okta

FORUM

Security in the API Economy

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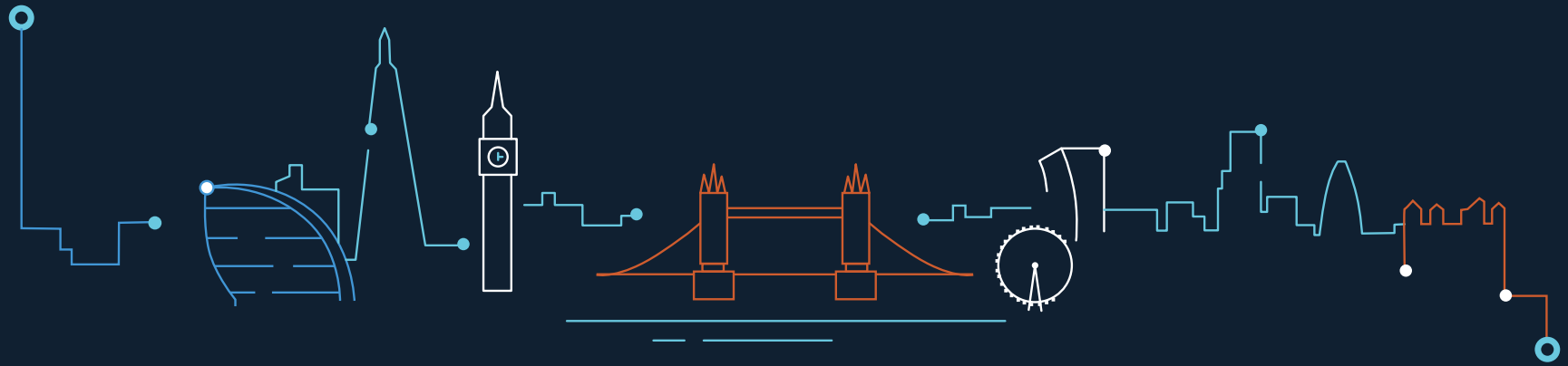

JAMES FANG

Director of Product Marketing, API Products, Okta

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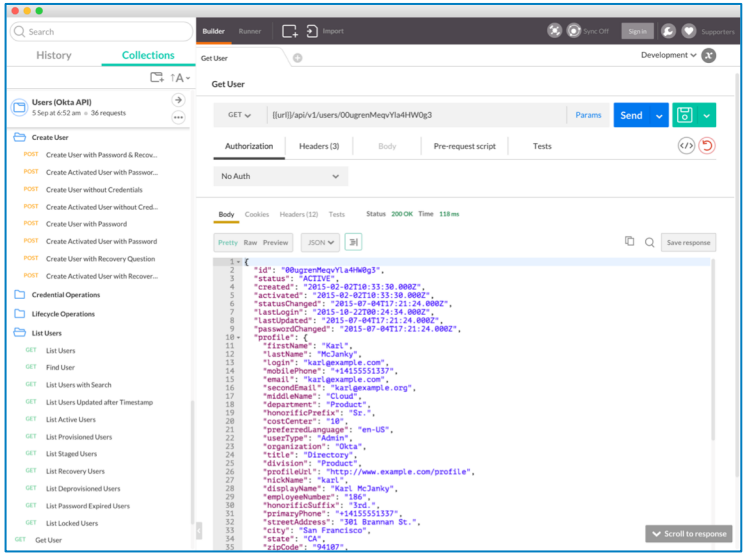
Connected experiences across devices

APIs have enabled this Transformation



APIs drive integrations, opportunities, and revenue

APIs drive 50% of Revenue *

APIs drive 100% of Revenue

APIs drive 90% of Revenue *

* https://hbr.org/2015/01/the-strategic-value-of-apis

API Journey: A Maturity Model

Integrate internal systems by introducing Private APIs

Internal advocacy & collaboration for internal APIs and CoE/Governance

Limited API access to partners, resellers and suppliers

Grow these APIs as full fledged products with external developer access

Either monetized directly or to reach new customers and enter new markets.

Security Team evaluates use cases, interfaces, authentication, access management, etc, etc

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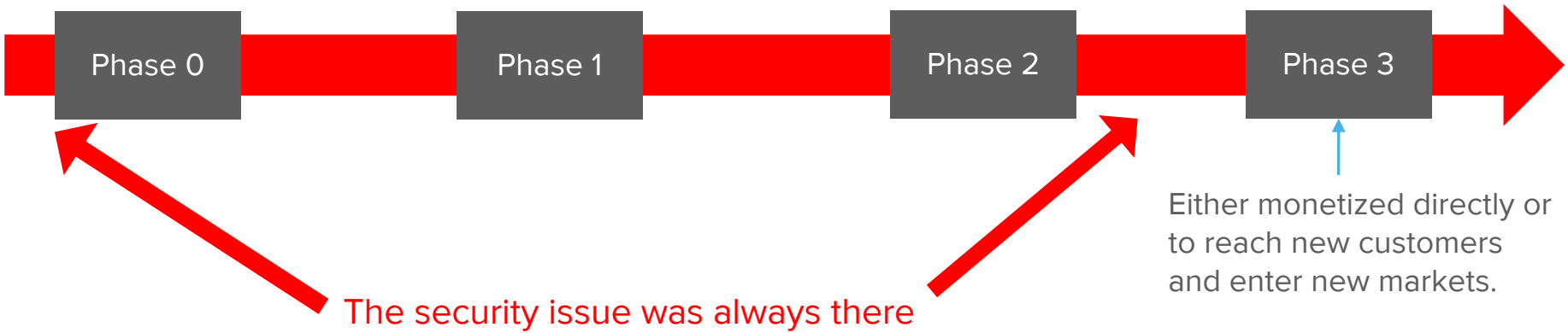
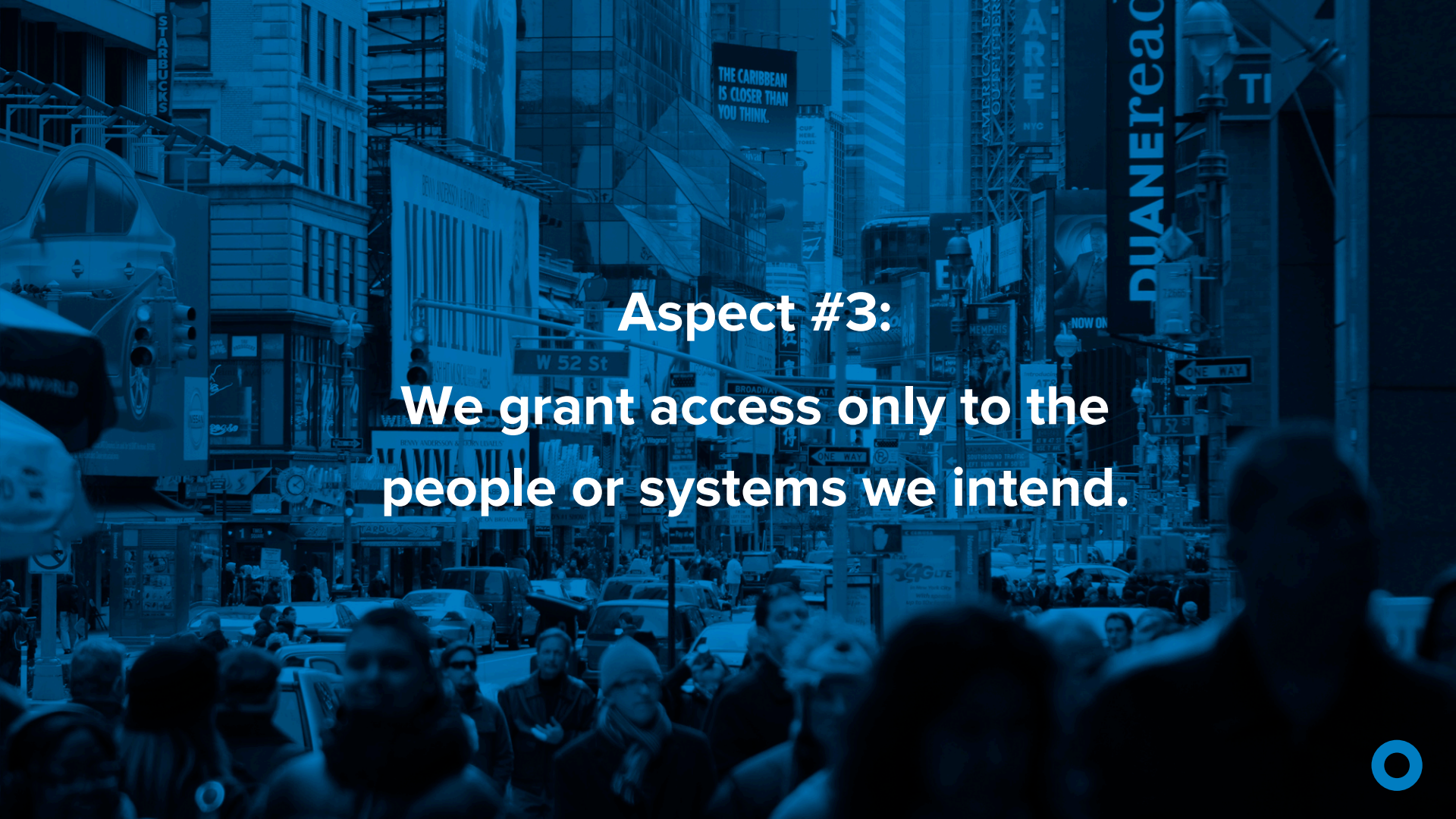



What is
API Security?


Aspect #1:
We expose only the interfaces
which we intend.

Aspect #2:

We share and accept only the data which we intend.



Aspect #3:

We grant access only to the people or systems we intend.


Approach #1:
Trust our
End Users

No, I’m kidding.
Unqualified trust is not security.


Approach #2:
Use an API
Gateway

API Management Capabilities

Full Lifecycle API Management

Lifecycle

What state is it in?

- How was it designed?
- How was it built?
- Is it deployed?
- To which GWs?
- Is it live/available?

Interface

What does it expose?

- Which resources?
- Which methods?
- Which objects?
- Which fields?

Access

Who can use it?

- Which users/groups?
- How do they authenticate?
- Using which clients?
- In what contexts?

Consumption

How to succeed with it?

- API Documentation?
- Debugging/errors?
- Track usage?
- Examples/SDKs?

Business

How does it drive business goals?

- Partner CRM
- Monetization
- Marketing
- Business Analytics

API Management Capabilities

Full Lifecycle API Management

Lifecycle	Interface	Access	Consumption	Business
What state is it in?	What does it expose?	Who can use it?	How to succeed with it?	How does it drive business goals?
• How was it designed? • How was it built? • Is it deployed? • To which GWs? • Is it live/available?	• Which resources? • Which methods? • Which objects? • Which fields?	• Which users/groups? • How do they authenticate? • Using which clients? • In what contexts?	• API Documentation? • Debugging/errors? • Track usage? • Examples/SDKs?	• Partner CRM • Monetization • Marketing • Business Analytics

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API Gateways - Drawbacks

- Yet another user database
- Doesn’t have full context on the user
- Designed to manage APIs, not authorization policies

Approach #3: API Keys

An Example

- curl –X POST https://api.company.com/projects
  --header “Authorization: Bearer **abcdef012345**”
  --data ‘{“name”:”My Project”, “date_due”:”2018-09-14”}’

- curl –X DELETE https://api.company.com/projects/1234
  --header “Authorization: Bearer **abcdef012345**”

API Keys - Drawbacks

- All the joys of passwords
- Rotating at scale is really painful
- Generally all or nothing access

- *The de facto standard for APIs, API gateways, etc.*

Approach #4: OAuth

Hotel key cards, but for apps

OAuth Authorization Server

Access Token

Resource (API)

Compared to API Keys

- All the joys of passwords
- Rotating at scale is really painful
- Generally all or nothing access

- Tokens expire automatically
- Rotation is part of the spec

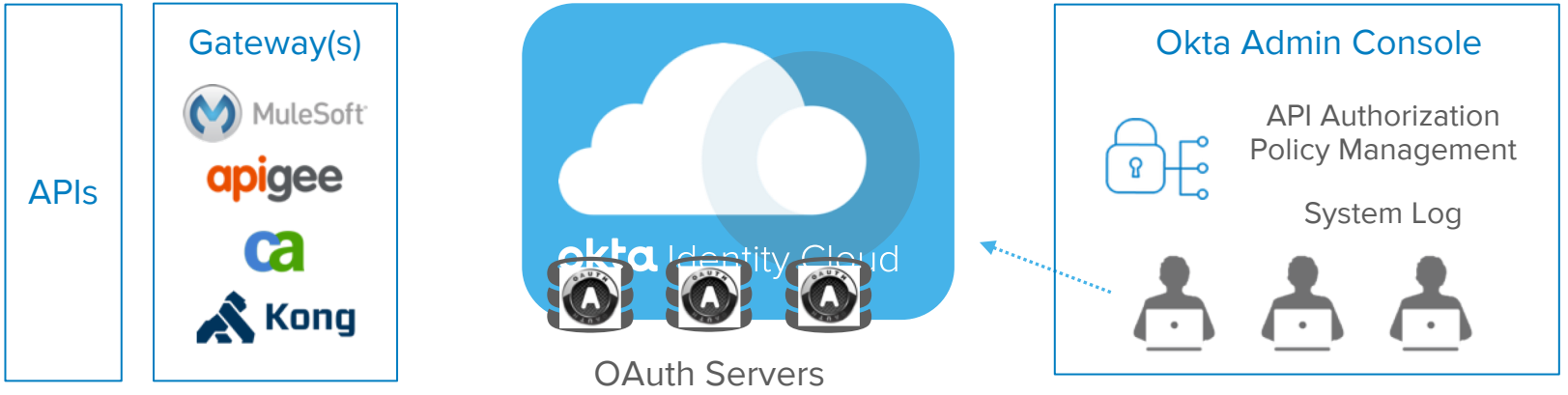
- OAuth is inherently scoped

OAuth - Drawbacks

- Not a single specification but a framework
- More complex, more flexible, less standard as a result

- *No, really. Those are the only major drawbacks.*

Okta lets developers focus on development and IT manage policy



Developers

Add the Okta SDK and stay focused on core features

IT and Security

Empowered to create, manage, and audit access across all points of access

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Senior Solutions Architect

JOHN BAZLEY

Application Support Manager

Alzheimer's Society

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JAMES FANG

Director, Product Marketing, API Products

MARTIN STEVEN

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Thank You