GUIDE 04 / 06

API & backend *explained simply.*

What happens behind every application and how your software can work together automatically.

01 What is it about?

Every application has two sides: the visible interface you use, and the invisible foundation behind it. That foundation is called the backend. It stores data, does calculations, checks who may do what and sends emails.

An API (application programming interface) is the door through which other programs can talk to that foundation securely – such as your app, your accounting software or a business partner's system.

> AN EVERYDAY COMPARISON
>
> *In a restaurant you see the dining room – that is the interface. The cooking happens in the kitchen – that is the backend. The waiter who takes orders to the kitchen and brings the food back is the API. He works from a fixed menu: only what is on it can be ordered.*

02 Typical examples

- An order in the online shop automatically becomes an invoice in your accounts
- Your app shows the same data as your web application
- A business partner sends orders straight into your system
- Payments are automatically marked as paid

03 Do I need this?

It is worth thinking about when …

- ✓ Your team retypes data from one program into another.
- ✓ A planned app needs data from your existing system.
- ✓ Partners or customers want to connect to you automatically.
- ✓ Your software slows down as the amount of data grows.

04 What you get

01

Clean interfaces

Clearly described doors for other programs, with understandable error messages, versions and documentation (technical terms: REST and GraphQL).

02

A well-designed database

A data model that copes with reports and growth instead of slowing down at the first long list.

03

Access and security

Keys with precisely defined rights, limits against misuse and a complete log of who retrieved what and when.

04

Integrations

Payment providers, accounting, CRM and your existing systems – including automatic notifications between programs (webhooks).

05 How it works

1 **Review**

Which programs exist, which data flows where, and where is data still being retyped today?

2 **Design**

The interface is described and agreed with you – and your partners if needed – before it is built.

3 **Development and testing**

Automated tests check every path, including error cases such as missing data.

4 **Go-live**

Launch with monitoring, so problems are noticed before anyone is affected.

06 What you contribute

- → A list of the programs that should work together
- → Access or test access with the respective providers
- → Examples of data that is transferred by hand today
- → If needed, contact with the providers' technical staff

07 Frequently asked questions

I can't see any of it – what am I paying for?

Reliability and less manual work. A good foundation saves time every day, prevents typing errors and is the basis for apps and partner integrations.

Can my existing software be connected?

Usually yes, as long as the provider offers an interface. We check this in the very first step.

Is my data safe?

Access is only allowed with rights, connections are encrypted and everything is logged – in line with the GDPR and, if you wish, on servers in Germany or the EU.

What is the difference between REST and GraphQL?

They are two common "languages" for interfaces. Which one fits depends on who uses it. We choose and explain it in the design.

08 Mini glossary

Backend	The invisible foundation of an application.
API	An interface through which programs exchange data.
Database	The organised storage for all data.
Webhook	An automatic message from one program to another when something happens.
Token	A digital key with defined rights.

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