



QUICK REFERENCE CARD

API Management Essentials

THERE IS A BETTER WAY

"With a taste of a poison paradise, I'm addicted to you, Don't you know that you're toxic"
- Britney Spears - In the Zone album - 2004

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We believe that API IS THE ENGINE OF DIGITAL STRATEGY

WE KNOW *that the Web infiltrates* AND *transforms* COMPANIES WE **WORK + OGETHER,** *with passion,* TO CONNECT BUSINESS & IT *We help you* CREATE OPPORTUNITIES AND EMBRACE THE WEB **Inside & Out**



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When to implement an API Management product.

This decision tree aims to help you:

- Know when to use API Management products
- Know when to setup incrementally and use a specific API Management module when needed

Start Simple and Add Features Incrementally

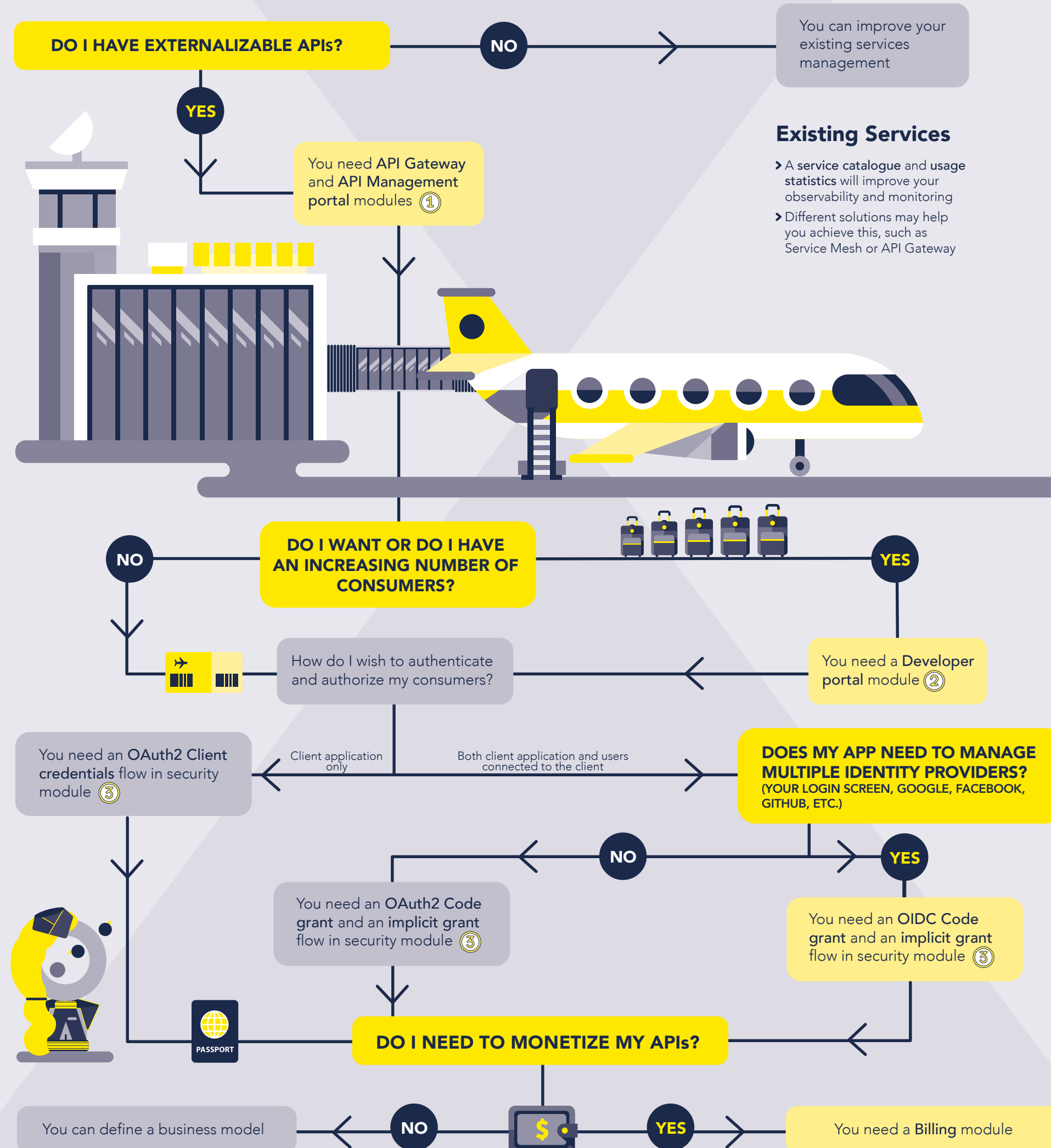
- Your solution should be usable as soon as possible with prioritized features
- A new feature should not block the use of the API Management solution
- You must own the deployment and configuration of your API's publication
- For a better TTM (Time To Market), think "value-first": implement API Management features that meet your and your consumers' needs

Externalizable APIs must...

- Be well-designed: vulgarized, intuitive, inspired by the state-of-the-art of API designs
- Handle fine-grained access: authentication and authorization
- Be testable: provide a sandbox environment
- Offer a clear SLA (Service Level Agreement) in accordance with the product strategy



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API Management Essentials.

"Anytime, Anywhere, Any Device" is the main objective of digital transformation. APIs are a solution providing "Business Agility" as they allow the creation of new business models and to quickly build new applications for upcoming digital devices.

➤ APIs are the industrialization of the consumption of an enterprise's resources on the Web, facilitated by API Management platforms.

➤ API management is the process of publishing APIs, enforcing their usage policies, controlling access, nurturing the subscriber community, collecting and analyzing usage statistics, and reporting performance metrics and data.

➤ An API strategy is often summarized as "buying the right API Management product." But the reality is that API Management solutions only address a minor part of an API strategy's objectives.

This reference card enumerates the key features of API Management platforms and how to integrate them incrementally to ease and accelerate its implementation. Our recommendations are based on our vision and our hands-on experience in API development.

DISCLAIMER

OCTO Technology is an independent consulting and implementation company: hence, we don't receive any fees from API Management vendors. Please check out our blog <http://blog.octo.com>, and feel free to comment or challenge this API cookbook. We're really looking forward to hearing from you.

AUTHORS

Powered with ♥ by Antoine Chantalou, Armen Ozcelik, Daniel Sabin, Adrien Graux, Franck Romano, WOAPI Tribe & Sophie Delronge.

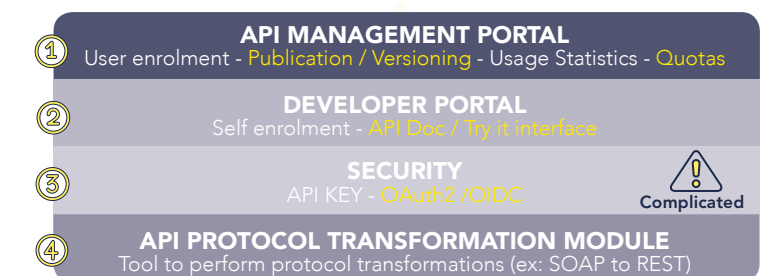
What is an API Management Solution?

An API Management solution is a tool that industrializes the consumption of your APIs and is made for three kinds of users:

An API layer enables

- developers consuming APIs
- developers publishing their APIs
- API Managers configuring the API Management solution, monitoring consumption, communicating with consumers, planning the roadmap...

AN API MANAGEMENT GENERALLY OFFERS THE FOUR FOLLOWING FEATURES:



WARNINGS:

SECURITY 3

Most API Management solutions offer a security module and Identity Provider features. Those features are almost never Plug&Play and will require customization and development. We recommend the use of a dedicated security module with on-premise or cloud solutions.

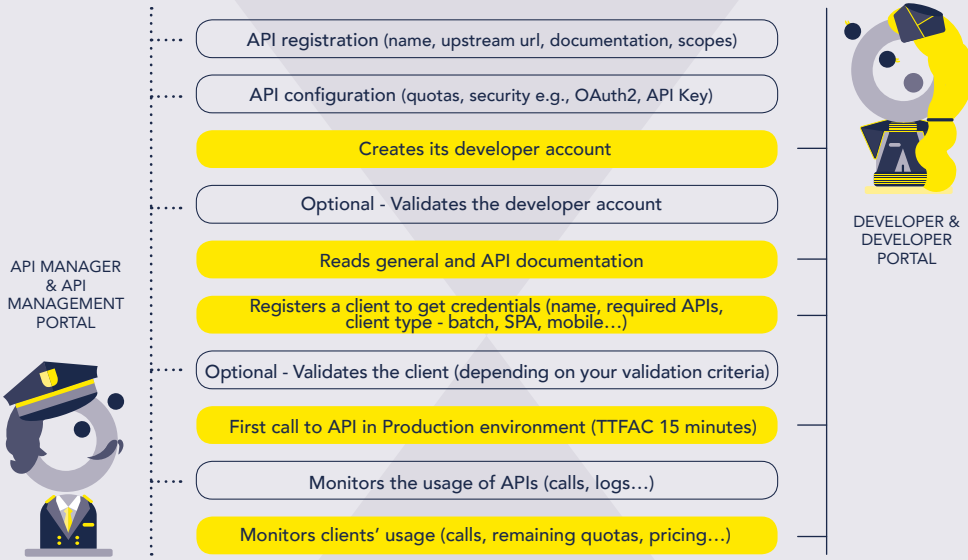
API PROTOCOL TRANSFORMATION MODULE 4

We don't recommend the use of this module because it is proprietary and locks you into a vendor, thus creating maintenance complexity of your produced API.

How it works.

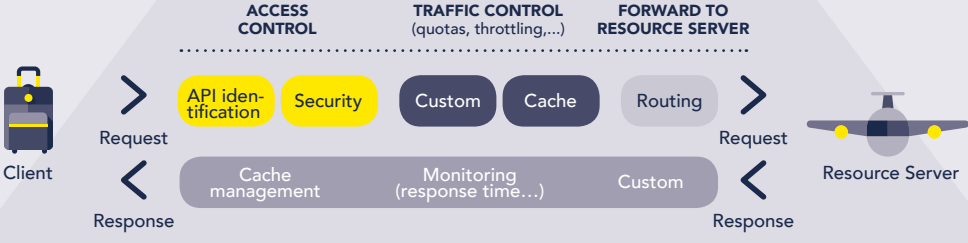
Developer portal & API management portal: initialization scenario

API Managers perform their actions (API registration, monitoring...) in the API Management portal, while Developers must use the Developer portal. These steps are not dependant on a particular API Management solution.



Gateway & Security

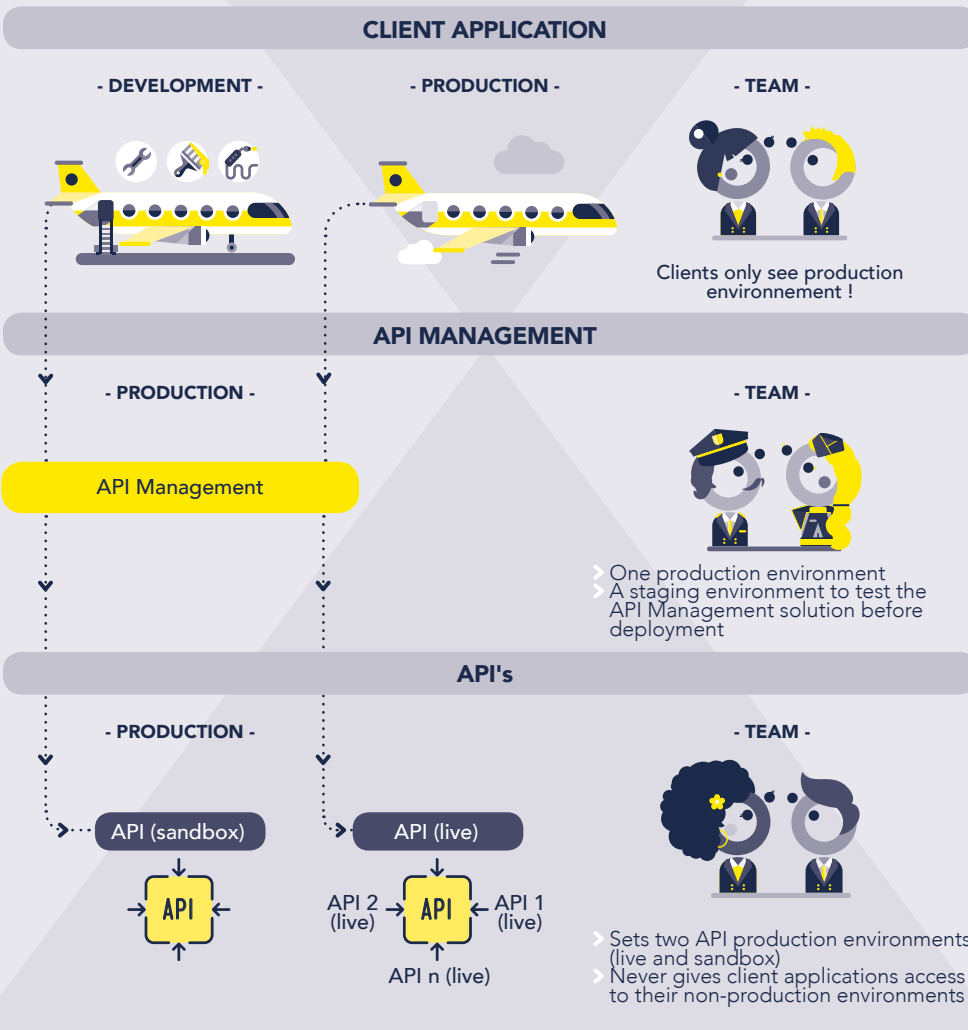
When a client submits a request to an API through an API Management tool, the following steps occur, no matter the chosen API Management solution.



How to manage your API environments?

We believe that API teams must expose a live version and a sandbox of their API. A single development environment is necessary for the team to develop and test the API before deploying.

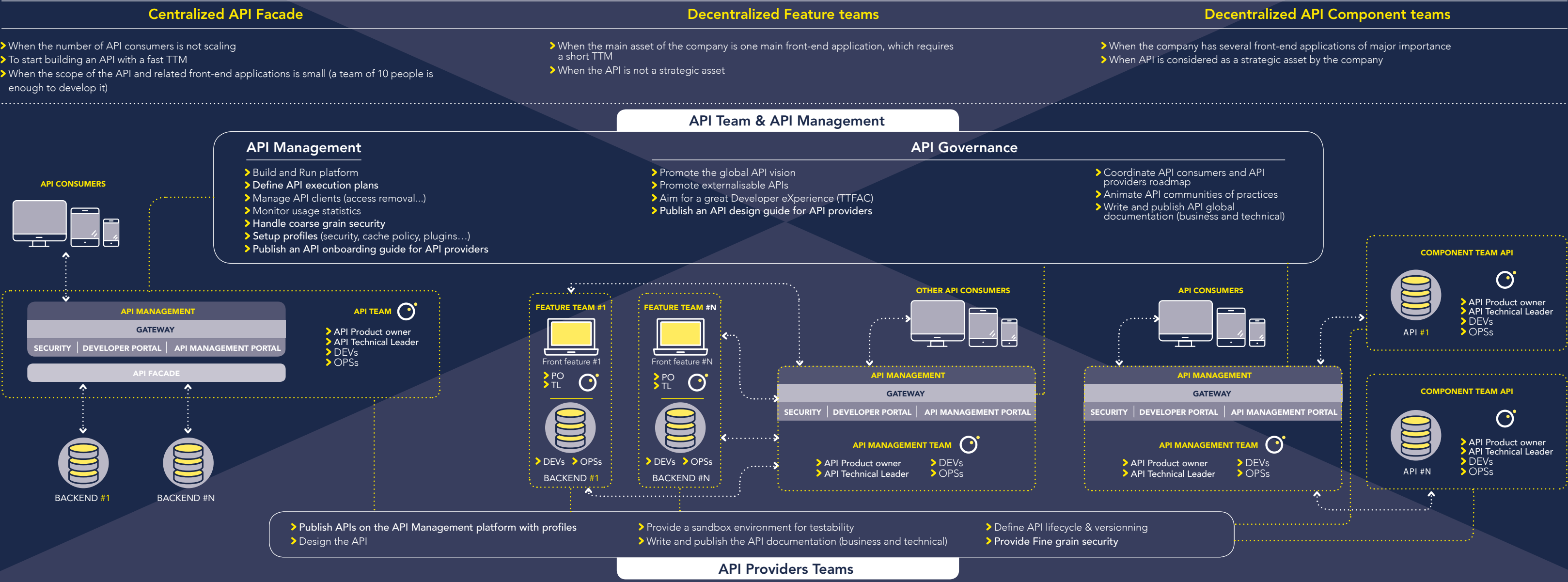
- > Needs a sandbox environment for all non-production environments
- > Access API through gateway only
- > Never access API development environment directly
- > Use a try-it API linked with sandbox



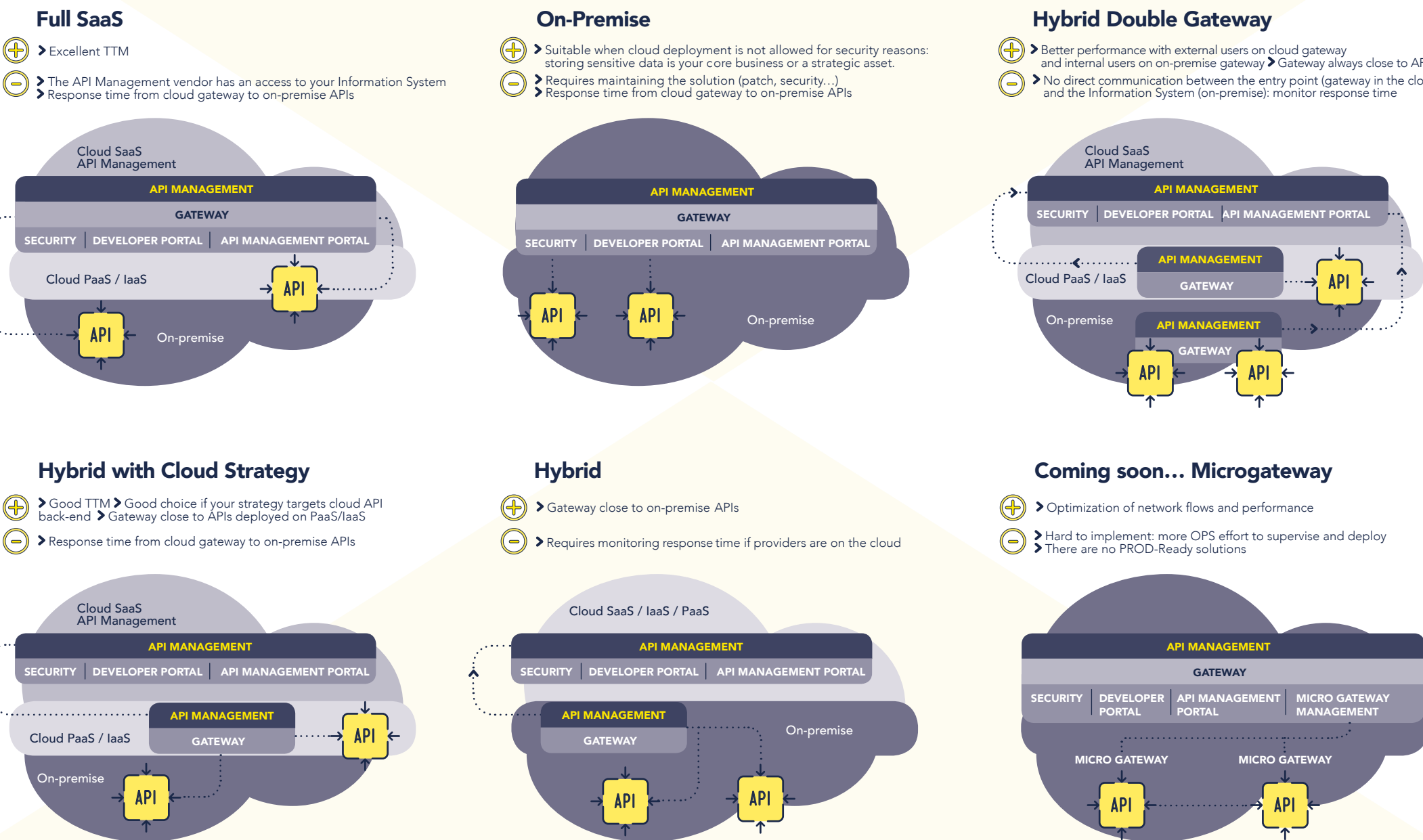
API Management governance.

The following organization patterns are the ones we see the most. In fact, we frequently observe an evolution from Centralized API Facade pattern to Decentralized API Component teams or Decentralized Feature teams patterns. At large scale, decentralized API Component teams

pattern is the most observed. This model mixes scaled agile organizations and API Management product constraints. Global API product owner and global API technical leader are key roles, as they share their knowledge with communities of practice and promote the API vision.



API Management integration patterns.



Common mistakes.



API management platforms are evolving

Two patterns are opposing: the central gateway vs. the microgateway. There are currently no tools able to answer to both patterns. Some API Management solutions are introducing Service Mesh features. Service Mesh tools are also introducing API Management features. So, be aware and make your API Management solution as evolutive as possible – you should be able to easily make changes and updates.

Solution benchmark based on our view of the french market

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