API STRATEGY DEMYSTIFIED

Creating an API Program Your Developers Will Love

Monica Hockelberg, Integration Domain Architect at Red Hat
David Codelli, Product Marketing Manager at Red Hat
May 9, 2019
WHAT ELEMENT OF AN API STRATEGY IS OFTEN OVERLOOKED?
... THE DEVELOPER’S EXPERIENCE
Platforms that developers enjoy using are more successful.
3:30:3 RULE ...for APIs
3:30:3 RULE ...for APIs

3 seconds to UNDERSTAND
3:30:3 RULE ...for APIs

3 seconds to UNDERSTAND

30 seconds to DISCOVER
3:30:3 RULE ...for APIs

3 seconds to UNDERSTAND
30 seconds to DISCOVER
3 minutes to USE
Opening the door for future digital services

Welcome to the Government of Canada new API Store, our one-stop shop for Application Programming Interfaces (APIs). We encourage you to use these APIs – which provide a wealth of government data and information – to build new applications and services for Canadians. We welcome your feedback to this version of the store. Check back regularly as we continue to add more APIs to the store.

Start now by completing these 4 simple steps!

EXPLORE
View the list of services and pick what you’d like to use.

REGISTERLOGIN
Create your user account to gain access.

SUBSCRIBE
Pick a plan and subscribe for each API you want to use.

TEST/USE
Test your key and use it for your project!
HOW DO I GET FROM HERE
HOW DO I GET FROM HERE TO THERE?
HOW DO I GET FROM HERE TO THERE?

... THE 4 PRINCIPLES
1ST PRINCIPLE

Define clear API program objectives that advance core business goals.
1ST PRINCIPLE

➔ Define clear API program objectives that advance core business goals.

Identify
1ST PRINCIPLE

➔ Define clear API program objectives that advance core business goals.

Identify  Measure
1ST PRINCIPLE

➔ Define clear API program objectives that advance core business goals.

Identify  Measure  Brand
Patrick and John Collison
via CNBC
A Payments Platform that “Doesn’t Suck”

... a developer-focused, instant-setup payment platform that scales to any size
Simple things should be simple and complex things should be possible.

—Alan Kay
2ND PRINCIPLE

➔ Structure your delivery pipeline for changing requirements.
2ND PRINCIPLE

➔ Structure your delivery pipeline for changing requirements.

Organize
2ND PRINCIPLE

➔ Structure your delivery pipeline for changing requirements.
2ND PRINCIPLE

Structure your delivery pipeline for changing requirements.

Organize  Balance  Automate
LEADING independent provider of Aircraft Maintenance + Overhaul

On a typical day:

- Inspect 2000+ aircraft and overhaul 1000+ aircraft components
- 110,000 components in stock
- 26,000 employees delivering parts to 2,000+ aircraft worldwide
LEADING independent provider of Aircraft Maintenance + Overhaul

On a typical day:

Inspect 2000+ aircraft and overhaul 1000+ aircraft components

110,000 components in stock

26,000 employees delivering parts to 2,000+ aircraft worldwide

By 2025, more than 38,000 aircraft are forecasted to be in operation worldwide.

Latest aircraft types produce 50 times more data than older generations.

Prediction

Fulfillment
Open Digital Platform for the Aviation Industry

Lufthansa Technik

AVIATAR

The innovative and holistic platform for the entire aviation industry: AVIATAR offers an extensive variety of digital products and services for airlines, MROs, OEMs and lessors by combining multiple apps in one place.

Discover more

... digital products and services for airlines, MROs, OEMs, and lessors
3RD PRINCIPLE

➔ Establish architecture and processes that will automate and scale, based on your culture and competencies
Software development as a manufacturing facility

- Cycle times
- Process flows
- Profitability
- Bottlenecks
3RD PRINCIPLE

➔ Establish architecture and processes that will automate and scale, based on your culture and competencies

Assess  Standardize
3RD PRINCIPLE: OWNING THE ASSEMBLY LINE

- Cucumber
- Arquillian
- Junit
- Sonarqube
- Fortify
- AtomicScan
- Blackduck
- Twistlock

Trusted code repos

REQ
- Jira
- Trello

DEV
- Che
- JBDSguac

UNIT TEST
- Cucumber
- Arquillian
- Junit

CODE QUAL
- Sonarqube
- Fortify

SEC SCAN
- AtomicScan
- Blackduck
- Twistlock

INT TEST

QA UAT

PROD
- Sysdig
- Dynatrace

CM CS

OPENSHIFT SOFTWARE FACTORY

CCB
RAPID ATO

#redhat #rhsummit
3RD PRINCIPLE

→ Establish architecture and processes that will automate and scale, based on your culture and competencies
4TH PRINCIPLE

➔ Focus on engaging your developers.
4TH PRINCIPLE

➔ Focus on engaging your developers.

Attract
COMPETITIVE INTENSITY

Percent of US manufacturers classified as "hypercompetitive"

Source: "The Rise of Hypercompetition from 1950 to 2002" by L.G. Thomas and Richard D'Aveni, 2004

Source: Dave Gray, The Connected Company
4TH PRINCIPLE

→ Focus on engaging your developers.

Attract

Socialize
In 2014, Philips Hue developer adoption grew by 157%, as measured by average visitors to the developer portal. This growth has been fostered by a clear understanding of the different developer personas that are building on the API.  

ProgrammableWeb.com
4TH PRINCIPLE

➔ Focus on engaging your developers.

Attract  Socialize  Equip
## FOUR PRINCIPLES RECAP

<table>
<thead>
<tr>
<th>Principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define clear API program objectives that advance core business goals.</td>
<td>Structure your delivery pipeline for changing requirements.</td>
</tr>
<tr>
<td>Establish architecture and processes that will automate and scale, based on your culture and competencies.</td>
<td>Focus on engaging your developers.</td>
</tr>
</tbody>
</table>

### Observations

- **Stripe**: An instant-setup payment platform that scales to any size ... offering a delightful payment experience for consumers and is fun for developers to work with.

- **Lufthansa Technik**: “We have infrastructure as code, reproducible at any time”

- **Schiphol Amsterdam Airport**: “This new infrastructure needed to provide massive scalability to support one of the key tenets of the airport’s goal: sharing relevant data via RESTful APIs based on open data principles”

- **PHILIPS hue**: “Growth has been fostered by a clear understanding of the different developer personas that are building on the API.”

---

#redhat #rhsummit
AND DON’T FORGET …
AND DON’T FORGET …

... THE DEVELOPER’S EXPERIENCE

ONE DOES NOT SIMPLY

PROVIDE AN API
<table>
<thead>
<tr>
<th>API Owner’s Manual</th>
<th>Agile Integration E-Book</th>
<th>Red Hat 3scale Trial</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="https://red.ht/2UjyM7B">https://red.ht/2UjyM7B</a></td>
<td><a href="https://red.ht/2UYEElg3">https://red.ht/2UYEElg3</a></td>
<td><a href="3scale.net">3scale.net</a></td>
</tr>
</tbody>
</table>
THANK YOU

linkedin.com/company/Red-Hat
youtube.com/user/RedHatVideos
facebook.com/RedHatInc
twitter.com/RedHat