eBay Speaks API

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Connecting Businesses, People, and Things

- Consumers
- Applications & experiences
- Developers
- APIs
- API teams
- Internal microservices
- Data
Agenda

Consistent API Portfolio

Standards and Patterns

API Design and Beyond
Consistent Portfolio vs an API Maze

A simple, consistent, and well-documented API portfolio

Easy to discover capabilities
## Public APIs vs Internal Services

<table>
<thead>
<tr>
<th>Public APIs</th>
<th>Internal services</th>
</tr>
</thead>
<tbody>
<tr>
<td>The consumer’s view of the capabilities</td>
<td>The provider’s view of the capabilities</td>
</tr>
<tr>
<td>Requirements tailored to external clients</td>
<td>Fine-grained capabilities of domain services</td>
</tr>
<tr>
<td>Orchestrators of internal microservices</td>
<td>Contribute to a portfolio of internal services</td>
</tr>
<tr>
<td>Thin layer</td>
<td>Quality of domain services impacts the quality of public APIs</td>
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Services Layers

- eBay UX app
- eBay non UX app
- 3rd party client
- Top
- Down
- Experience service layer
- 3rd party API layer
- Internal microservices layer
- Consumer’s view
- Provider’s view
- Service dependency direction
API Standardization

- URI scheme
- Quality levels and versioning
- Error handling
- Paginated collection resources
- Deprecation

Ensure consistency across APIs

Define “the good citizen” API
API Deprecation

- Resource/method
- Field
- Enumerated value
- Query parameter
- HTTP header
- Behavior
- API version
- Entire API across all versions
Deprecation: Warning HTTP Header

Warning: <warn-code> <warn-agent> <warn-text> [<warn-date>]

Request

GET
https://api.ebay.com/account/v1/some_resource

Response

HTTP/1.1 200 OK

Warning: 299 api.ebay.com "Deprecated return policy fields: restockingFee and extendedHolidayReturnsOffered. We will keep supporting them for next 18 months. For more information, visit https://developer.ebay.com/api-docs/sell/account/deprecation.html" "Wed, 15 Jun 2018 00:00:00 GMT"

{ ... }
Governance

Objective, transparent, and manageable process

“Ensuring and validating that assets and artifacts within the architecture are acting as expected and maintaining a certain level of quality.” - Gartner
Compliance Model

Enforces standards and policies
Platform-agnostic
Testable
Measured
Patterns

- Asynchronous requests
- Partial responses
- Bulk requests

Enable speed and agility
Consistency across APIs
Names Matter

- Accurate terminology
- Consumer-centric approach
- Predictable and understandable names

Ensure consistency across APIs
Define "the good citizen" API consumer-centric approach
Accurate terminology
Predictable and understandable names
API Design

The API blueprint is the starting point

“Unfortunately, people are fairly good at short-term design, and usually awful at long-term design.” - Roy Fielding
# API Design: Use Cases

<table>
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<th>Actor</th>
<th>Use case</th>
<th>Constraints</th>
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</table>
| Seller | Seller creates a return policy where the policy encapsulates seller's terms for returning items. | The returns policy can support both domestic and international transactions. eBay marketplace policies define categories that require sellers to supply a return policy for the marketplace(s) into which they list.  
  
  Policy instructions can be localized.  
  
  Seller-defined description of the return policy is optional and it is not displayed to end users. |
API Design: Entity Relationships Diagram

- Third Party
- Offer
- Payment Policy
- Fulfillment Policy
- Return Policy
- Merchant External Profile
- Account Settings
- Sales Tax
- Program Participation
- Selling Privileges
- Preferences
- Store Subscription
- Sales Tax Jurisdiction
- Payment Program
- Selling Limit

- Currently supported
- Future extension
- Reference to an external model
API Design: Resources, Methods, and Authorization

Resource Representation

```
{
    "returnPolicyId": "string",
    "returnsAccepted": "boolean",
    "returnShippingCostPayer": "string",
    "marketplaceId": "string",
    "name": "string",
    "description": "string",
    "refundMethod": "string",
    "returnInstructions": "string",
    "returnMethod": "string",
    ...
}
```

HTTP Request

POST sell/account/v1/return_policy

Authorization (OAuth 2.0 scope)

https://api.ebay.com/oauth/api_scope/sell.account
OpenAPI Specification

Streamlines integration with APIs

Standard way to describe API contract
Vendor-neutral

Large community
Well tested and mature
Human-readable
Machine-readable
Emerging Technologies

Reverse image search

Text machine translations

The emerging field of AI exposed through APIs
The Art of Crafting APIs Continues

Keep the marketplace open

Have APIs acting as lingua franca for partners
Thank you

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