



# The I/O of DevOps Solving the Problem of Information Silos

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# Overview

Intro

How to “DevOps” your data

Where do we go from here?

# Intro



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# Overview

- \$26.5 billion in revenue is lost each year from IT downtime
- 78% of downtime costs relate to reduced worker productivity
- Missed sales opportunities and lost revenue make up 17% of losses from downtime



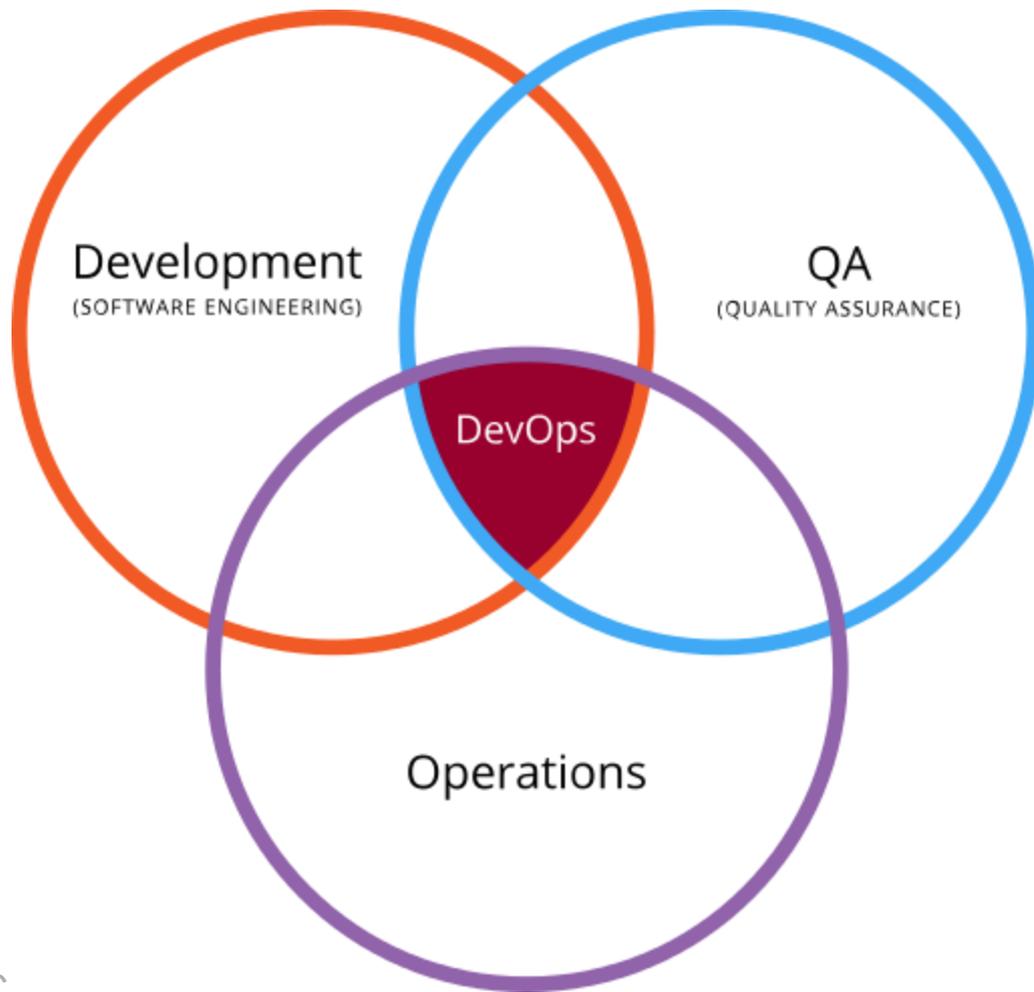
# The challenge

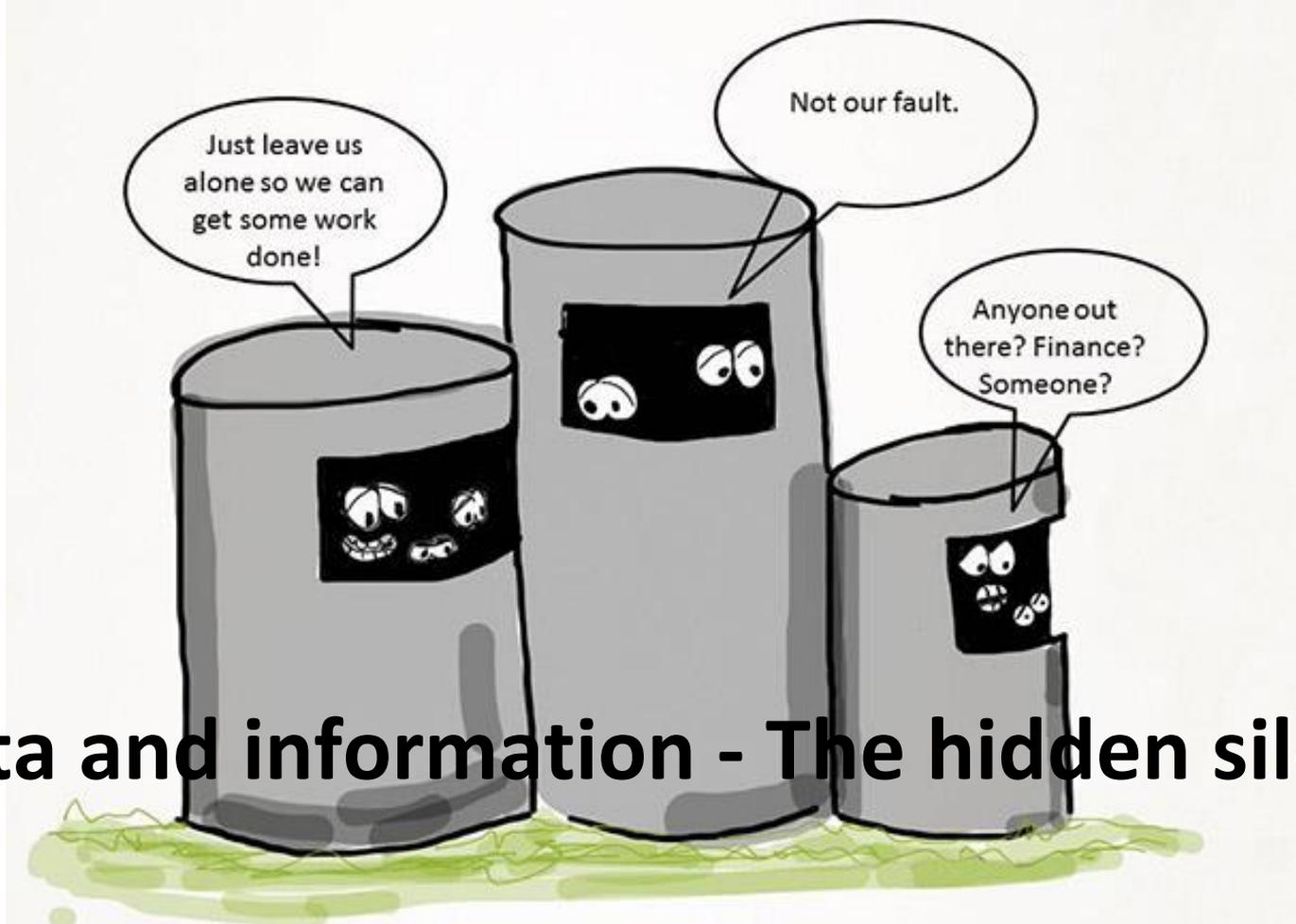
- Massive data growth
- Monitoring tool proliferation
- Increasing information silos

## *Too Many Monitoring Tools*

65% of enterprises have 10+ monitoring tools, despite the fact that siloed tools with limited integration lead to poor end-user experience, reactive performance management, long MTTR, and extensive investments to procure and manage the tools.







# Data and information - The hidden silos

“...for decades we have ended up with silos of information...”

- The DevOps Handbook



Late night incident calls  
made worse by data silos

# Key Steps to DevOps Your Data

1. Determine data sources and reduce duplications
2. Centralize key data
3. Uplevel your data

# 1. Determine Data Sources and Reduce Duplications

- Identify key point solutions
- Single source of monitoring data for each monitor type
- Eliminate duplicate sources of data for the same information where possible

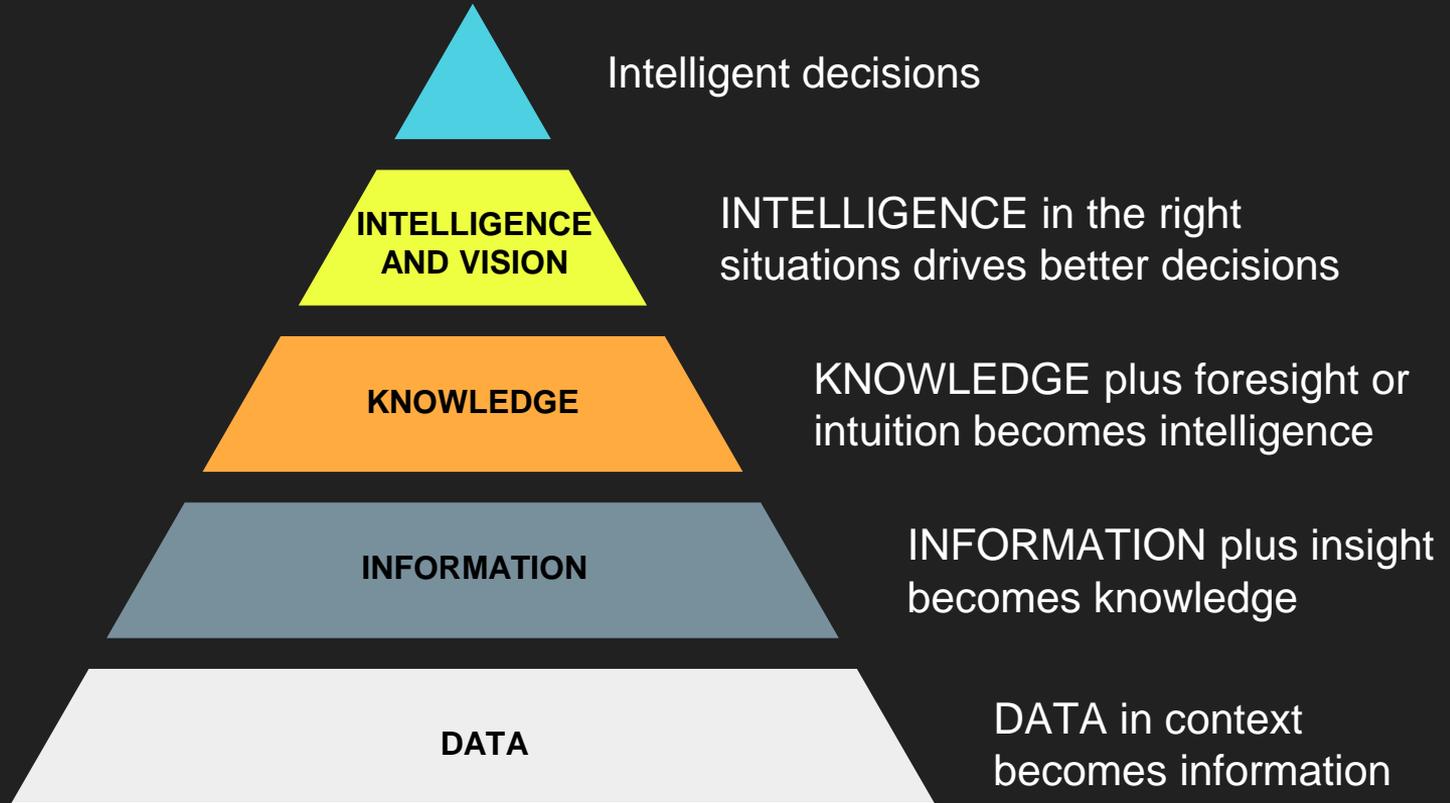
## 2. Put all your data in one place

- Choose your tools carefully
- Leverage big data
- Evaluate and select appropriate data aggregation tool
- Easier said than done

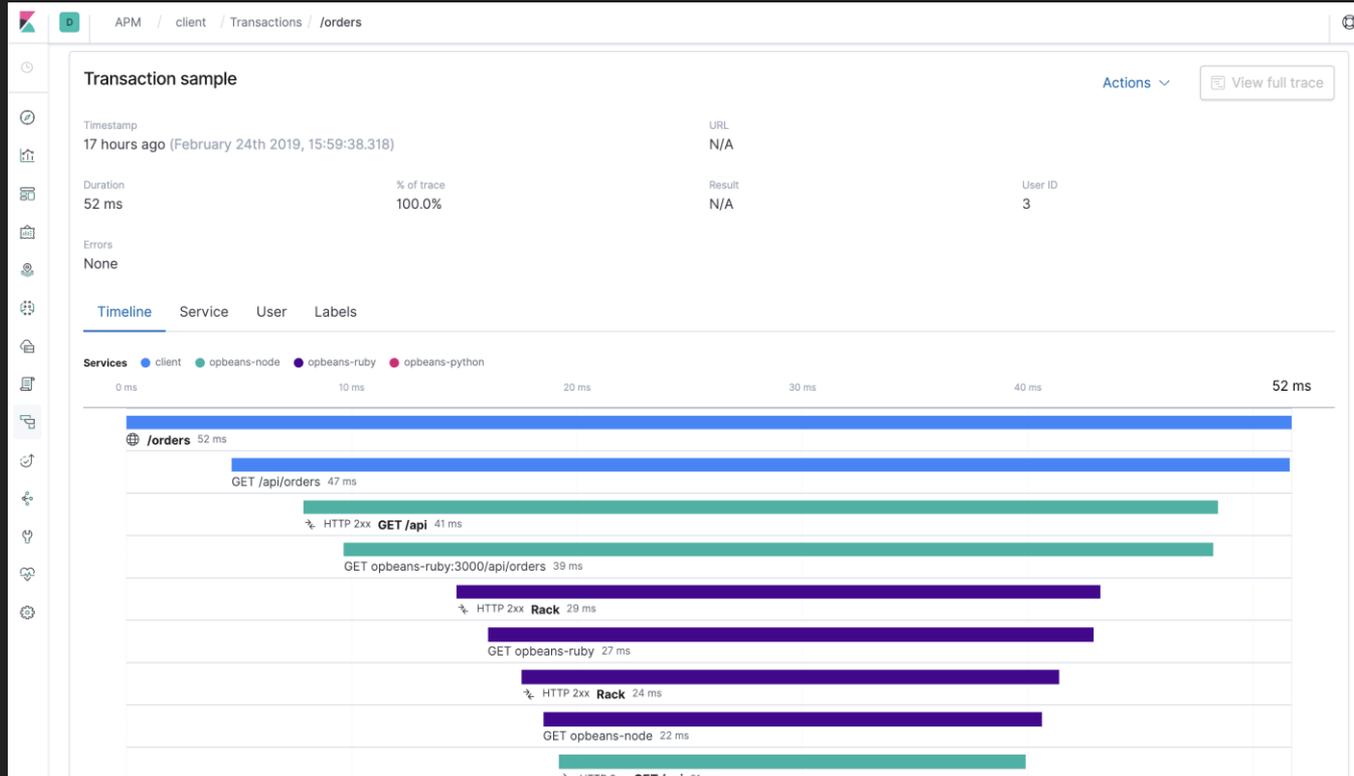
# Centralize and Manage Data Through Access Controls

- The more disparate data sources brought together the better
- Transparency is good, but manage access controls
  - Business unit data may be limited access
  - Tech and business data may need controls

# 3. Uplevel your data



# Distributed Tracing



# Tools Tools Tools

- Splunk
- Moogsoft
- Datadog
- HP Omniview
- IBM Tivoli

Build culture of collaboration - tools  
alone do not make you “DevOps”

# Gotchas

- Stay away from point solutions (when possible)
- Avoid vendor lock-in
- Ensure you have access to your data
- Ensure your tools have complete APIs for automation and integration

# Where do we go from here?

- Identify and reduce any duplicative data
- Reduce point solutions where possible
- Determine a central data collection and presentation engine

# Thank you



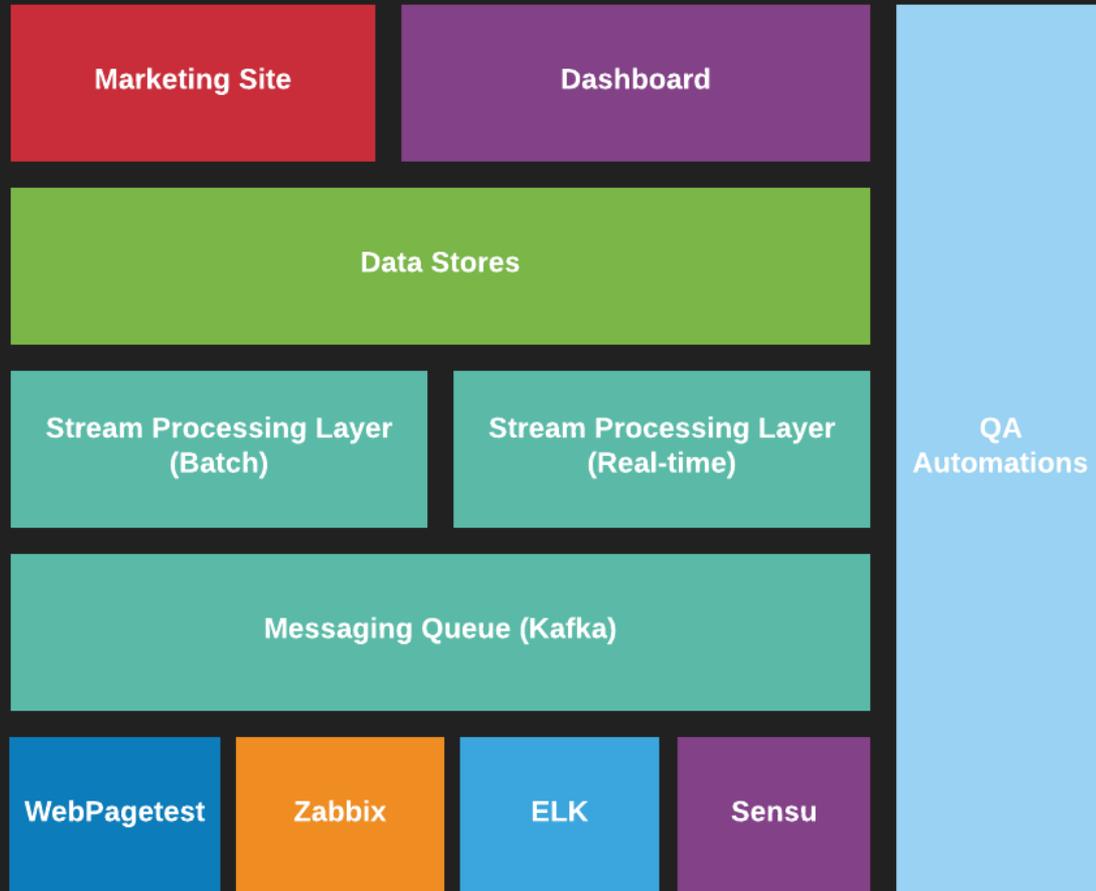
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# Appendix

# Conceptual Architecture

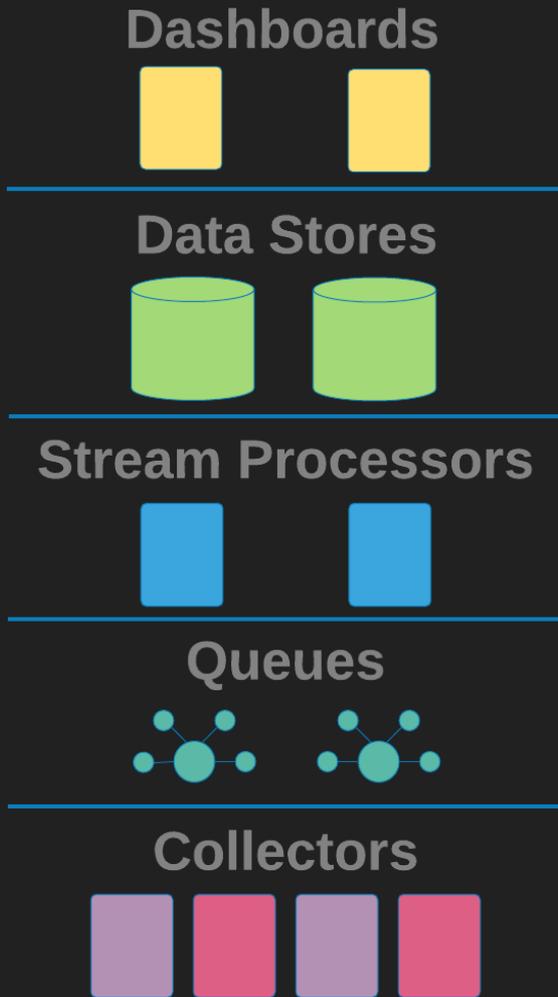


# Data Flow Path



# Component Architecture

- The components between each corresponding conceptual layer are loosely coupled and logically separate and run on their own stack of extensible containers/VMs
- Each layer has redundant components and is extensible both horizontally & vertically
- This architecture will support high availability and elastic capacity based on the run-time needs. We can support both simple individual customers with a small foot-print and medium-scale customers based on their growing needs



# Deployment Architecture

