Improving Development Velocity

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Doubling Development Velocity

Goal: 2X successful features shipped by end of 2023

Velocity is defined as the number of successful features launched, on a per-employee basis, that contribute to growth in either mDAU and/or revenue.
Areas we’ve needed to address

1. Technology backend hasn’t kept up
2. Significant coordination required to ship
3. Machine learning & analytics capabilities have lagged
Technology backend hasn’t kept up
Technology backend hasn’t kept up

Adopt external solutions for non-differentiated areas
Technology solutions
Technology solutions
Technology solutions
Technology solutions
Significant coordination required to ship
Significant coordination required to ship

Modularize our architecture
Modular architecture - Ads Serving

Shipped 100+ meaningful product improvements in 2H'20, up from 56 in 1H'20
Modular architecture - Consumer
ML & analytics capabilities have lagged
ML & analytics capabilities have lagged

Improve experimentation
Business impact

- Increased mDAU due to product changes
- Improved health of the conversation
- Improved ad relevance

Machine Learning
On-demand data analytics
Increase mDAU
and revenue

Invest

Launch more successful features

Improve velocity
ML Research

- Recommendation Systems
- Natural Language Processing
- Graph ML
- Responsible ML
- Conversation Understanding
- Media Understanding
Investing to double velocity by end of 2023

- Adopt external solutions for non-differentiated areas
- Modularize our architecture
- Improve experimentation
Security Enabling Velocity

Peiter “Mudge” Zatko
Head of Security
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Aligning across disciplines

Trust and Safety

Twitter Services

Corporate Security

IT

Information Security
Security Enabling Velocity

- Velocity
  - Technology solutions
  - Modular architecture
  - Improve experimentation

- Security & Privacy
  - Secure Development Lifecycle (SDL)
  - Configuration & Monitoring
  - Authentication & Tracking

- Scale
  - Infrastructure
  - Team
Scale Enabling Velocity

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Engineering Lead
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Improving Engineering Scale

Velocity

Improving

Modular architecture

Technology solutions

Improve experimentation

Secure Development Lifecycle (SDL)

Configuration & Monitoring

Authentication & Tracking

Security & Privacy

Scale

Infrastructure

Team
Scale Enabling Velocity

- Infrastructure
- Team
Scale Enabling Velocity

Infrastructure
Team
Scaling infrastructure
Scaling infrastructure

Traffic

Previous years 2020 spike
Scaling infrastructure

Traffic

Previous years 2020 spike Future growth
Scaling infrastructure

Traffic

Previous years 2020 spike Future growth

2021: New data center
Scaling infrastructure

AWS hybrid approach

2021: New data center

2020 spike

Future growth

Traffic

Previous years
Benefits of a hybrid approach

Global Performance Benefits

Flexible Capacity Management

ARM Efficiencies
Growing the team
Attracting and retaining top talent (2018-2020)

-60% Engineering attrition rate

>65% Engineering team growth
Engineering VPs
To support all of our objectives, we’re growing our team in three ways:

1. Scaling infrastructure
2. Unlocking development velocity
3. Delivering product features
Doubling Development Velocity

- Technology solutions
- Modular architecture
- Improve experimentation
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Velocity

Security & Privacy

Scale
Doubling Development Velocity

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