Metrics-Informed Development

Laurent Ploix, Engineering Manager, September 2023
About me

Laurent Ploix

Engineering Manager
Platform Insights

Platform Insights’ mission

Provide data, metrics and insights to Spotify R&D to enable data-informed decisions that improve speed and success
A few years ago...

Product Manager in a Platform Team

Team Want actionable metrics

Users Want satisfaction metrics

Management Want impact metrics
Agenda

A metric mental model

A metrics journey

Common questions & concerns
A metric mental model
A metrics journey
Common questions & concerns
A mental model for metrics

**Leading**
- Action-focused
- Noisy
- Actionable
- Tactical
- Gameable
- Vanity Metrics

**Lagging**
- Value / Impact-focused
- Low noise
- Move slowly
- Strategic
- Trickier to measure

**A metric mental model**
Metrics “influence” each other, leading to lagging
Metrics “influence” each other, leading to lagging

Leading / Actionable

Lagging / Value Creation
A metric mental model

- Data
- Information
- Knowledge

- Raw data
- Metrics and Dashboards
- Research and Insights

Spotify R&D
A metric mental model

- Raw data
- Metrics and Dashboards
- Research and Insights
- Knowledge
- Information
- Data
Metrics are products
A metric mental model

A metrics journey

Common questions & concerns
Problem: A typical BASIC situation

- 10: It’s planning time
- 20: We don’t have good metrics
- 30: Agree on a metric we don’t measure
- 40: Development starts
- 50: Ignore the metric and data collection
- 60: GOTO 10
Metrics: A Success Story.
Spotify EngSat / Pulse

Pulse free-text

ROUND
2023Q3
2023Q1
2022Q4
2022Q1
2021Q4
2021Q2

QUESTION_ID
dev_tools_qe
dev_tools_qe
dev_tools_qe
complex_dept_text
techdeb_tinder_text

ANSWER_HTML

Spotify is awesome :)
Spotify is great!
Testing infrastructure is built for scale, stable oriented producers, and unclear how to use contract or dataset validation for pipelines like Runner or Sprinkler.
We met several Sprinkler bugs, connecting to that team helped a lot. Our CI/CD product relies heavily on other products inside the company, so sometimes we respond to support questions related to other teams.
We have a Sprinkle storage-insights repo which contains Docker workflows for database and S3 bucket insights. Workflow...
Metrics: A Success Story

Android Developer’s Self-reported Productivity:

*Overall, in the past 3 months how productive have you felt at work at Spotify?*
The Productivity Case

- Ask people!

- “Proxy metrics”
  - Imperfect
  - Necessary

- Contextualize them

- Trends > Plain value

- Trigger conversations
But...

- What about data Quality?
- Can we really trust self reported metrics?
- This metric does not cover every case
- This metric is flawed in some way
- My Metric depends on external factors I don’t control
What metric for my OKR?

1. Sensitive to changes you will implement
2. Bet: Aligned with value creation
3. Available within time horizon
Define common set of metrics and bets
Review metrics regularly

Management
Role model

Product Managers
Prioritise data collection and promote metrics-informed decisions

Engineering
Focus on actionable metrics

When to start... and who is accountable?
When a measure becomes a target, it ceases to be a good measure

...for someone who benefits from the metric looking good...
But... Is that really an oriented graph?
A metric mental model

A metrics journey

Common questions & concerns
Key takeaways

● Align product, engineering, business
● Metrics are products
● Start with surveys
● Build your data / information / knowledge stack
Start measuring your R&D productivity with the:

**Pulse plugin for Backstage**

backstage.spotify.com/plugins/pulse
Thank you
STOP HERE
Continuous Improvement Methodology

Test Flakiness

Build Time

Client Developers Satisfaction

Client Developers Productivity

Development Productivity
The Productivity Case: The DORA Case

● Reminder
  ○ Deployment Frequency
  ○ Deployment failure rate
  ○ Time to Recovery
  ○ Lead time

● Survey people, then implement

● Think “Local” DORA metrics