

INTUIT



turbotax



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quickbooks



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Data and Analytics in Service of DPE

September 2024

Jason Rhoades, Development Manager

Agenda

Introduction

Intuit and Jason + Team

DPE Metrics Domains

Velocity, Operational Excellence, Cost

Data Foundations

Robust data platform for powerful metrics

Communications and Driving Action

How do we unlock max value from our insights?

Q&A

Intuit believes everyone should have the opportunity to prosper and we never stop working to find new innovative ways to make that possible.

FAST FACTS

**Intuit's impact
by the
numbers**

Here's what being a customer-focused company has allowed us to accomplish



18,200

Employees worldwide at the end of
fiscal year 2023



16

Offices in seven countries



\$16.3B

Revenue in fiscal year 2024

About Jason and the Team

The team was born to solve for FinOps but has evolved to handle DPE.

By combining all the skills needed to drive change, this single team can move very quickly.

- ◆ Data Engineering

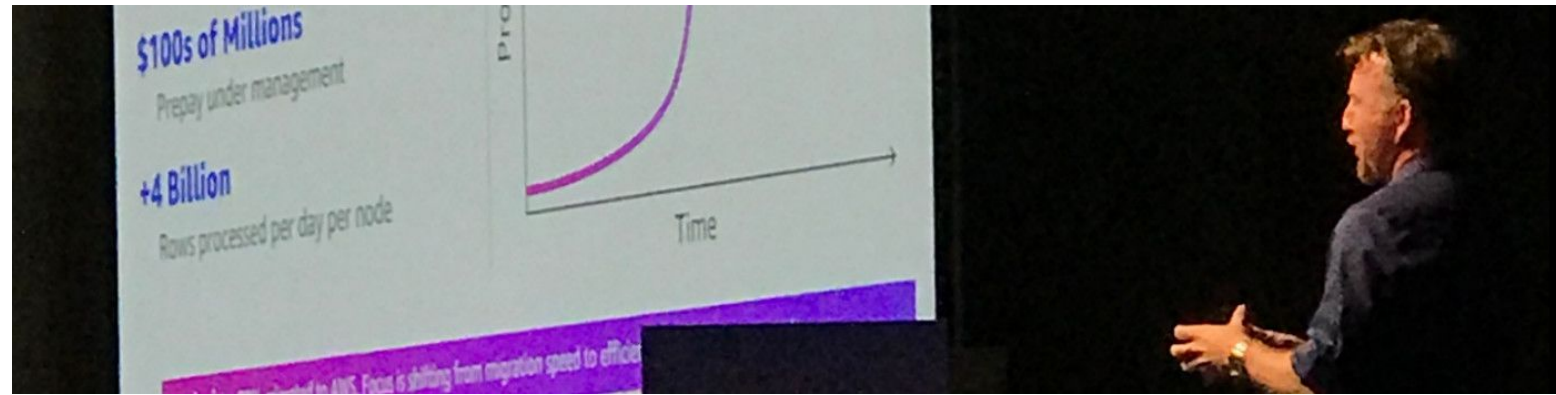
- Data acquisition
- Transformation, business logic application
- Warehousing

- ◆ Software Engineering

- Web applications and workflows
- Systems integration

- ◆ Business Analytics

- Customer engagement and success
- Planning/modeling
- Business intelligence products (dashboards, reports)



DPE Metrics Domains

Comprehensive Metrics for Dev Teams



Velocity

Is your team moving fast enough, producing enough output?

- ◆ Release Velocity
- ◆ PR Merge Velocity



Operational Excellence

Are you operating with the expected levels of quality, performance, and stability?

- ◆ Service and User Availability
- ◆ Application Performance
- ◆ Quality (bugs & defects)
- ◆ Incident management and response



Hosting Costs

Is your cloud footprint efficiently run and adhering to its budget?

- ◆ Adherence to forecast for each cloud budget
- ◆ Waste score - percentage of cloud spend identified as waste to be kept under 5%

Velocity

The general formula:
 $(\text{Output}) / (\text{Developer-Days})$

Example:

A team of 5 developers produced 10 releases over a 7 day span.

$(10 \text{ releases}) / (5 \text{ developers} * 7 \text{ days})$

$= 10 \text{ releases} / 35 \text{ developer-days}$

$= .285 \text{ releases per developer-day for this team}$

$(.285 \text{ daily} * 7 \text{ days/week}) = 2 \text{ releases/developer-week for this team}$

When establishing the program, put thought into balancing the program's flexibility to ongoing organizational and technological changes, vs. the multi-year utility/continuity of a metric.



Availability

Incidents

Performance

Quality

Velocity

DOCUMENTATION

Operational Excellence

Access Control

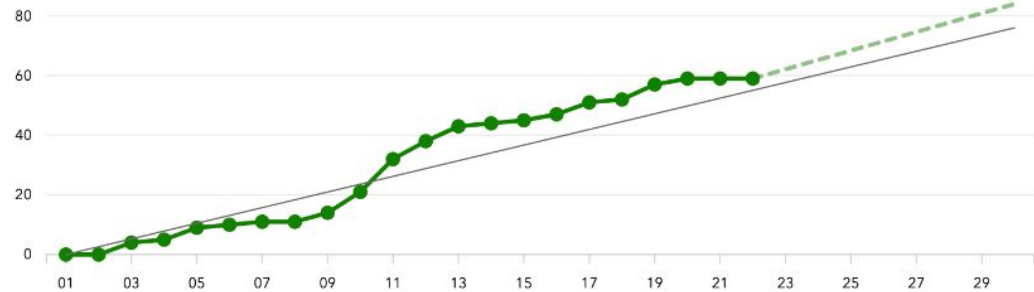
Velocity Jason Rhoades

RELEASES

Target:

R30D

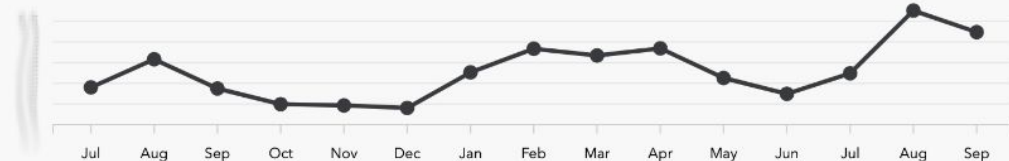
Current Month Projection ↑ 12% over target



completed

6 days to complete releases

Release Velocity Monthly History



PR MERGES

Target:

R30D

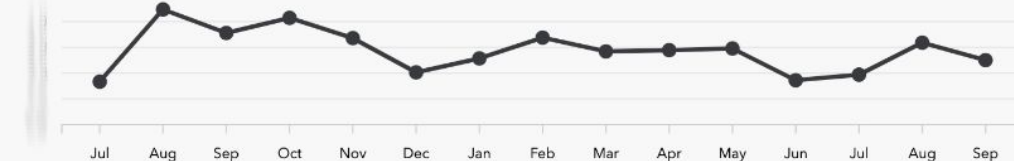
Current Month Projection ↓ 16% under target



completed

6 days to complete PR merges

PR Merge Velocity Monthly History



BEST PRACTICES

LIMIT JUMBO PRs

Less than 25% of PRs should contain more than 100 lines of code.

NEEDS IMPROVEMENT



SELF SERVE MATURITY

Average SSM level for all capabilities weighted by number of releases

DOING GREAT



Operational Excellence

Output Metric 1

Output Metric 2

Output Metric Hierarchy Browser

Input Metric 1

Input Metric 2

Input Metric Hierarchy Browser

Asset-level Details

Dashboard

Budgets

Query Builder

Spend Forecasting

Cross-charge Contracts 10

Waste Exceptions 25

Savings Details

Cloud Budgets

Digests Configuration

Instances Cost Average

Scopes Configuration

Amortization Targets

Reports

Support

Admin

Manager

Select Scope

MONTH TO DATE

\$

as of 09/21/2024 15:00 UTC

PROJECTED MONTHLY COST

\$

45% higher than last month

BUDGET

\$

76% over budget

ENTITY

Entity 1

SEPTEMBER TO DATE

\$

SEPTEMBER PROJECTION

\$

AUGUST TOTAL

\$ 47%

SEPTEMBER BUDGET

\$ 118%

CSV Download

LAST 7 DAYS

\$

09/14/2024 to 09/20/2024

PREVIOUS WEEK

\$

09/07/2024 to 09/13/2024

WOW

-26%

ENTITY

Entity 1

LAST 7 DAYS

\$

PREVIOUS WEEK

\$

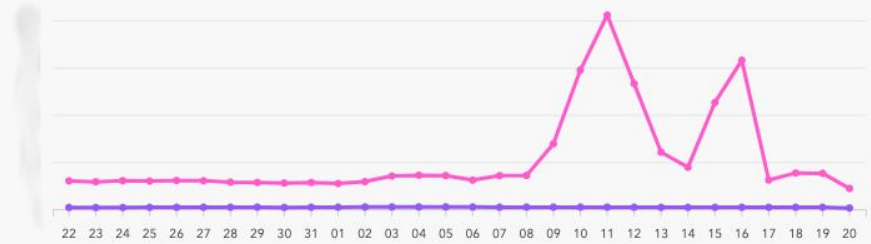
WOW

-27%

CSV Download

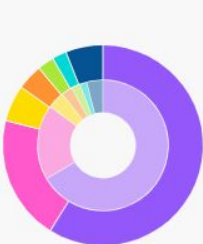
TOTAL DAILY COST (Last 30 days)

Line



COST BY SERVICES | Environments

Weekly



SERVICES	LAST 7 DAYS	PREVIOUS WEEK	WOW
AmazonEC2	59%	67%	-35%
	20%	19%	-20%
	6%	4%	1%
	4%	3%	11%
	3%	2%	-9%
AmazonDynamoDB	2%	2%	-1%
	6%	4%	11%

INTERESTING CHANGES



LAST 14 DAYS (14 items)

ENTITY	OPERATION	DAY	COST	AVE.	DIFF.
Cloudbudget DevX Production	RunInstances	09/12/2024			
Devportal Project DevX Produ	RunInstances	09/12/2024			
Cloudbudget DevX Production	RunInstances	09/17/2024			

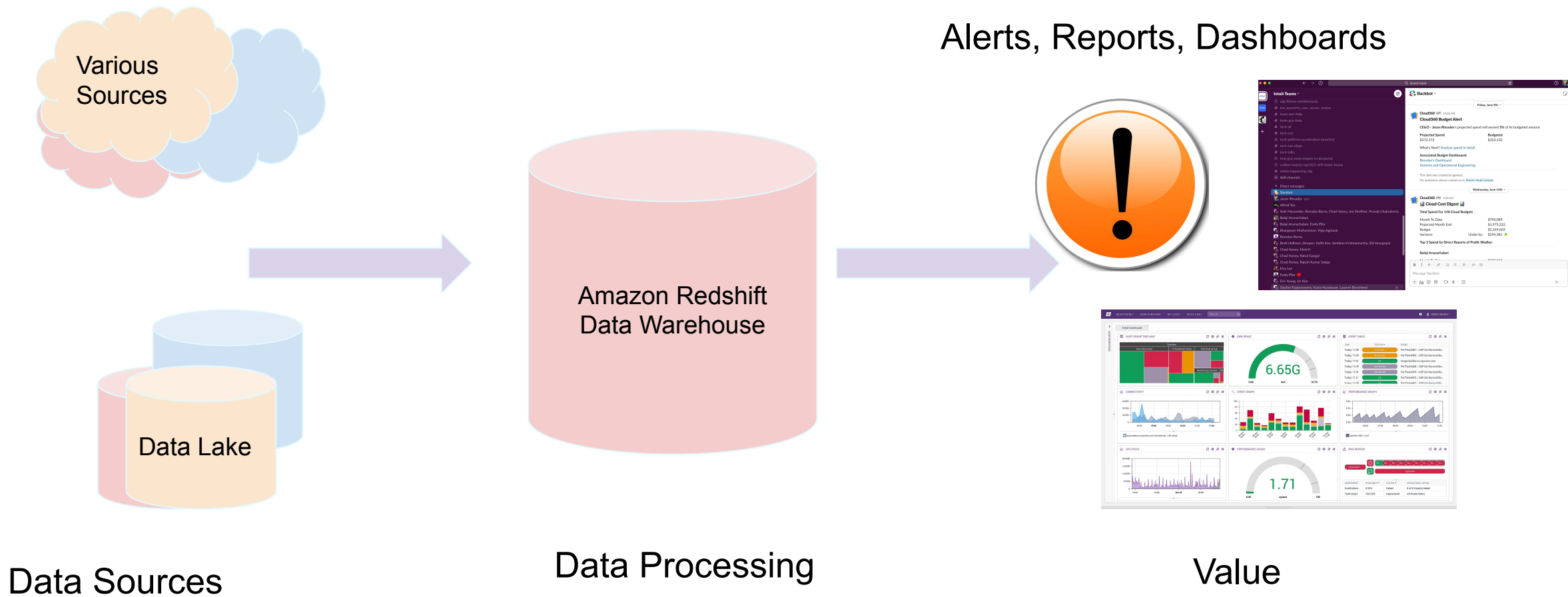
SAVING OPPORTUNITIES

No saving opportunities found.

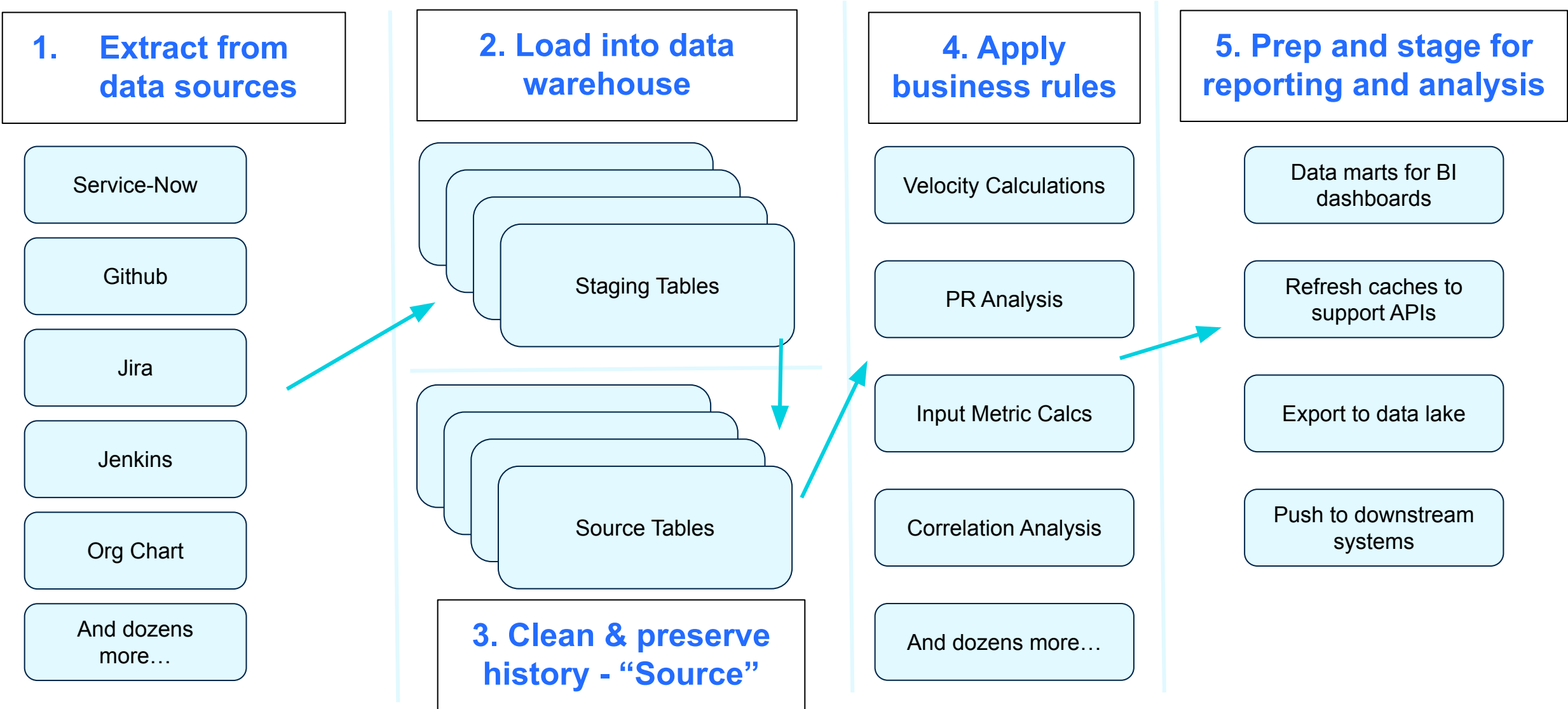
Data Foundations

High Level Data Journey

We bring all the data together, allowing us to cook up any desired metric



Detailed Data Flow

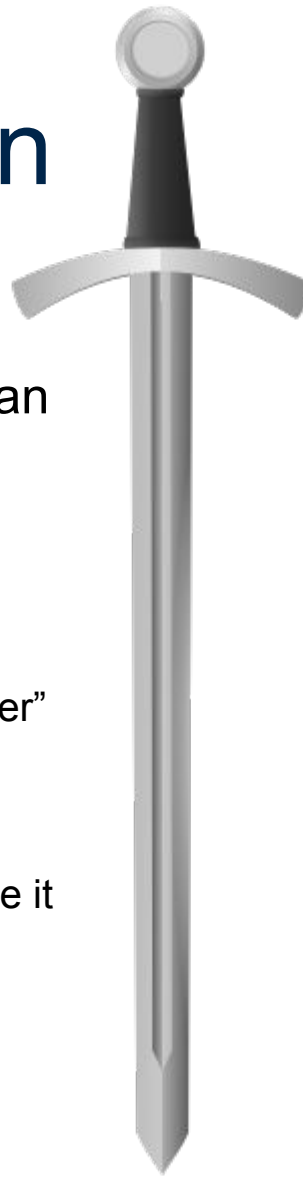


Data Democratization

Challenges

Opening up data for the whole organization can be perilous.

- ◆ With access to the raw data, teams become free to author their own metrics, with potentially leads to different nightmare scenarios-
 - “Your numbers don’t match ours, and we like ours better”
 - “The data you gave us must be wrong because our numbers don’t make sense”
 - (From a customer) - “Your dashboard is wrong because it doesn’t match Team X’s dashboard”
- ◆ As teams consume data in new ways, it is critical reasonable boundaries have been established to prevent these downsides.



Benefits

Getting more eyes and minds on the data can reap benefits.

- ◆ It’s not reasonable to expect one small team to conceive and solve for all use cases. Increasing the population distributes this responsibility.
 - In some cases teams are able to self-serve for their unique case, thus not consuming resources from the central team
 - Distributed teams have great flexibility to change how they operate and conduct local experiments that would be too costly to do enterprise-wide.
 - Successful testing of a hypothesis at small scale and be brought back to the central team, potentially becoming an enterprise-wide capability

Democratized data can bring powerful benefits if wielded carefully

Communications and Driving Action

Approach Right-Sizing to Priority

- Dev teams continually face pressure to deliver in (at least) 4 areas:
 - Innovation/Growth - build and deliver new features
 - Security/Compliance - patch/fix to meet latest standards
 - Operations - Fix bugs, manage incidents, scaling, support
 - Efficiency/Cost - ensure systems are economically hygienic and spend is on track
- We should expect the amount of focus and attention given to each space to align to the prioritization balance set by leadership.
- Our goal isn't to have people chase everything we find for them - instead, to ensure they've made optimized decisions in their allocation of resources against priorities. And that nobody is ever surprised.

Strategy by DPE Domain

Velocity

This is a focus area at present.

In addition to the dashboards and supporting toolsets, regular Slack messages are distributed indicating status.

Regular reviews at the leadership level keep the focus.

Operational Excellence

These domains are operationally mature but the deeper-peering business intelligence components are new.

With existing mechanisms to alert teams in real time to urgent matters, this space can be more passive and communicate via dashboards.

A challenge is the breadth of metrics, so prioritizing the areas needing most attention is key.

Hosting Costs

This space is quite mature and stable.

Slack budget alerts are accompanied by a rich set of dashboards and workflows.



Dev360 APP 10:00 AM



Dev360 Digest for Jason Rhoades



One or more of your velocity targets is at risk for this month.



Release Velocity

Monthly Target:

MTD Release Count:

Projected Release Count:  (118%)

Your team needs to make  more releases this month in order to achieve your monthly goal.



PR Merge Velocity

Monthly Target:

MTD Merge Count:

Projected Merge Count:  (93%)

Your team needs to merge  more PRs this month in order to achieve your monthly goal.

What's Next? [Analyze metrics in detail.](#)

Questions? Please contact us in [#cmtty-development-velocity](#).

Q&A

Thank you

