

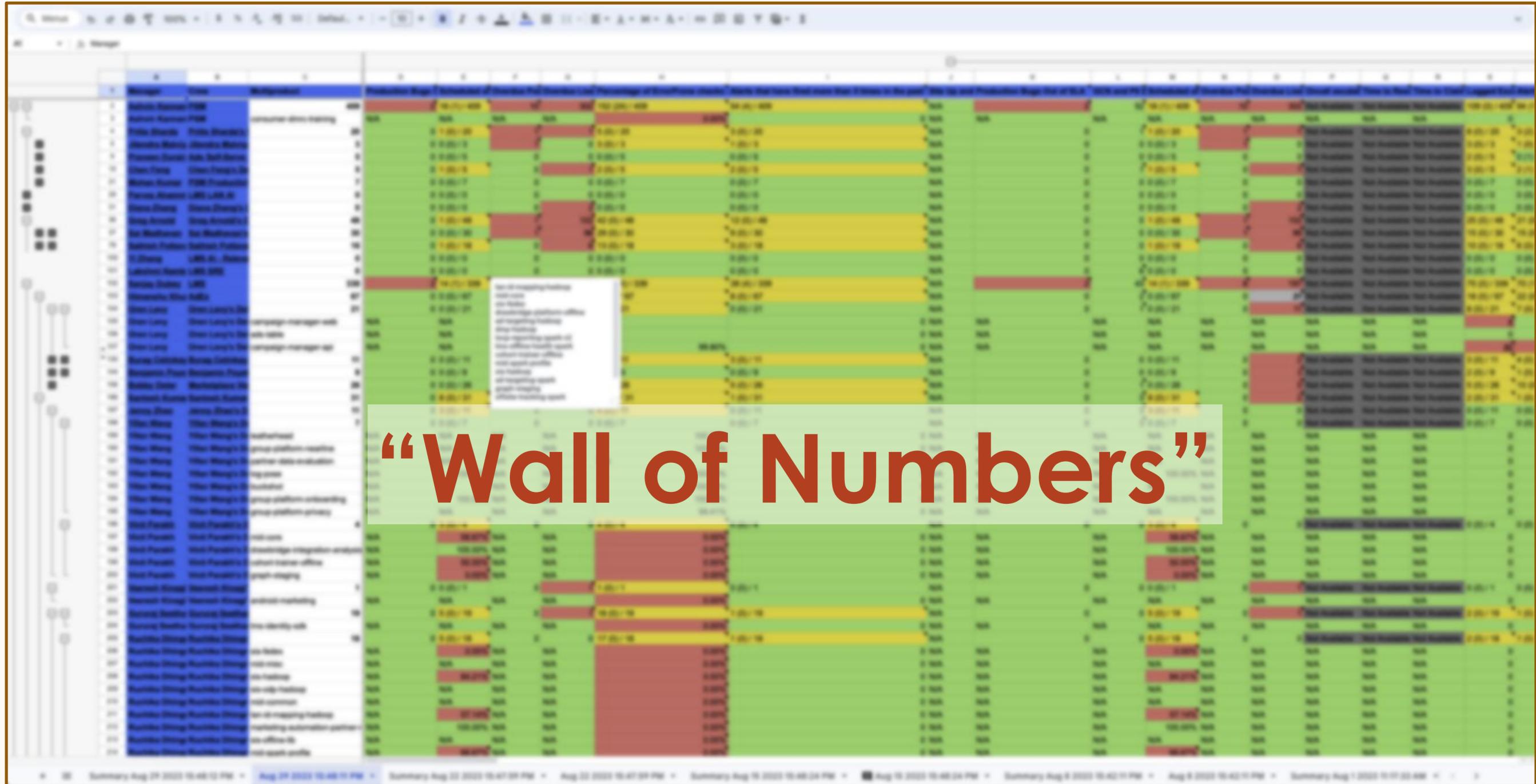


Behind the Scenes of Productivity Metrics at LinkedIn

DPE Summit 2023

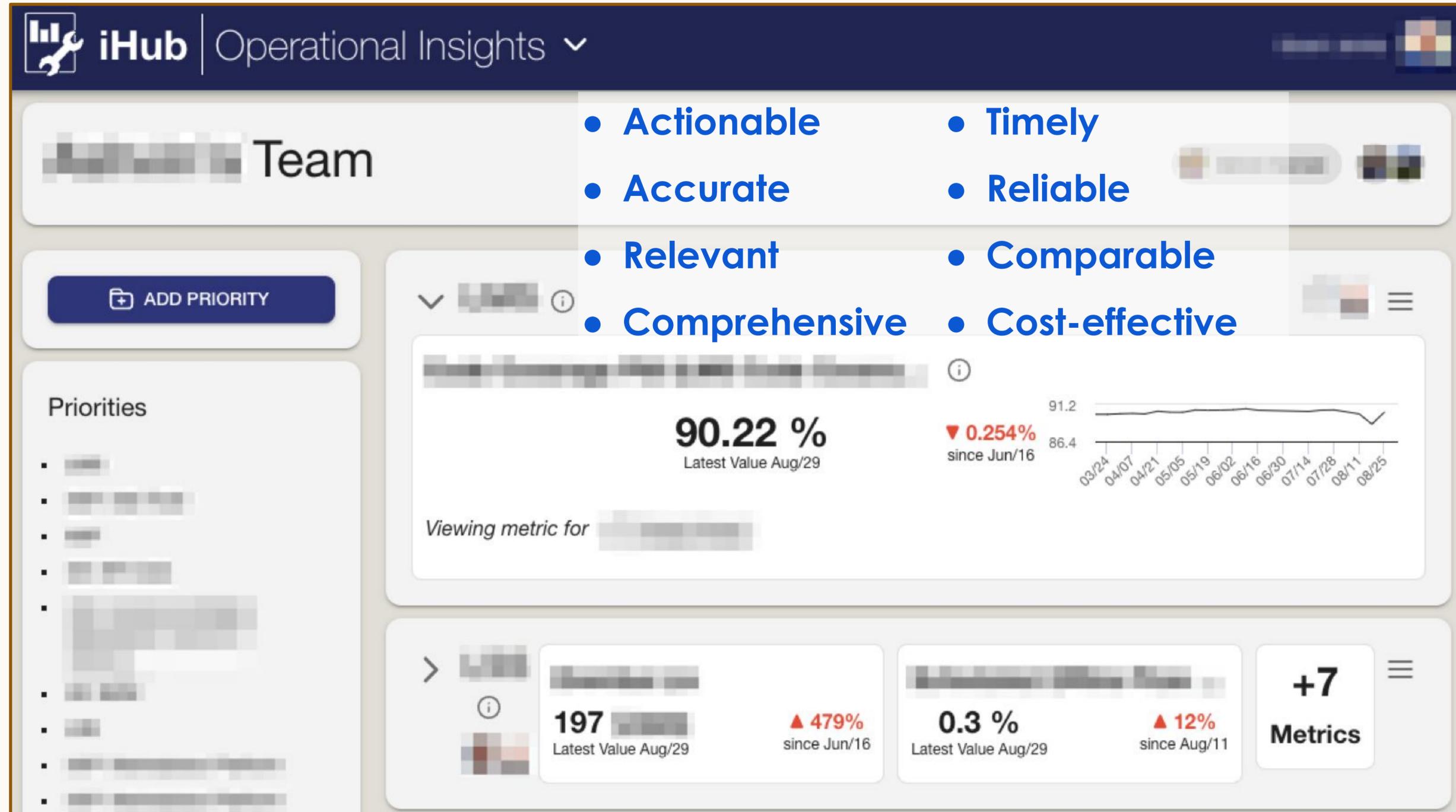
Grant Jenks

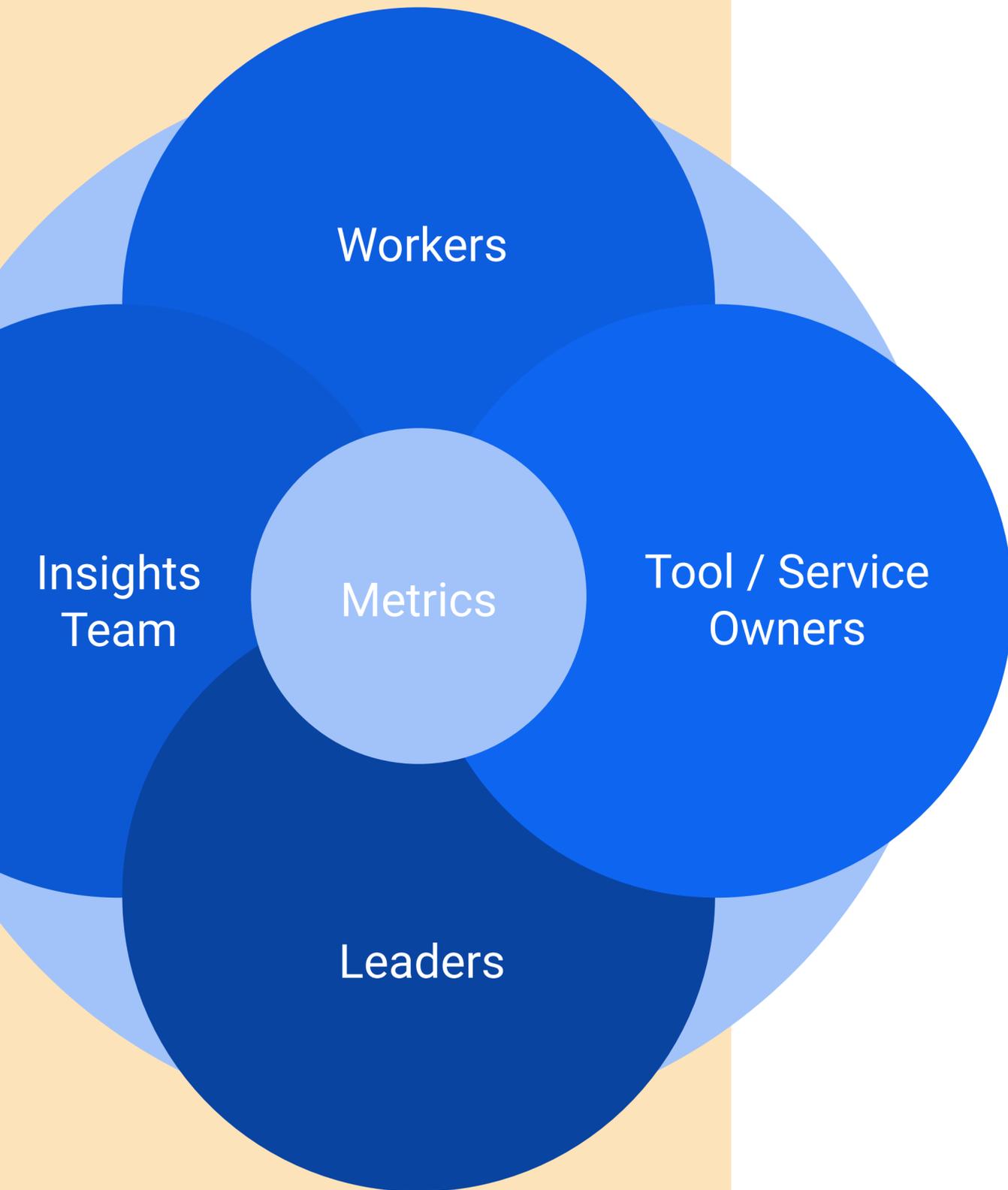
If I had a nickel for every metric at LinkedIn... 😄



Blurred image of spreadsheet tracking hundreds of metrics.

Data-Informed, Metrics-Forward, Insightful Change





Stakeholders & Ownership 🤝

Tool / Service Owners maintain systems that **Users** interact with, creating telemetry and feedback that the **Insights Team** uses for metrics which **Leaders** leverage for insights.

Median duration
that pull request
authors wait
for feedback
in code review.

Good Metric

Lines of code
merged by a
developer.

Bad Metric

Logins per Worker per Day



Data Collection and Aggregation



Typically the costliest part of metric development.

Collection

- Common datasets like Gradle build scans, GitHub webhooks, Jira tickets, etc.
- Build connectors for common data stores like Kafka, MySQL, etc.
- Long retention times help with functionality like backfill.

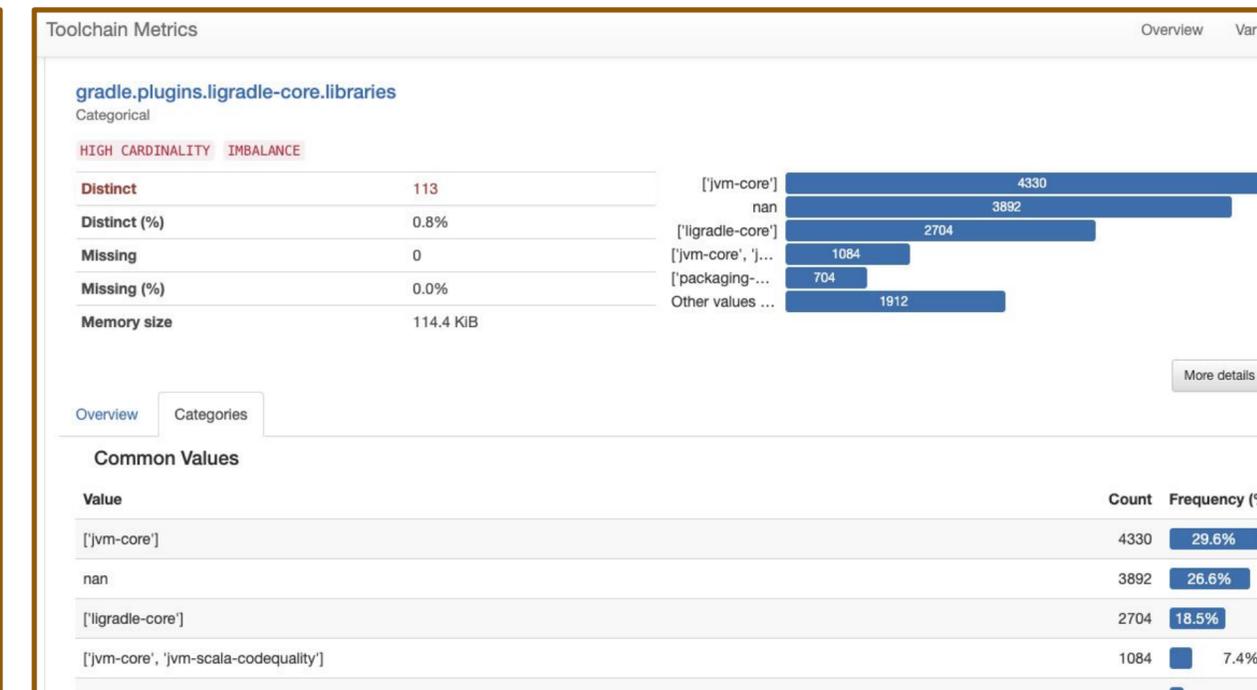
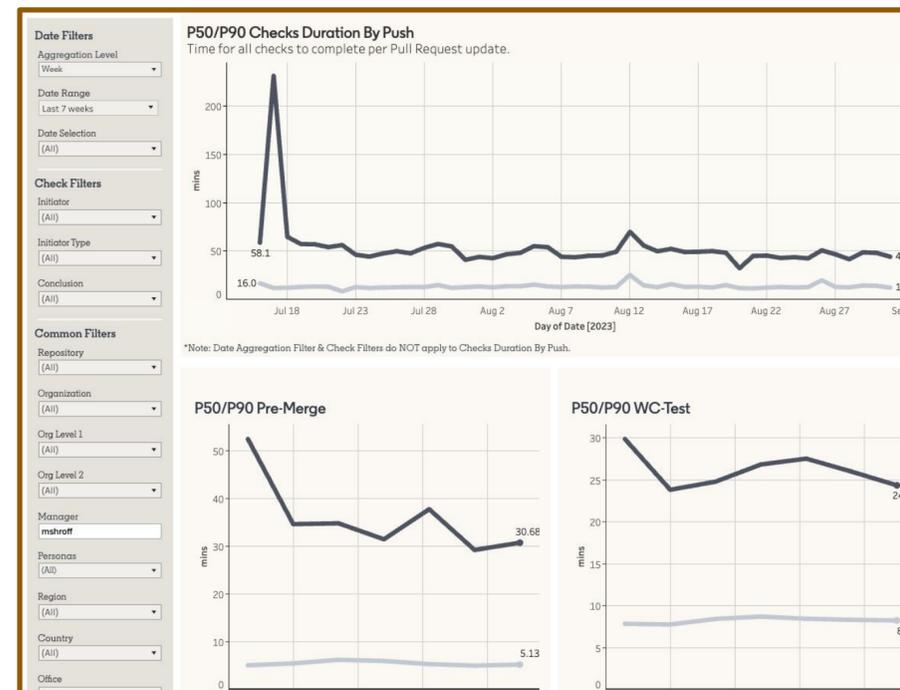
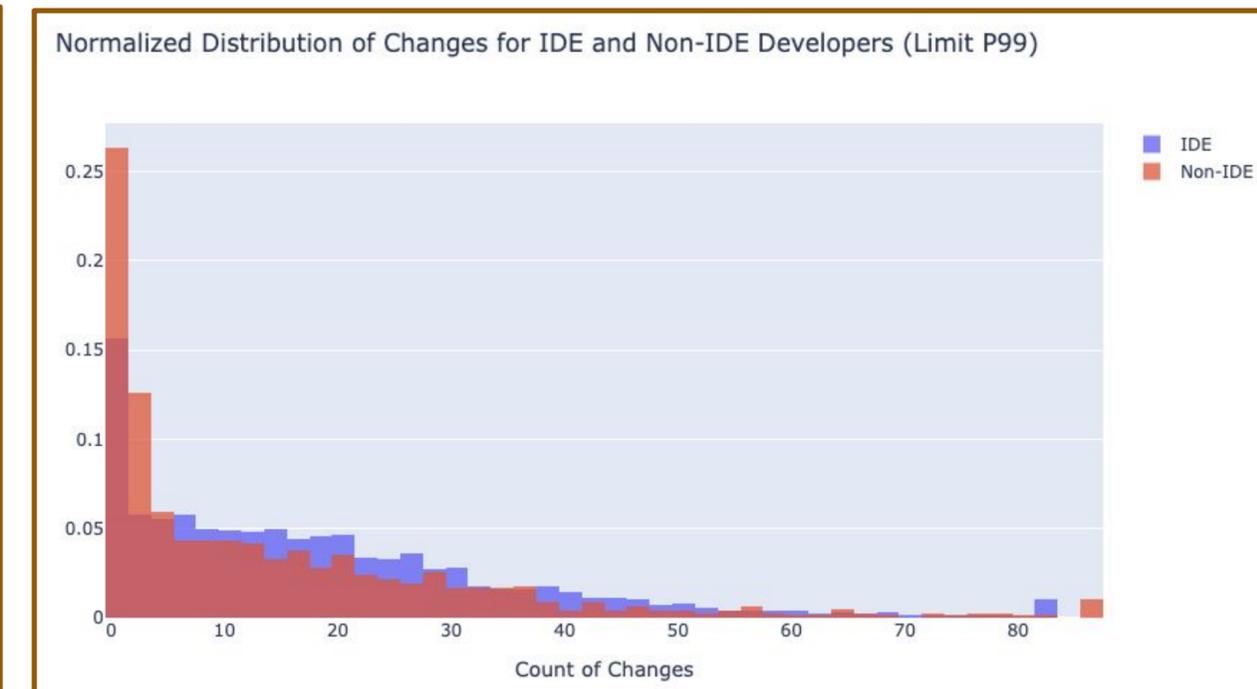
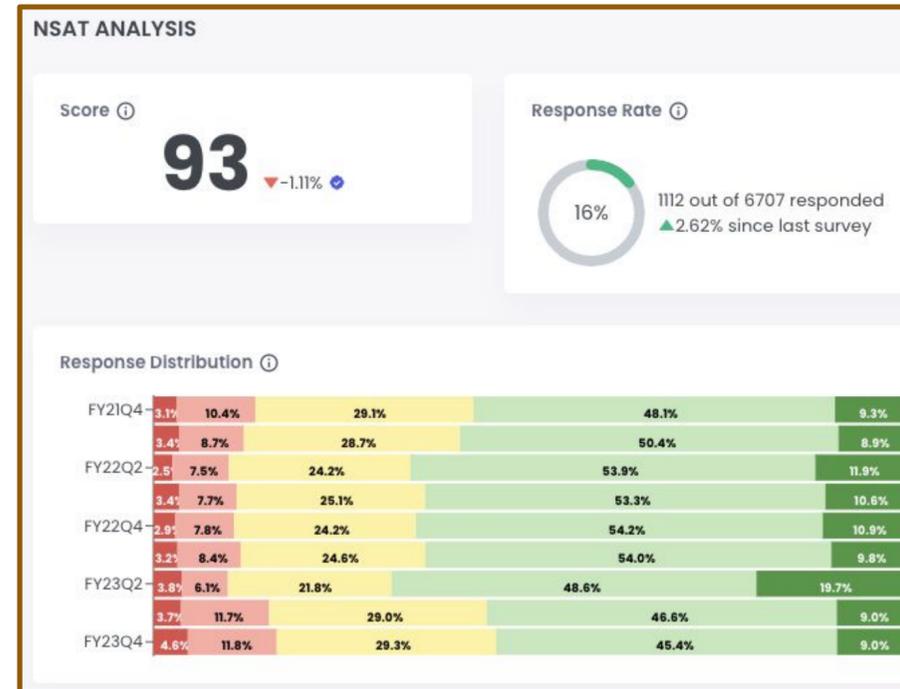
Aggregation

- Ensure traceability back to source datasets.
- Metric transforms like “business hours” calculations.
- Customized aggregates like “winsorized mean” for durations.

Analysis & Visualization

Audiences

1. Leaders
2. Power users
3. Productivity champions
4. Analysts





Operationalization: Insights to Impact

The screenshot shows the iHub Developer Productivity dashboard. The main header is "iHub | Developer Productivity" with a dropdown arrow. Below the header, there's a "Developer Experience" section with an "Onboard a Metric" button. The dashboard is divided into several panels:

- 's Team's Experience:** A gauge chart showing an "Overall Experience Index" of 3.9 on a scale from 0 to 5.
- Top Insights for :** A section titled "Productivity Initiatives" containing a red-bordered insight: "Did you know that only 17.4% of 's team used remote development? Remove development provides a consistent and fast development environment. Visit [go/rdev/onboarding](\"#\") to onboard today."
- 's Team's Developer Experience Metrics:** A section titled "Build Metrics" with two rows:
 - Developer Build Time P50:** 22.8 sec, ↓14.2% vs. prior 6 weeks, score 4.3.
 - Developer Build Time P90:** 147.1 sec, ↓14.1% vs. prior 6 weeks, score 2.8.
- 's Org:** A section titled "Manager" and "Peers" with horizontal bar charts showing scores of 3.5, 3.8, and 3.4.

Insights Hub Developer Experience View of Build Time Metrics

The LinkedIn Learning Curve 🚧

iHub | Persona Experience

CSAT | Feedback Analysis | Listening Management

CSAT ANALYSIS

Response count >= 5 | FY23 Q4 | Organization: | Persona

- We made numbers!
- Work is not your goal.
- If we all X, then metric!
- Super score of important things.

Top Painpoints

> [Red Box]	1.62	-42.8%	Low Volume
> [Red Box]	1.92	-15.4%	
> [Red Box]	2.00	-16.0%	

“Rate My Team”

Tooling Interface	Overall	AI	Android	Backend	Data Infra	Data Science	EPE Developer	SRE	TPM
> [Red Box]	3.74 948	3.28 36	4.00 52	3.77 294	3.64 100	3.47 32	3.49 49	3.46 71	3.69

Insights Hub Platform

1. Metric Definition
2. Team Reviews Request
3. Requester Prepares Data
4. Team Builds Metric Pipeline
5. Owner Acceptance Testing
6. Ops Review Integration

Metric Onboarding

Metric Key

Unique name to identify your metric. Will not be displayed to iHub users.

Display Name

Easy to understand name that will be displayed to iHub users.

Description

Normal **B** *I* U **A** ~~A~~

Tell users what this metric means, how it is computed and what to do if it has regressed.

Metric Data Type

Aggregate if your metric is measured over a period of time, Snapshot if it is `snapshotted` at a specific point in time.

Function

Function applied to your data. Supported functions include: p1-p99, avg, percentage, rate, sum, count, max

Metric Dimensions

Comma separated list of column names in your dataset for which you want dimensional breakdowns.

Positive Direction

`Upward` if metric value is increasing when improving, `Downward` otherwise.

Metric Units

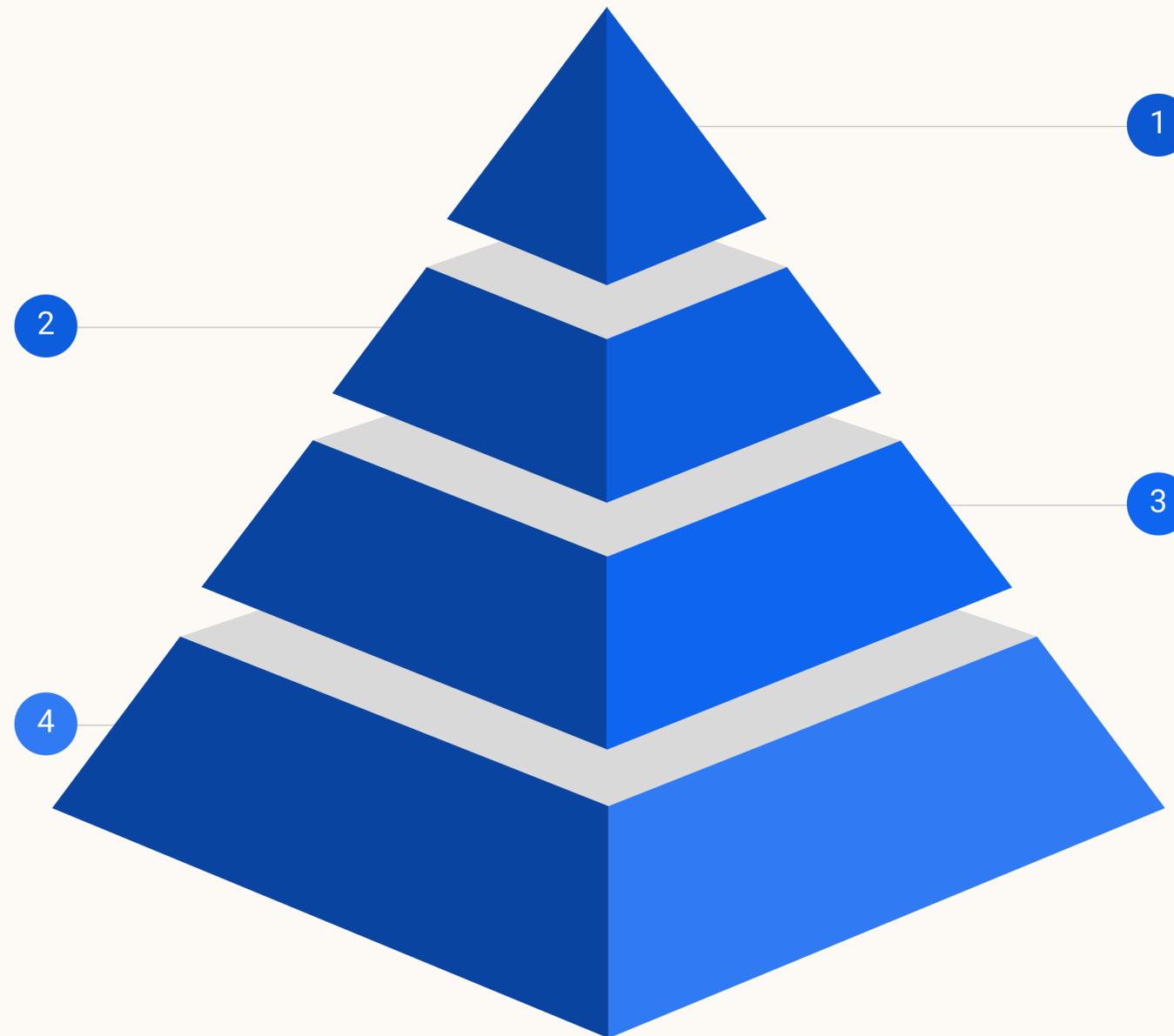
Ascending with Insights: Numbers to Change

Develop a framework

Build personas that represent your end-users. Understand their pain points and needs before jumping to metrics.

Look to the future

Imagine your metrics three years from now. What changes can you begin today to get there?



Goal is transformation

Learn the moving parts, remember it's a process, and strive for transformation. Revisit one key metric in your organization.

Learn the process

Host a session in your team or company on the intricacies of defining and refining metrics. Foster a culture of informed metric creation.