

Scaling Through Simplicity: How a 300 million user chat app reduced data engineering efforts by 70%

Joel Cumming
Kik Interactive



kik.



Kik Battles Facebook With Bots In The New Messaging Wars

Tech



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The Little Black Book of Billionaire Secrets

Kik Battles Facebook With Bots In The New Messaging Wars



Parmy Olson, FORBES STAFF 

I cover agitators and innovators in mobile. [FULL BIO](#) ▾

This story appears in the February 29, 2016 issue of Forbes. [Subscribe](#)



Ted Livingston uses a bot on Kik Messenger, the chat app he founded, to order lunch at the Bauer Kitchen restaurant in Waterloo, Canada. (Michelle Gibson For Forbes)

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How Kik Predicted The Rise of Chat Bots

The messaging app started working on bots years before its competitors. But can it beat the heavyweights of Silicon Valley?



Ted Livingston, founder of Kik. Credit: Aaron Vincent Elkaim

V3

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BOTS

Kik has stockpiled more than 20,000 bots in the chat platform 'arms race'

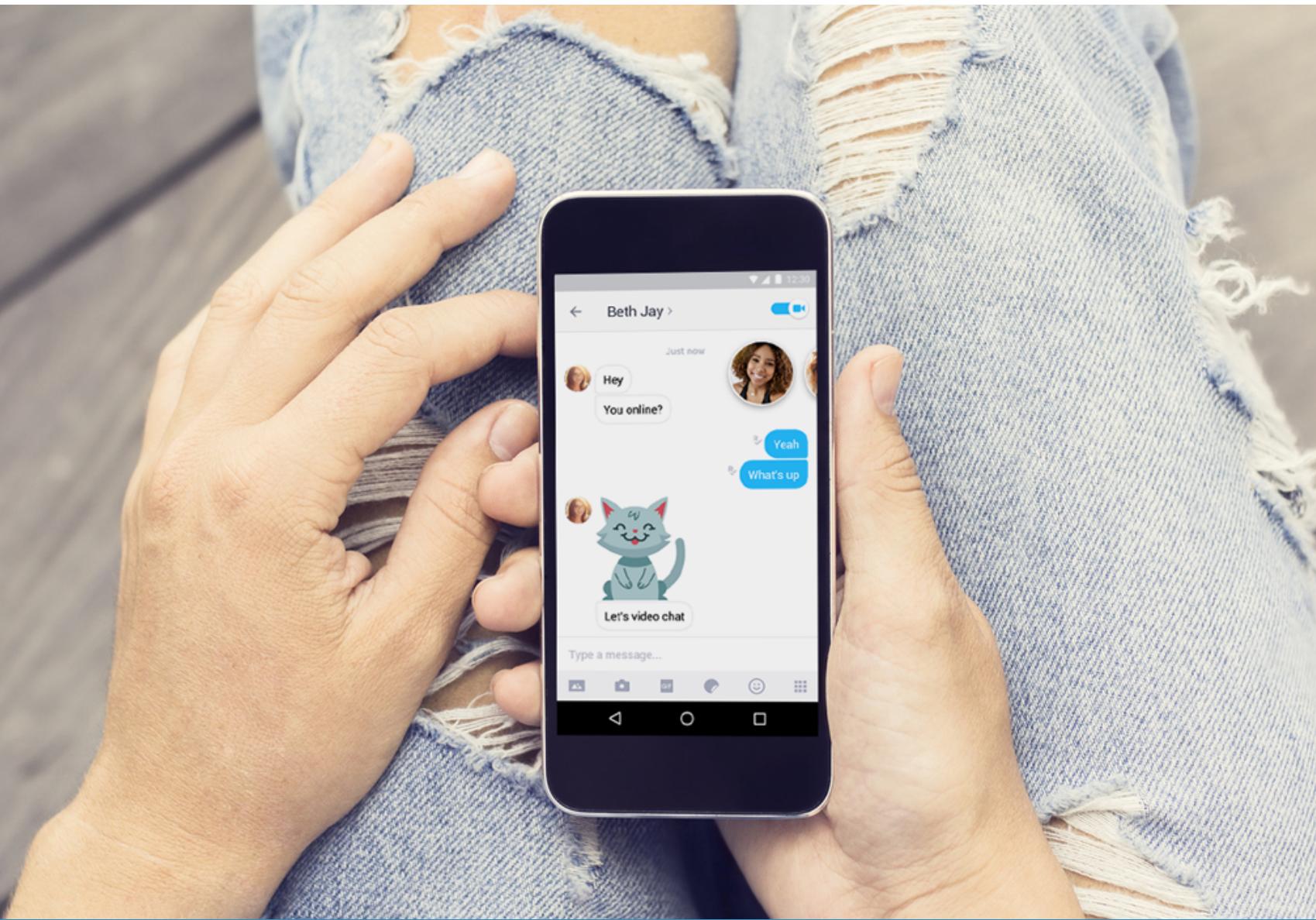
KHARI JOHNSON @KHARIJOHNSON AUGUST 3, 2016 9 AM



The Bot Shop, where users of the chat app Kik go to get featured bots, recently surpassed 110 bots, the chat app announced today. And you wouldn't know it by visiting the Bot Shop, but more than 20,000 bots have been made for the Kik platform.

Photo: Screenshots of the Kik Bot Shop. Credit: Kik





At Kik, we believe that
everyone has the right to
be curious.

Data should be available
to everyone and should
be super easy to use.

We have dashboards to
glance at, reports to
analyze, and a data lake
for exploration.

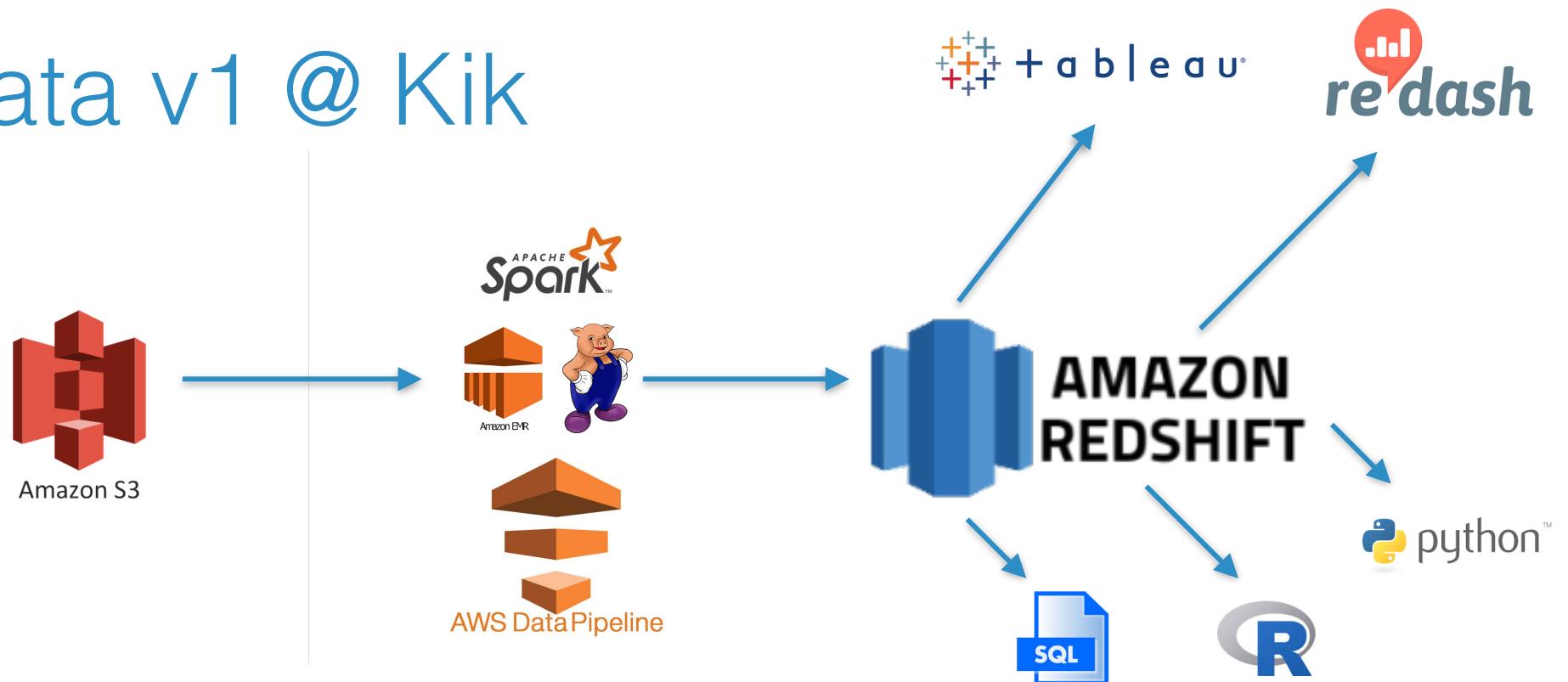
However, Kik is a startup
and we have to move
very quickly.

Moving quickly often
comes at the expense of
scalable data
engineering.

How can we compete with
Facebook and Google (and
their data teams) with a tiny
team and very little time to
master new tools?

Data v1 @ Kik

Data v1 @ Kik



Data Lake & Transformations

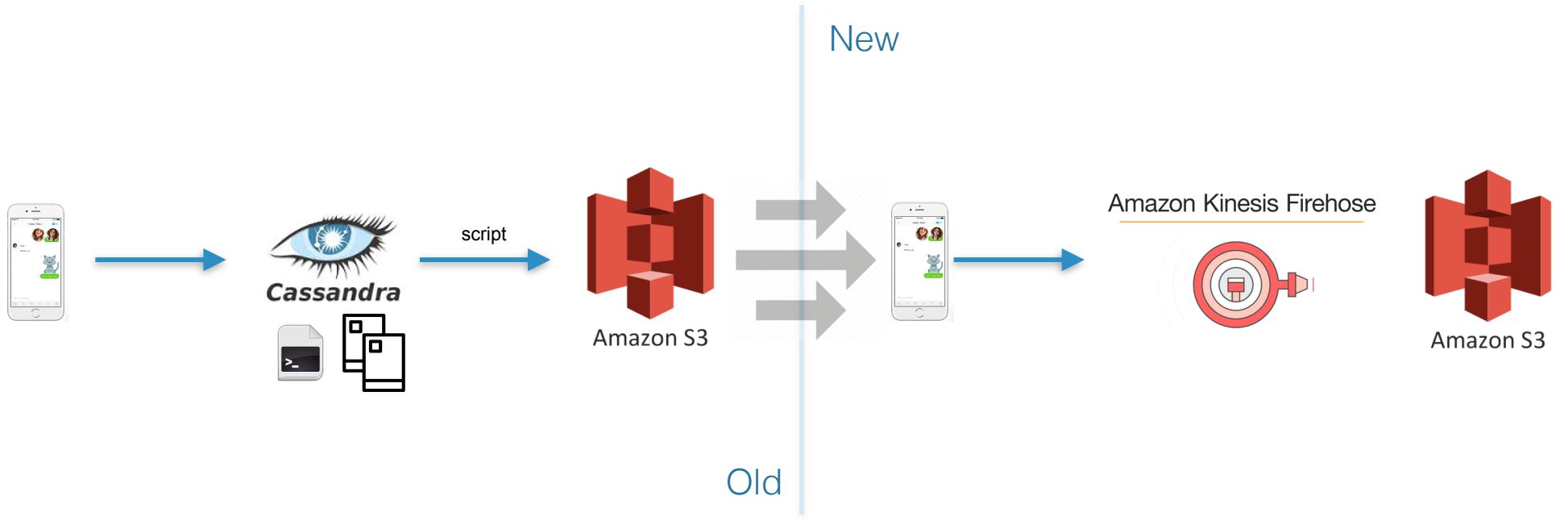
Exploration & Analysis

KPIs

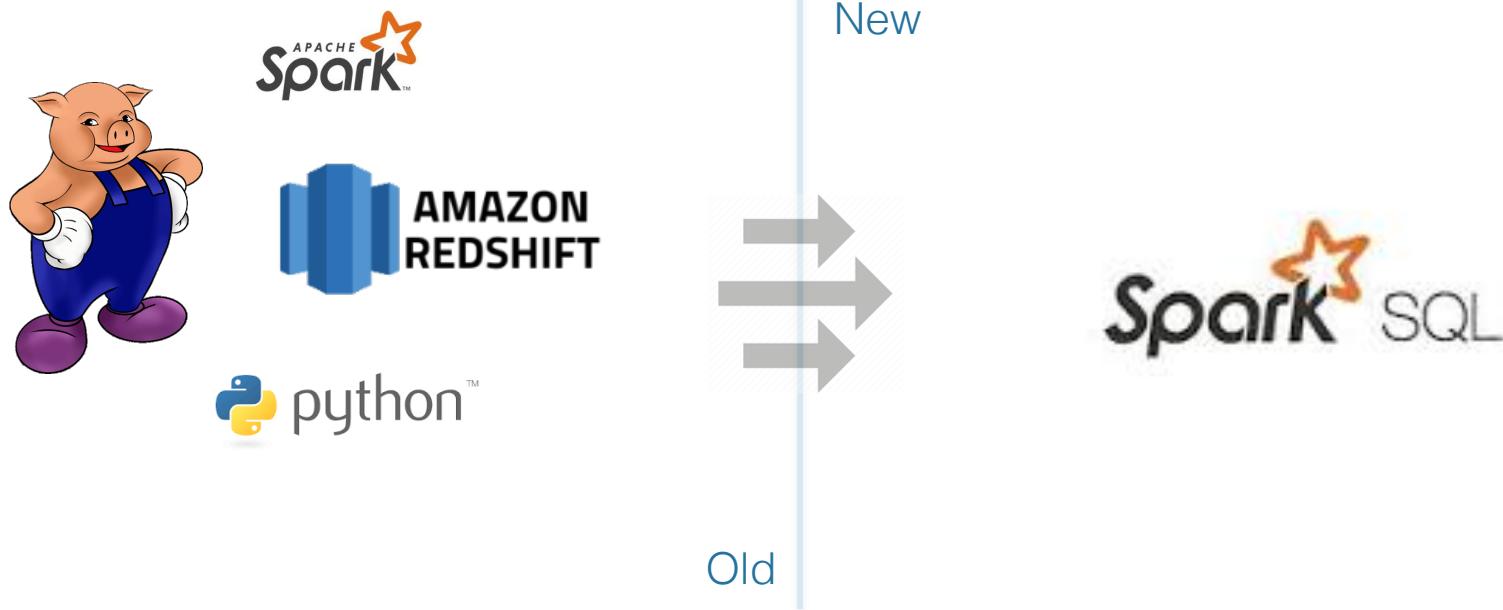
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We decided to make 8 changes

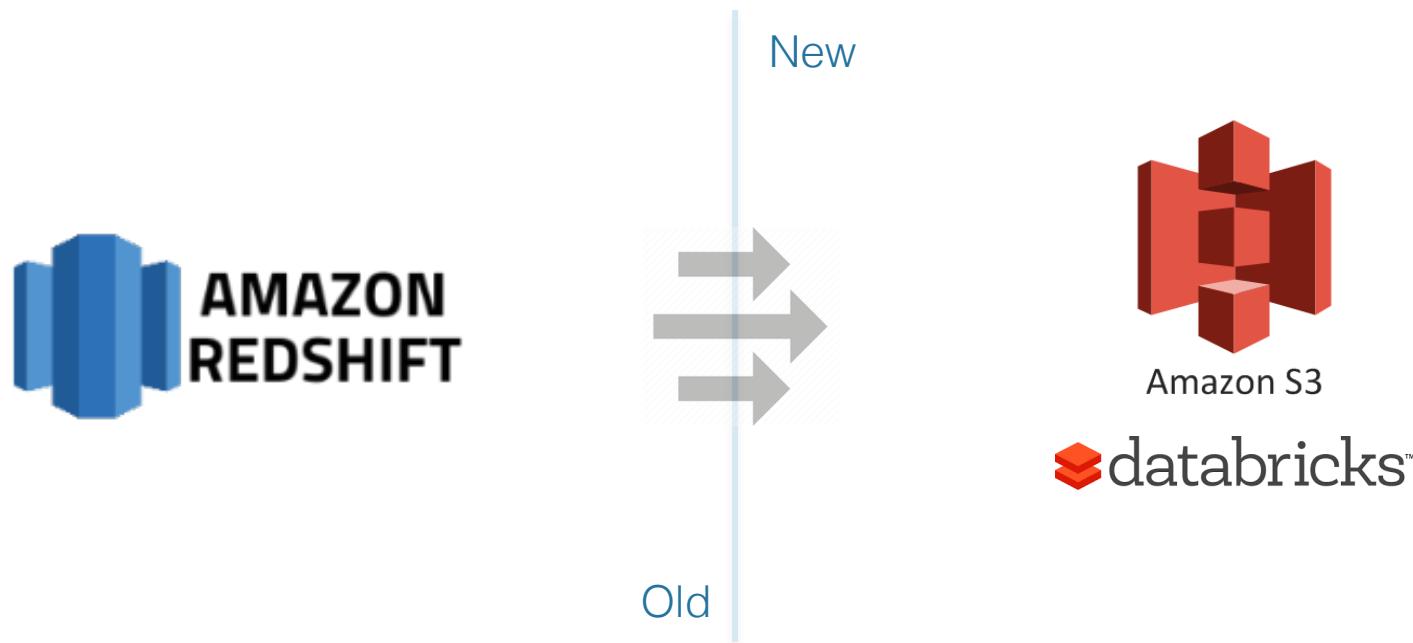
1. Streamline Data Collection via Kinesis Firehose



2. Standardize Transformations with Spark SQL



3. Build a Data Lake (Caspian) in s3



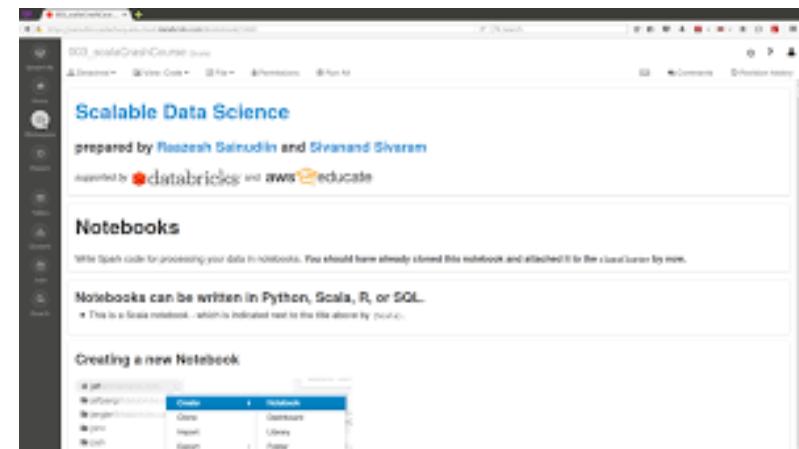
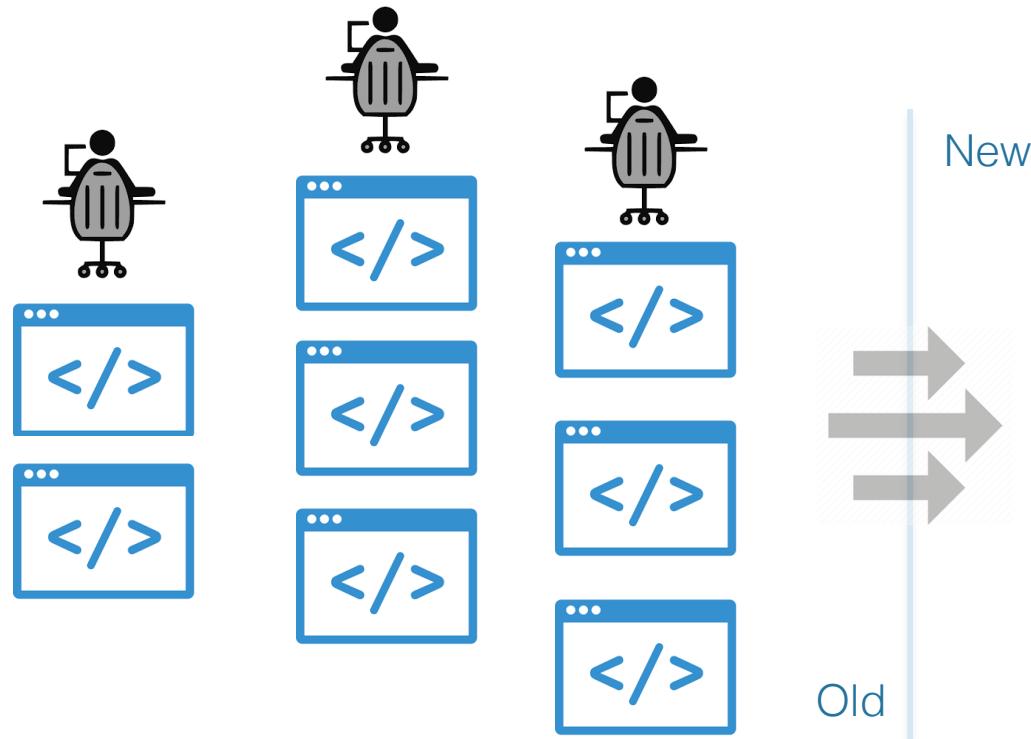
4. Move from EMR to Managed Spark



Amazon EMR



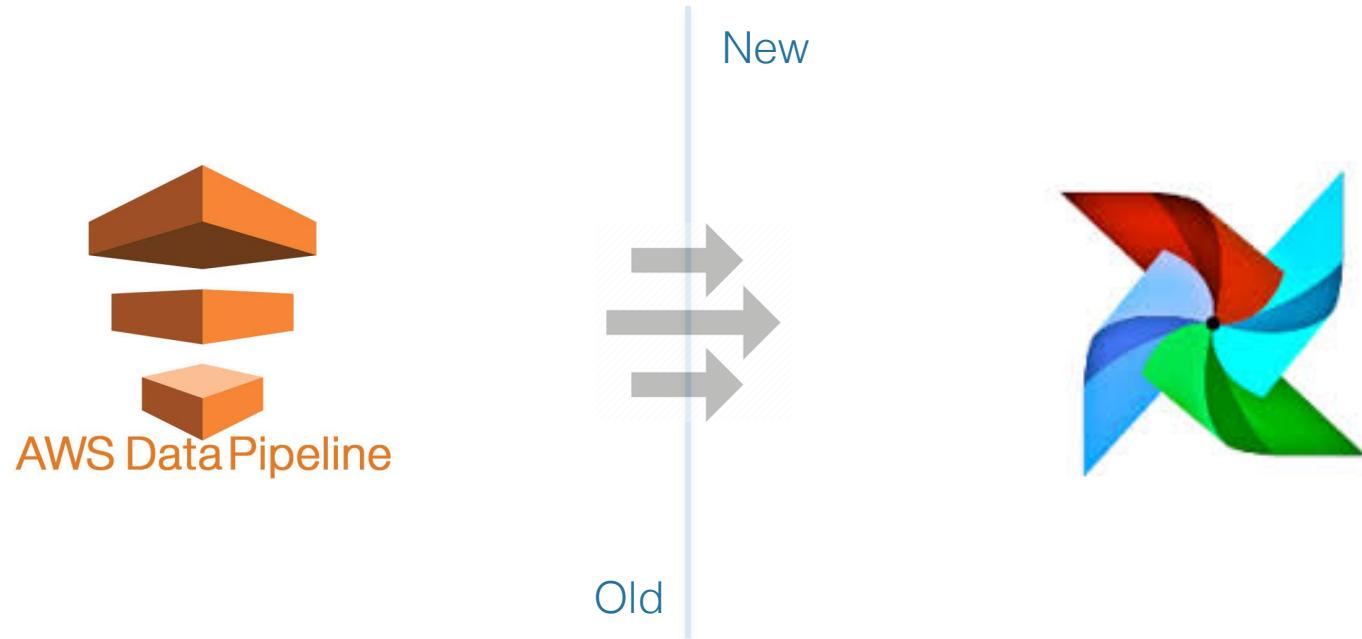
5. Collaborate via Notebooks



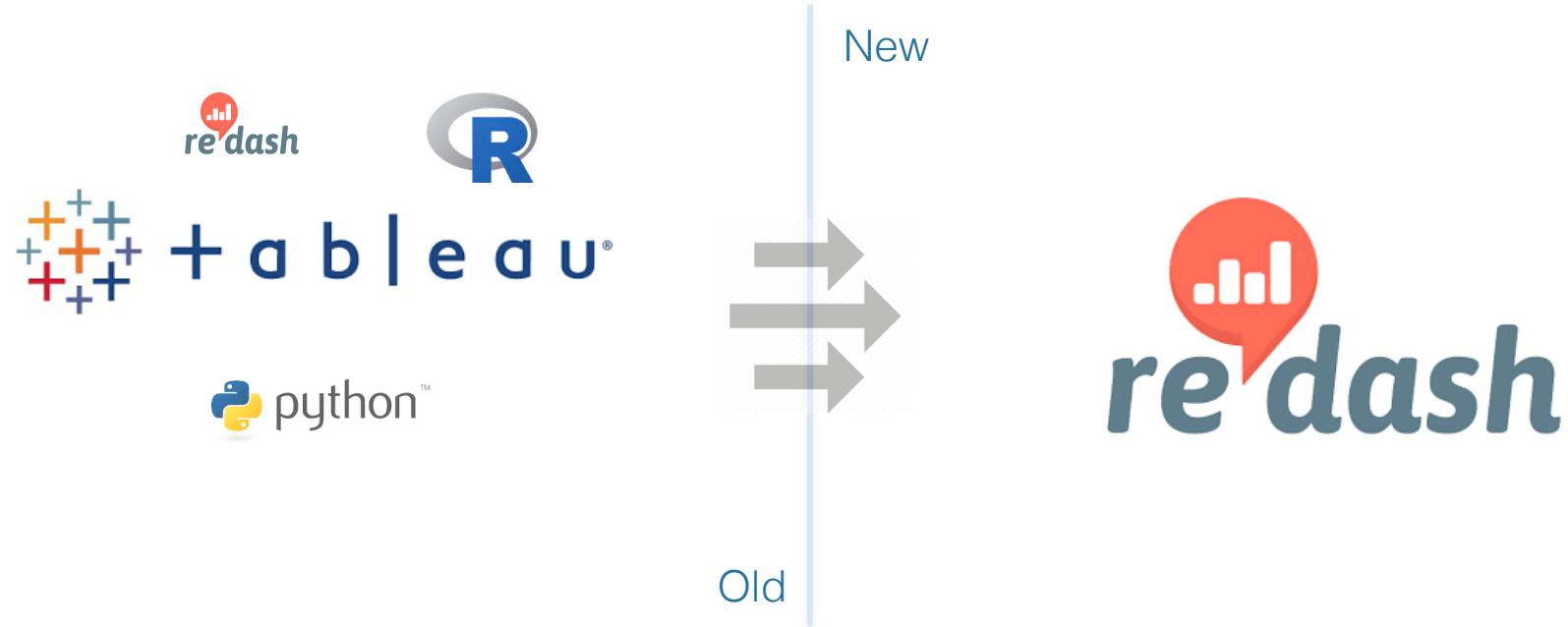
6. Get Serious About Committing Code



7. Move to Airflow for Orchestration Flexibility

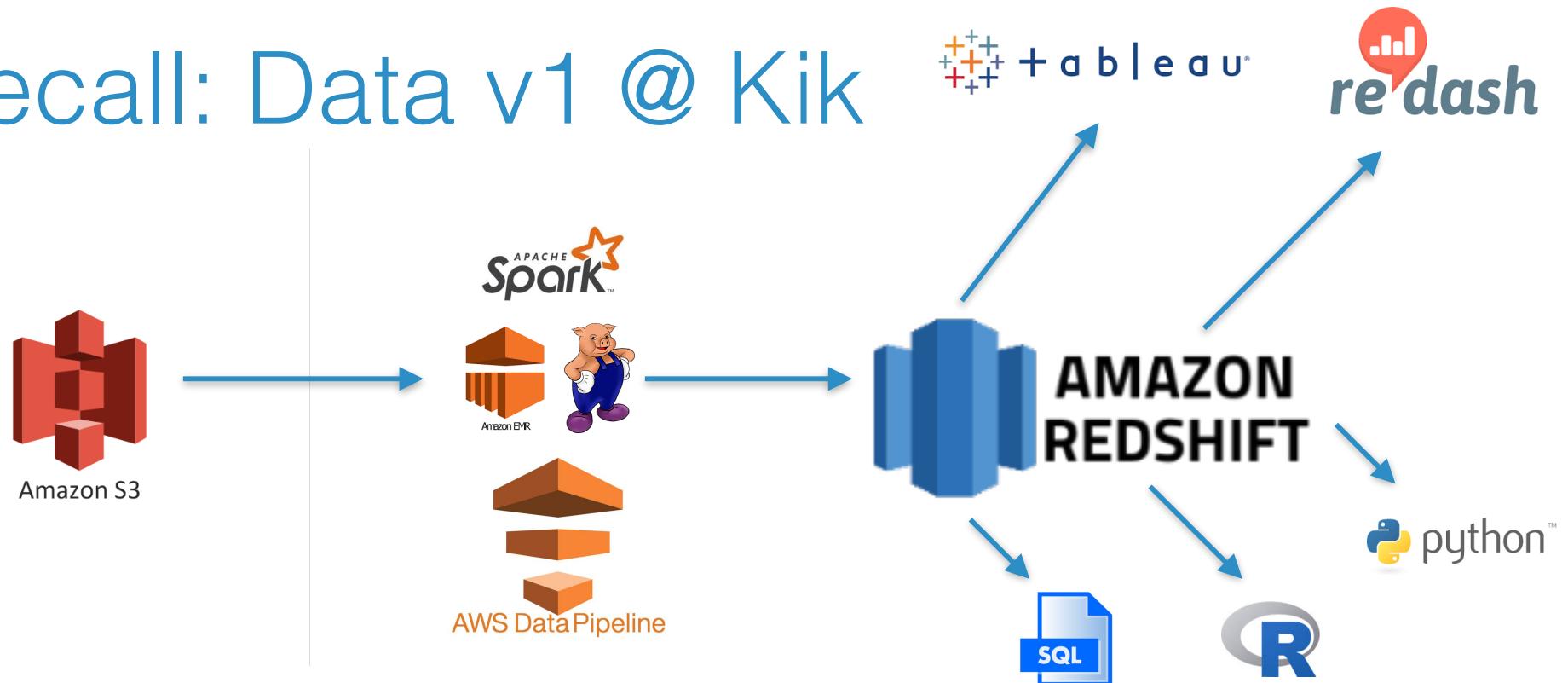


8. Standardize Reporting on re:dash



Data v2 @ Kik

Recall: Data v1 @ Kik



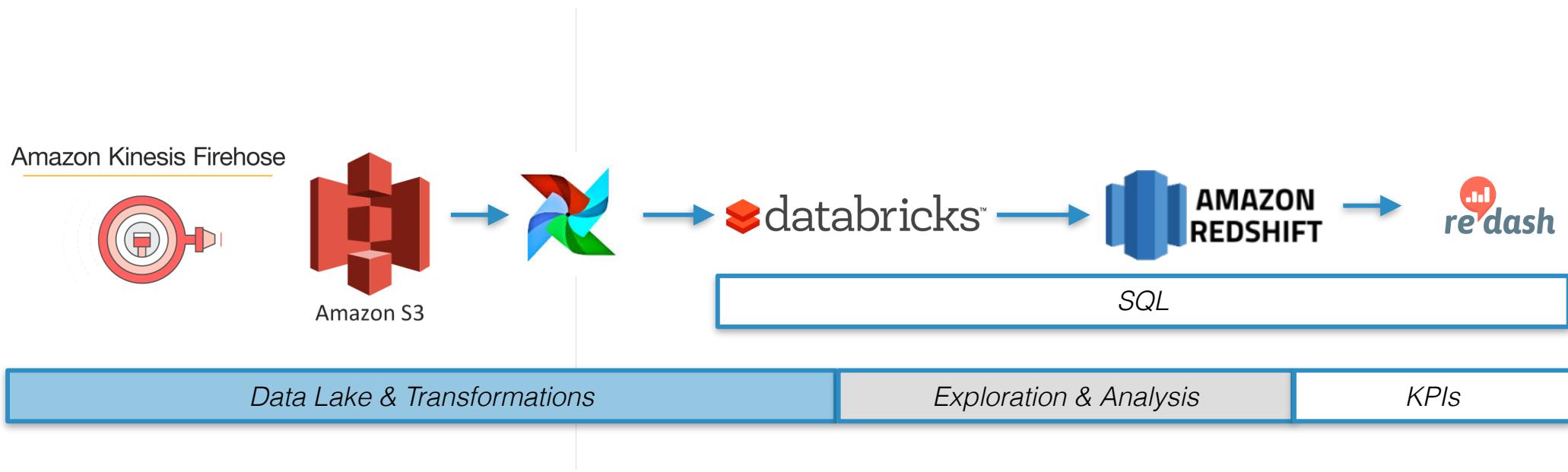
Data Lake & Transformations

Exploration & Analysis

KPIs

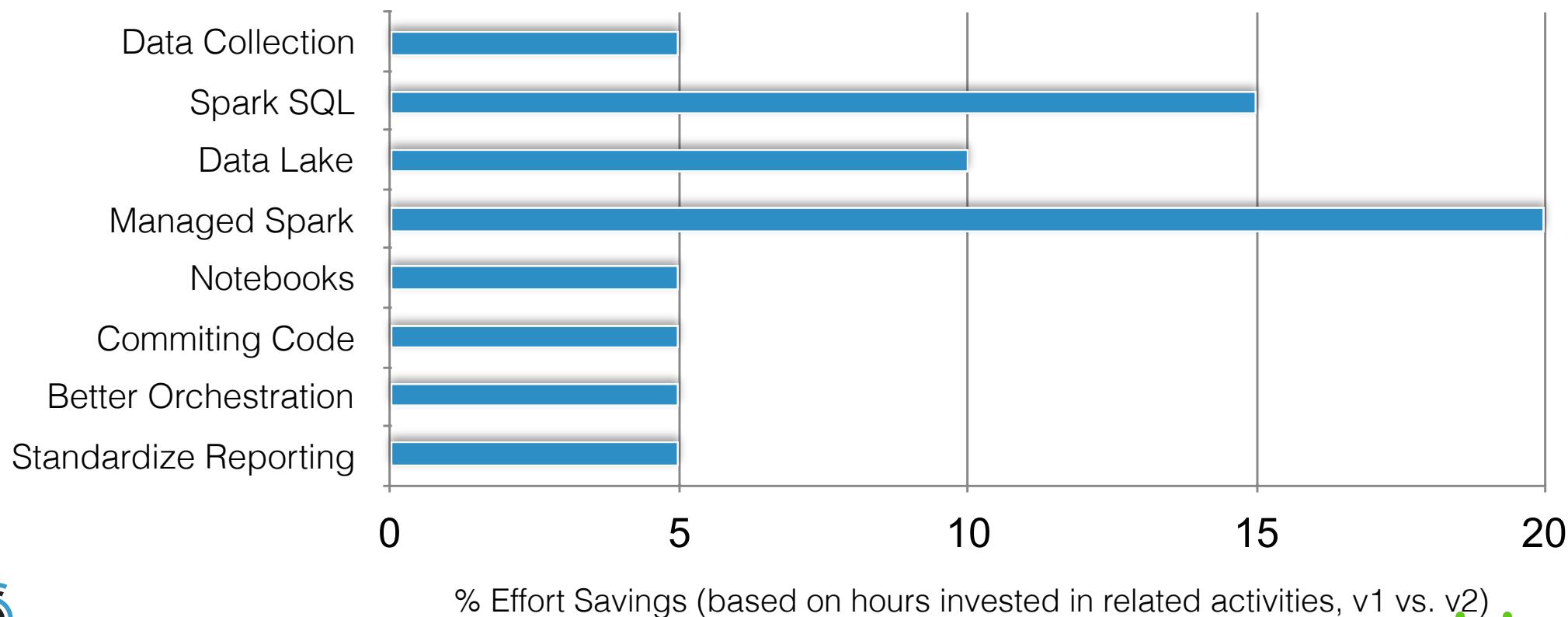
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Data v2 @ Kik: Scaling through Simplicity



New data is available within an hour in a query optimized format. Transformations can be built and scheduled in minutes. Reports can be developed just as quickly.

We estimate we save about 70% of our prior effort



What's Next?

1. Spark as a DW?
2. Structured Streaming
3. Data Lake Cataloging

Thank You.

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