

Which Metrics Matter in DevRel?

Subjectivity Applied to Objectivity

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Head, Worldwide Developer Marketing
Amazon Web Services



@DevRelChap



Pivotal™





Amazon Web Services




Compute

-  **EC2**
Virtual Servers in the Cloud
-  **EC2 Container Service**
Run and Manage Docker Containers
-  **Elastic Beanstalk**
Run and Manage Web Apps
-  **Lambda**
Run Code in Response to Events

Storage & Content Delivery

-  **S3**
Scalable Storage in the Cloud
-  **CloudFront**
Global Content Delivery Network
-  **Elastic File System** PREVIEW
Fully Managed File System for EC2
-  **Glacier**
Archive Storage in the Cloud
-  **Storage Gateway**
Integrates On-Premises IT Environments with Cloud Storage

Database

-  **RDS**
MySQL, Postgres, Oracle, SQL Server, and Amazon Aurora
-  **DynamoDB**
Predictable and Scalable NoSQL Data Store
-  **ElastiCache**
In-Memory Cache
-  **Redshift**
Managed Petabyte-Scale Data Warehouse Service

Networking

-  **VPC**
Isolated Cloud Resources
-  **Direct Connect**

Developer Tools

-  **CodeCommit**
Store Code in Private Git Repositories
-  **CodeDeploy**
Automate Code Deployments
-  **CodePipeline**
Release Software using Continuous Delivery

Management Tools

-  **CloudWatch**
Monitor Resources and Applications
-  **CloudFormation**
Create and Manage Resources with Templates
-  **CloudTrail**
Track User Activity and API Usage
-  **Config**
Track Resource Inventory and Changes
-  **OpsWorks**
Automate Operations with Chef
-  **Service Catalog**
Create and Use Standardized Products




Security & Identity

-  **Identity & Access Management**
Manage User Access and Encryption Keys
-  **Directory Service**
Host and Manage Active Directory
-  **Trusted Advisor**
Optimize Performance and Security


Analytics

-  **EMR**
Managed Hadoop Framework
-  **Data Pipeline**
Orchestration for Data-Driven Workflows
-  **Kinesis**

Mobile Services

-  **Cognito**
User Identity and App Data Synchronization
-  **Device Farm**
Test Android, Fire OS, and iOS apps on real devices in the Cloud
-  **Mobile Analytics**
Collect, View and Export App Analytics
-  **SNS**
Push Notification Service

Application Services

-  **API Gateway**
Build, Deploy and Manage APIs
-  **AppStream**
Low Latency Application Streaming
-  **CloudSearch**
Managed Search Service
-  **Elastic Transcoder**
Easy-to-use Scalable Media Transcoding
-  **SES**
Email Sending Service
-  **SQS**
Message Queue Service
-  **SWF**
Workflow Service for Coordinating Application Components

Enterprise Applications

-  **WorkSpaces**
Desktops in the Cloud
-  **WorkDocs**
Secure Enterprise Storage and Sharing Service
-  **WorkMail** PREVIEW
Secure Email and Calendaring Service

Largest Number Of Start-up Customers



Largest Number Of Enterprise Customers



Largest Number Of Public Sector Customers



What Metrics Matter in Developer Relations?

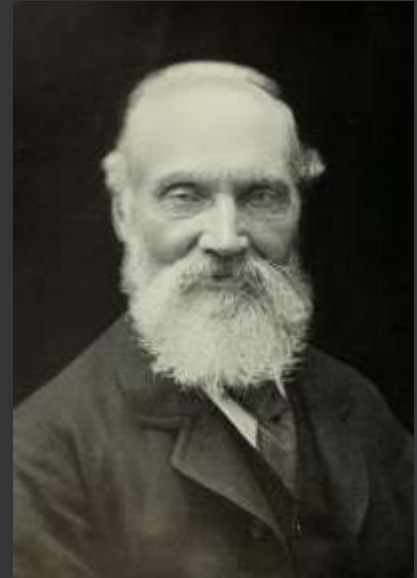
« If you can't **measure it**,
you can't **improve it** »

-Peter Drucker
Management Guru



« If you can't **measure it**,
you can't **improve it** »

-Lord Kelvin
William Thomson



« How do I know what
you are doing is making
a difference? »

-Your Manager





Adam Fitzgerald

@DevRelChap



What is your critical Developer Relations metric?
Asking for a friend 🤔 #DevXCon

27% Users: DAU/MAU

7% Love: Github Stars

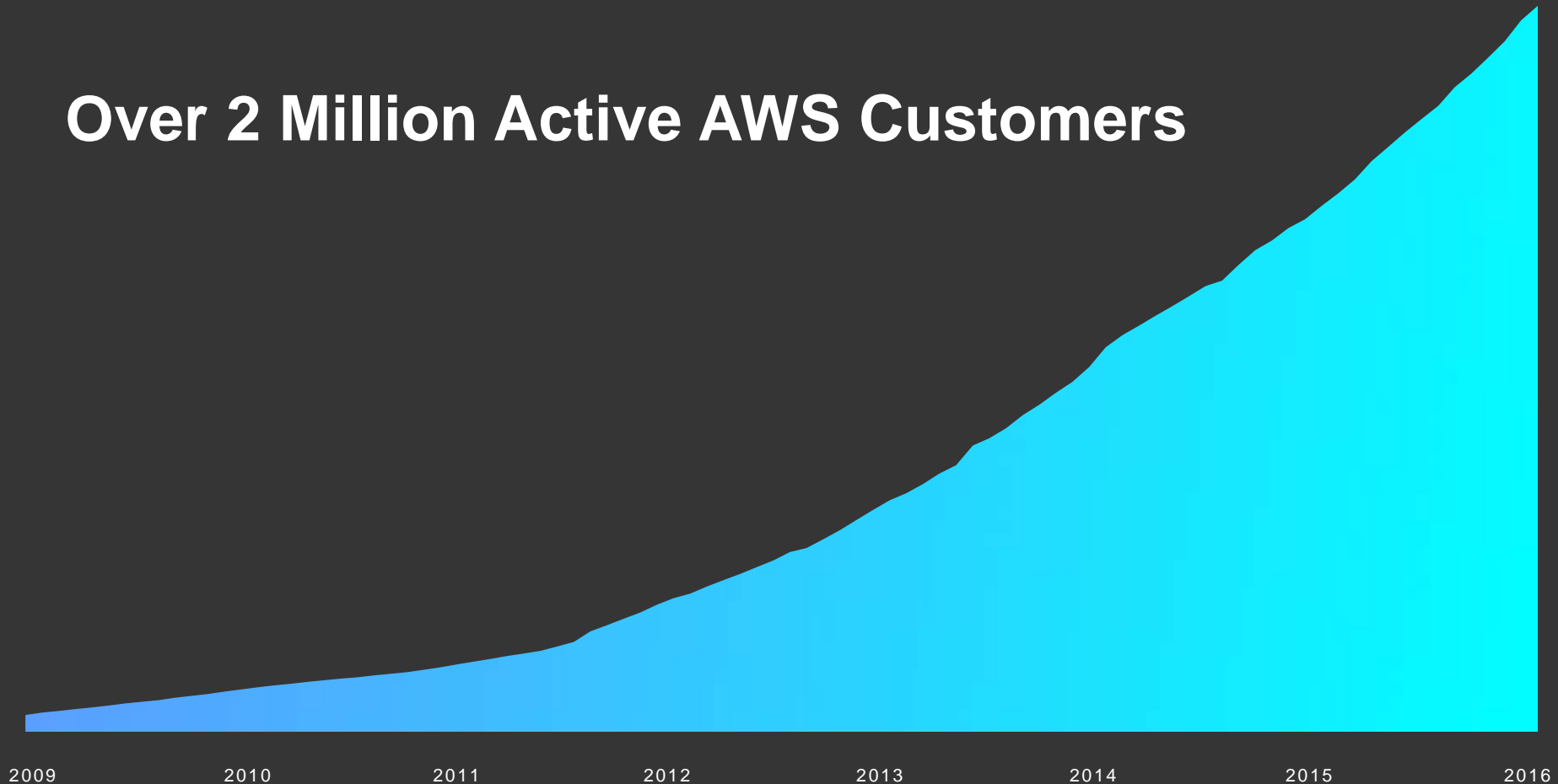
20% Volume: Unique Pageviews

46% Money: Conversion to Paid



Users: DAU/WAU/MAU

Over 2 Million Active AWS Customers



2009

2010

2011

2012

2013

2014

2015

2016

"Active customer" is defined as a non-Amazon customer with AWS account usage activity in the past month, including the free tier





**SILICON
VALLEY**

$$AU = \|\{id \mid \forall id \in Events\}\|$$



June, 9, 2014

#data-structure

#set-cardinality

#hyperloglog

Efficient way to calculate active Users

In analytics we like to track every interaction of a user with the system. Whenever a user interacts with our system we record an *event*. This *event* usually contains an *id* which can uniquely identify the user. This *id* can be a cookie, an IP address or a Vendor ID from an iOS App. **Active Users** is the number of unique users who interacted with the system. Active users are calculated over a time-period, e.g. **Monthly Active Users (MAU)**, **Weekly Active Users (WAU)** or **Daily Active Users (DAU)**. So when you want to calculate MAU, you would gather all the events in the last month and count the number of unique *ids*. This means that Active Users is the *cardinality* of the set of all the *ids* from these *events*.

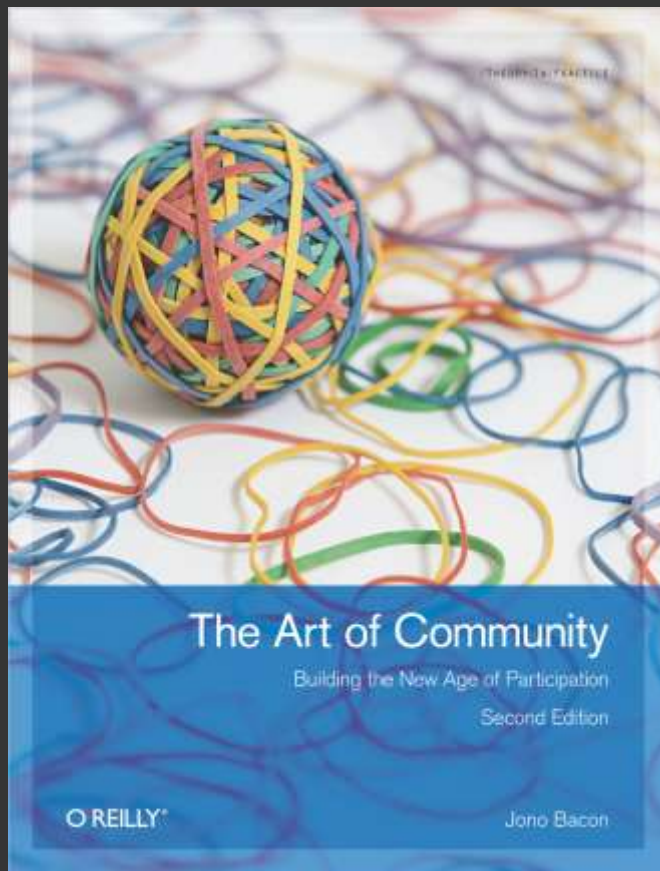
Perils of DAU/WAU/MAU

1. Externalities
2. Masking Churn
3. Wrong Event Source



Love GitHub Stars





OSS: Users vs Contributors vs Committers

Spring Community Population (Open Source)

★ **Key Ratios**

Core:Expert	20:1
Forum:Registered	10:1
Registered:Global	20:1



Population

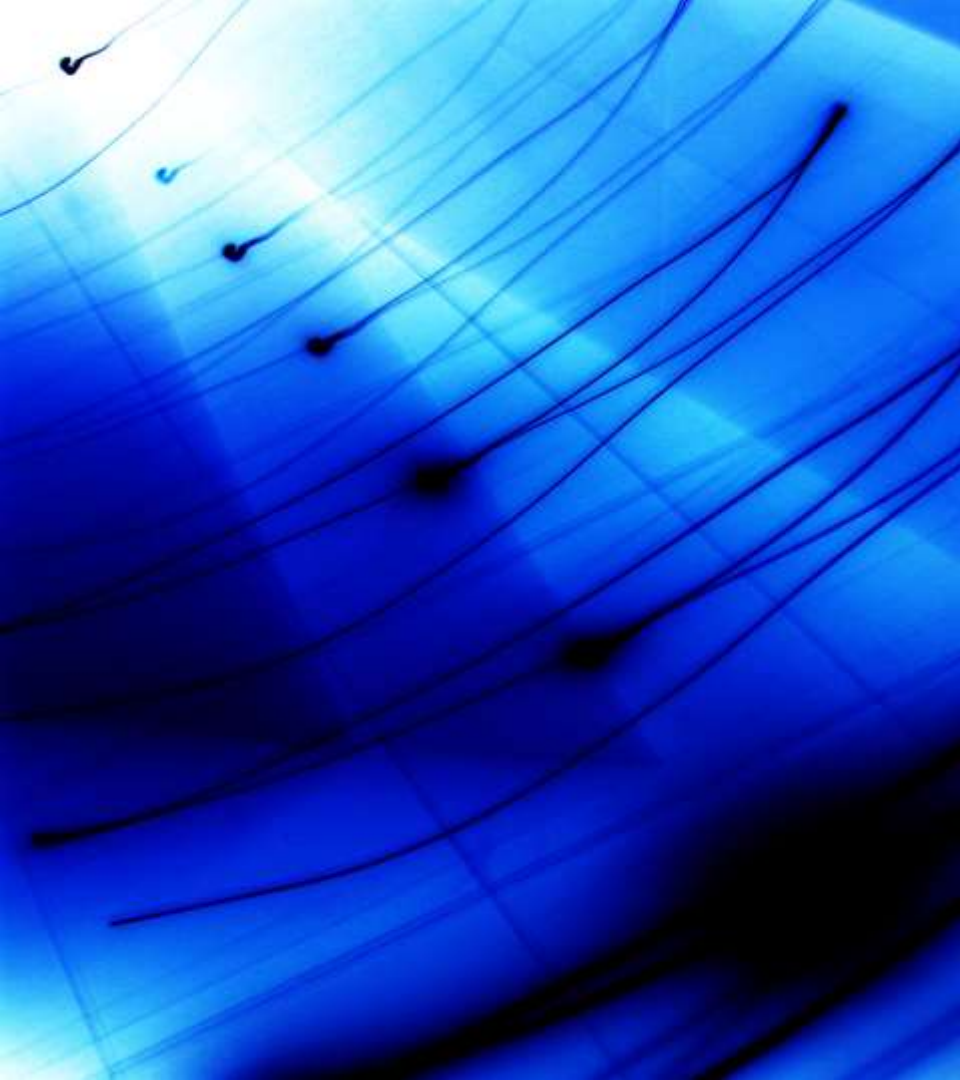
User base: 2,500,000

Subscribers: 125,000

Active: 12,000

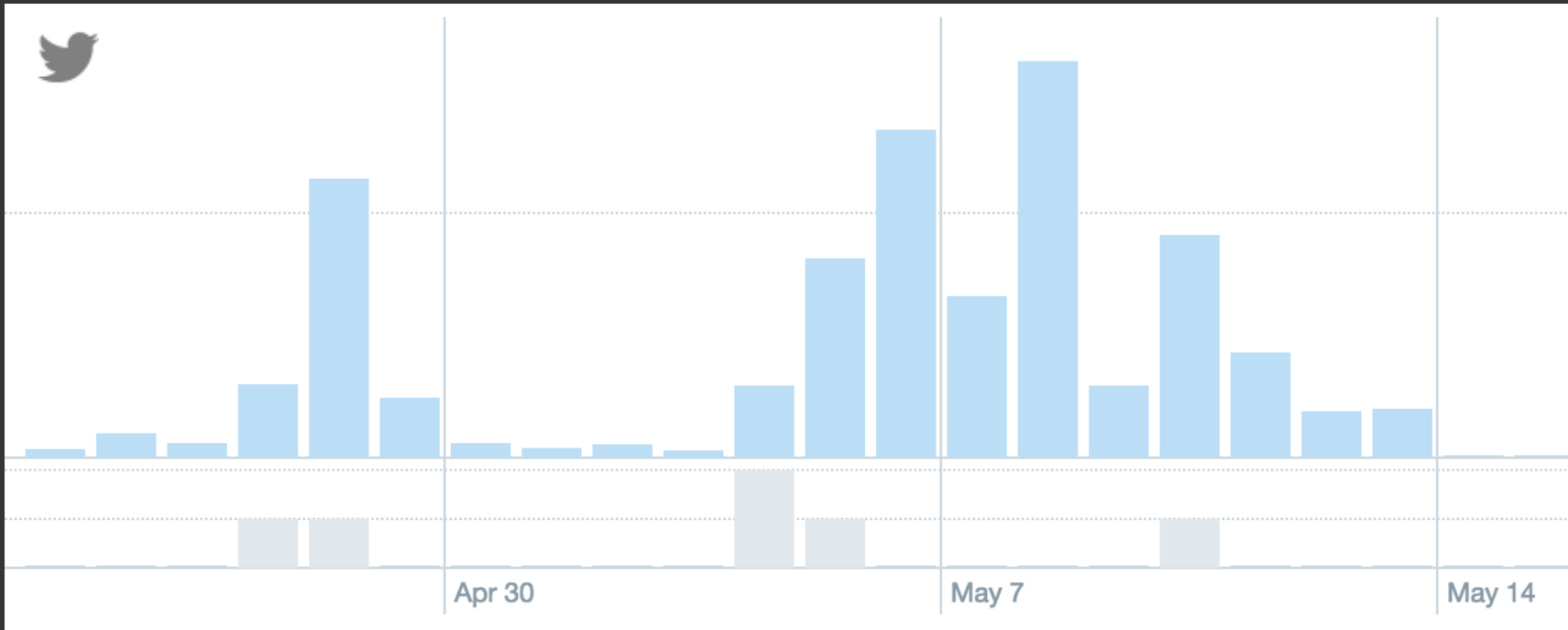
Answers: 400

Committers: 20



Volume

Unique PageViews
Impressions



What is your Unit of Measure?

$$EM = \sum_{i=1}^n \sum_{j=1}^m w_i M_{ij}$$



Money Conversion to Paid

What is your conversion event?



Conversion
Event



Conversion
Event

Natural Search



CLV

Conversion
Event

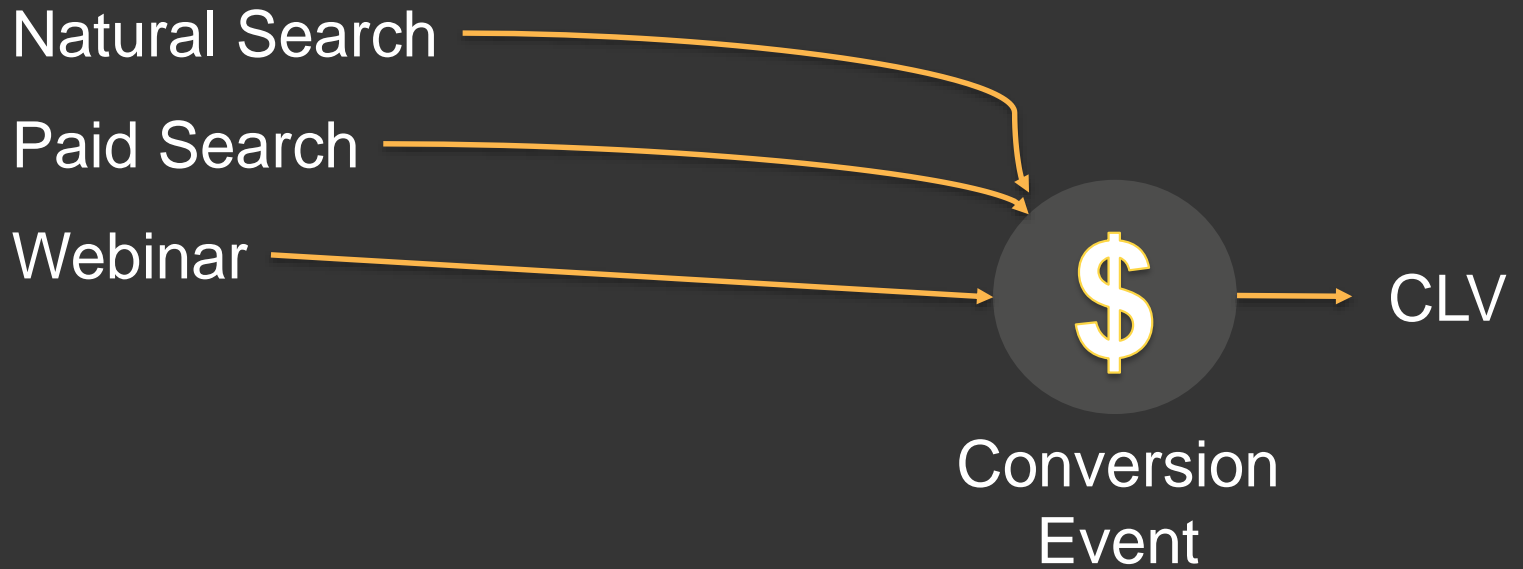
Natural Search

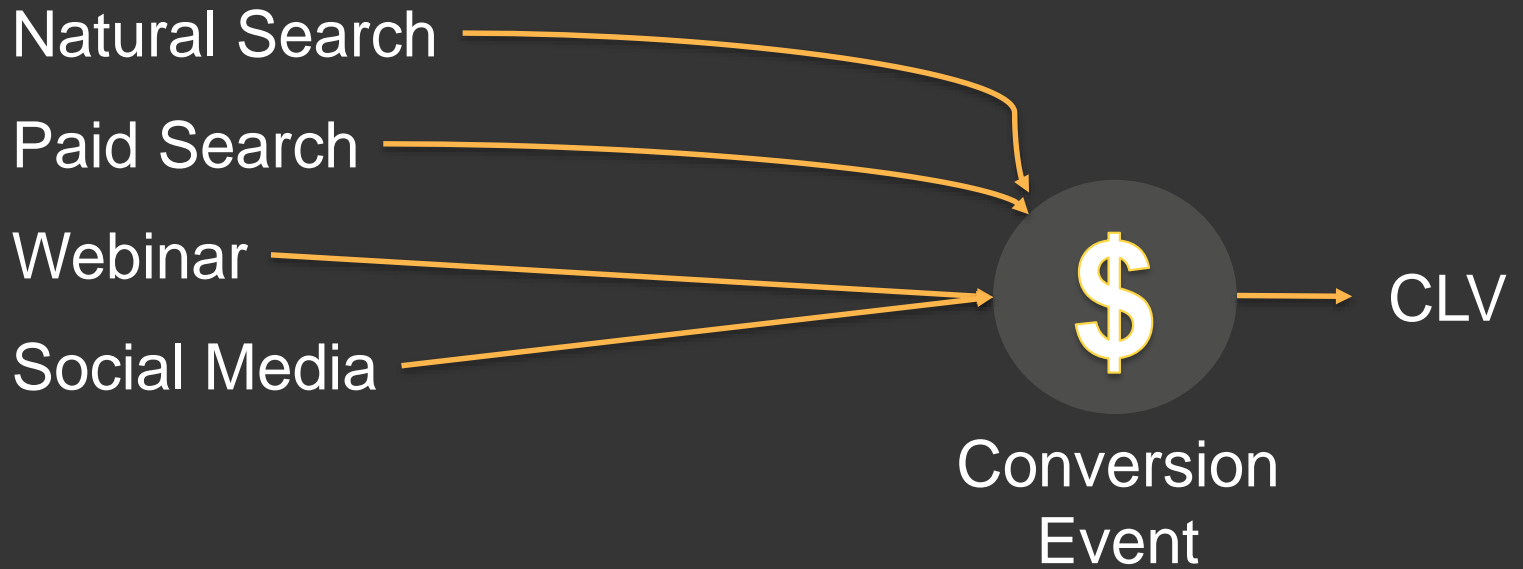
Paid Search

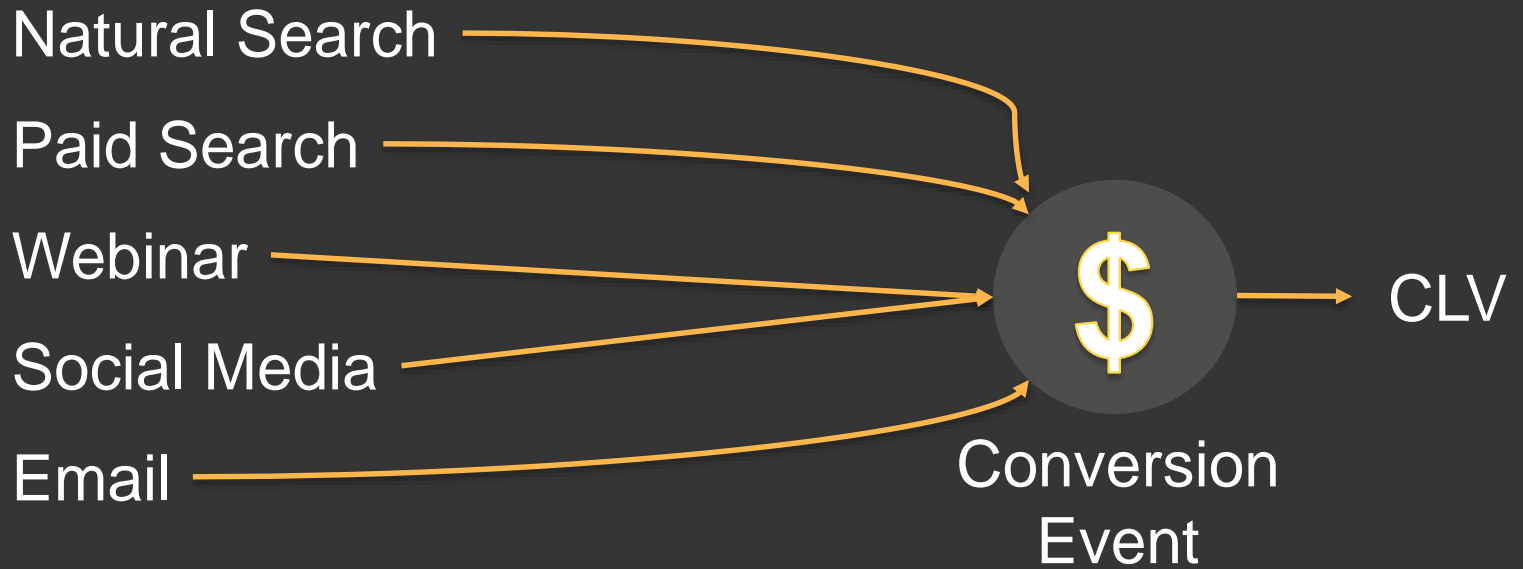


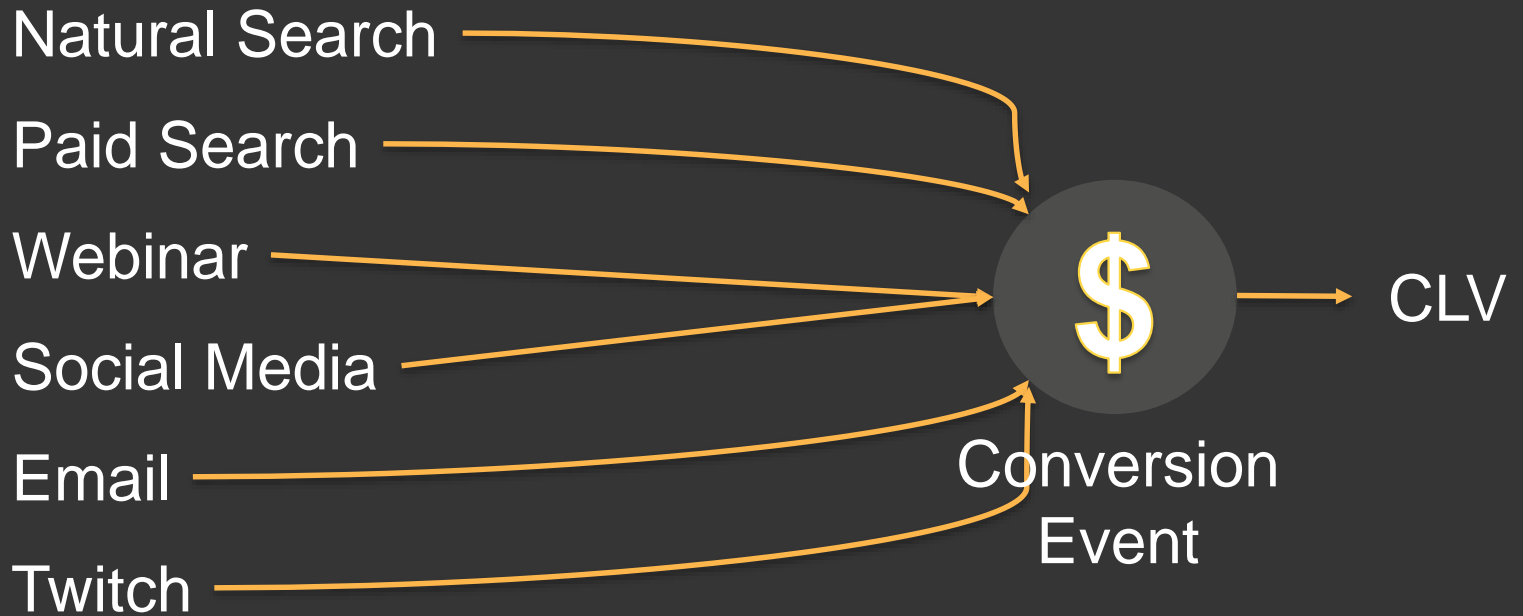
Conversion
Event

CLV









Natural Search

Paid Search

Webinar

Social Media

Email

Twitch



Conversion
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CLV

Conversion
Event

Natural Search

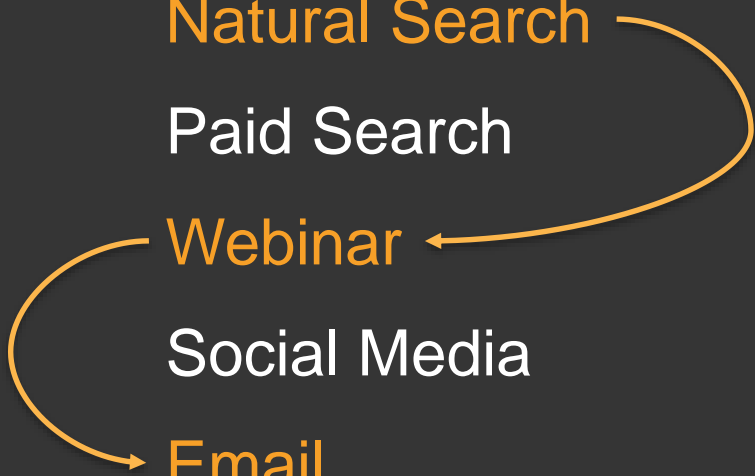
Paid Search

Webinar

Social Media

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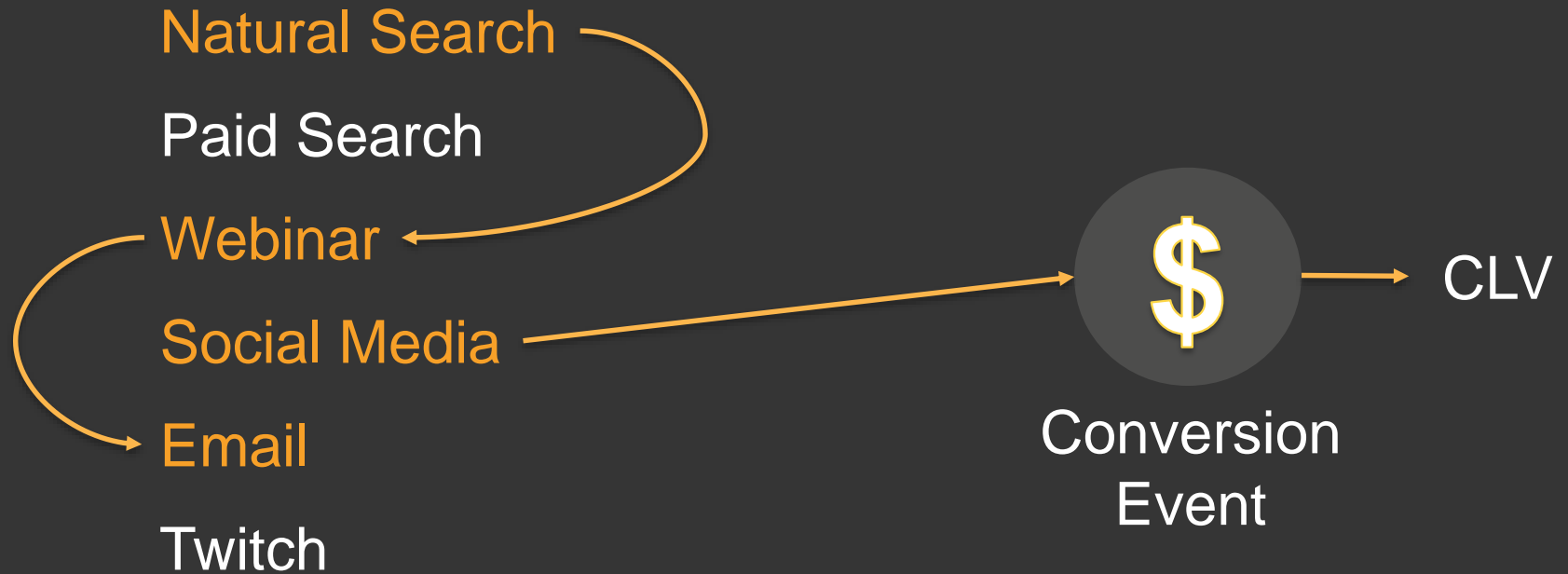
Twitch



Conversion
Event



CLV



Multi-touch Attribution Model

$$\log \left(\frac{p}{1-p} \right) = \sum_{i=1}^k \sum_{j=1}^c \beta_{ij} \times f_{ij}$$

What Metrics Matter in Developer Relations?

All of them!

**DOUGLAS
ADAMS**

THE ULTIMATE

HITCHHIKER'S

GUIDE

Thank you!

Adam FitzGerald



@DevRelChap