



# Recipes for Success in Creating Customer Identity

An API Approach To  
Building the Identity, and  
Identity Data, Ecosystem



A person is shown from the side, looking at a tablet. The tablet screen displays a news article with a play button icon. A white rectangular box is overlaid on the tablet, containing the Avoco logo and a quote. The person's hand is visible at the bottom, holding a white pen.

Identity  
AVOCO

“  
Creating identity  
platforms and  
products from a  
single API  
”





# CONTENTS

4

**Introduction to the Book**

5

**Introducing the Avoco API**

7

**THE AVOCO API: Simplicity in Services  
Rules-driven | Flexible | Simple**

8

**Rules of Engagement**

9

**Recipe 1: A Recipe for Online Banking**

10

**Recipe 2: Online Banking With Smart  
Contracts**

11

**Recipe 3: Creating a Data Store To  
Facilitate Personal Data Transactions**

12

**Recipe 4: Creating an Identity Hub and  
Decision Engine**

# INTRODUCTION TO THE BOOK

Avoco provides the fulcrum upon which identity rests. The world of digital identity is changing. Long gone are the days of a hard-coded IAM system where you knew who your users were because they were stored in your company directory.

Digital identity is now universal - everyone wants one, and everyone needs one.

Avoco Identity take a different approach to building services and systems based on a verified (assured) identity and/or identity data. Avoco use a single API approach.

## What is an API Approach?

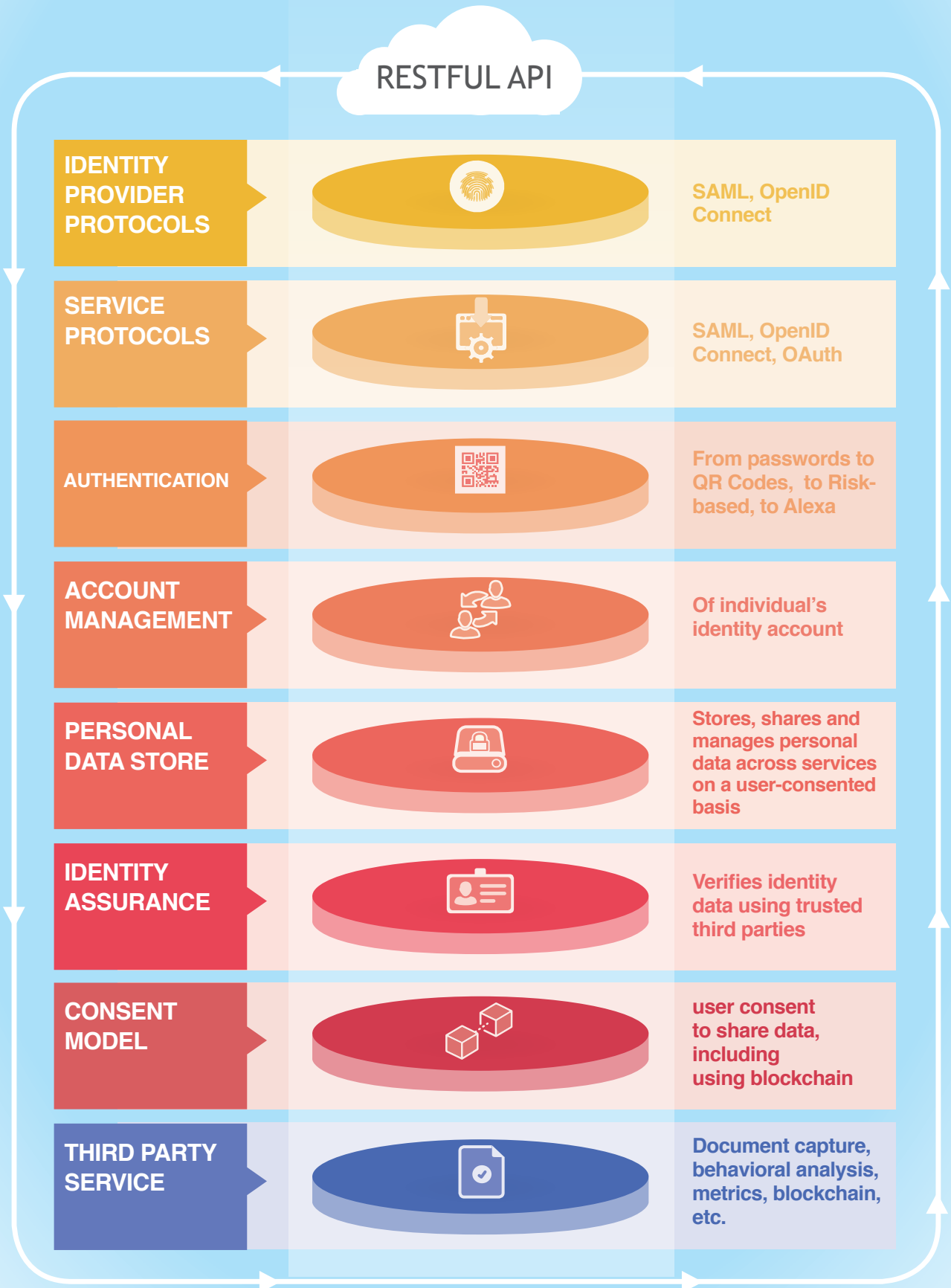
An API is a application interface. It is a way to join online services and digital products together and to add functionality to make a complete identity ecosystem; it can be likened to building blocks. Each block linking to another to create a bigger and more functional system. You can also think of it as a configuration engine - each part you use is a way to configure your ideal system.

*The Avoco API gives you the tools to create services based on digital identity data, simply and with inbuilt flexibility*





# Avoco Trust Platform API and Ecosystem Builder





# THE AVOCO API:

## *Simplicity in Services*

### *Rules-driven | Flexible | Simple*

The Avoco API is built to be flexible. Modern identity systems and services reliant on identity data need to be the right fit for your business. But bespoke identity systems are time consuming and costly to create. Avoco have created a system that is incredibly easy to use from B2B to mass-adopted, wide-demographic scenarios.



#### **Rules:**

The API itself is driven by rules. These rules are updateable in real-time, so you can instantly see changes. This dynamism is a key component of an adjustable, configurable, and usable identity system.



#### **Flexibility:**

The extended identity ecosystem includes identity provisioning, identity hubs and personal data stores. The Avoco API provides you with the tools to build better, more seamless services, that enhance consumer privacy and create a more secure environment to share personal and health data. The flexibility to make fast configurations is built into the design of the API.



#### **Simplicity:**

The Avoco API is designed for simplicity of use. The web-based, graphical interface lets system designers and business analysts pick and choose the specific API components required in order to build their identity or data service.

All that is needed is a frontend to the identity service. To simplify things even further

Avoco offer vanilla UI template screens that can be used to handle tasks such as first and second factor login. API components can be added or removed at any time to modify the service, even during production.

In this short 'recipe book' we will show you how you can build an identity ecosystem that can be used for a multitude of identity and personal data based services.

### **Who Can Use the Avoco API?**

The Avoco API can be used to create identity products and platforms to service all types of industry sectors including:

- Financial
- Banking
- Healthcare
- Retail
- Government
- And more...

# Rules of Engagement

The Avoco API is based upon rules. Rules are a very powerful way to control the details of an identity ecosystem.

The Avoco API rules control all aspects of the system and are real-time updateable using a very simple interface, named Desk. For example, you could set a rule to whitelist an IP address, or to force a re-verification of users after a certain time period. Rules drive dynamism and the API provides flexibility.

## Putting Identity to Work

API + Recipes + Desk + UI = Flexible identity and Identity data services

### Simplicity:

Recipes are 'mixed' using our **Recipe Maker**. This web-based, graphical interface, lets system designers and business analysts pick

and choose the API components needed to build different parts of the identity or data service they need. This information is then packaged up and sent to a central control unit called Desk. Desk is typically used by a system administrator to add the fine details, such as endpoints and rules.

A web designer/developer creates the front end to display the identity service. But, to make things easy, we have even included sample web UI screens. For example, you can use our vanilla login credential screens to handle your first and second factor login screens.

## Making Things Even Easier:

Recipes can be changed in situ. Adjusting a Desk configuration will instantly show up on the screen, e.g. decide to add in Google login as a first factor? No problem, add to Desk and it will be instantly reflected in the login screen for users, even when in production.





# EXAMPLE RECIPES

## Recipe 1: A Recipe for Online Banking

### Project KYC for Online Bank Account Opening

According to a study by Thomson Reuters completing a KYC process to onboard banking customers can cost of up to \$500 million per year <sup>(1)</sup>. This is because of the onerous checks to verify customers.

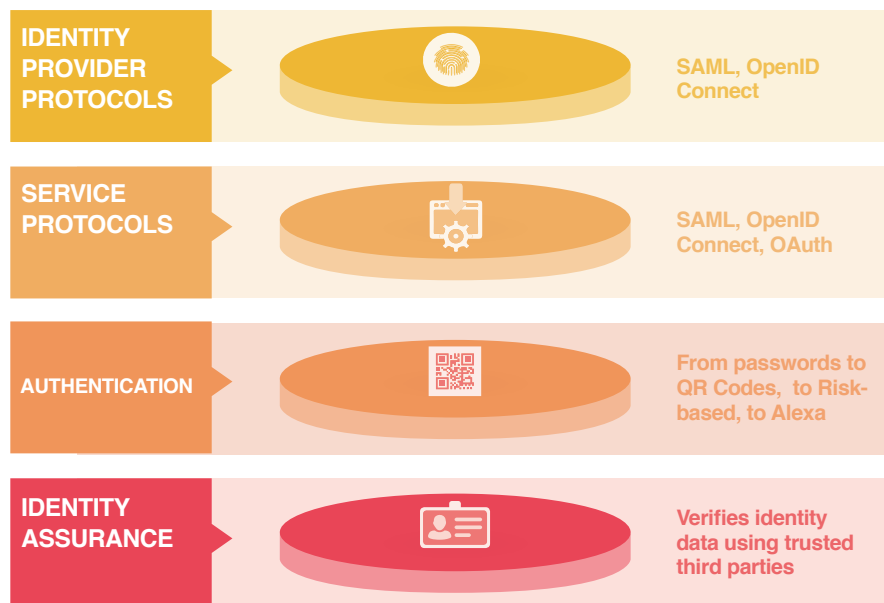
The Avoco API allows banks to either create their own verified Customer Access Management platform, or piggy back off other verified identity services. These other identity services can be, for example, government sponsored assured identities, or unverified providers, like Amazon.

In the case of lower assurance identities, like AmazonID, the Avoco API can allow the bank to offer customers to sign up using their Amazon account to start the process; the bank can then call the API to make further online checks to verify the user to the higher standard needed for KYC.

Optionally, a blockchain, distributed ledger, or smart contract, can be used to register the assurance level/KYC result of the customer for further use.

The use of the Avoco API for bank KYC and onboarding, provides the perfect mix of usability, speed, privacy, and assurance.

### Ingredients for a KYC identity provider:



<sup>(1)</sup> <https://www.thomsonreuters.com/en/press-releases/2016/may/thomson-reuters-2016-know-your-customer-surveys.html>

## Recipe 2: Online Banking With Smart Contracts

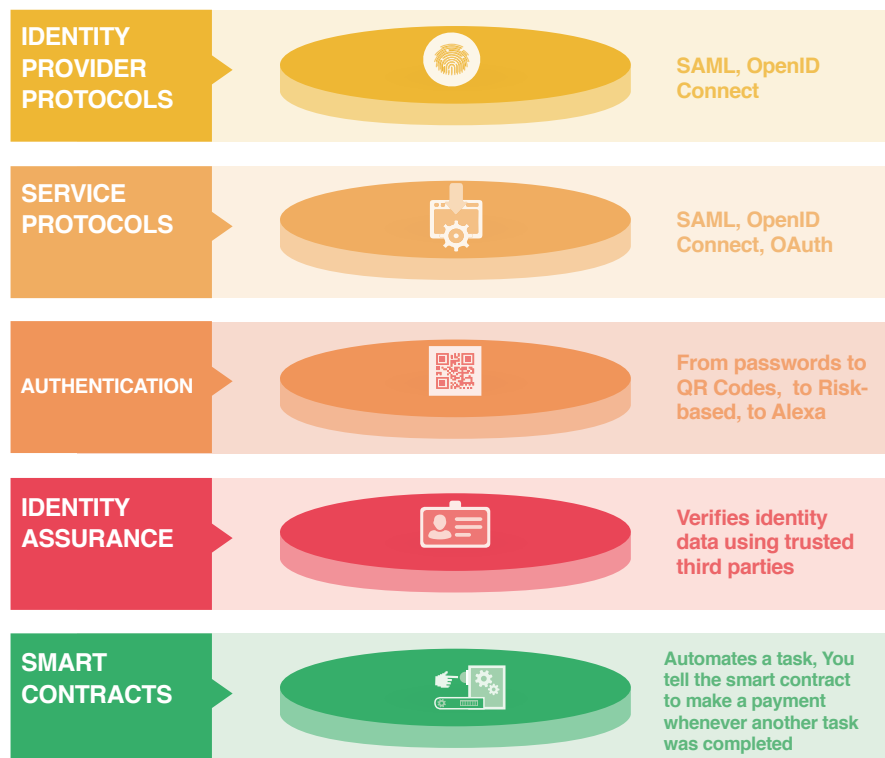
Smart contracts and blockchain technology can be used for a number of banking processes. In this example we are using Smart Contracts with our MyMoney app.

The MyMoney app is built using the Avoco API. It allows users to perform P2P payments and securely share financial information. Smart Contracts offer a method that allows bank and their customers to create contracts that do jobs, like sending out notices after a contract has been completed.

They are even smarter as they can also be used to initiate nextstep actions. For example, Smart Contracts could be used with the Avoco API to manage the entire lifecycle of customer management, from KYC and onboarding to creation of payment contracts for P2P, direct debits, etc.

The Smart Contract works symbiotically with various components of the Avoco API. Together they choreograph the various actions of the customer, even creating an in-built consent model for activities carried out within that system.

### Ingredients for a smart contract based financial app:



# Recipe 3: Creating a Data Store To Facilitate Personal Data Transactions

There are many processes that are currently done manually, that could be done digitally using an assured identity. For example, if you want to give a relative money as a deposit on a mortgage, you will likely need to prove your identity and financial status to the conveyancing lawyer.

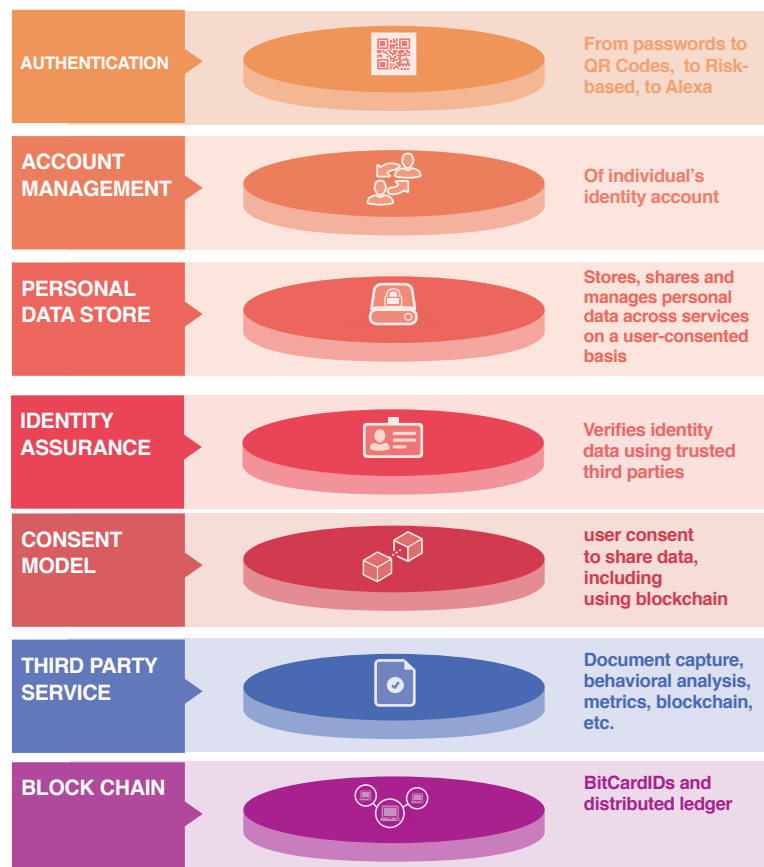
This is usually done using face-to-face checks of identity documents and posting off copies of bank statements. It adds lead time and cost onto the mortgage completion process. The Avoco API lets you build personal data store based on an assured identity that can securely share data such as identity documents and finances with trusted third parties.

Optionally, the data store can offer a visual way for distributed ledger based identity data to be displayed. This is in the form of BitCardIDs. A BitCardID is a digital card, stored in a data

store and registered on a distributed ledger/blockchain. It can be used to control transactions. For example, an 'Age BitCardID' could be used

to show a person was over 18 to purchase an age restricted product. The card would not divulge the user's actual age, just an age over, under, or range.

## Ingredients for a data store:





## Recipe 4: Creating an Identity Hub and Decision Engine

Using identity systems creatively comes naturally with the Avoco API. You can use a recipe to create a 'hub' or decision engine that pulls services, consumers, and IdPs together under one umbrella. The hub can allow you to:

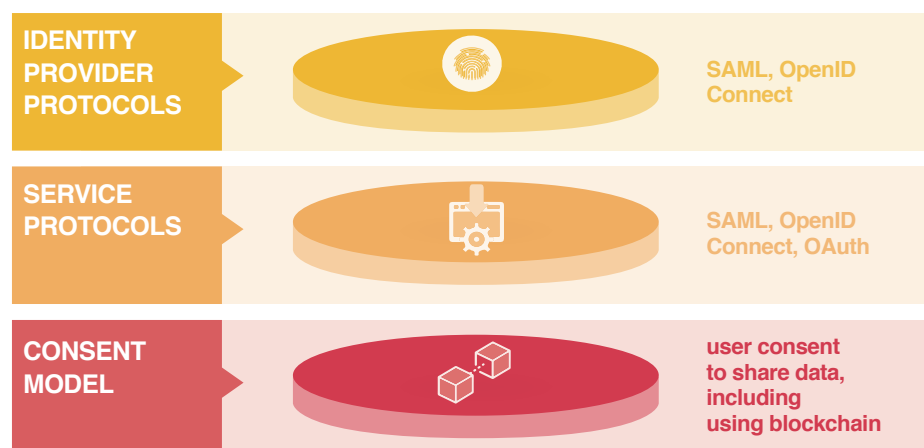
- Offer other identity or federated sign in options from a single place. Your organization can allow users to chose to sign up to your service using pre-existing assured identity accounts, or even federated accounts like Amazon, PayPal, etc.
- Translate identity protocols, e.g. SAML to OpenID Connect to allow your service to take advantage of other systems
- As a hub hosting company, let you offer online services the benefits of using Identity as a Service (IDaaS)



**Your organization can allow users to chose to sign up to your service using pre-existing assured identity accounts, or even federated accounts like Amazon, PayPal, etc.**



### Ingredients:



## A Recipe for Identity Success

We have built the Avoco API to make Identity as a Service (IDaaS) a reality. The Avoco API makes building identity and identity data sharing ecosystems, simple, yet powerful.

## ***Making identity work***

For further information on how the Avoco API can change the way you use identity, contact:

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