Metrics that Matter: Building your DevOps Metrics Dashboard

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Why DevOps Metrics?

A client story

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Our DevOps Metrics Story

- Client is a major player in storage appliances

- Problems:
  - How successful was their DevOps transformation?
  - Identifying pain points and slowness in pipelines and processes.

- DevOps Maturity Assessment
  - Informed by DevOps Research & Assessment (DORA) State of DevOps Report

- Discovered that key DORA-recommended measurements were missing

Important DevOps Metrics

What to measure

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Important DevOps Metrics

Lead Time for Changes
- How long it takes for a code commit to make it to production

Deployment Frequency
- How often you deploy code to production

Change Fail Rate
- Percentage of changes that result in degraded service, requiring hot fixes, patches, or rollbacks

Time to Restore Service
- How long it takes to restore service after an incident

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Important DevOps Metrics

Lead Time for Changes

- Elite: < 1 day
- High: 1 day – 1 week
- Medium: 1 week – 1 month
- Low: 1 – 6 months

Deployment Frequency

- Elite: On demand, several times/day
- High: Daily to weekly
- Medium: Weekly to monthly
- Low: 1 – 6 months

Change Fail Rate

- Elite, High, and Medium – 0 – 15%
- Low – 46 – 60%

Time to Restore Service

- Elite: < 1 hour
- High and Medium: < 1 day
- Low: 1 week – 1 month

Source: DORA State of DevOps 2019

DevOps Metrics Tools

How to gather data

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DevOps Metrics Tools: Getting DORA Measurements

CloudBees DevOptics

XebiaLabs (now Digital.ai)

Azure DevOps Dashboard

Grafana

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DevOps Metrics Tools: Getting DORA Measurements

- ## Buy COTS solution
  - Easiest to maintain because you don't have to manage features, code fixes, and everything else that goes along with building software
  - Requires less coding
  - Can be more expensive for licensing costs
  - Typically less flexible
  - In this case, we're talking DevOptics and XebiaLabs

- ## Write your own or customize existing solution
  - More work upfront and to maintain because logging and queries aren't pre-defined, you must write them
  - Generally requires some to a lot of coding
  - Open source solutions are available (Grafana)
  - Can be more flexible

…or you might have access to something like Azure DevOps Dahsboards that you're already using
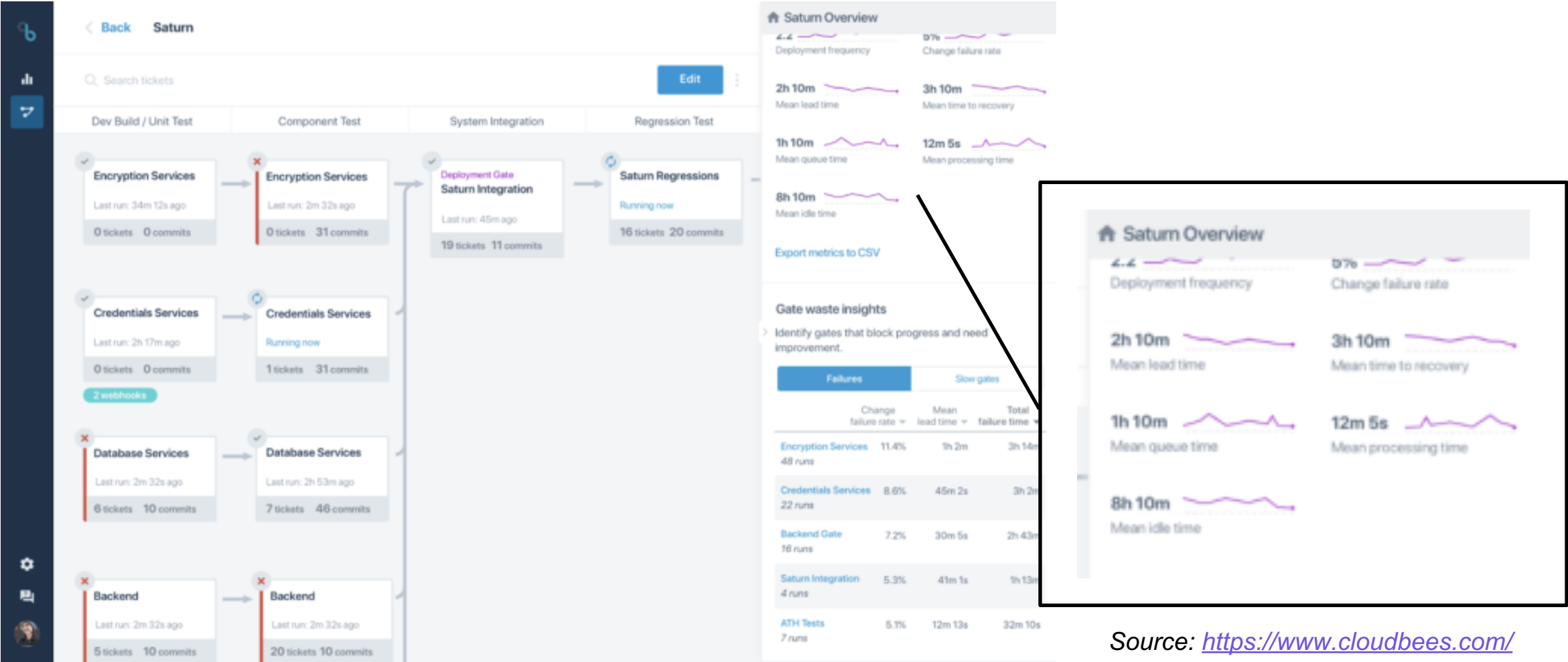
DevOps Metrics Tools: Getting DORA Measurements
CloudBees DevOptics

- My favorite choice: CloudBees DevOptics
  - Perfect if your tool chain includes Jira, Github, and Jenkins
  - Affordable
  - SaaS solution
  - Very user-friendly to set up and use
  - Value stream mapping is useful to tie business value to dev work & bug fixes

DevOps Metrics Tools: Getting DORA Measurements
CloudBees DevOptics


Source: https://www.cloudbees.com/

DevOps Metrics Tools: Getting DORA Measurements
XebiaLabs

- ## XebiaLabs/Digital.ai
  - A holistic solution for automating DevOps that contains a wealth of data depending on what you're using in your ecosystem
  - Supports many different tools
  - XL Release Reports and Dashboards come with DORA metrics
  - Also has value stream mapping
  - Expensive
  - It must be installed on hardware

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DevOps Metrics Tools: Getting DORA Measurements
XebiaLabs

*Source: https://blog.xebialabs.com*
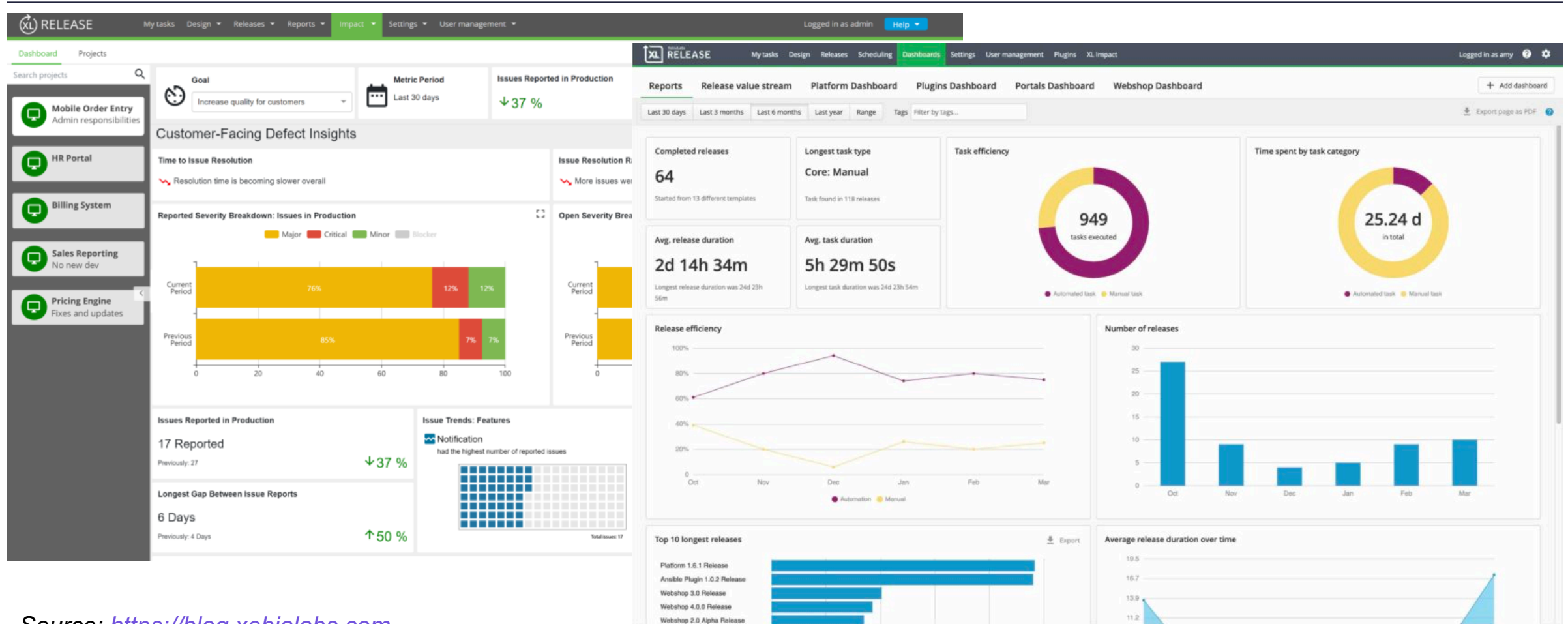
DevOps Metrics Tools: Getting DORA Measurements
Grafana

- Grafana
  - Open source solution for visualizing any kind of data
    - You host this version
  - Also available as a SaaS product for a fee
  - Capture data in a DB and create graphs of data
  - Takes some work to set up
  - Is incredibly flexible

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DevOps Metrics Tools: Getting DORA Measurements
Grafana
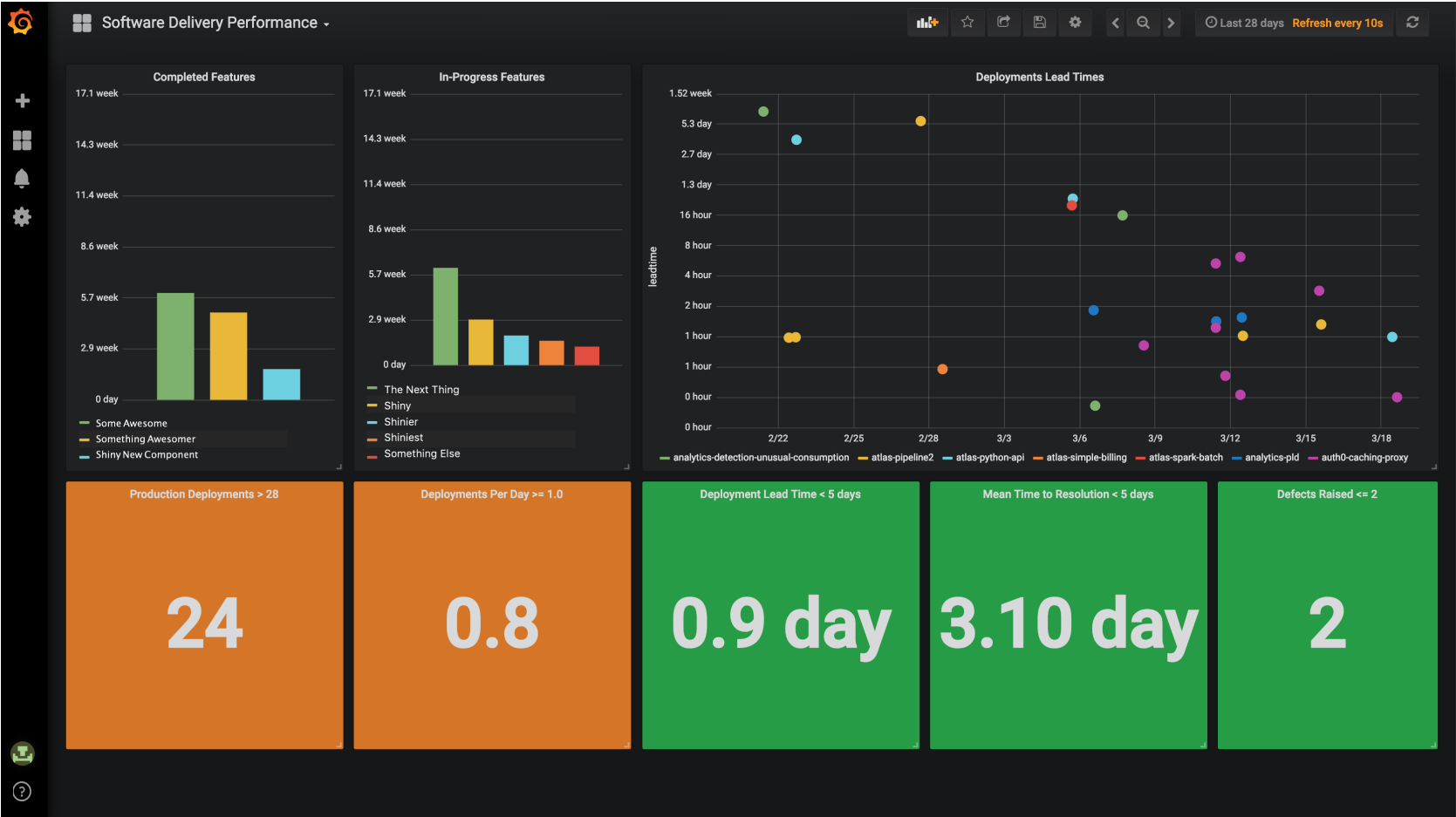
Source: David Lush, "Deploying to Production More Frequently" https://medium.com/onzo-tech/deploying-to-production-more-frequently-b03fc74f8d6e
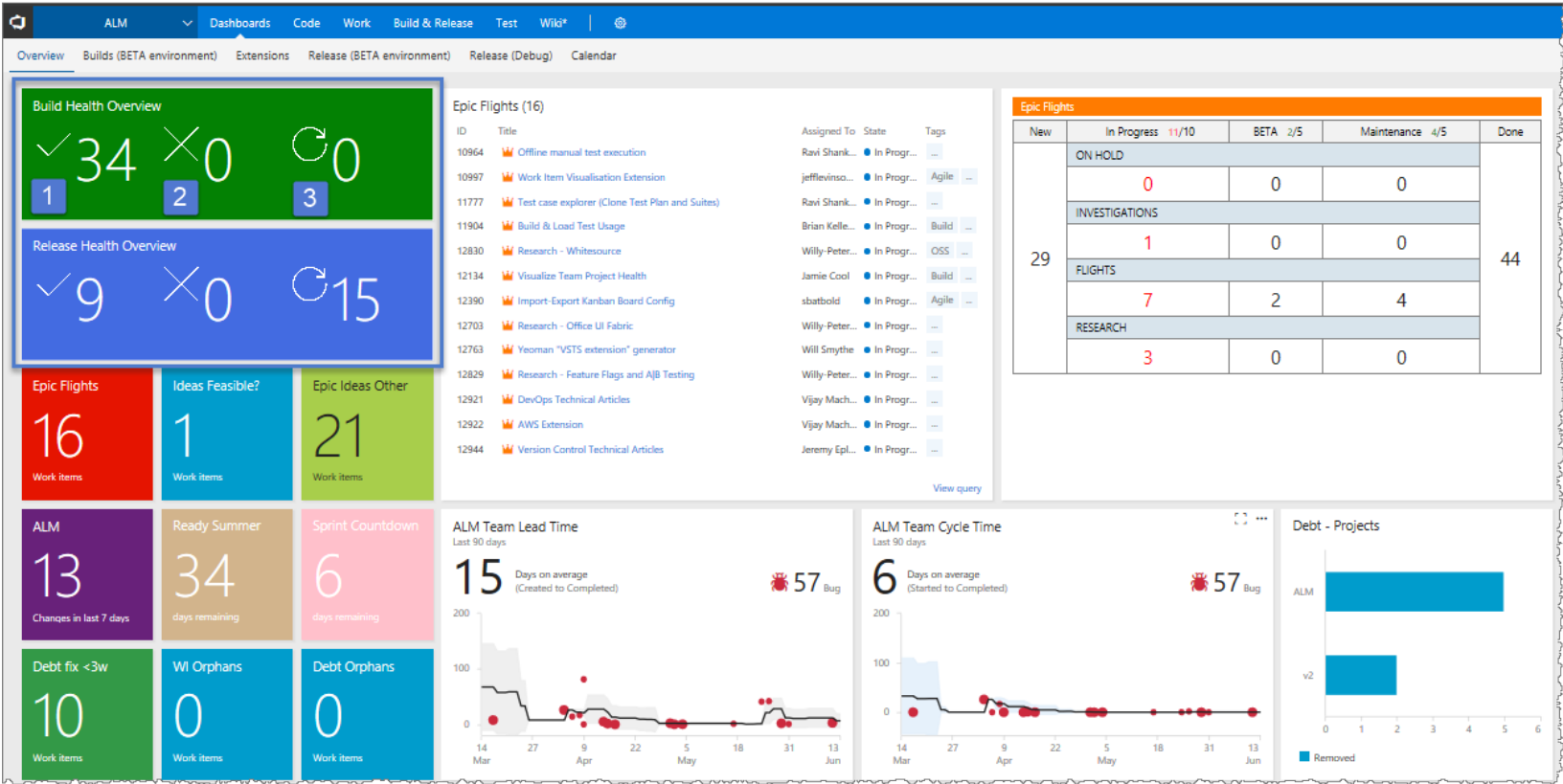
DevOps Metrics Tools: Getting DORA Measurements
Azure DevOps Dashboard

- Azure DevOps Dashboard
  - Great if you're using Azure DevOps for everything
  - You build dashboards using widgets that you get on the marketplace, or from GitHub, or you build yourself
  - No additional cost
  - If you're using Jenkins on Azure, do a side by side of this method with DevOptics and see which you prefer

DevOps Metrics Tools: Getting DORA Measurements
Azure DevOps Dashboard

Source: https://marketplace.visualstudio.com/items?itemName=ms-devlabs.TeamProjectHealth

Source:
https://marketplace.visualstudio.com/items?itemName=FalckDevOps.DevopsPerformanceMetrics

Benchmarks, Goals, and Continuous Improvement

How to gain insights from gathered data

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DevOps Metrics Benchmarks

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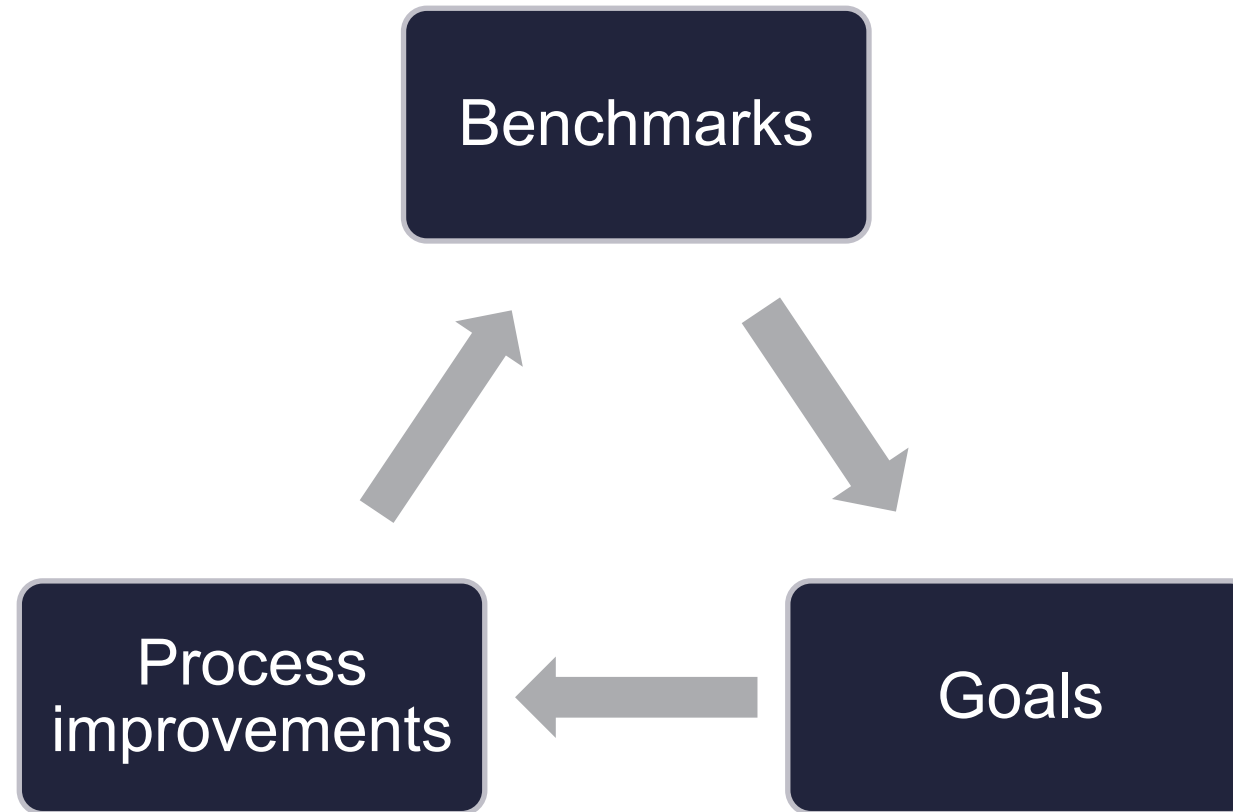- Medium: Weekly to monthly
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Goal Setting & Continuous Improvement