API as the most critical technology in digital business design

CA EXPO PRAGUE | 2018

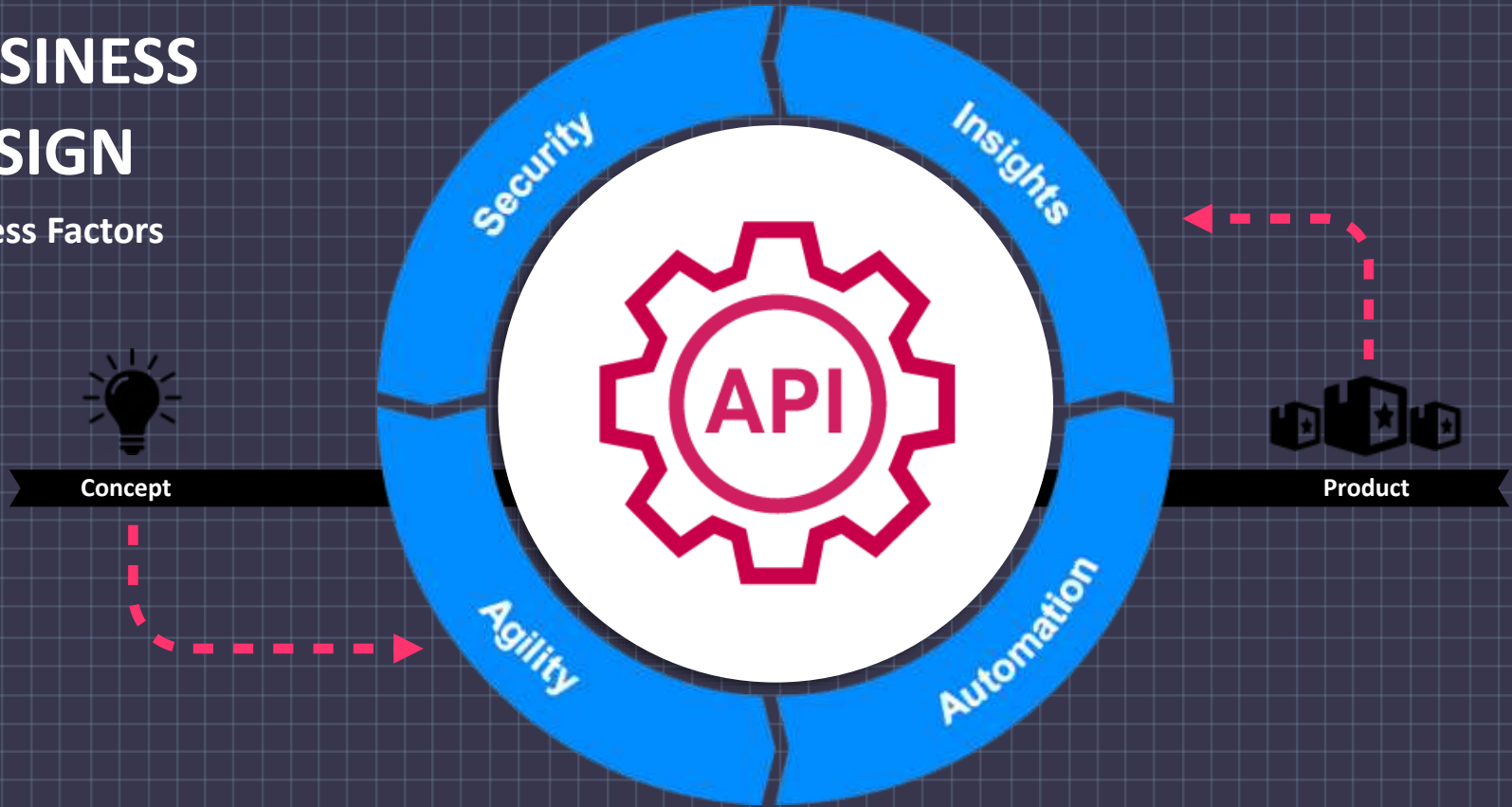**IAN CLARK**
VP, EMEA API MANAGEMENT SOLUTION SALES

DIGITAL BUSINESS DESIGN

Success Factors

Concept

Security

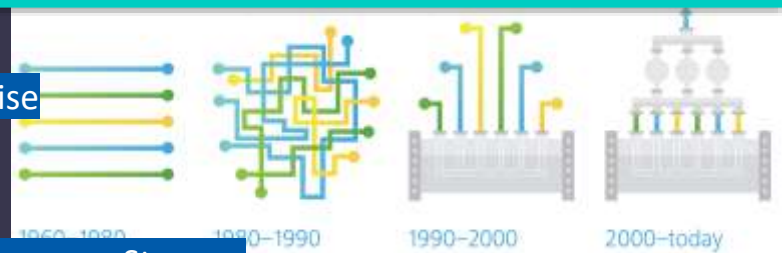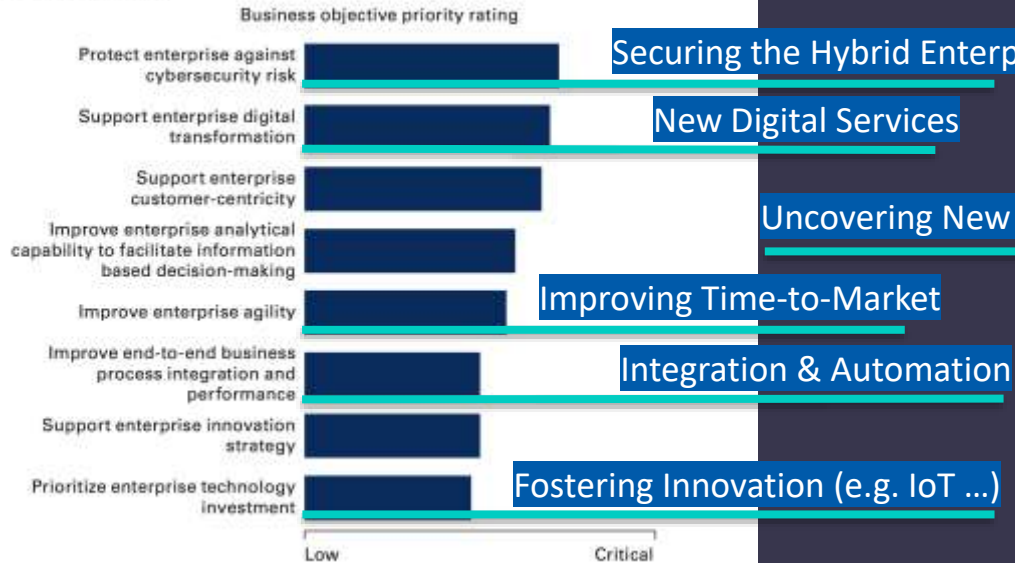Insights

API

Agility

Automation

Product

Why s?

Modernisation of Application Architectures

Securing the Hybrid Enterprise

New Digital Services

Uncovering New Revenue Streams

Improving Time-to-Market

Integration & Automation

Fostering Innovation (e.g. IoT …)

FIG. 7 Top IT priorities and most common improvements supporting business objectives in 2018

Business objective priority rating

- Protect enterprise against cybersecurity risk
- Support enterprise digital transformation
- Support enterprise customer-centricity
- Improve enterprise analytical capability to facilitate information based decision-making
- Improve enterprise agility
- Improve end-to-end business process integration and performance
- Support enterprise innovation strategy
- Prioritize enterprise technology investment

Low — Critical

Source: Digital Transformation Performance Study, The Hackett Group, 2017

grammableWeb, http://www.programmableweb.com,

BASIC	PRO	ULTRA	MEGA
$ 0.00	$ 9.99	$ 35.99	$ 75.99
500 / monthly	45,000 / monthly	1,000,000 / monthly	2,500,000 / monthly
$ 0.00 per extra	$ 0.01 per extra	$ 0.001 per extra	$ 0.00 per extra
Choose Plan	Choose Plan	Choose Plan	Choose Plan

1960–1980   1980–1990   1990–2000   2000–today

API Drivers across Industries

Example of API-led Transformation in:

Banking & Financial Services

FinTechs' View		Banks' View
27.2%	Revenue Sharing – Indirect	47.8%
54.3%	Transaction Fees – Direct	43.5%
32.1%	API Call Fees – Direct	30.4%
35.8%	Licensing Fees – Direct	26.1%
24.7%	Fees for Insights and Data – Direct	21.7%
22.2%	Support Fees – Direct	13.0%
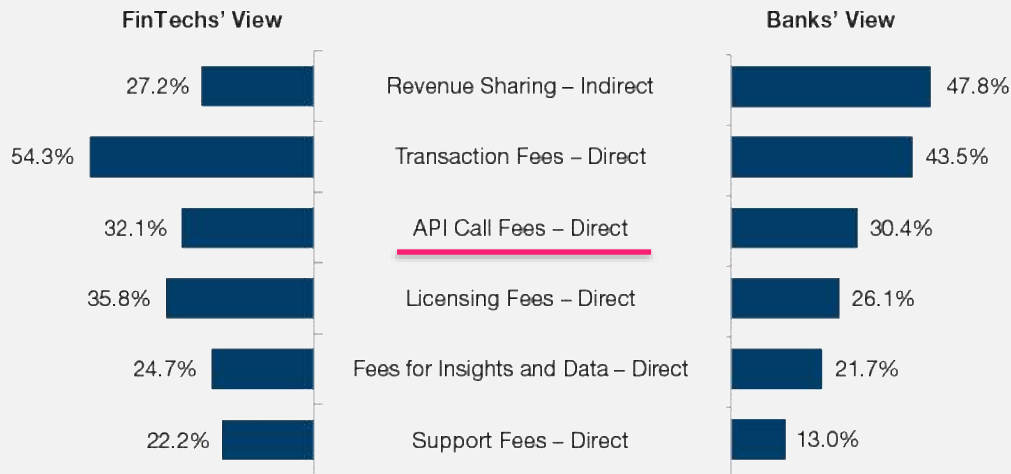
Note: The percentage represents the FinTech and banking executives who have given a rating of 6 or 7 on a scale of 1–7 for each of the monetization mode

Source: Capgemini Financial Services Analysis, 2017; 2017 Retail Banking Executive Interview Survey, Capgemini Global Financial Services

Directive to Drive Innovation & Customer Convenience

APIs as one of the most important pillars

Offering both compliance and opportunity

API Drivers across Verticals

API Strategy
concerns & considerations

Concerns

? Handling **Omnichannel** Delivery

? Centralised & **Standardised** API Security

? Gaining **Revenue** from APIs
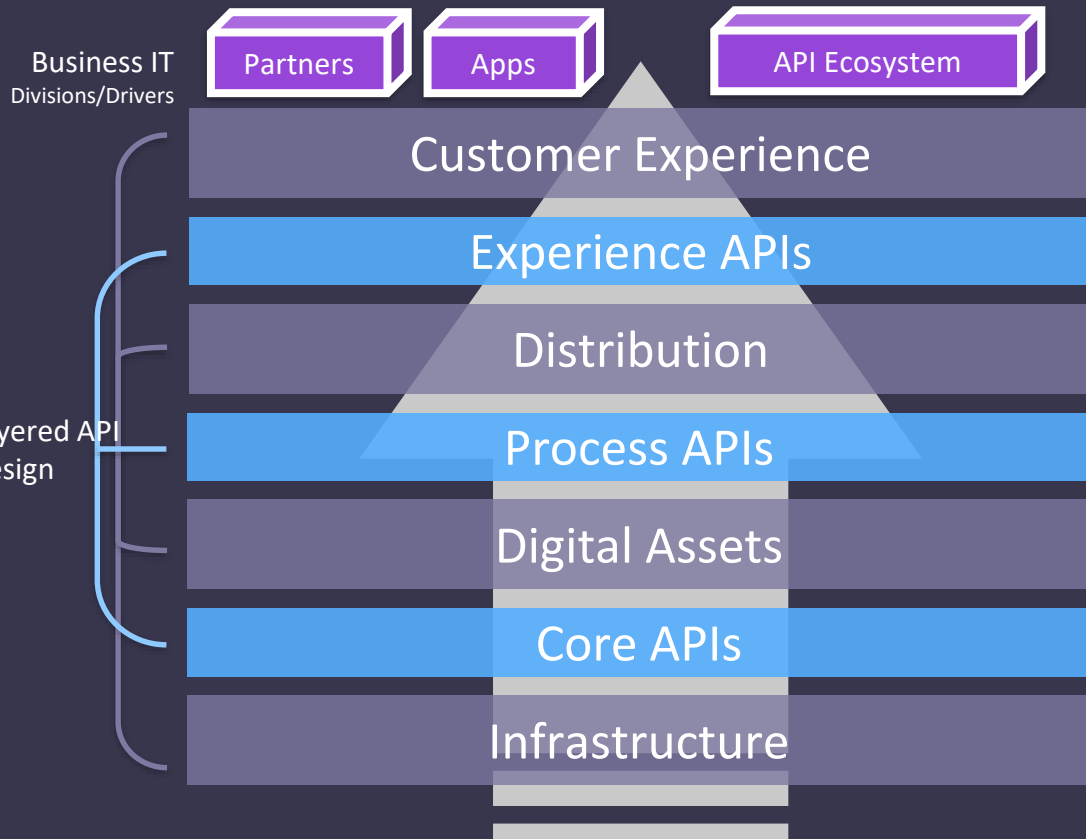
? Insights & **Usage** Reporting
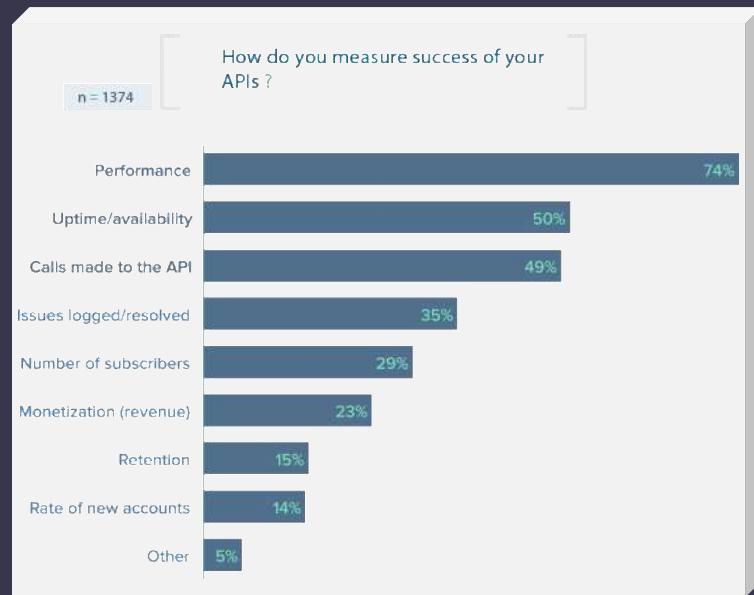
? **Manage** & **Govern** 100(0)+ APIs

? API Consumer **Relationships**

Adopt an **API-First** Business

Business IT
Divisions/Drivers

| Partners | Apps | API Ecosystem |

Customer Experience

Experience APIs

Distribution

Process APIs

Digital Assets

Core APIs

Infrastructure

Layered API
Design

API Management KPIs

How do you measure success of your APIs ?

n = 1374

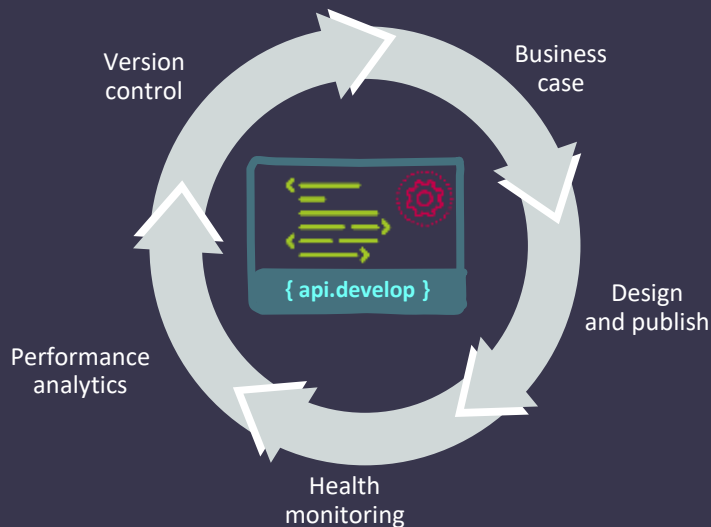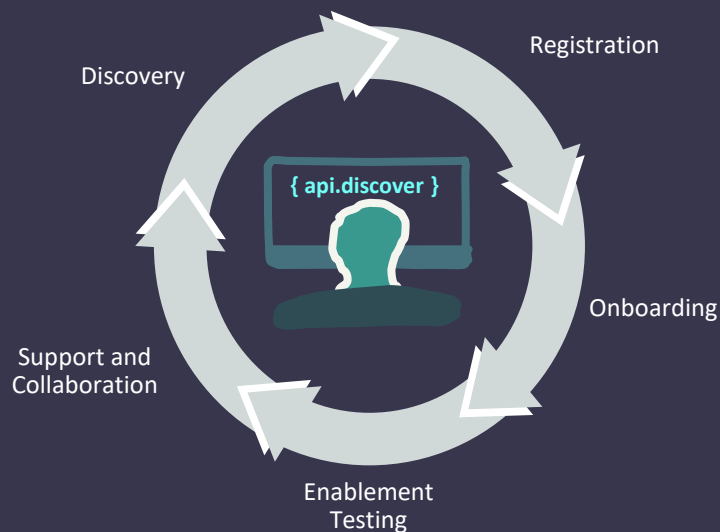|	
Performance	74%
Uptime/availability	50%
Calls made to the API	49%
Issues logged/resolved	35%
Number of subscribers	29%
Monetization (revenue)	23%
Retention	15%
Rate of new accounts	14%
Other	5%

https://smartbear.com/learn/performance-monitoring/insights-into-state-of-api-performance/
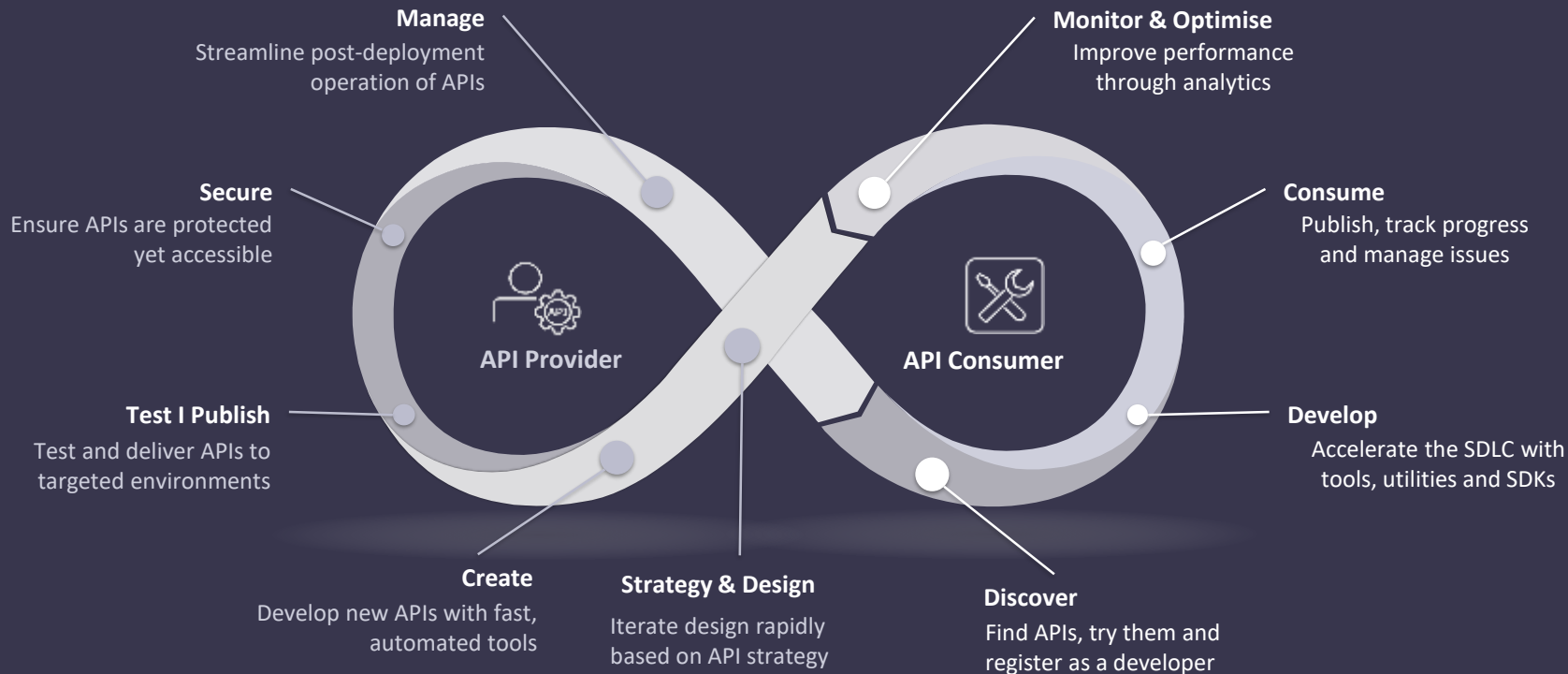
Manage APIs and the Developer Lifecycle Independently

Manage APIs like Products

Manage Developers like Customers

Build a **Full Lifecycle** API Management

Manage
Streamline post-deployment operation of APIs

Monitor & Optimise
Improve performance through analytics

Secure
Ensure APIs are protected yet accessible

Consume
Publish, track progress and manage issues

API Provider

API Consumer

Test I Publish
Test and deliver APIs to targeted environments

Develop
Accelerate the SDLC with tools, utilities and SDKs

Create
Develop new APIs with fast, automated tools

Strategy & Design
Iterate design rapidly based on API strategy

Discover
Find APIs, try them and register as a developer

Leverage Microservices for **speed** and **safety** at **scale**

Monolithic system

- Generally easier to build, **initially**
- Generally easier to test against, **initially**

- **Difficult to maintain**

- **Slower to iterate**

- **Difficult to scale**

- **More difficult to innovate** with

- **Difficult to insert new programmers against** due to a steep learning curve

New Challenges

- **More moving parts** than a monolithic app, so it's important to monitor

- **More** modern back–end infrastructure **requirements**

- **More difficulty testing** the complete app

- **New security requirements** that need to be addressed on behalf of endpoints

Microservices Architecture

- **Better architecture** for larger applications

- **More agile solution** as easier to pivot segments of an application

- **Easier to learn:** each component is small and isolated

- **Easier to scale:** only the components that need improved scalability are affected

Leverage Microservices for **speed** and **safety** at **scale**

Goals

- Assess the maturity of the agile enterprise
- Create smaller groups of developers
- Adopt a domain–driven design & break down large applications

Critical CA Tools for Microservices

API Gateway

Live API Creator

Security

Transformation

Routing

Speed of Delivery

Zero Deploy

Modularity

Microgateway

Application Performance Monitoring

Service
Discovery

Last Mile
Security

Local
Orchestration

Visibility into Microservices
Interdependencies

View Microservices Performance
from Multiple Perspectives

Conclusions

booming

The API Landscape

Last Update: March, 2017

Business Processes as an API/API-as a Product/Transactional APIs (151)

SMS / Voice APIs (22)

Fax / Mail (9) Email APIs (20)

Search Engine APIs (5) Payments APIs (25)

Accounting API (19)

eCommerce APIs (4)

AI APIs (4)

Data-as-a-service/Messaging (90)

Online Forms(2)

Humans as a Service APIs (2)

HR APIs (2)

API Lifecycle platform (78)

API Documentation Platform (6)

API Testing (6)

API Management (16)

API Analytics / Monitoring (5)

Streaming APIs (9)

Developer portal (5)

IOT Platforms/Networks/Devices API (7)

Access level and Identity management (20)

API Oriented IT Consulting Firms (8)

Backend Building Tools/MBaaS (14)

MBaaS (7)

GraphQL BaaS (3)

DBaaS (4)

API Abstraction / Integration Platform (32)

Horizontal API abstractions (5)

Automation/ Orchestration (8)

Vertical API Abstractions (13)

Domotics (6)

APIs are the Building Blocks
of Digital Transformation

Cloud

External Developers

Mobile

Partners/External Divisions

Customer Devices

The Digital Business

BRING NEW APPS TO MARKET FASTER

ENABLE ENGAGEMENT ACROSS EVERY TOUCH POINT

SHARE DATA AND CAPTURE NEW MARKETS

LEVERAGE SECURITY TO GROW