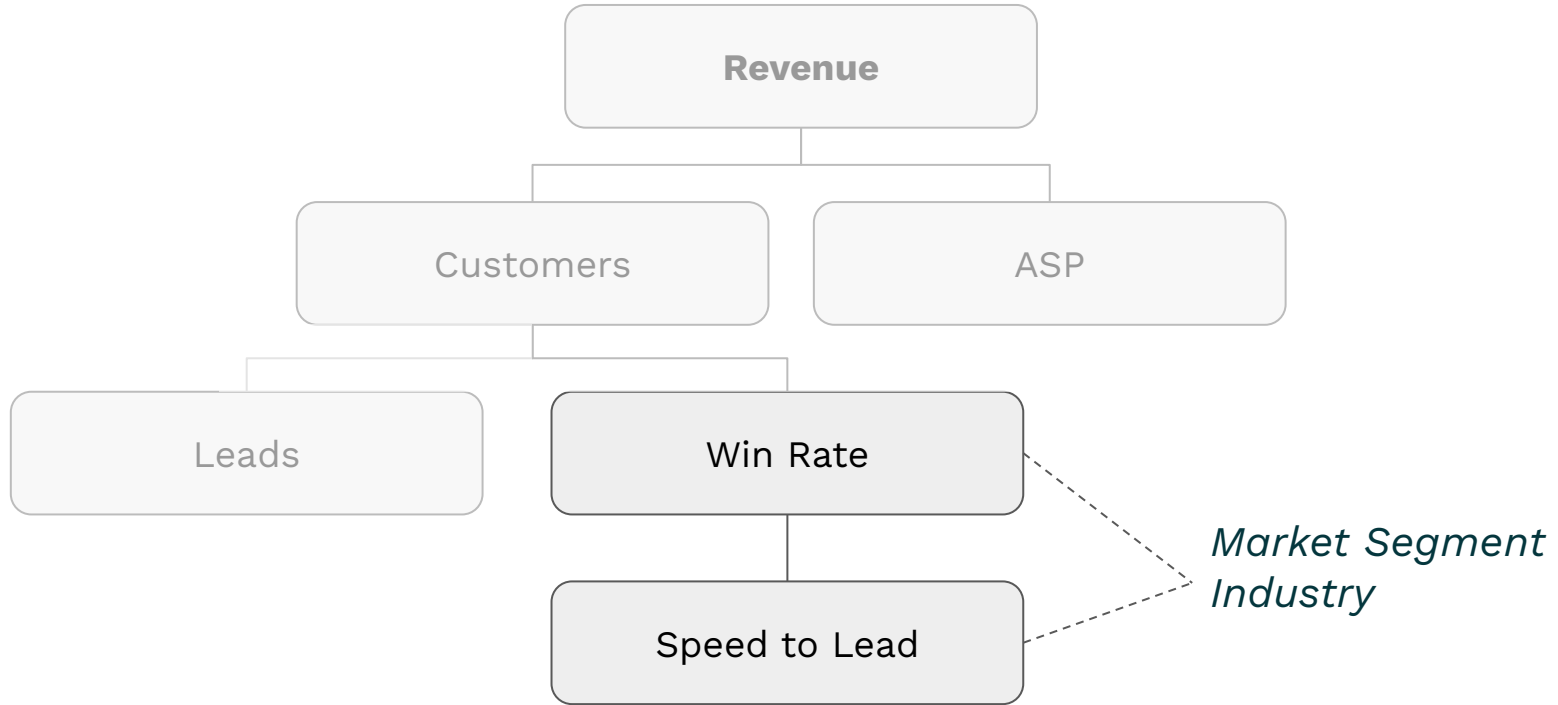
Activities

Customer Renews On Contract
Customer Expands On Contract
Customer Fails to Renew Contract
Customer Resurrects From Contract
Customer Contracts On Contract

Periods	Dimensions	Aggregations
Month	Segment	
	Plan	

34

For all that we didn't cover…

- How do you reify this growth model?

- How do I get my company to see the world this way?

- How do I use this SOMA standard?

- How do I get these use cases to work?

Twitter: @_abhisivasailam @ergestx

Web: www.somastandard.com

Github: Soma Standard