



# Pareto principle and Developer eXperience – why should I care?

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# Continue discussion and participate

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# Goal

Understanding Pareto principle and its impact on the performance of our value stream – offering great API driven solutions with excellent developer experience

# 80/20

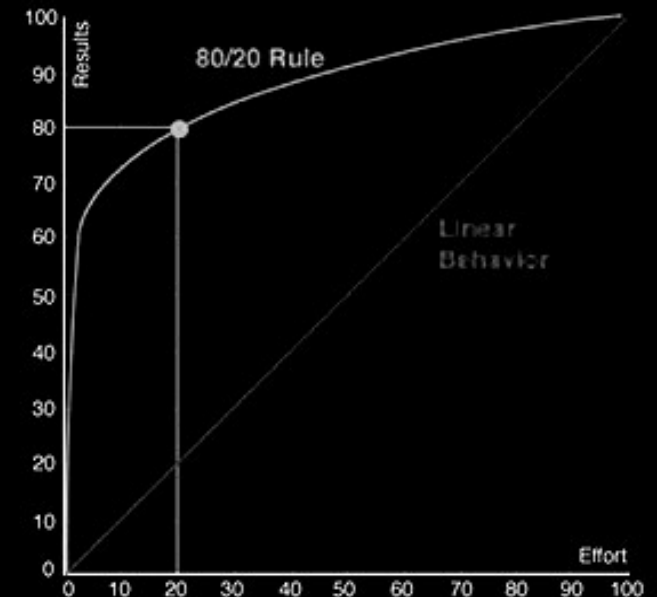
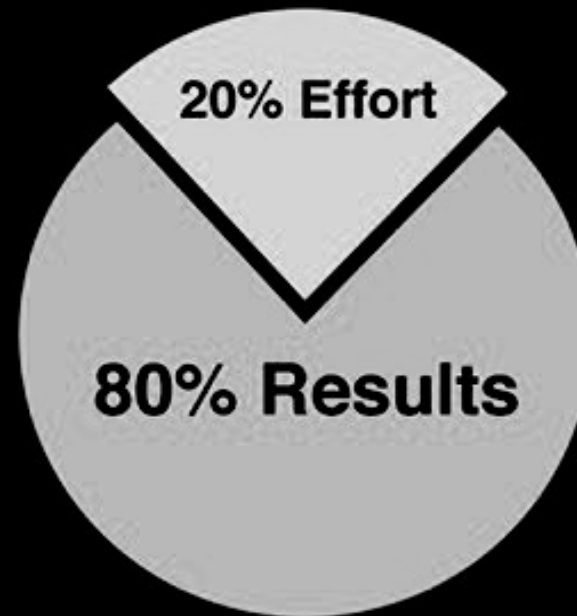
Pareto principle, aka the law of the vital few, or the principle of factor sparsity  
“universal truth” about the imbalance of inputs and outputs is

It is named after an Italian Economist Vilfredo Pareto who in 1906 noticed that 80% of the land in Italy was owned by 20% of the population. Pareto verified the principle with multiple tests around different contexts.

# Pareto principle

also known as the **80/20 rule**, the **law of the vital few**, or the **principle of factor sparsity**) states that, for many events, roughly

80% of the effects come from 20% of the causes.



[https://en.wikipedia.org/wiki/Pareto\\_principle](https://en.wikipedia.org/wiki/Pareto_principle)

# Examples from the IT industry

Microsoft observed that by fixing the top 20% of the most reported bugs, 80% of the bugs and crashes would be eliminated

P. Rooney. Microsoft's CEO: 80-20 rule applies to bugs, not just features

[http://www.crn.com/news/security/18821726/microsofts-ceo-80-20-rule-applies-to-bugs-not-just-features.htm;jsessionid=4y9xsrtocbwxlpvhrhueuw\\*\\*](http://www.crn.com/news/security/18821726/microsofts-ceo-80-20-rule-applies-to-bugs-not-just-features.htm;jsessionid=4y9xsrtocbwxlpvhrhueuw**).ecappj01, October 2002.

The test team found 100% of the defects in 28% of the code, and 80% of the defects in 26% of the code.

Gittens, M., Yong Kim, & Godwin, D. (n.d.). The Vital Few Versus the Trivial Many: Examining the Pareto Principle for Software.

29th Annual International Computer Software and Applications Conference (COMPSAC'05).  
doi:10.1109/compsac.2005.153

# Examples

You DONT want your API to be involved in the 20% of the features

You DONT want your API to be involved in the 20% code base

You WANT to enable that 20% of the features

You WANT to decrease the time needed with your API

- 80% of the bugs in software come from 20% of the features.
- 80% of the complexity in a given application comes from 20% of the code base.
- Only 20% of a given feature set in an application is important to 80% of the users.
- A given engineering team spends 80% of its time on 20% of the application.

# Pareto Chart Analysis

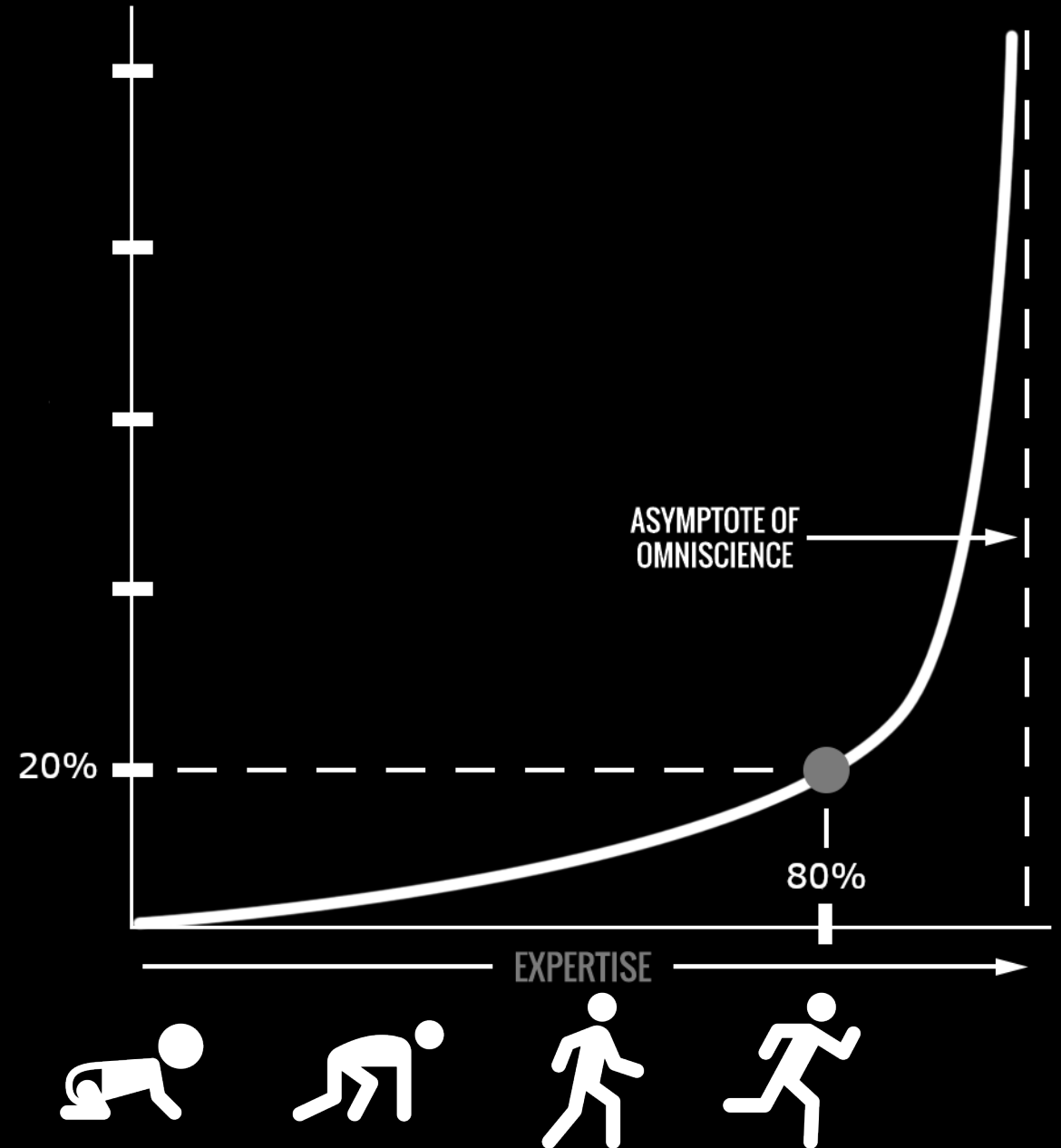
It doesn't matter whether you are trying to optimize code, a business process, workflows, documentation practices, and so on.

Pareto chart analysis can be applied to any efforts for optimization.



# "inverse" Pareto principle

- In learning how to use your API / platform, the learnign curve should be "inverse" Pareto curve.
- 20% of resources probably enable 80% of the needs



# Information overflow

Find the relevant information from your developer portal

80% of the  
developers  
need 20% of the  
content



# Example from real world - platform of trust

Data consuming  
(app developer)

50%



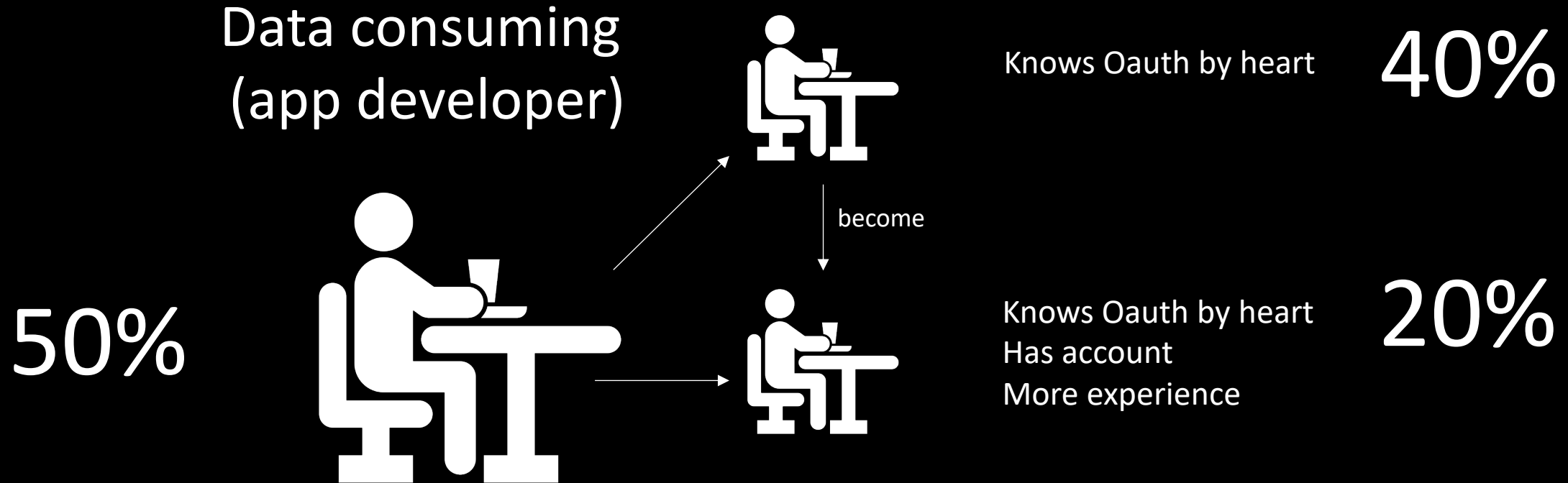
Data source  
integration engineer

50%



**Both need different content and tools**

# Example is platform of trust





How to offer needed 20% of the information so that consumers achieve 80% of their goals

Targeted getting started packages

Grouping related guides

Efficient search

Analyze how search is used to learn

Clear structure  
(and menu!)

Conventions - no  
need to learn

Keywords indicate and catch the eye

# Example 1

Developer wants to list all products with API from Platform of Trust.

What information the developer needs?

- Find the documentation
- Product listing endpoint
- How to call API with preferred programming language
- What are the responses?

PLATFORM OF TRUST

Q Search

Platform of Trust API Docume...

Getting started

ACL

Application

Broker

Calendar

Context

Identity

Login

Message

Product

/products/v1

/products/v1/{product\_code}

Authentication

Errors

Feedback

Developer Portal

422

Take-away:

Reorder endpoints so that relevant for the user's work flow are close to each other. Use Pareto Chart Analysis

GET

Description:

Lists all available products. NOTE: This is a CORS enabled endpoint. 5 pagination.

GET /products/v1

Parameters

Name	Located in	Description	Required	Type
version	path		Yes	string
offset	query	Offset of a query	No	integer
limit	query	Limit the result of a query	No	integer

Responses

Code	Description
200	

### REGISTER AN APPLICATION

Registered application aids to perform useful functionalities in the Platform, like exploring and consuming Data Products, implementing authorization flows for intended users, etc. [Read more...](#)

### INTEGRATE OAUTH 2.0 TO ACCESS APIS

This guide aids developers to implement authorization flows in their registered apps in the Platform [Read more...](#)

### Take-away:

Reorder guides so that relevant for the user's work flow are close to each other. Use Pareto Chart Analysis

# Example 2

## Developer wants to register application to the platform

### What information the developer needs?

- Find the developer portal and guides
- Howto guide on registering an application
  - Step by step guide with code examples (for API calls)
- Most likely developer also needs to add auth to the application as well



# Example 3

**Which APIs or endpoints should I optimize?**

Optimize, performance, usability and reliability of the 20% of the endpoints, leave rest as is (waste of time and resources).

# Example 4

**We consider building a code library to enable more fluent DX for consumers. What APIs and endpoints should be included?**

Most likely consumers need in 80% of the cases just 20% of your API capabilities. Bundle those logically.







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