

Productivity Beyond Dashboards

. Karim Nakad Software Engineer



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Productivity Maturity Model









Does not prioritize productivity. Focused on their core business model.







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IDE Team





Language Services Team

CI/CD Team



Build Team



Testing Team

Developer Coverage





Deployment Latency/Reliability



Language Coverage

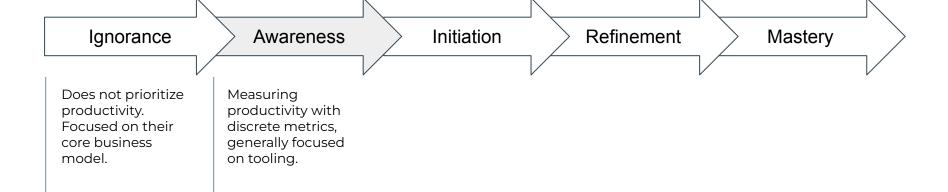


Build Latency/ Reliability



Test Latency/ Reliability

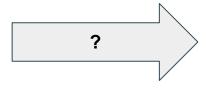




Awareness



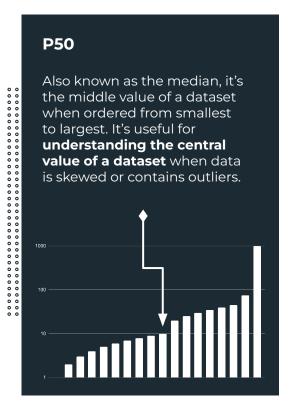


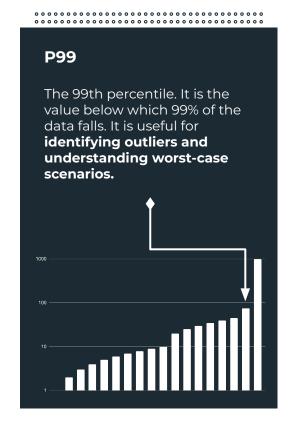




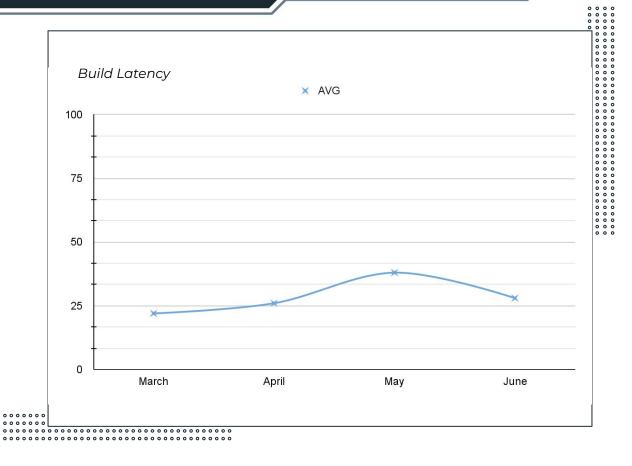


AVERAGE The average, or mean, is the sum of all values in a dataset divided by the number of values. It's a measure of central tendency.



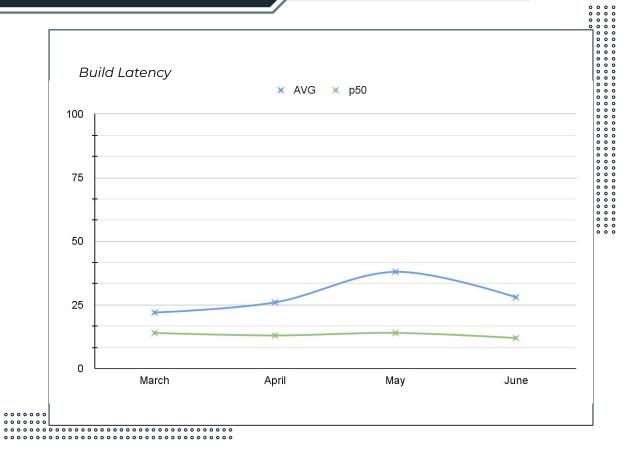






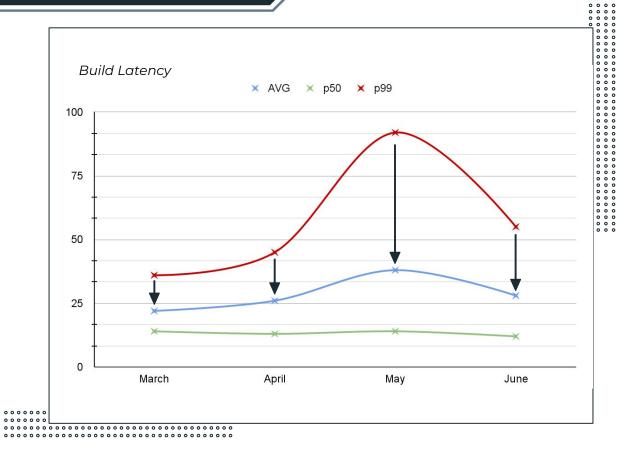




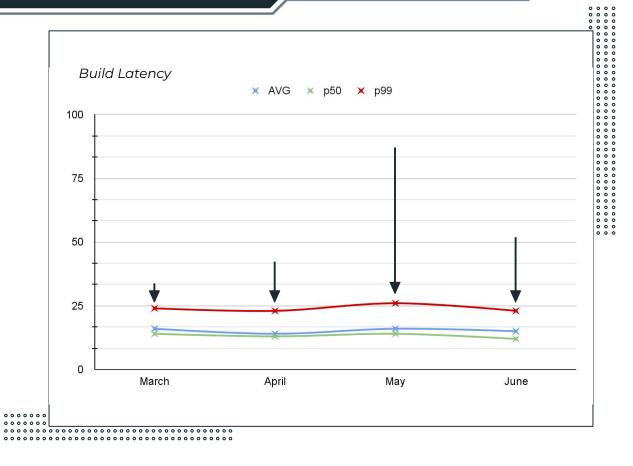






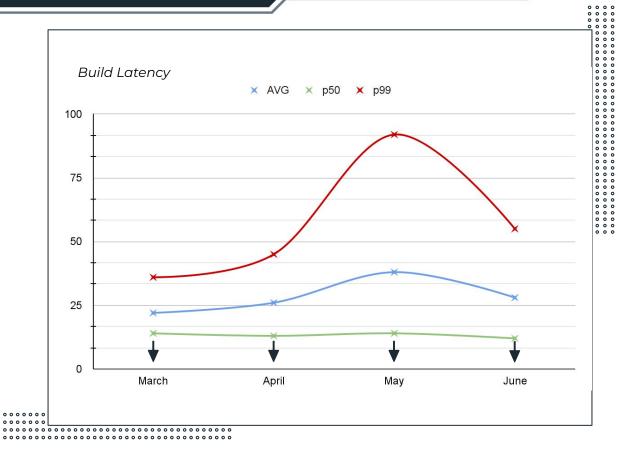






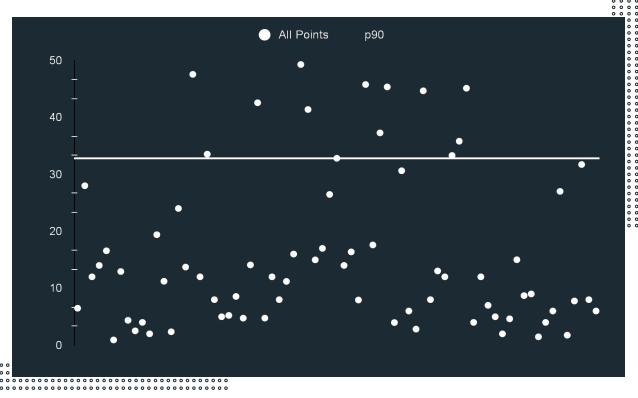


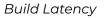


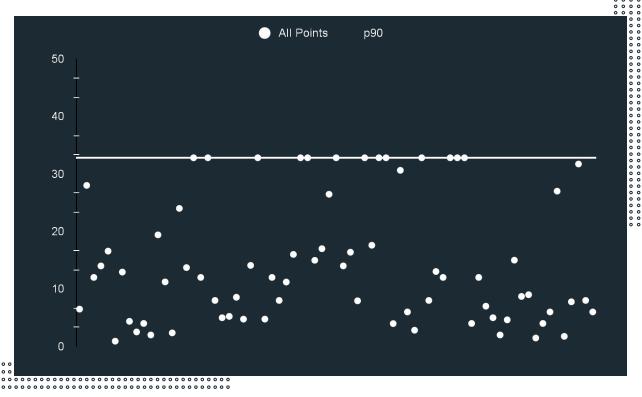












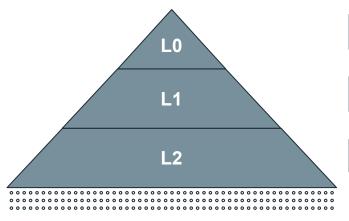












Top-Line Metrics	Developer Flow	
Driver Metrics	Sync Tooling Context Switches	
Operational Metrics	Build Latency	





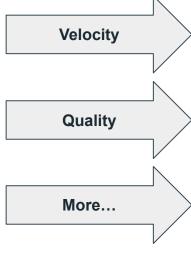




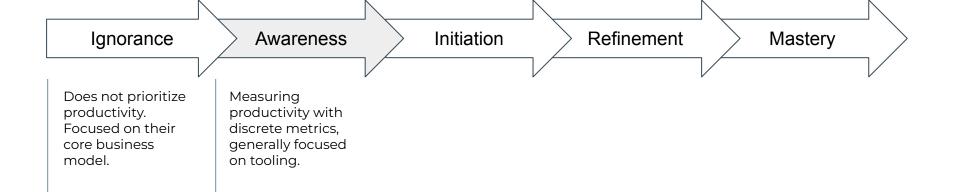


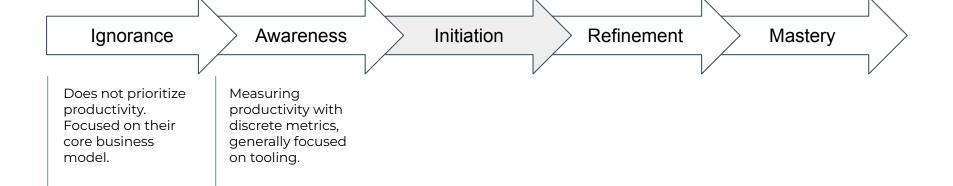


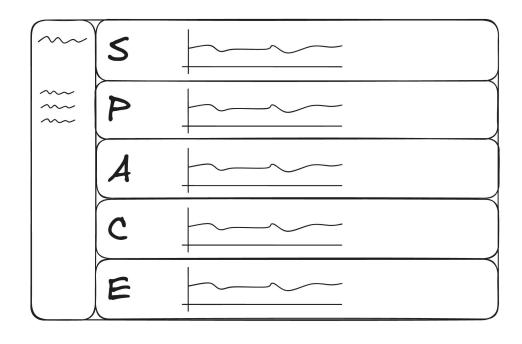












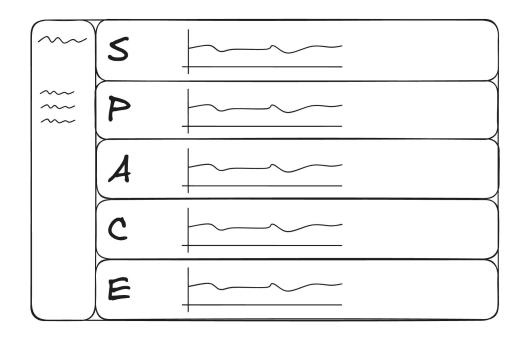
Awareness

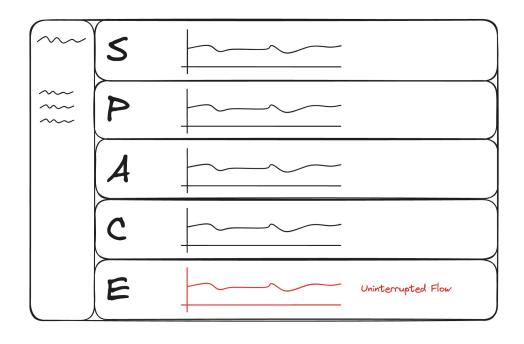
Initiation

Refinement

Mastery

Does not prioritize productivity. Focused on their core business model. Measuring productivity with discrete metrics, generally focused on tooling. Assembling telemetry into a framework and visualizing data in a dashboard.





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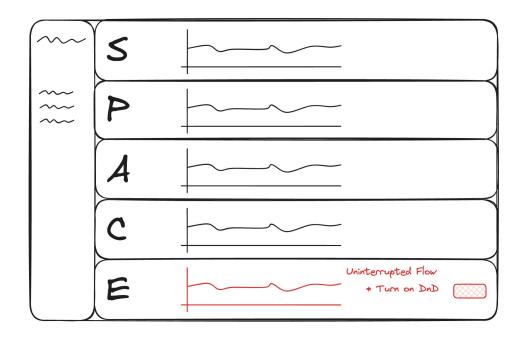
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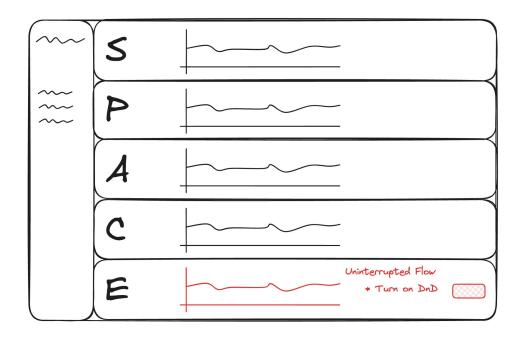
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Does not prioritize productivity. Focused on their core business model. Measuring productivity with discrete metrics, generally focused on tooling. Assembling telemetry into a framework and visualizing data in a dashboard. Developing actionable insights and recommendations based on insights and telemetry.





Ignorance

Does not prioritize

Focused on their

productivity.

core business

model.

Accuring

Awareness

Measuring productivity with discrete metrics, generally focused on tooling.

Initiation

Assembling telemetry into a framework and visualizing data in a dashboard.

Refinement

Mastery

Developing actionable insights and recommendations based on insights and telemetry.



Ignorance

Measuring

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discrete metrics,

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generally focused

Awareness

Assembling telemetry into a framework and

Refinement

Mastery

Does not prioritize productivity. Focused on their core business model.

visualizing data in a dashboard.

Initiation

Developing actionable insights and recommendations based on insights and telemetry.

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[...] Meta developed the AutoFocus tool that blocks work chat notifications when an engineer is working on code for 12 minutes or longer. [...]. In a large experiment, we find that AutoFocus increases the amount of personal-focus time by 20.27%, and it has

AutoFocus

- Warn senders
- Mutes recipients' notifications
- Senders can override



Workgraph: personal focus vs. interruption for engineers at Meta



now been rolled out widely at Meta.













Yifen Chen, Peter C. Rigby, Yulin Chen, Kun Jiang, Nader Dehghani, Qianying Huang,



Peter Cottle,







Clayton Andrews, Noah Lee, Nachiappan Nagappan Authors Info & Claims



Ignorance

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Measuring productivity with

Awareness

productivity with discrete metrics, generally focused on tooling.

Initiation

Assembling telemetry into a framework and visualizing data in a dashboard.

Refinement

Developing actionable insights and recommendations based on insights and telemetry.

Mastery

Integrating across your products and tooling to automatically improve productivity at scale.



Velocity Measurement

Phabricator (Meta)

Diff

=> Code Review / Pull Request (PR)

Creating a diff

=> Creating a PR

Publishing a diff

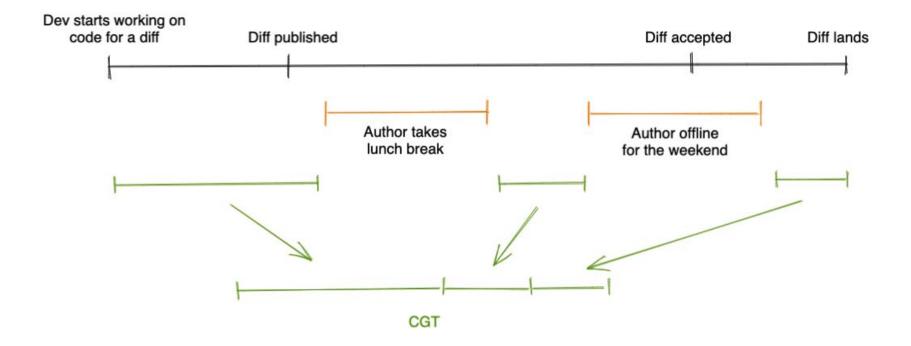
=> Requesting review on a PR

Accepting a diff

=> Approving a PR

Landing a diff

=> Merging a PR

















Code D123























Start coding D123

Task

Daiquery

Planned

Publish D123

Code D987

Sketching

Waiting for reviews

Author's PTO, Sick days

React to review on Phabricator Code D123 Landing

time Not included Aspirational /





Initial XFN meeting





















React to review on Phabricator







Start coding D123

Task

Daiquery

Code D123

Publish D123

Code D987

time

Meeting for D987

Waiting for reviews

Author's Sick days

Code

Landing time

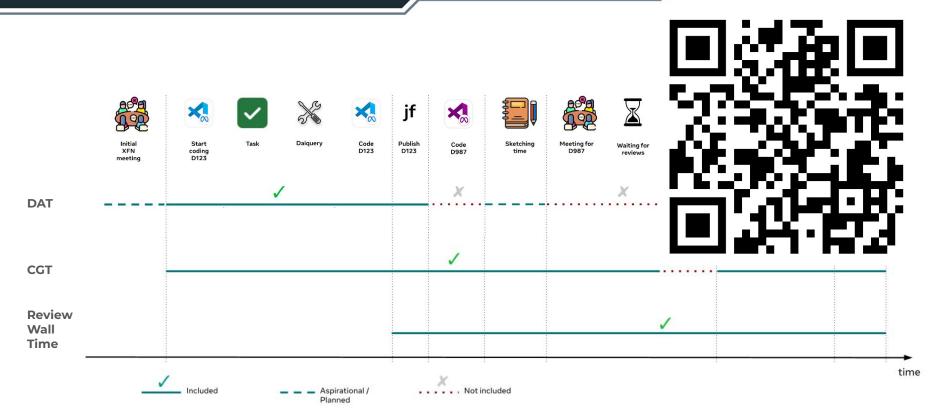
Aspirational / Planned



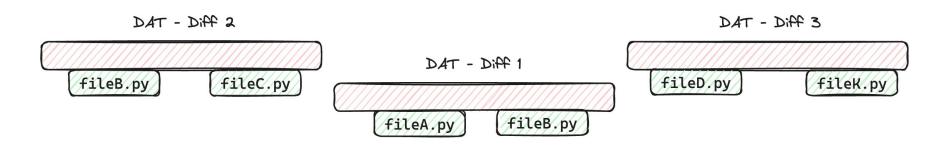


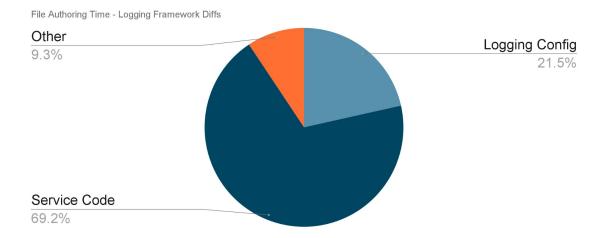
time

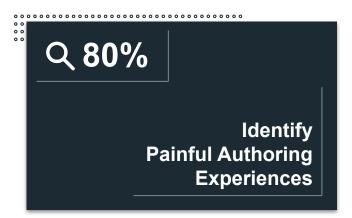




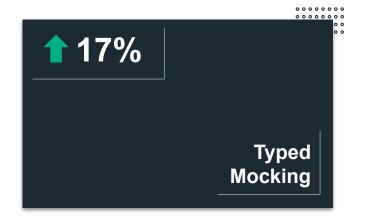


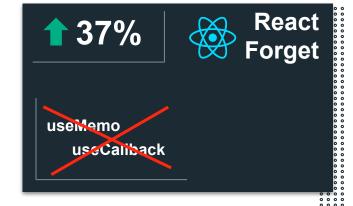








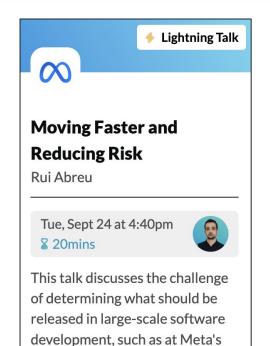


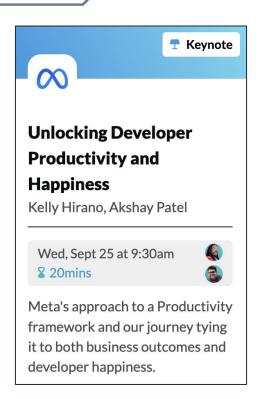


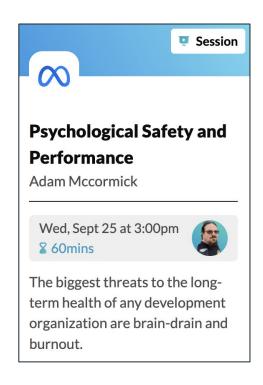












scale. To address this, we

developed models to determine the risk of a pull request (diff) causing an outage (aka SEV).



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