

Metrics-informed development

Theory and practice

Lessons and insights from implementing DPE



Laurent Ploix

DPE Product Manager

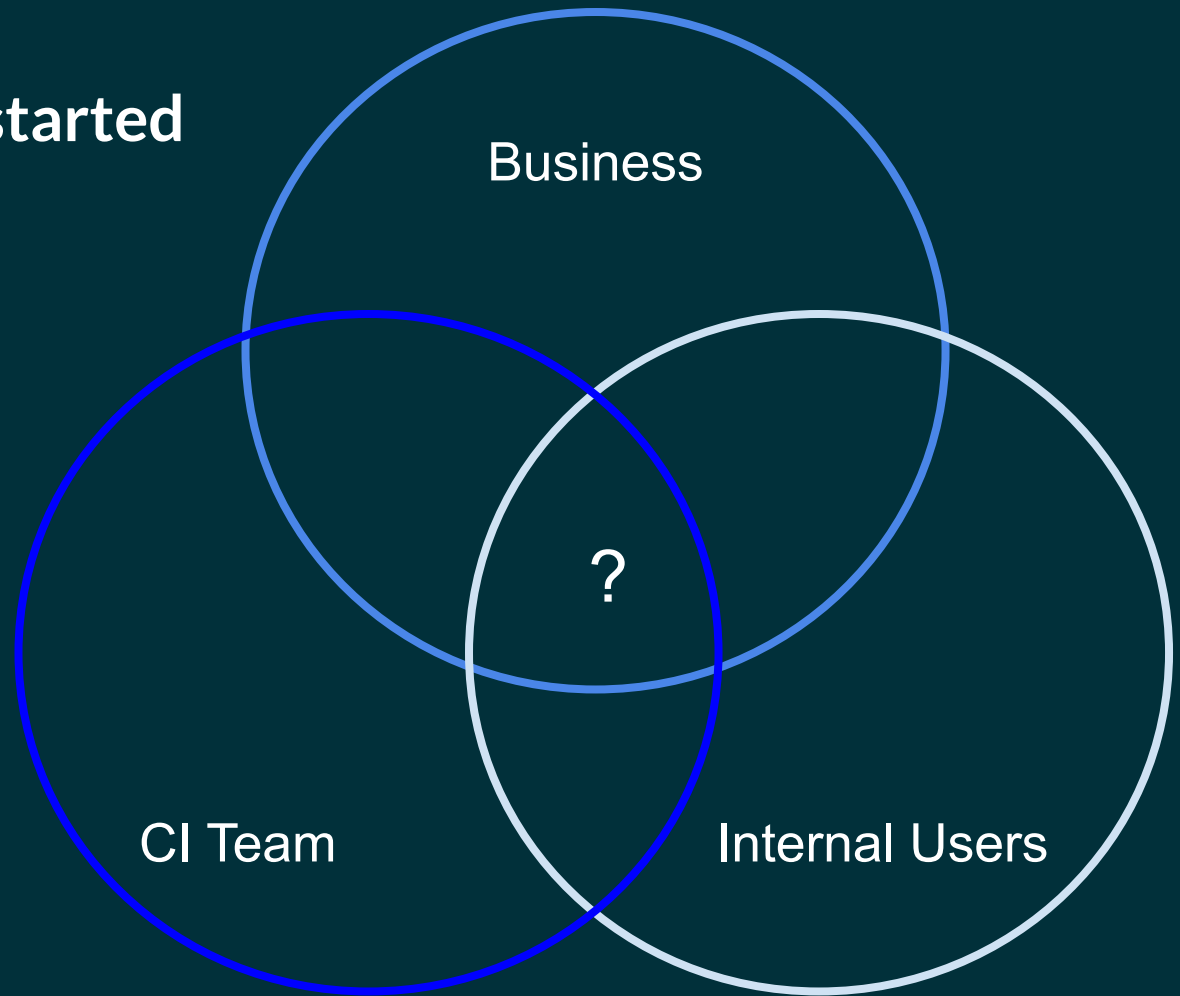
Gradle

Laurent Ploix

Gradle	2024	Product Manager	DPE / Insights
Spotify	2019	Engineering Manager	Understand Productivity
Spotify	2014	Product Manager	Continuous Integration at scale
Financial Trading Industry	1996		



How it all started

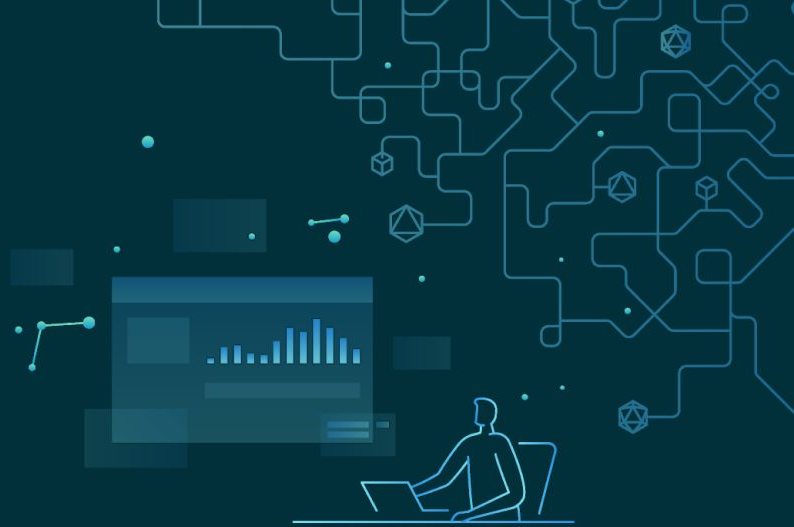


Agenda

Mental frameworks for DPE metrics & insights

Use cases and lessons learned

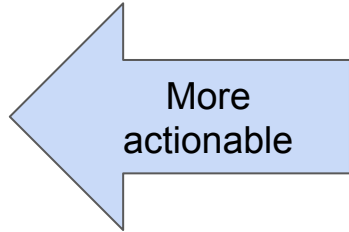
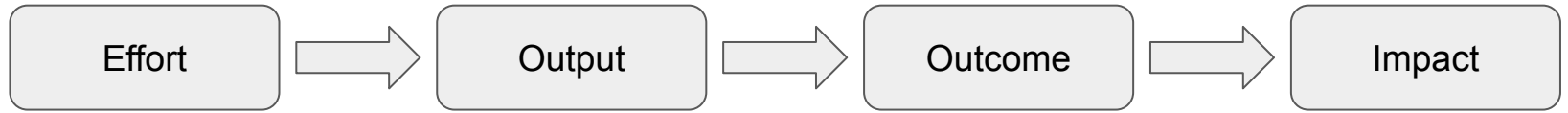
Risks and threats to validity



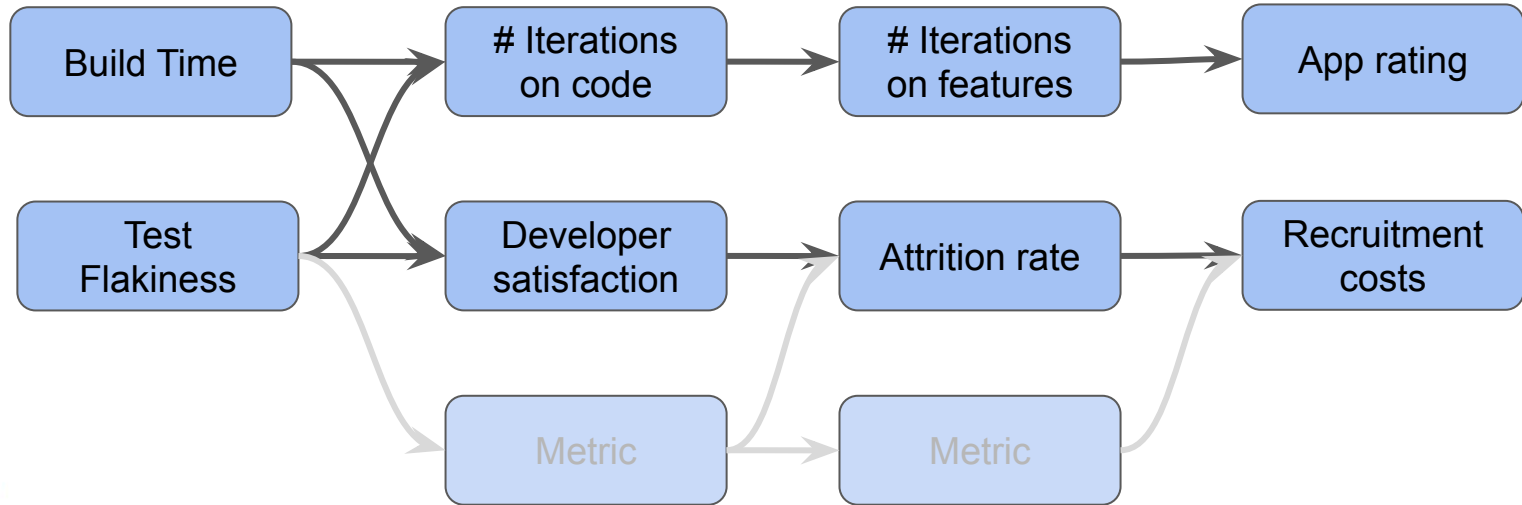
Mental frameworks for DPE metrics & insights



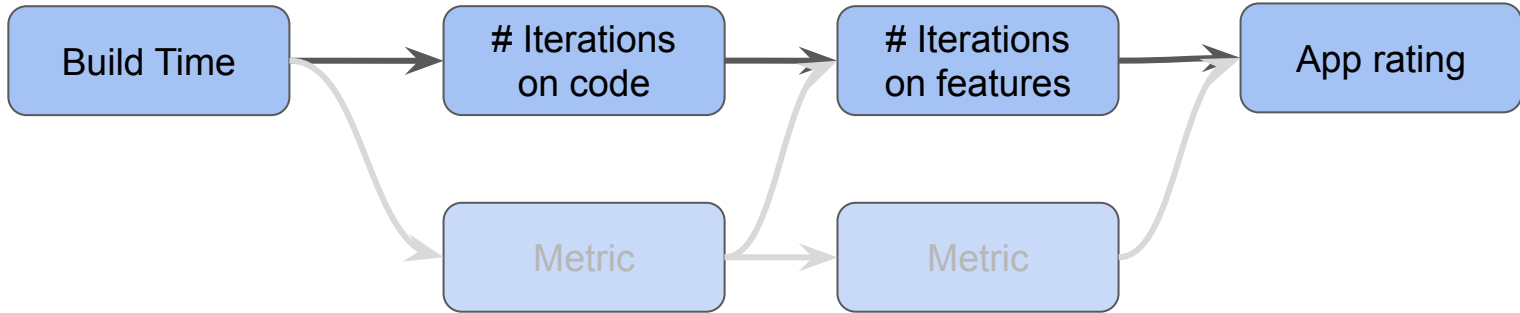
Metrics: From activity to impact



Metrics: Dependency Graph



Metrics: Dependency Graph



- Effort / Output
- Actionable
- Noisy
- Tactical
- Gameable
- Vanity

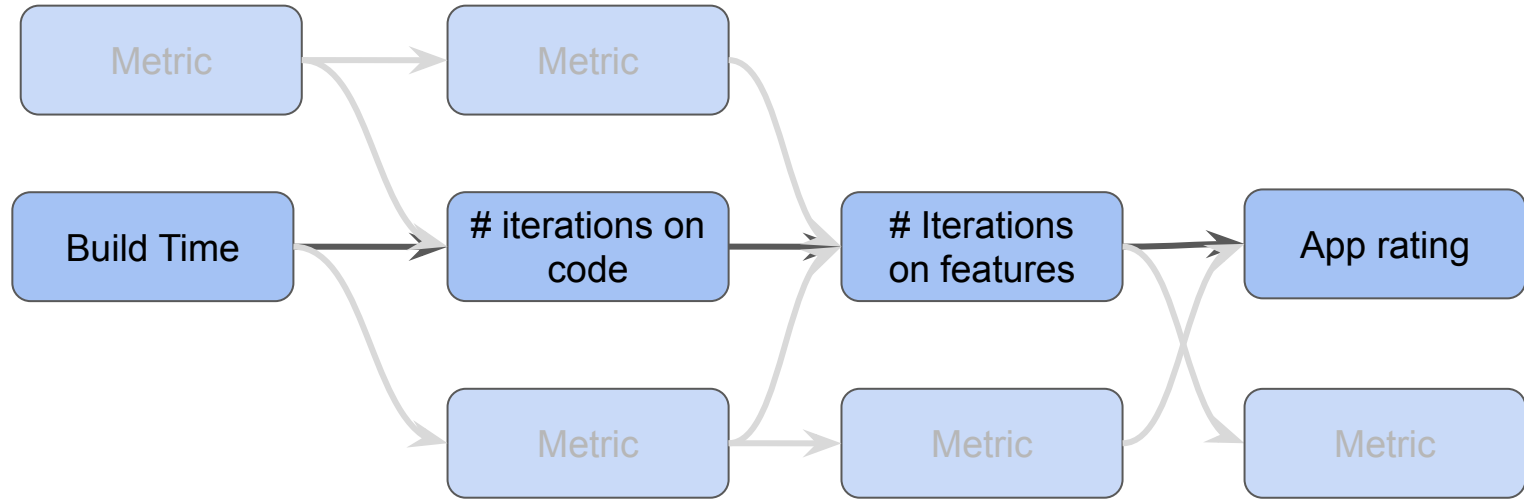
- Outcome / Impact
- Stable & Low noise
- Strategic
- Delayed

Leading

Lagging



Dependency Graph: What matters

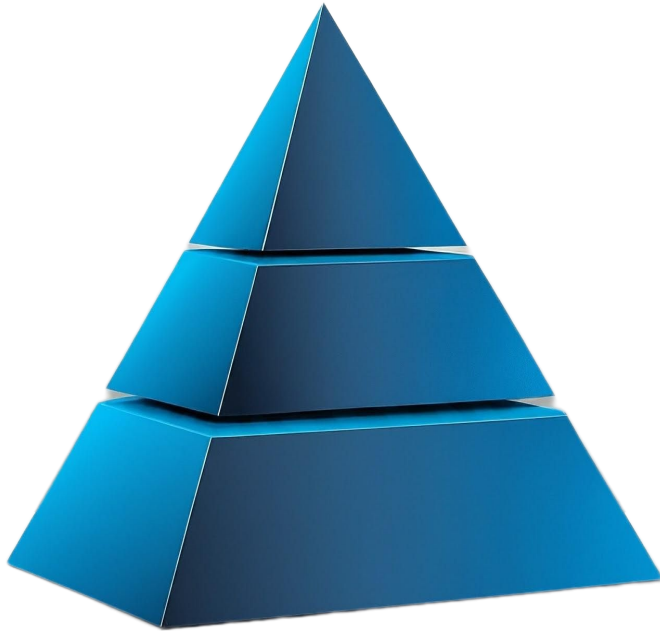


Leading

Lagging



Data, Information, Knowledge



Knowledge

- Insights
- Reports

Information

- Metrics
- Dashboards

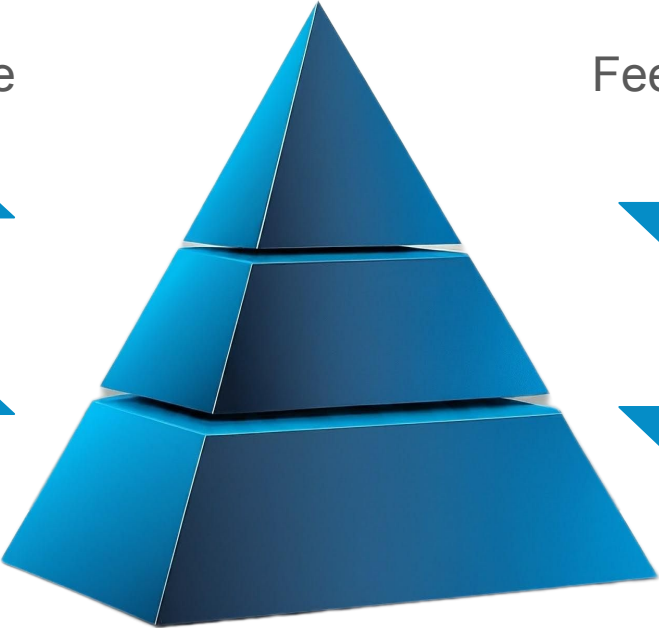
Data

- Digested
- Raw data



Data, Information, Knowledge

Improve



Feedback



Knowledge

Information

Data





⇒ Metrics are products



Framework : Wrap up

- Effort - Output - Outcome - Impact
- Oriented graph of metrics == Company alignment
- Data - Information - Knowledge
- Metrics are product



Use cases and lessons learned

- Surveys: more than trends
- The “local DORA” metrics
- Tickets: a treasure trove
- Technical debt
- Insights and metrics to plan work



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- **Surveys: more than trends**
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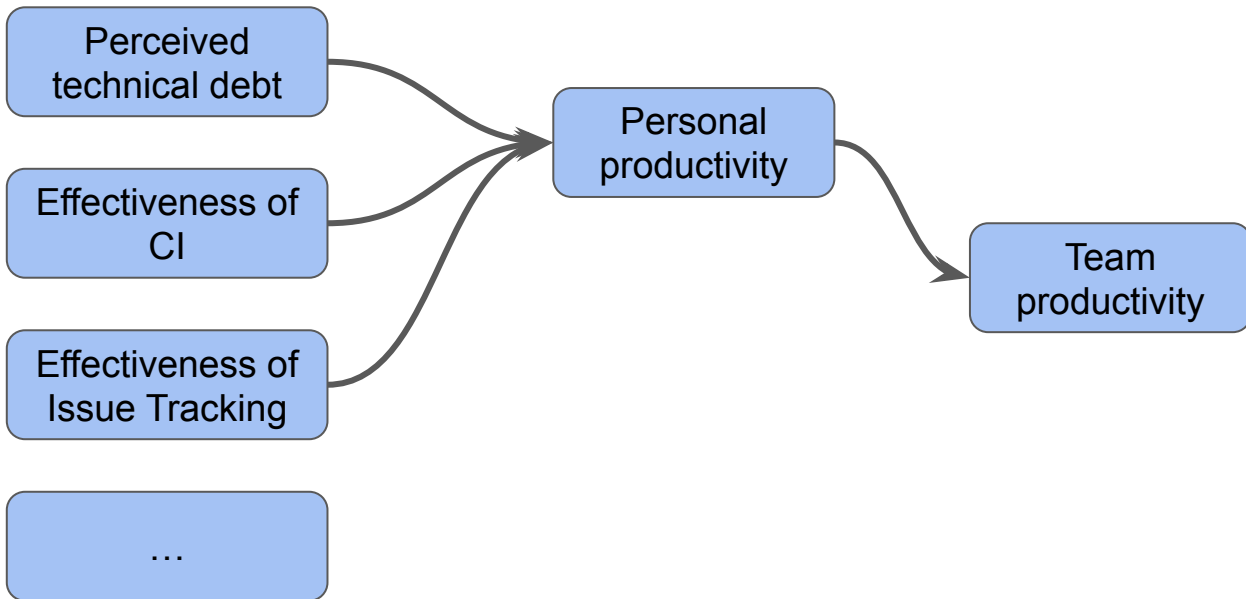


Surveys: more than trends

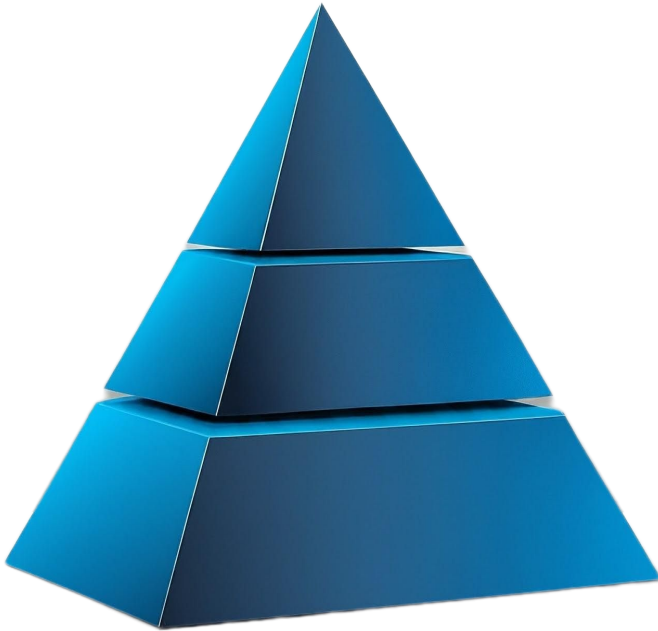
- Employees surveys on...
 - Self and team productivity
 - Perceived Autonomy
 - Clarity of product directions
 - Technical debt
 - Context switching
 - Ease of use of provided tools
 - ...



Surveys metrics: in the dependency graph



Surveys: from data to insights



Causality



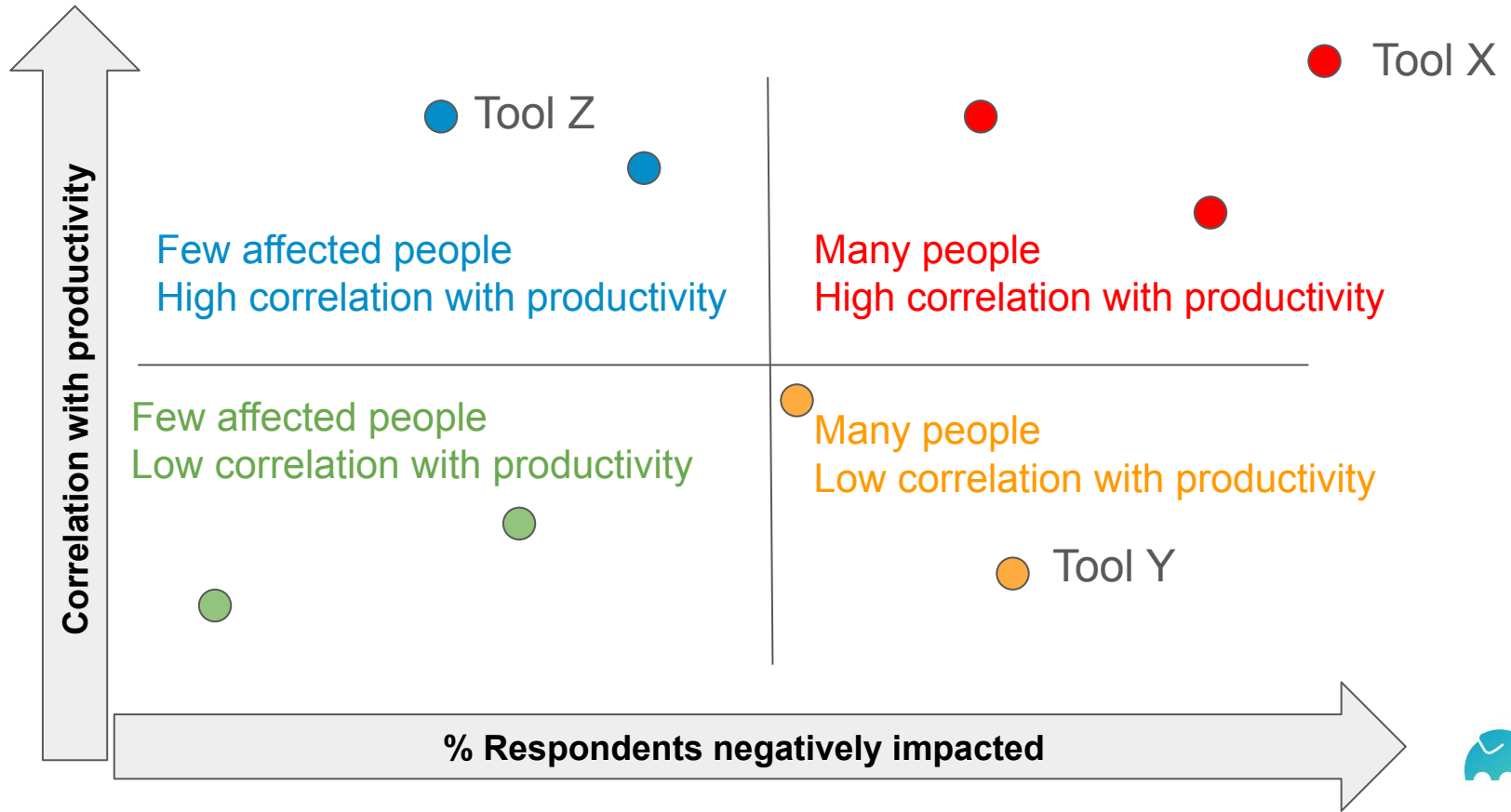
Trends and correlations



Survey data



Surveys: from data to insights

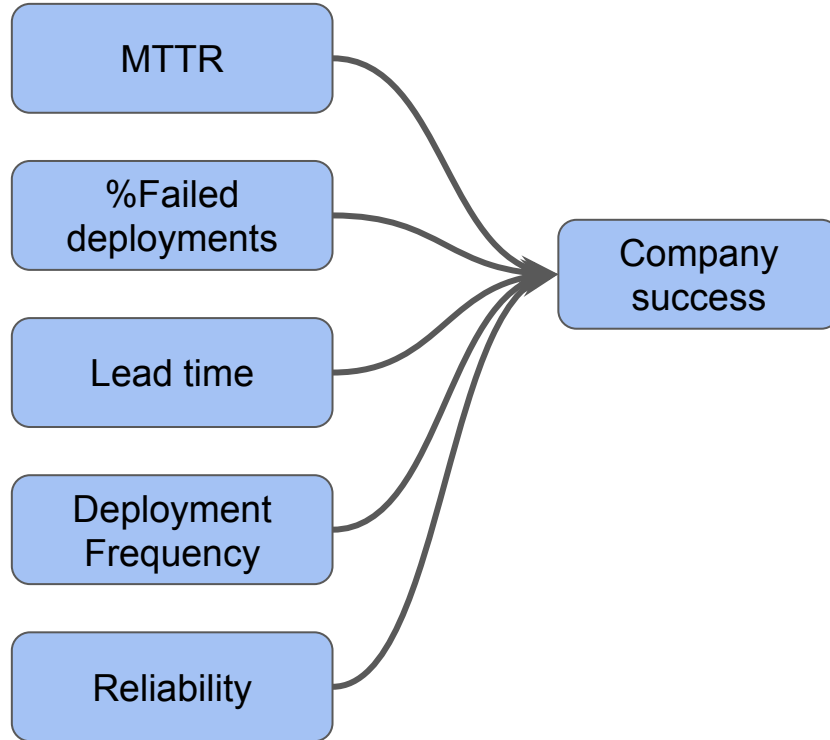


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DORA metrics

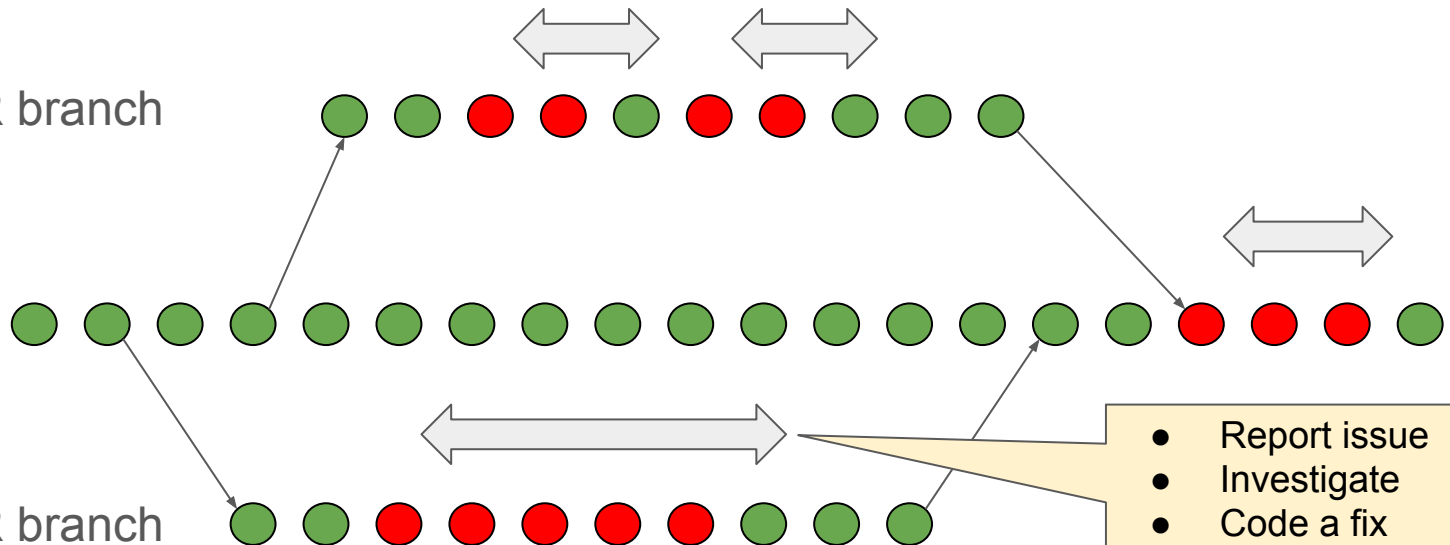


The “local DORA” metrics: How developers work

Local & PR branch

Main

Local & PR branch

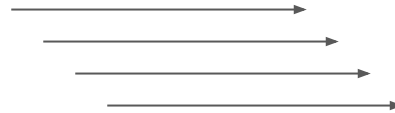
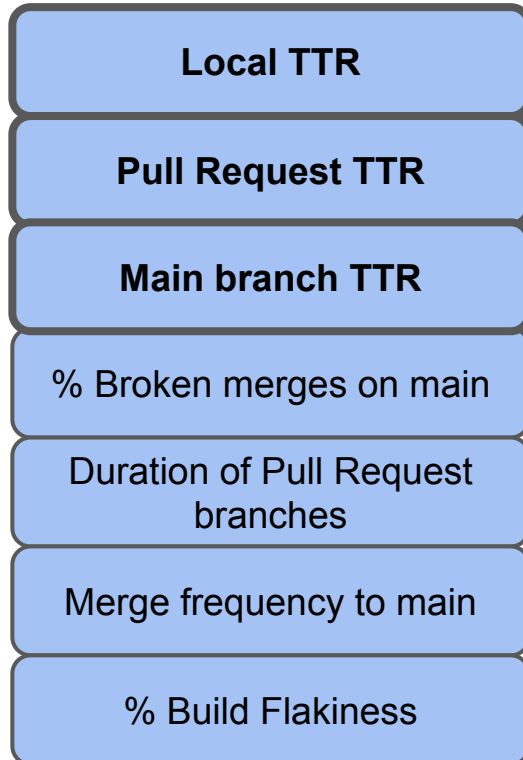


- Report issue
- Investigate
- Code a fix
- Queues
- Build time

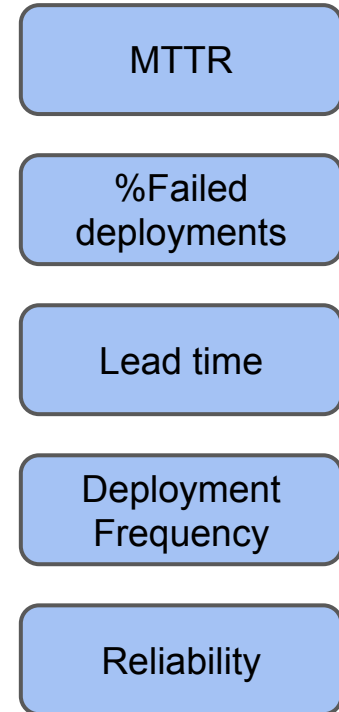


The “local DORA” metrics: inner loop

“Local” DORA Metrics



Real DORA Metrics



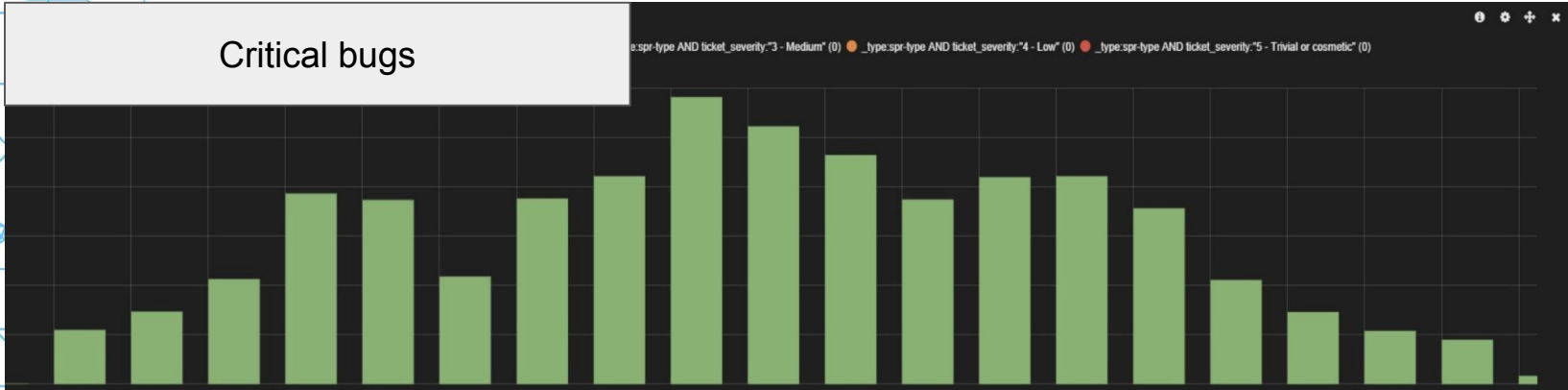
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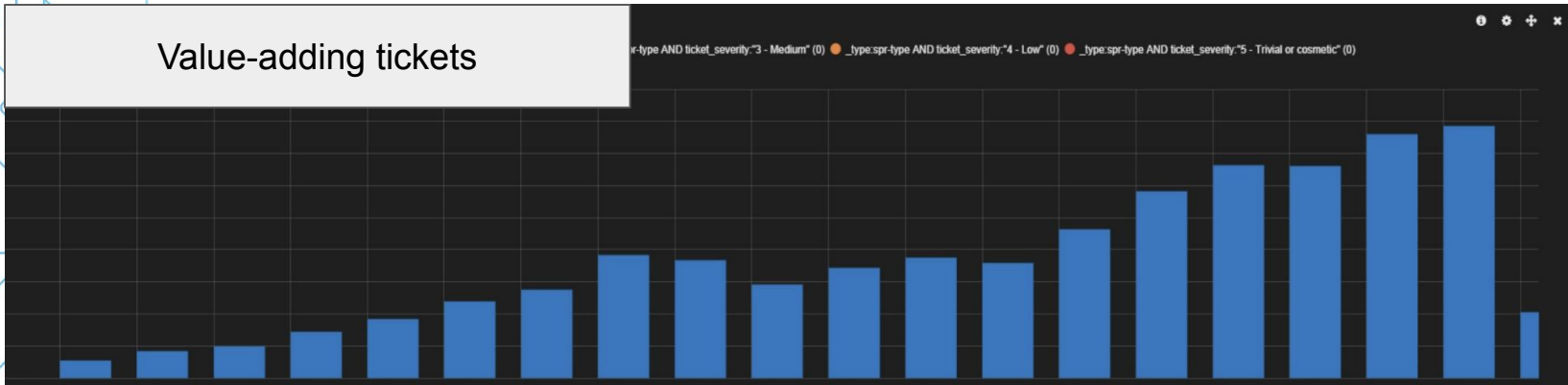


Tickets: a treasure trove

Critical bugs



Value-adding tickets

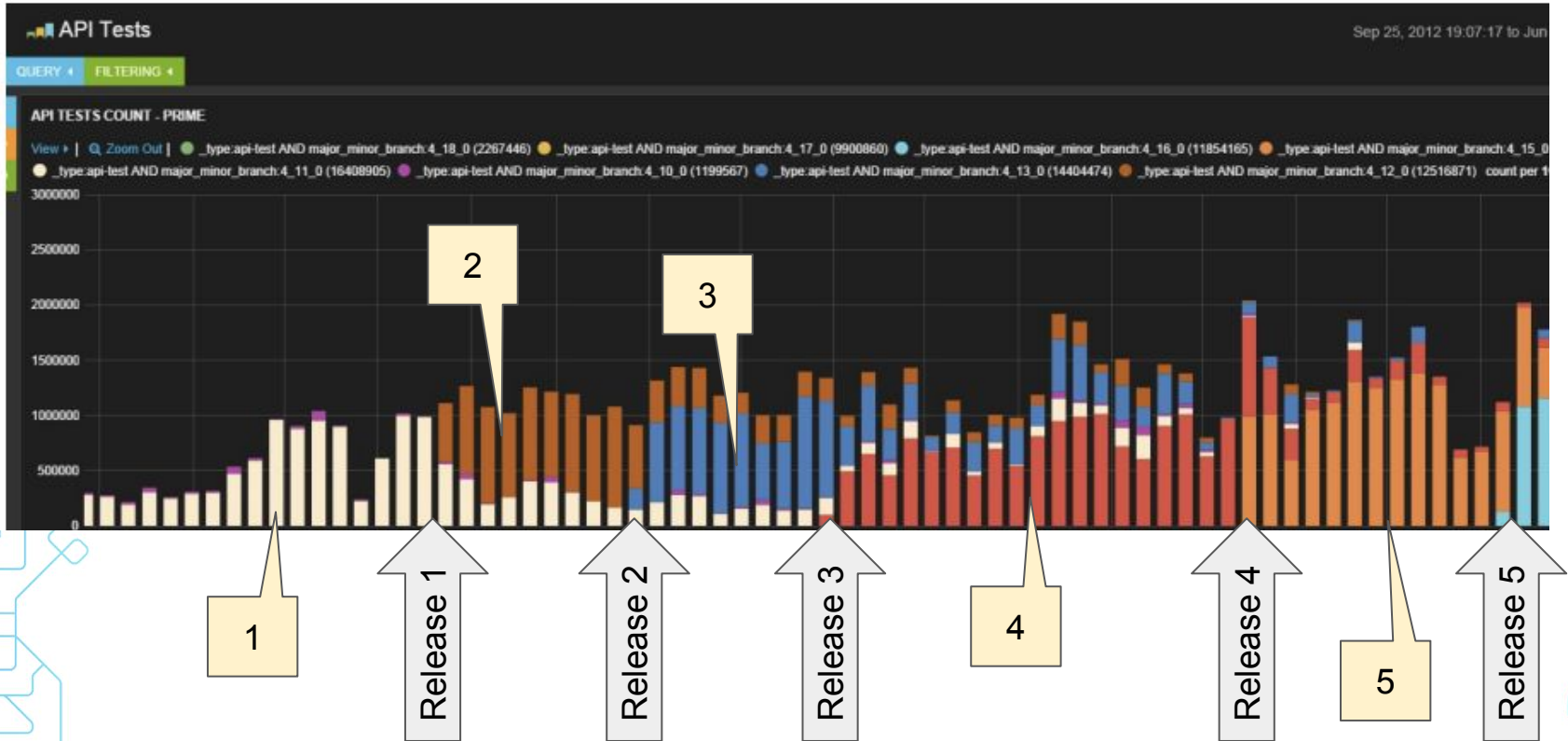


Use cases and lessons learned

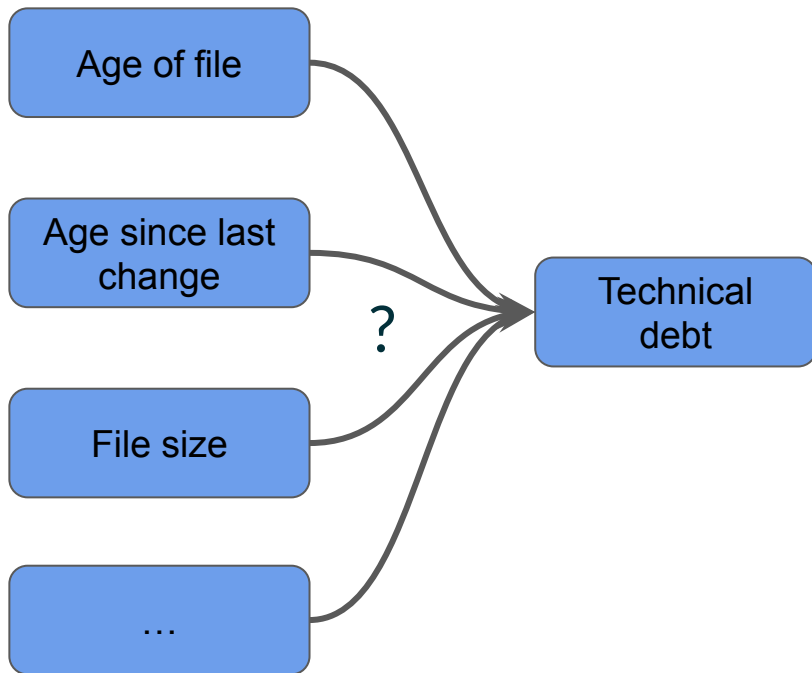
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- Tickets, a treasure trove
- **Technical debt**
- Insights and metrics to plan work



Technical debt: Visualization



Technical debt: Predictors?



1. Collect Tech Debt perception
2. Collect objective metrics
3. Identify most relevant factors
4. Interpret in your context

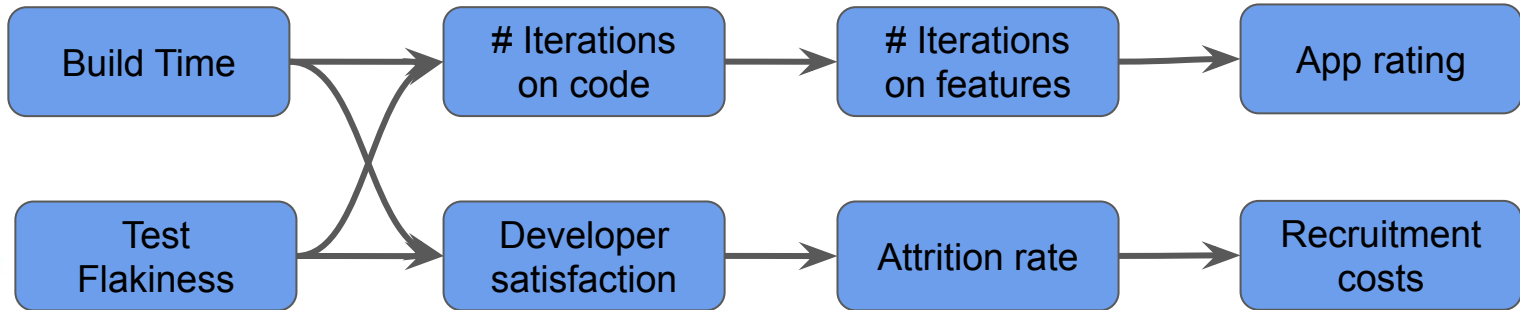


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- **Insights and metrics to plan work**



Insights and metrics to plan work



Risks and threats to validity

- Culture
- The map and the territory



Culture!

- **Every metric can be gamed**
- **Every metric *will* be gamed if people feel pressured**
- **Every metric has shortcoming**

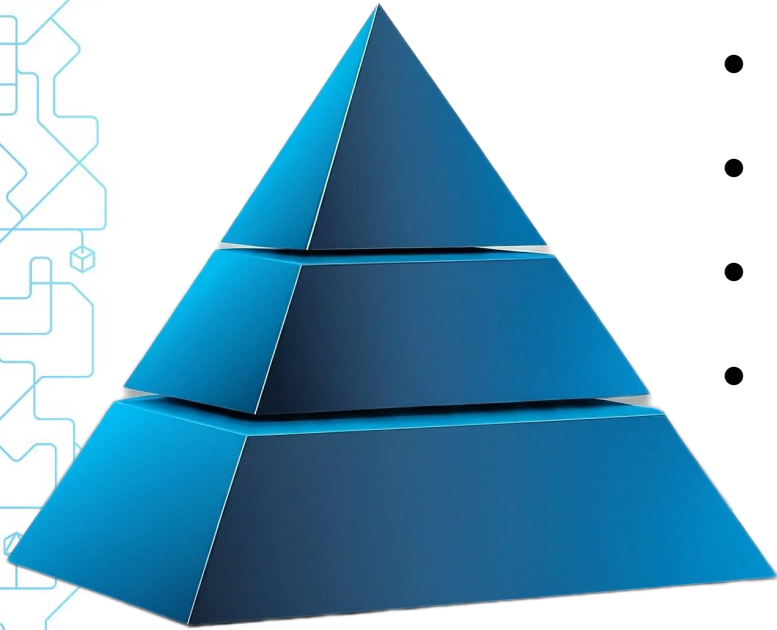
- **Metrics are here to inform decisions, not to justify already-taken decisions**

- **People must come with hypotheses, not (only) with opinions**



The map and the territory

- **The map \neq territory**
- **Tension wrt metrics definitions**
- **Discarding people's perception**
- **A company is a system of teams**



Thank you!
Danke schön!



Gradle

Laurent Ploix

DPE Product Manager

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