



berlin
march 18-20, 2025



OPENBANKPROJECT™

Disrupting Payments & Systems with Autonomous Agents and APIs

Who we are

TESOBE & the Open Bank Project

- Berlin-based consulting and FinTech engineering team
- Founded Open Bank Project open source software in 2010
- At the forefront of the Open Banking Movement



Simon Redfern

CEO and Founder

TESOBE / the Open Bank Project

- Agile team leader / architect / CTO
- Responsible for system design and technology stack
- Favours functional programming languages
- Musician
- Fan of open-source and open data
- Born at 318 PPM

Imagine...

“I requested those vacation days – can you check my work calendar and arrange a trip to Greece? I mainly care about the beach and sunbathing, consider my budget and routine.”

You could delegate tasks that require interacting with:

- Your Calendar
- Booking platforms
- Wallets
- Your maps
- Health & Fitness data
- etc.

Smart Money Management

- **Analysing** data and providing insights and suggestions
- **Managing** bills & subscription payments
- **Detecting** redundant expenses and subscriptions
- **Automating** basic savings and investments plans

Payment Optimisation

- **Choosing** between cards, e-wallets, currencies, etc, based on:
 - Fees & rates
 - Rewards / cashback
 - Whatever criteria you want
- **Scheduling** transactions to maximise benefits (e.g. paying bills when cash flow is high)
- **Executing** savings plans and dynamically managing contributions

Autonomous Commerce

- **Finding** the best deals for products/services
- **Applying** promo codes, cashback offers, or loyalty points
- **Handling** bookings, tickets, subscriptions payments
- **Switching** providers to always get the best deal
- **Tracking prices** & executing purchases at the best moment
- **Handling returns** and refunds with limited human intervention

We already have financial advisors...

Today, AI advisors help by providing **insights** and **recommendations**.



How much money do you want to set aside each month?



You've reached your savings goal of €11,000!

AI agents promise something bigger: **reasoning** and **execution**, handling financial tasks on your behalf.



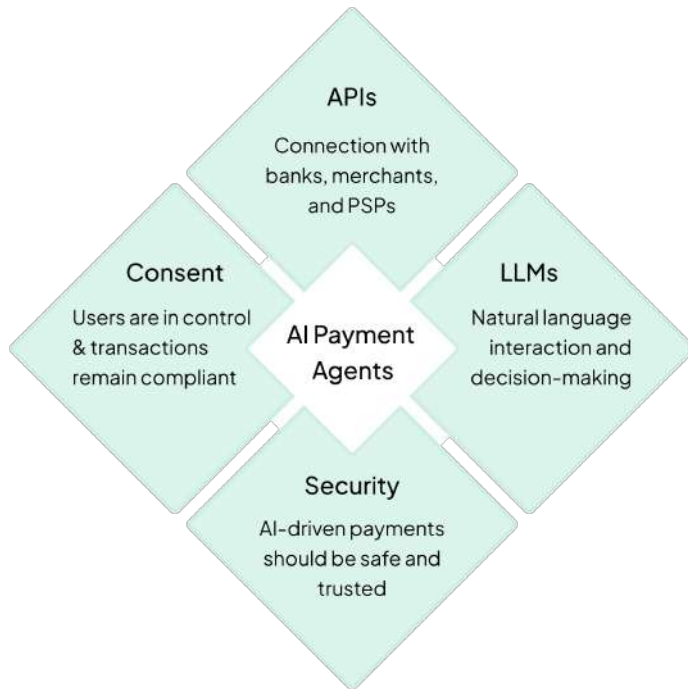
What type of car do you need? I'll set up a savings plan based on your income.



There's a new deal on a car that matches your criteria! You could achieve your goal four months early 🍾

Defining Payment Agents

- Independently initiates transactions
- Predefined, but not fixed, rules
- Reasons, chooses, decides
- Manages payments dynamically
- Handle tasks like subscription management, savings, or even booking and paying for services

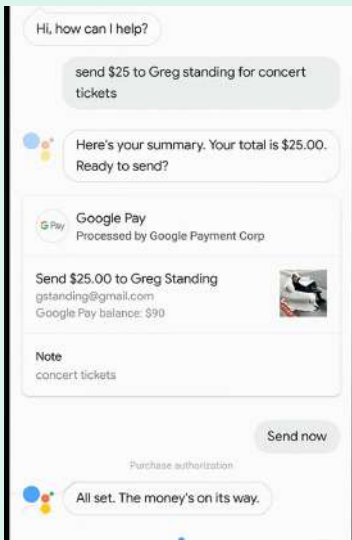
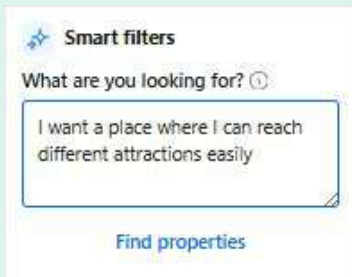
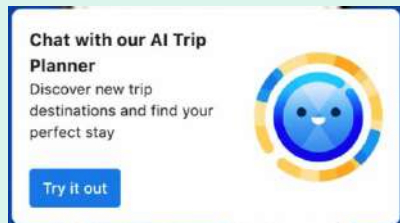


4 cornerstones of AI payment agents

Is AI commerce already here?

- **Traders** trust bots to make trades, showing consistent profit and performance.
- **Booking.com** is expanding generative AI features to help users search for their ideal stays in natural language.
- **Google and Alexa** have experimented with voice payments, but security concerns hindered uptake.

Would consumers give up control for convenience?



Would we give up that control?

We “give up control” for convenience and security every day.



This site asks for consent to use your data

- Personalized advertising and content, advertising and content measurement, audience research and services development
- Store and/or access information on a device
- Learn more

Your personal data will be processed and information from your device (cookies, unique identifiers, and other device data) may be stored by, accessed by and shared with 133 TCF vendor(s) and 94 ad partner(s), or used specifically by this site or app.

Some vendors may process your personal data on the basis of legitimate interest, which you can object to by managing your options below. Look for a link at the bottom of this page to manage or withdraw consent in privacy and cookie settings.

Do not consent

Consent

Approval required



This app requires your admin's approval to:

- Have full access to all files user can access
Allows the app to read, create, update and delete all files the signed-in user can access.
- Sign in and read user profile
Allows users to sign-in to the app, and allows the app to read the profile of signed-in users. It also allows the app to read basic company information of signed-in users.
- Maintain access to data you have given it access to
Allows the app to see and update the data you gave it access to, even when users are not currently using the app. This does not give the app any additional permissions.



```
{
  "name": "obp_requests"
  "args": {
    "method": "POST"
    "path":
      "/obp/v5.1.6/banks/simonopey/accounts/Adaa7673-e7b1-4b31-bfd6-0b99a1b1c833/owner/transaction-request-types/ACCOUNT/transaction-requests"
    "body": {
      "to": {
        "bank_id": "simonopey",
        "account_id": "e1c82e6b-4b77-4b4f-8d76-c864271a1569"
      },
      "value": {
        "currency": "EUR",
        "amount": "2"
      },
      "description": "Transfer 2 EUR from Main Account to Savings Account"
    }
  }
  "id": "call_sww0xd2THa1ft5CWc7P2sPnQ"
  "type": "tool_call"
}
```

Approve

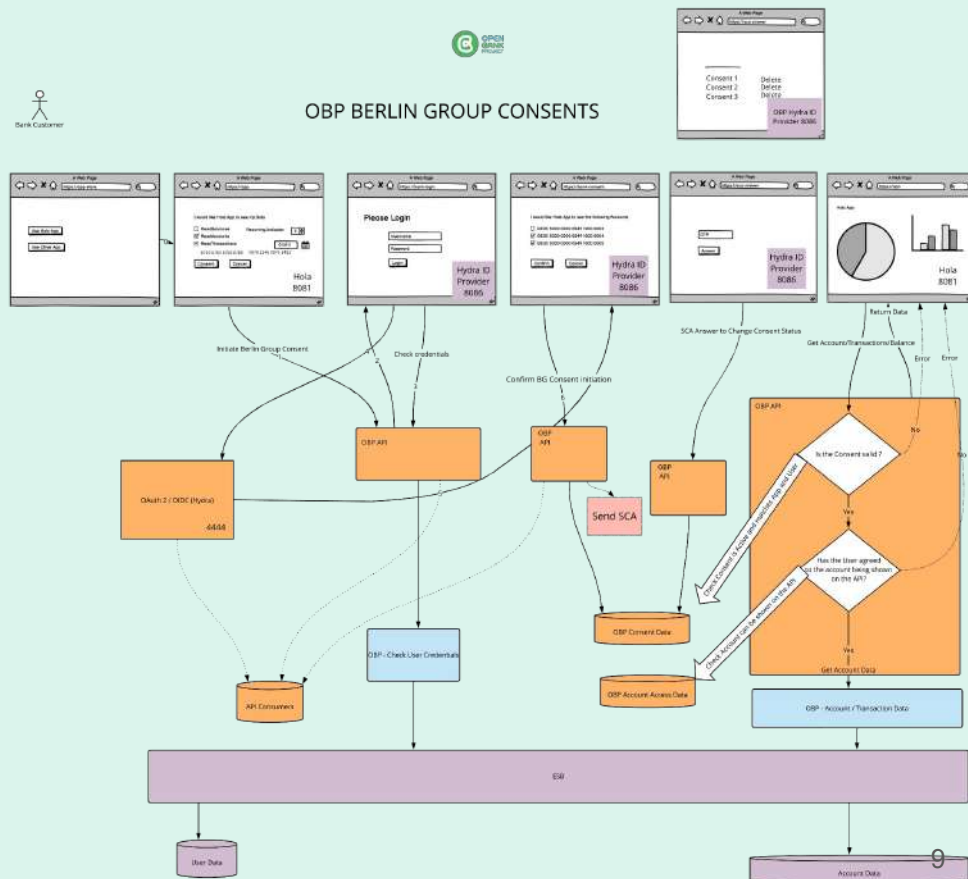
Deny

Your message

Security & Consent

If agents are booking flights, paying bills, making purchases, we need an eye on security standards.

- Open Banking API standards
- Application Access
- User Consent Flow
 - Initiation
 - Authentication & Authorisation
 - Confirmation
 - Strong Customer Authentication
 - Status / Validity
 - Revocation
- Exemptions



Fine grained Access Control

- Open Banking consents are broad.
- Agents need dynamic and granular permissions.
- “Allow this agent to make travel-related payments but not other purchases”
- “This agent can only approve transactions under €500 unless I manually confirm”

SOFIT [Logout](#)

HOME / OWNER / ACCOUNTANT / AUDITOR

VIEWING
Manage views

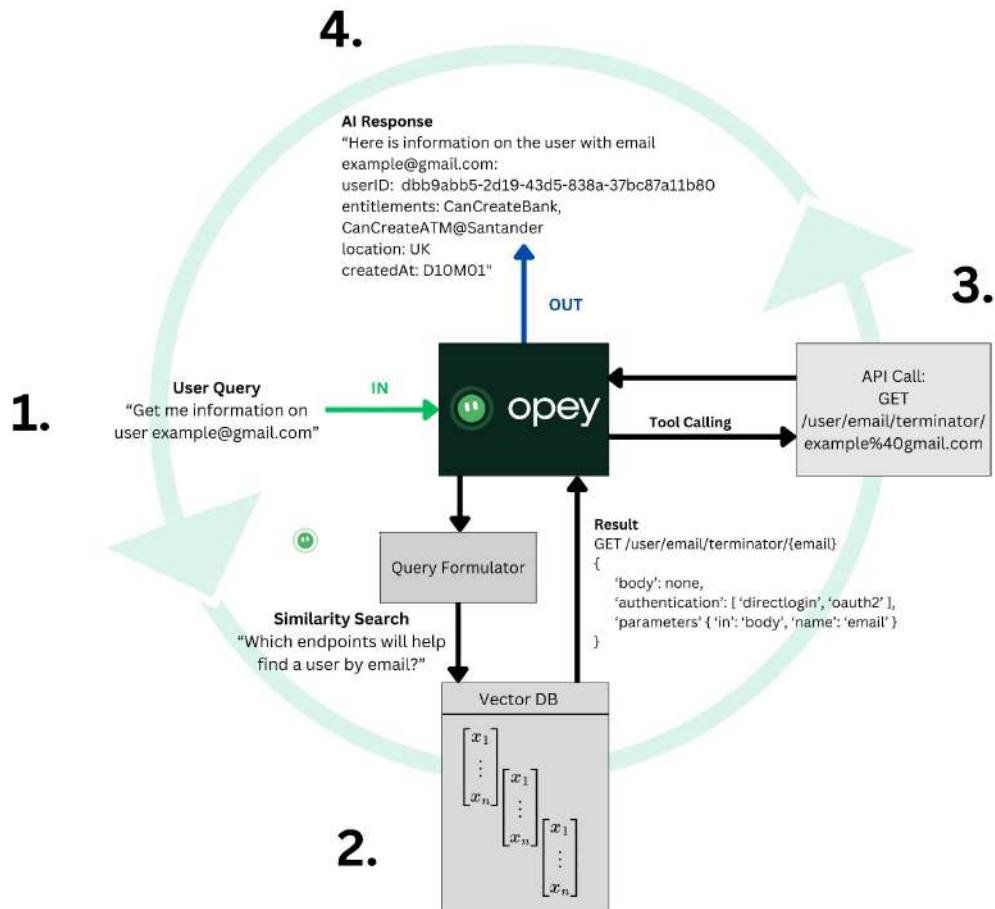
Susan.Us.44 M35 14..194

[Add new view](#) [Hide advanced options](#)

	Owner	Accountant	Auditor	_test	_test2
	Edit	Edit	Edit	Edit	Edit
Visible to anyone (public)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Description	Owner View	Accountants View	Auditors View	good	default description
Alias	none (display real names only)	public	public	none (display real names only)	public
Can add comment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can add corporate location	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can add counterparty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A regular interface for granular access control—what about doing this in natural language?

AI Agent



Behind the scenes

- **Parse:** Opey ingests Swagger-defined API endpoints, organising them into structured, retrievable documents.
- **Identify:** Using vector similarity search, Opey interprets queries and identifies the most relevant API endpoints.
- **Execute:** Opey uses tools to call the relevant APIs.

Preparing AI for APIs + Evaluations

Swagger/OpenAPI 3 Spec

```
{
  "openapi": "3.0.1",
  "info": {
    "title": "Open Bank Project API",
    "description": "An Open Source API for Banks. (c) TESOBÉ GmbH. 2011 - 2024. Licensed under the AGPL and commercial licences.",
    "contact": {
      "name": "TESOBÉ GmbH. / Open Bank Project",
      "url": "https://openbankproject.com",
      "email": "contact@tesobe.com"
    },
    "version": "v5.1.0"
  },
  "servers": [
    {
      "url": "http://test.openbankproject.com/"
    },
    ...
  ]
}
```

Split texts

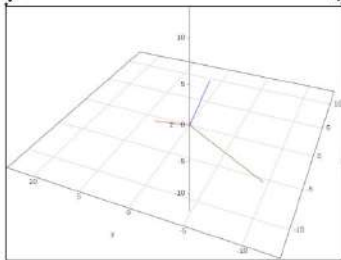
One endpoint per document

GET /users/current
description: get the current user
schema: { auth: direct }

Vectorize with
embeddings model
i.e. OpenAI
Embeddings

Vector Database

$\begin{bmatrix} x_1 \\ \vdots \\ x_n \end{bmatrix}$ $\begin{bmatrix} x_1 \\ \vdots \\ x_n \end{bmatrix}$ $\begin{bmatrix} x_1 \\ \vdots \\ x_n \end{bmatrix}$



Agent in Action

A conversation with Opey
(this was a demo at MPE 2025)

Potential impact

For Banks / PSPs

- Evolve APIs for Agents
- Criminals may focus their nefarious activities on agents
- Banks might need to detect new types of fraud
- Leverage and extend **Consent frameworks**
- **More data made available** for customers (fees, success rates, etc).

For Merchants

- Evolve APIs for Agents
- Agents could make purchase decisions for consumers
- **Traditional marketing and branding may become less effective**
- The concept of **brand loyalty may change**
- There may be a shift towards using agents to manage **internal API-driven** operations

Looking Ahead

- **How will banks and merchants adapt?**

Will merchants learn how to **acquire and retain an AI customer**? How will banks maintain control of customer interactions?

- **Chatbots are not the endgame.**

This is a journey. We don't know if in 30 years our interfaces will be chat-driven, or if our brains will communicate directly with machines.

- **Focus on the standards.**

Better standards will create the interoperability required for these kinds of use cases.

- **Eyes on Agents, Mind on Infrastructure.**

Agents may change commerce in the next decade, but the underlying infrastructure that we build will support whatever the next major payment innovation is.

Thank You!

Let us know your thoughts on agentic commerce

✉ contact@tesobe.com twitter.com/OpenBankProject

🌐 www.openbankproject.com ☎ +49 (0)30 8145 3994

