

DATA DEMOCRATIZATION

Enabling Citizen Data Scientists



**A TALE OF TWO
TECH LADIES**

Starring



Laura Ellis
STSM, Analytics Architect



@littlemissdata



Tiffany Cross
Program Director, Analytics & UI



tiffany-cross

A Citizen Data Scientist is

*“a person who creates or generates models that use advanced diagnostic analytics or predictive and prescriptive capabilities, but **whose primary job function is outside the field of statistics and analytics**”*

- Gartner



**ONCE UPON
A TIME**

Tiffany Cross

The UX Developer Looking For Feedback

- Primary responsibility is to release features
- Wants to know if the feature is successful
- Wonders how her work fits in with the big picture
- Weaves in the stats she does have which is just page stats, nps... silos!



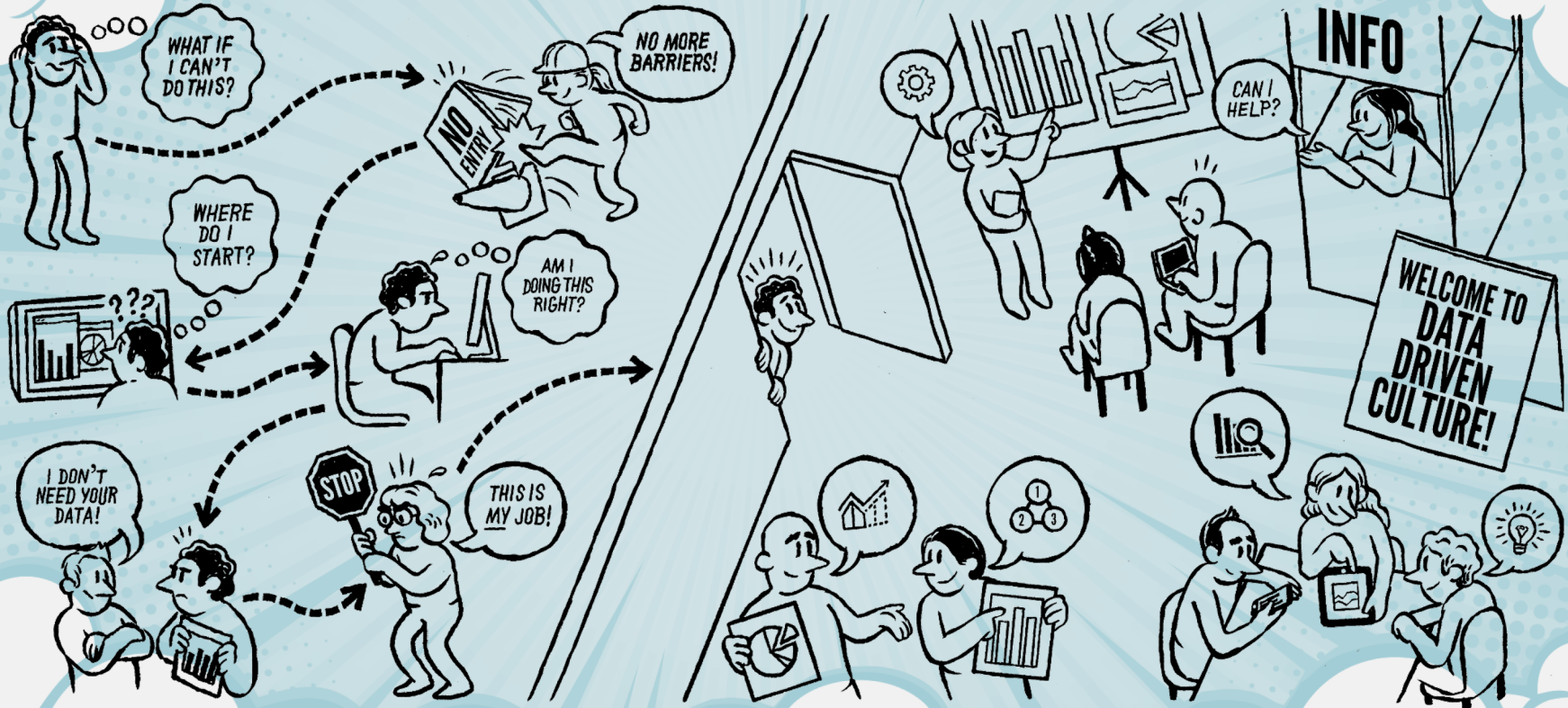
Laura Ellis

The Lonely Data Scientist

- Provides reporting and insights for the business owners
- Often looking for patterns in a vacuum
- Has difficulty finding “the right person” to vet potential data insights or issues
- Would love to partner with the development and business teams more proactively



THE DREAM





**THE DREAM
REALIZED**

- Notices a spike in account creations
- Getting influx of messages asking about an increase in fraudulent flows
- Notices that user onboarding patterns have changed



- Notices a spike in her page views
- Investigates conversion rates on page
- Digs into referrer and notices a trend





**EVERYONE FEELS RESPONSIBLE AND
INVESTED IN THE DATA**

Timeline of IBM Cloud Data

Scale

User & Publisher Adoption
Embed Data Collection & DS

Build Fast

Lots of Data
Lots of Tools

Harden

Data Quality & Availability
Enablement Programs

Extend

Replicate for other BUs
Develop Homegrown Stack

Harden

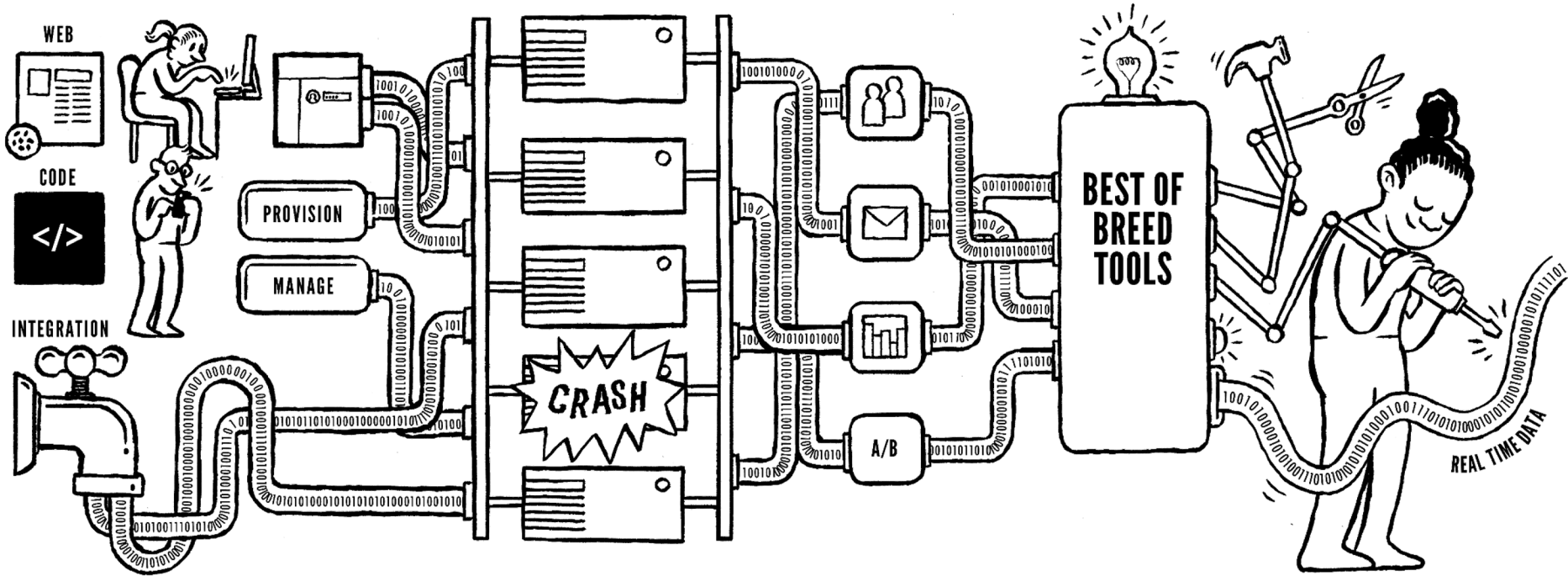
Streamline Tooling
Compliance and Auditing



New Data and Tooling Throughout

Tools.
Data.
Culture.

Tools.

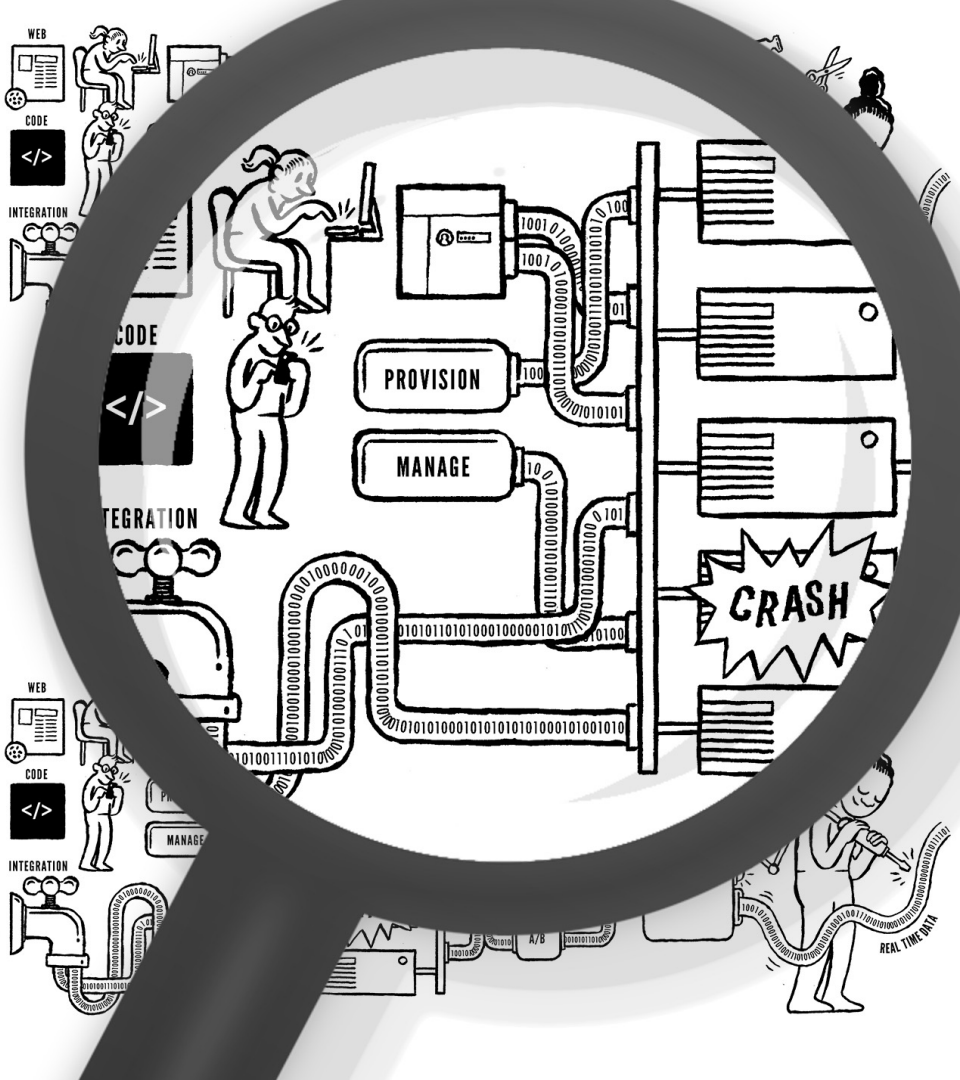


Challenges

Need for broad instrumentation

Too many tools & pipelines

Performance Impacts



Solutions

Need for broad instrumentation

- Common libraries
- Publisher enablement material

Too many tools & pipelines

- Meta tools

Performance Impacts

- Continuous tuning and monitoring
- Fit for purpose integration options

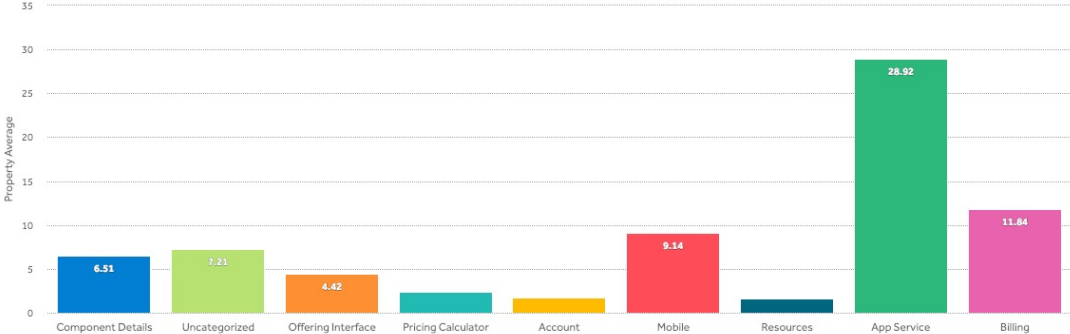


Use Case

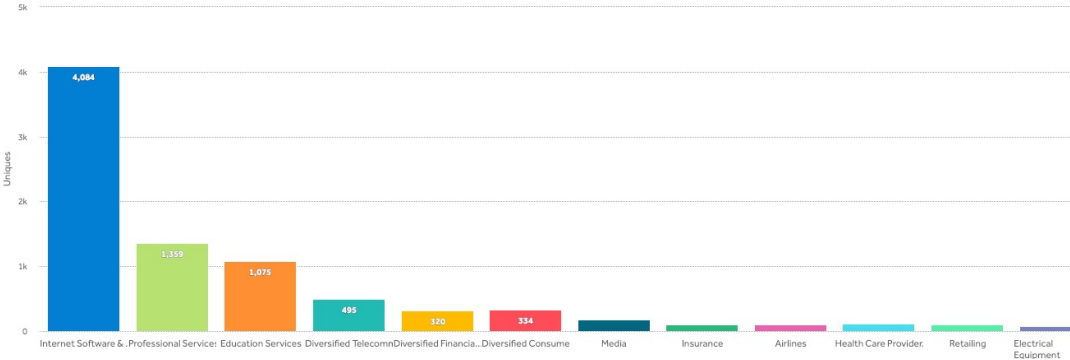
Code injection for very granular analytics.

Data Enrichment

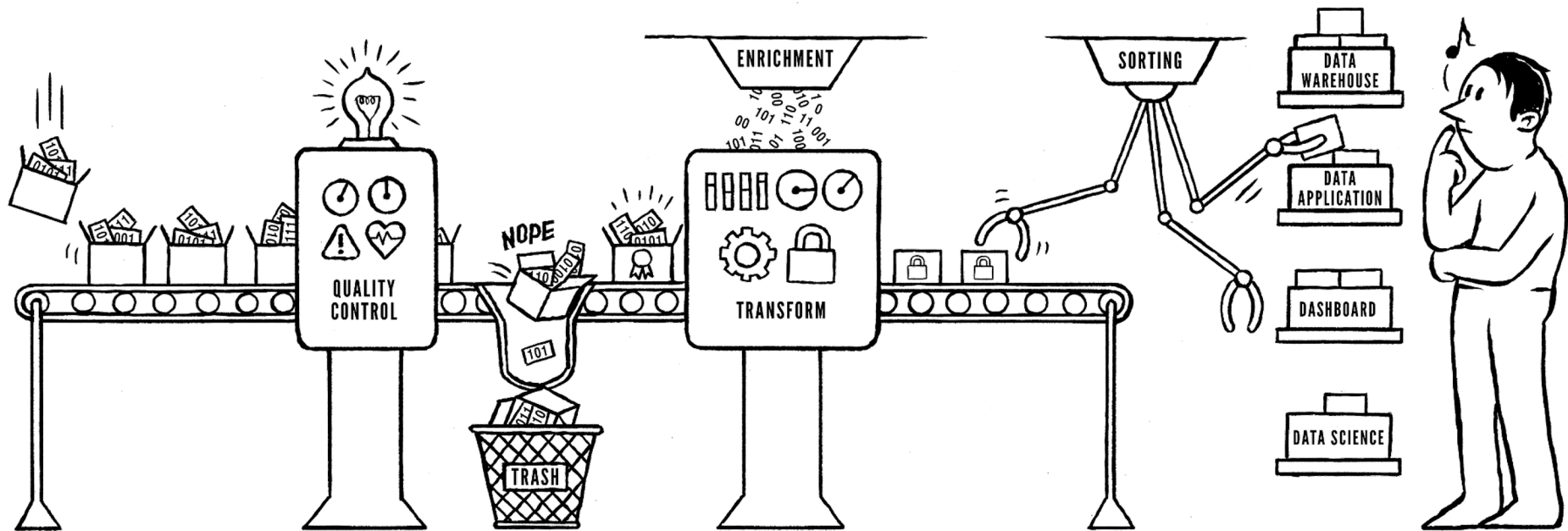
Spinner Duration by Page Category



Visitors by Industry



Data.

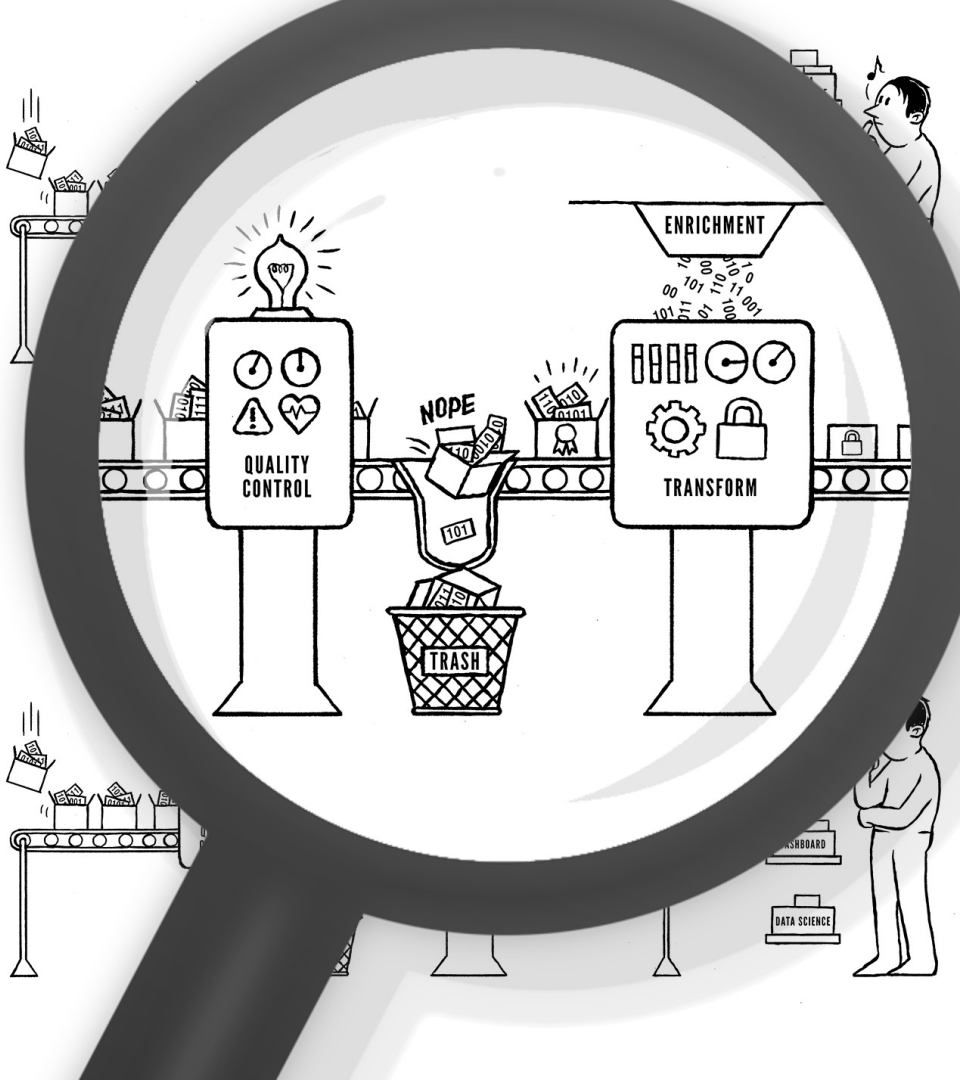


Challenges

Strict vs Flexible

KPI “Flavors”

User confidence



Solutions

Strict vs Flexible

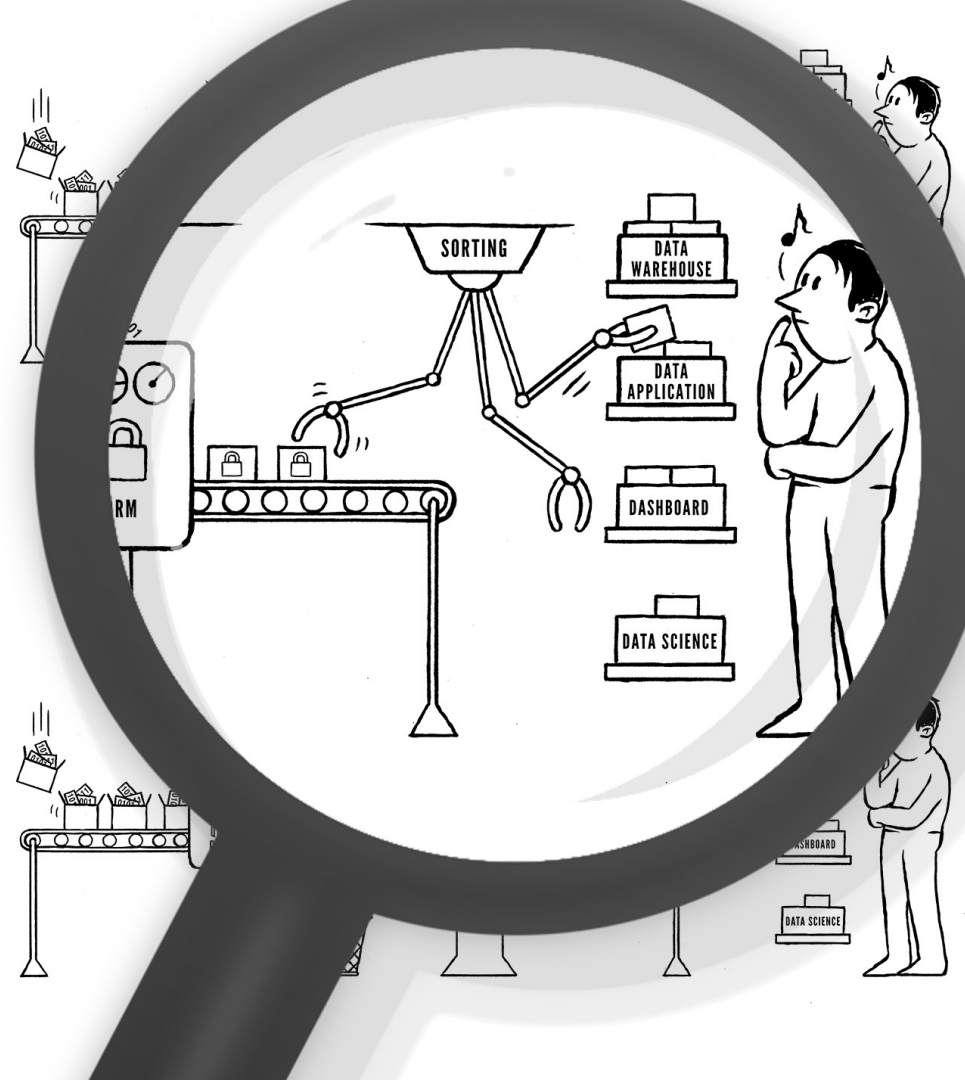
- Open publishing system
- Centralized filtering and enrichment

KPI “Flavors”

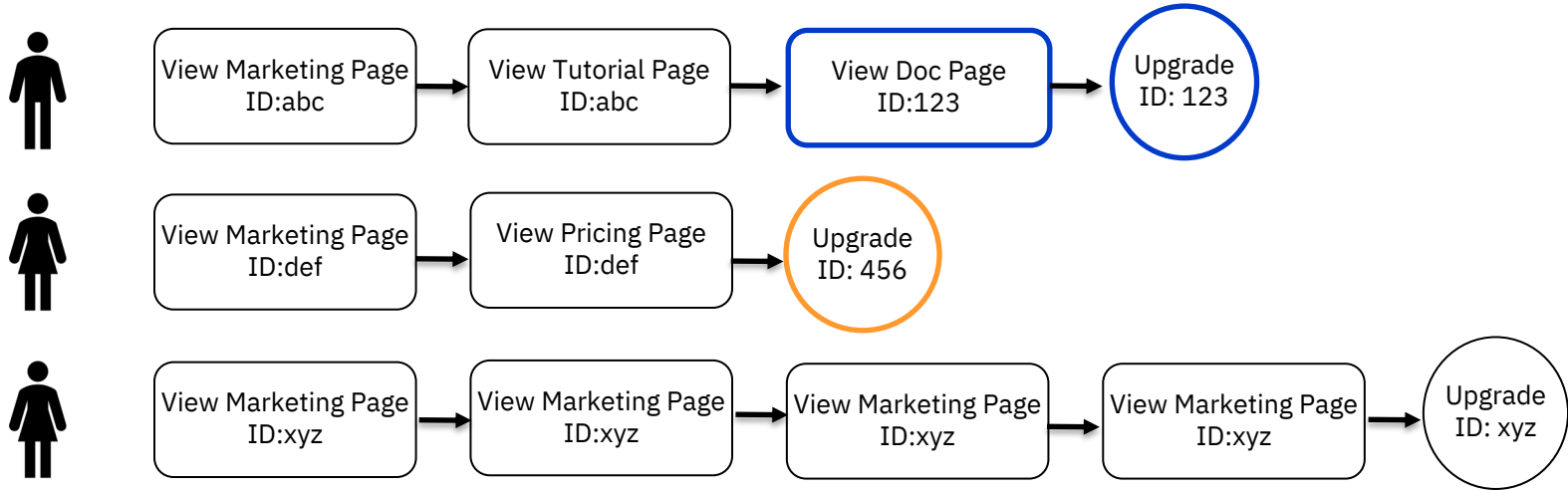
- Open KPI definition access across tools

User Confidence

- Strong data release process
- Data quality alert and monitoring



Use Case



Correct Data: 3 users, 100% conversion rate

Data Shown: 5 users, 60% conversion rate

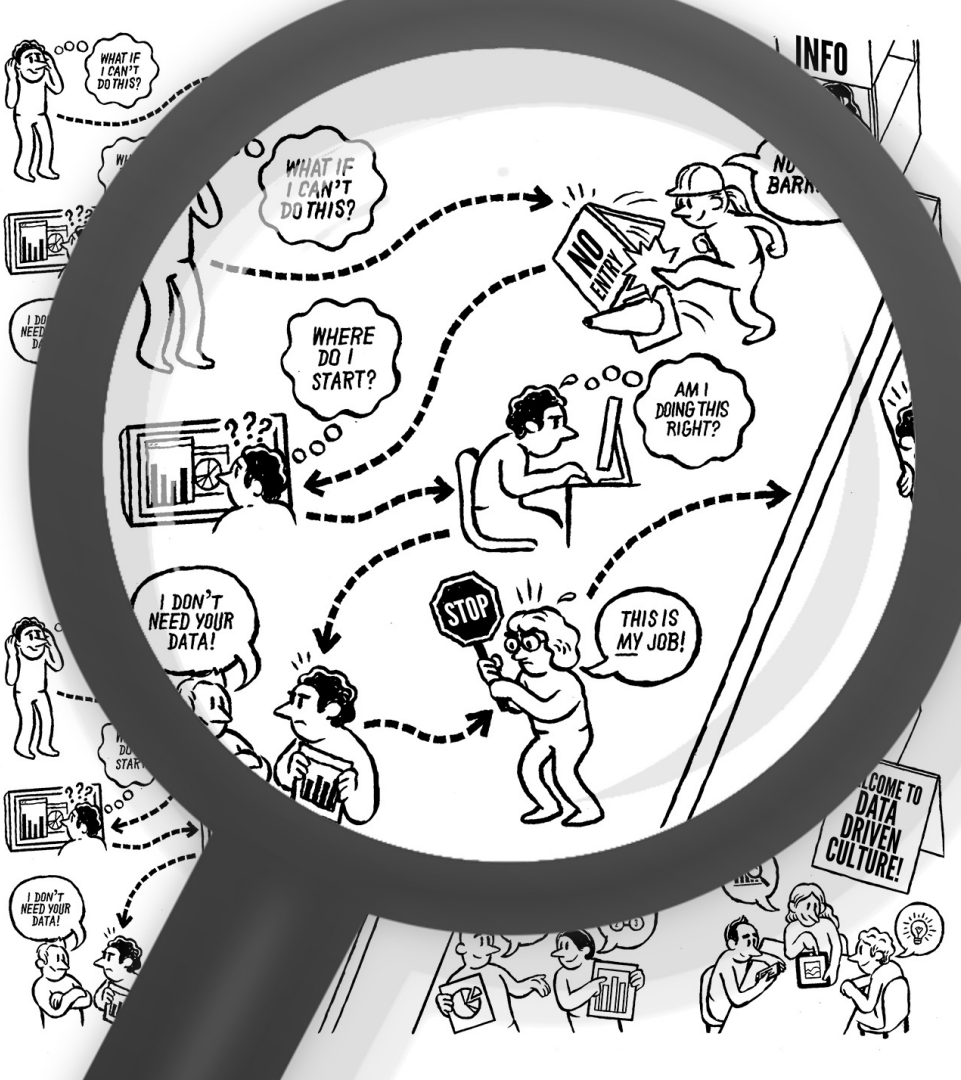
Culture.

Challenges

HIPPO

Weaponization of data

Confidence and new skills



Solutions

HIPPO

- Decisions are informed by data
- Executive training and buy in

Weaponization of data

- Policy of data and analysis transparency
- Data consumer rights

Confidence and new skills

- Variety of fit for purpose enablement programs across mediums
- Read, watch, engage



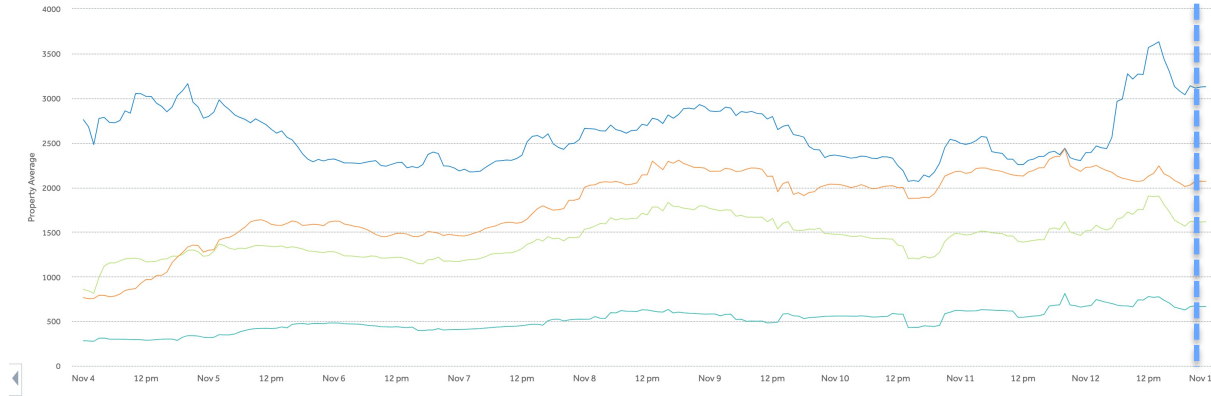
Use Case

Tough executive release decisions driven by data.

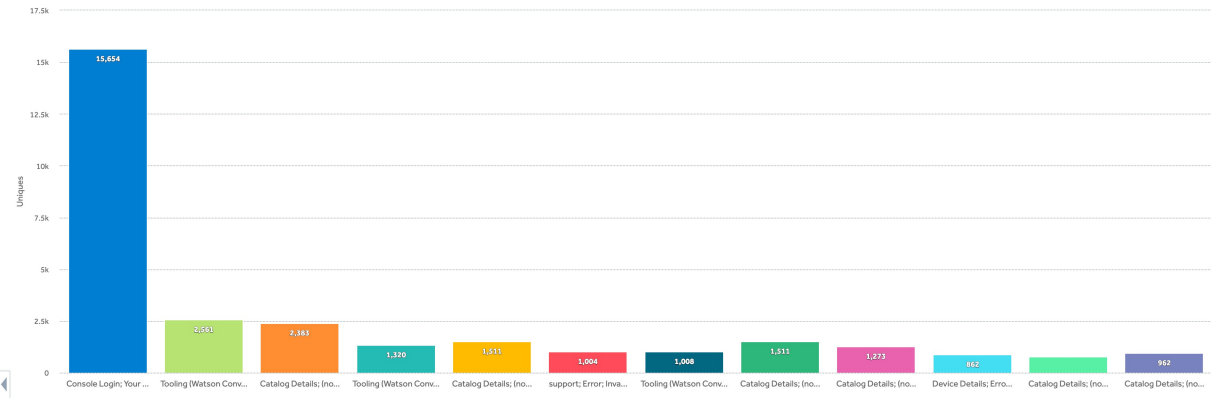
- Aggregate data looking at the entire new platform vs old
- Drill into specific problem areas to address issues
- No stone left unturned - Page Performance, Spinner Duration, UI Error Notifications, etc.
- Rollout via monitored A/B Test

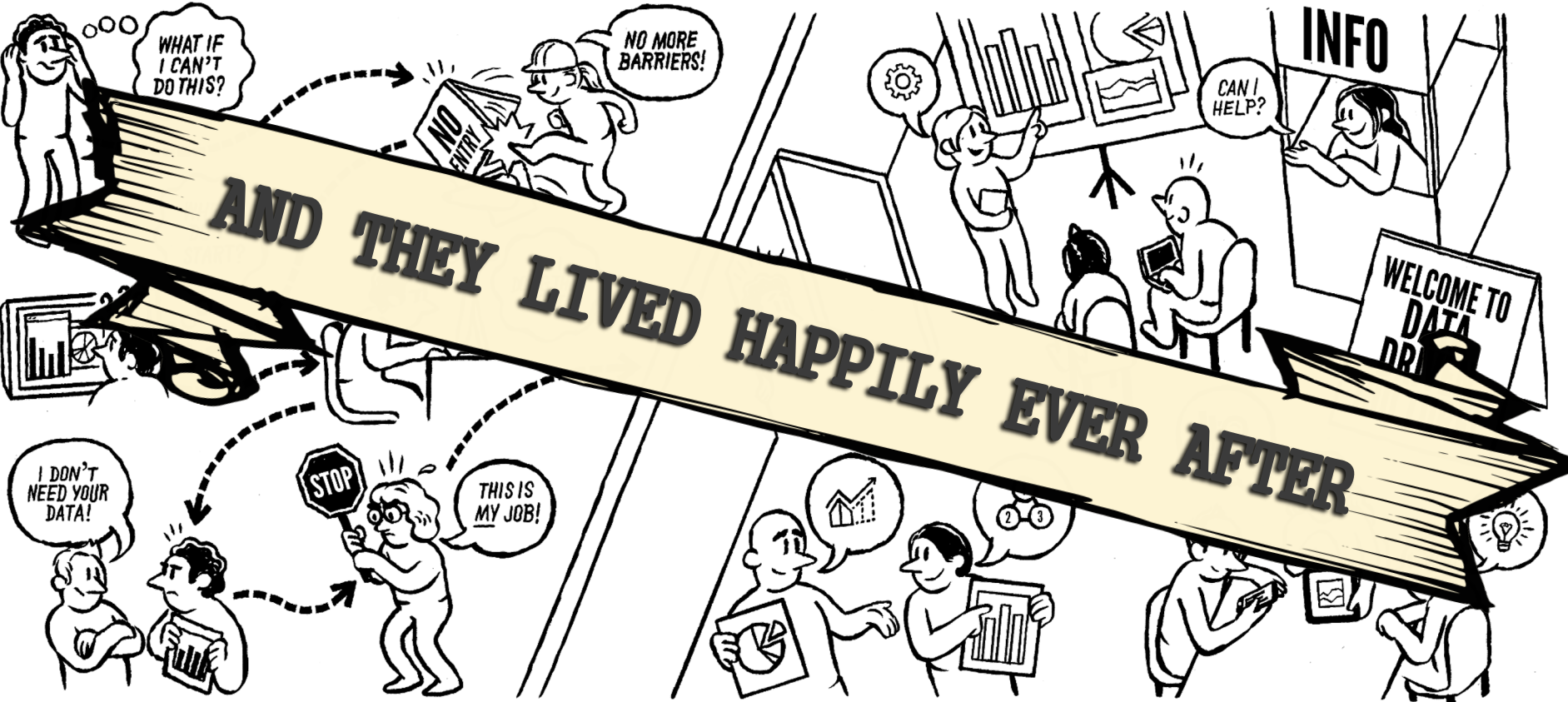
Page Load Performance

Projected Release Date



UI Error Notifications





WHAT?!?





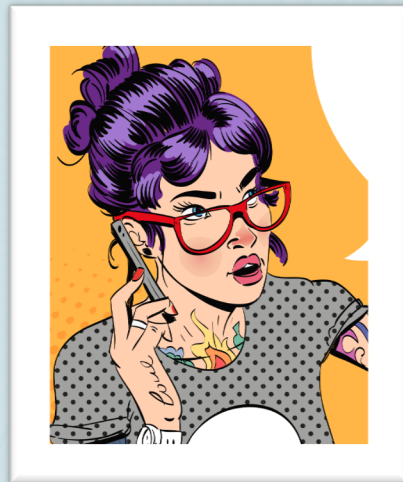
**TO BE
CONTINUED...**

THANKS!



Laura Ellis
STSM, Analytics
Architect

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Tiffany Cross
Program Director,
Analytics & UI

tiffany-cross

Slides available at:
<https://tinyurl.com/wia-talk>