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# An Introduction to User-Managed Access (UMA)

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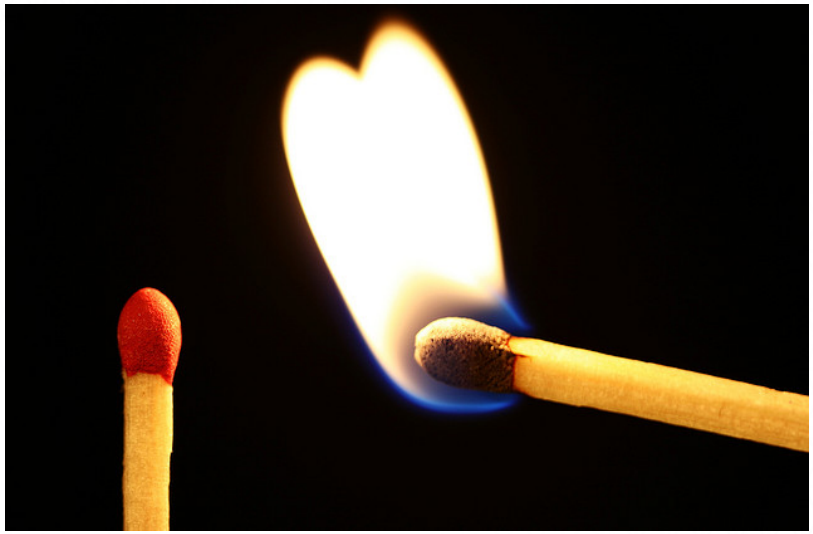
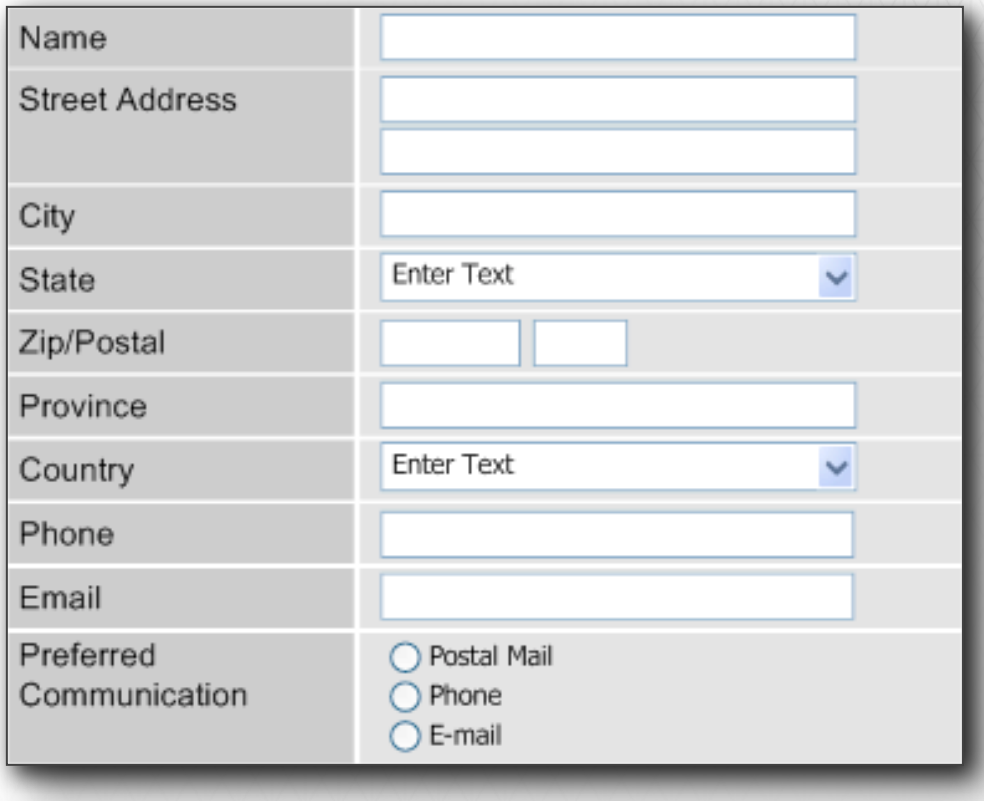
# Challenges in apps that handle personal data and content

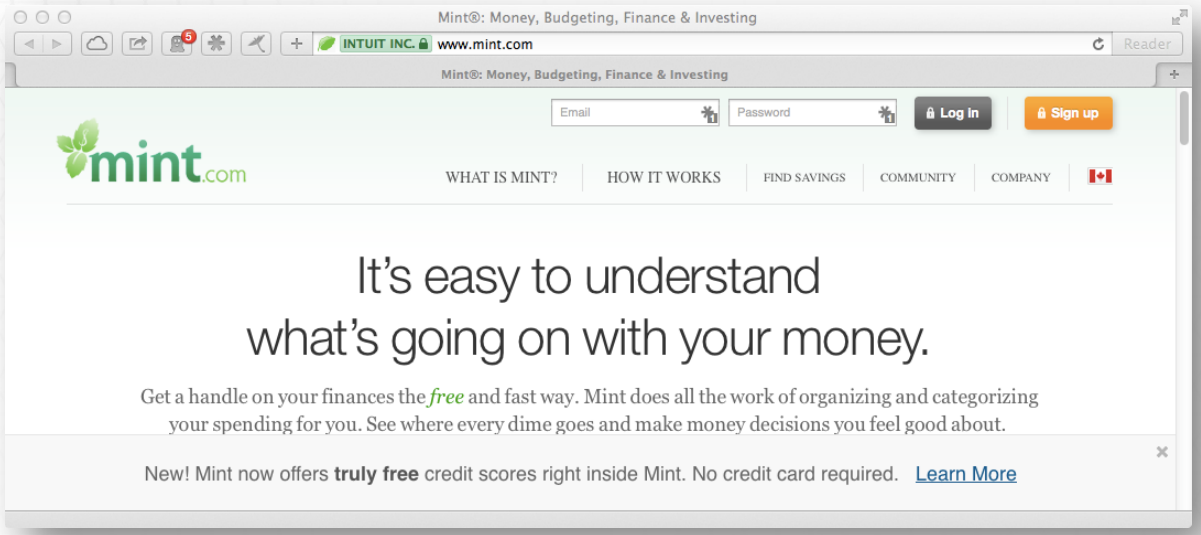


# Some apps are still in the Web 1.0 dark ages

- Provisioning user data by hand
- Provisioning it by value
- Oversharing
- Lying!

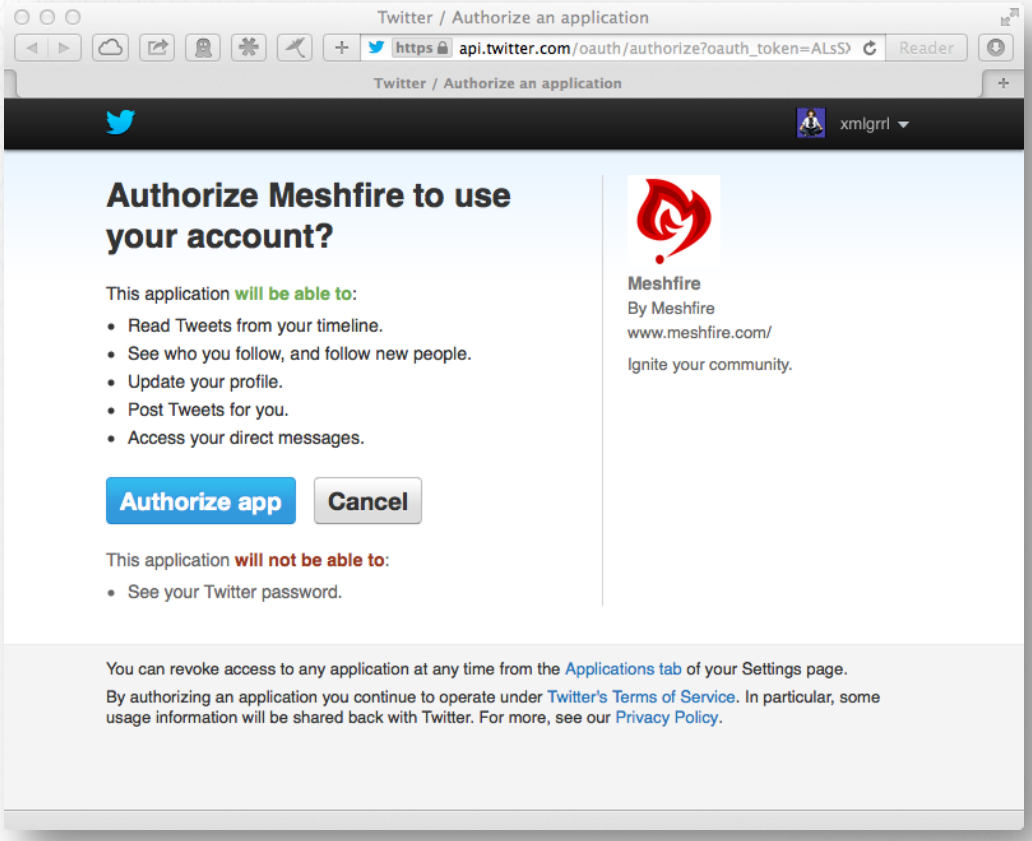


# Some other apps are still in the Web 2.0 dark ages




- The "password anti-pattern" – a third party impersonates the user
- It's a shared secret honeypot
- It's a gray-market B2B partner

# Apps using OAuth and OpenID Connect hint at a better, if not perfect, way



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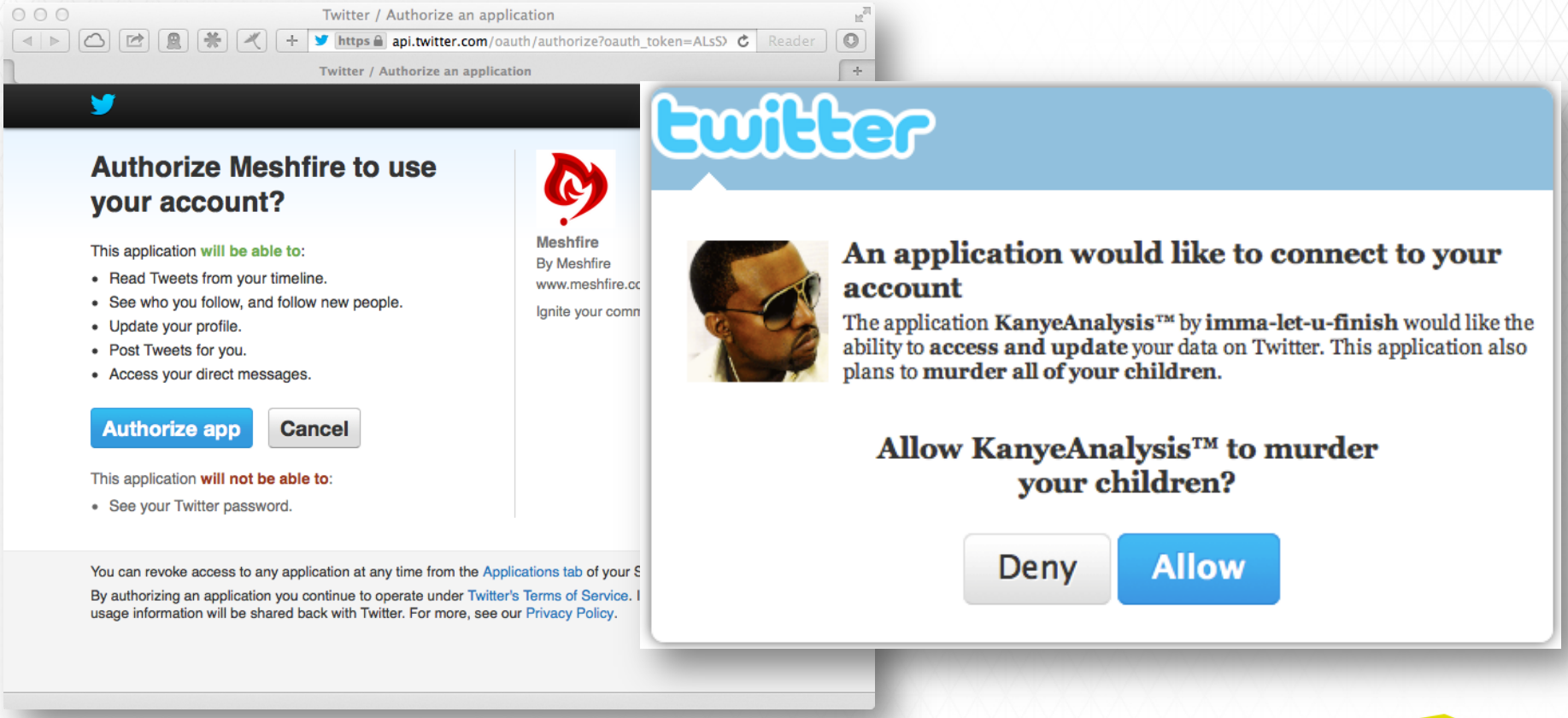
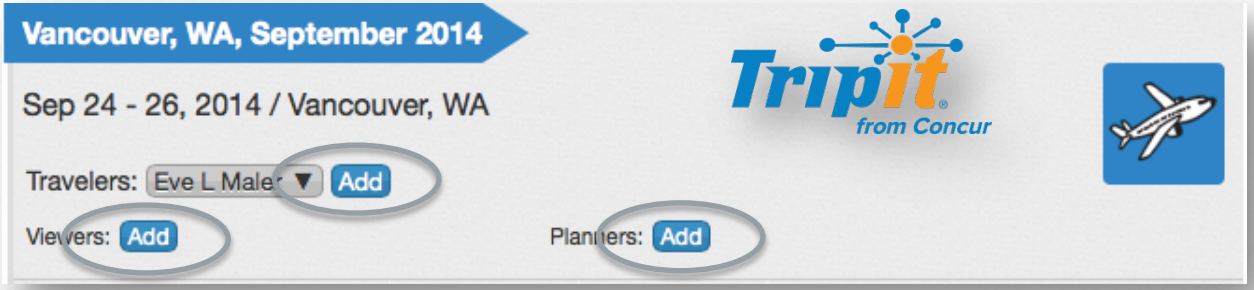
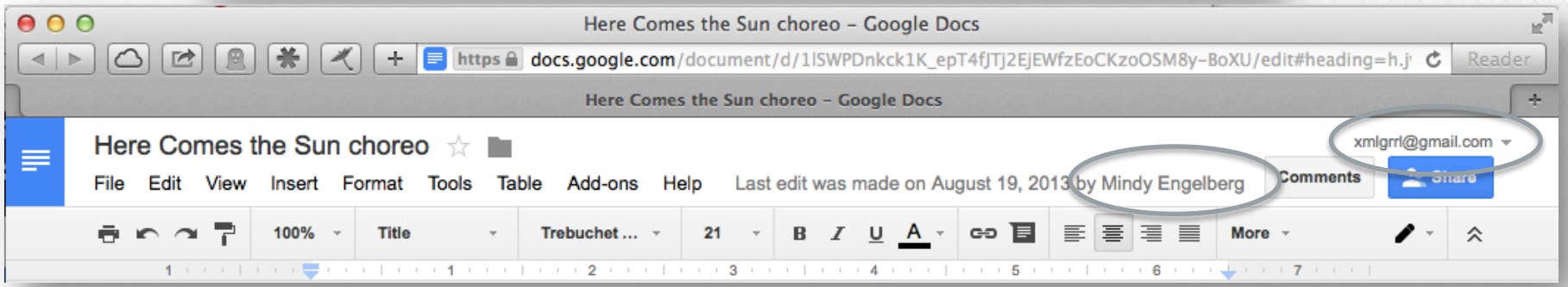


# What about selective person-to-*person* sharing?

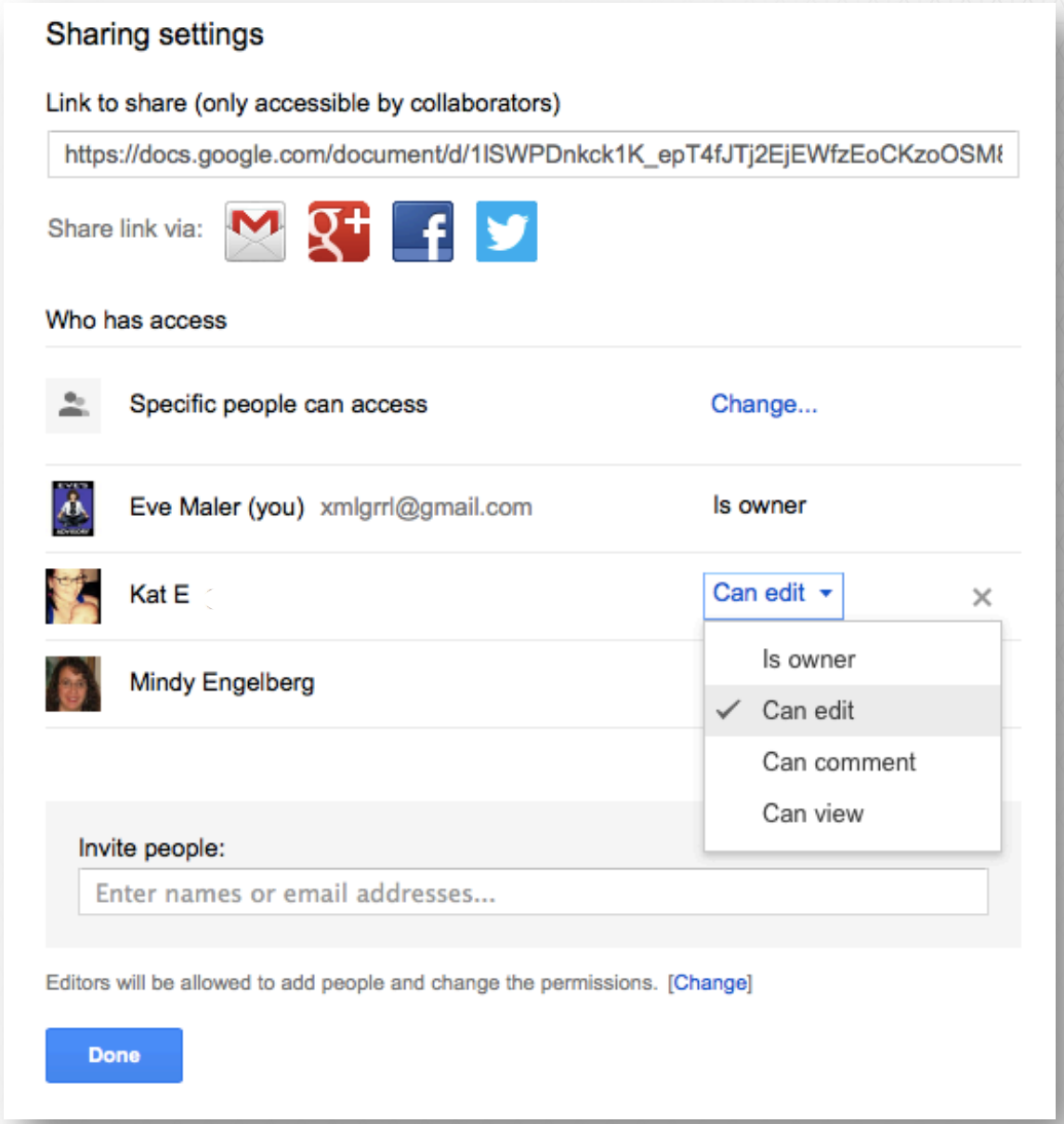



# Our choices: send a private URL…

- Handy but insecure
- Unsuitable for really sensitive data

# Or implement a proprietary access management system…



# Or require impersonation

## Import Fidelity Tax Information Into TurboTax®

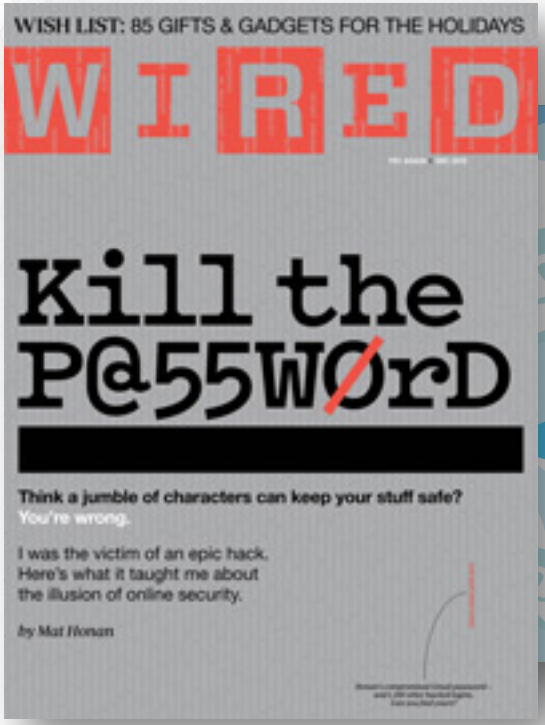
If you are a Fidelity customer and use TurboTax®, you may be able to import certain information directly from your account into the software. Here's how.

### How to import your information

Once you receive your 1099 statement by mail or through eDelivery, have it available to verify the imported information. Follow these simple steps:

1. Enter your Social Security number (SSN), taxpayer identification number (TIN), or username, and then your password. When asked where to import information from, select Fidelity Investments and enter the same information that you use to log on to Fidelity.com. Then, the tax information available for each of the accounts associated with your SSN should appear.

# Killing – or even *wounding* – the password kills impersonation

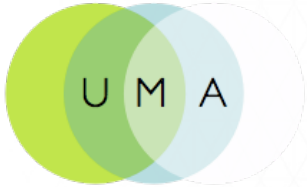



# We have tough requirements for delegated authorization

- Lightweight for developers
- Robustly secure
- Privacy-enhancing
- Internet-scalable
- Multi-party
- Enables end-user convenience

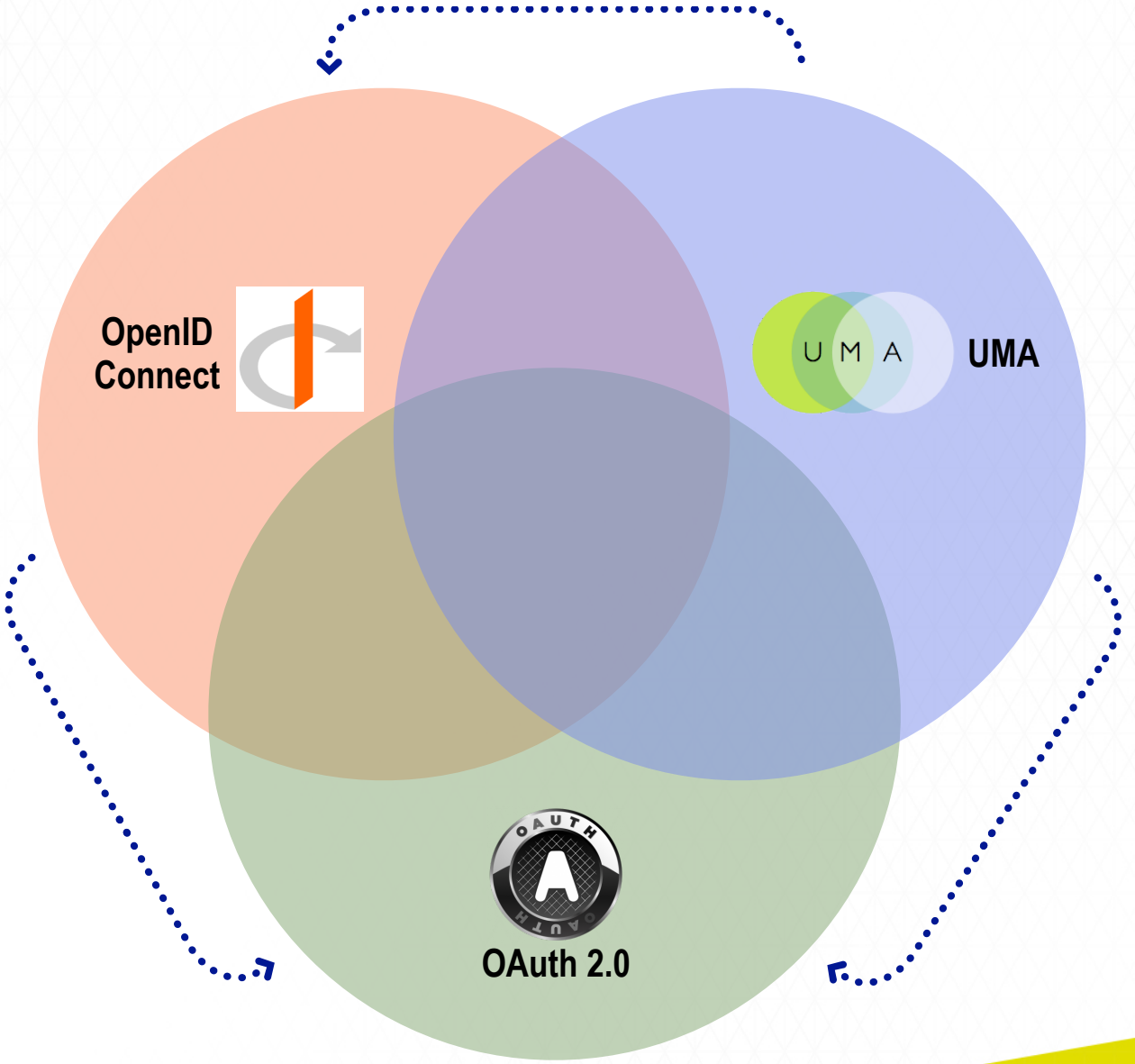
# Introducing UMA

# UMA in a nutshell

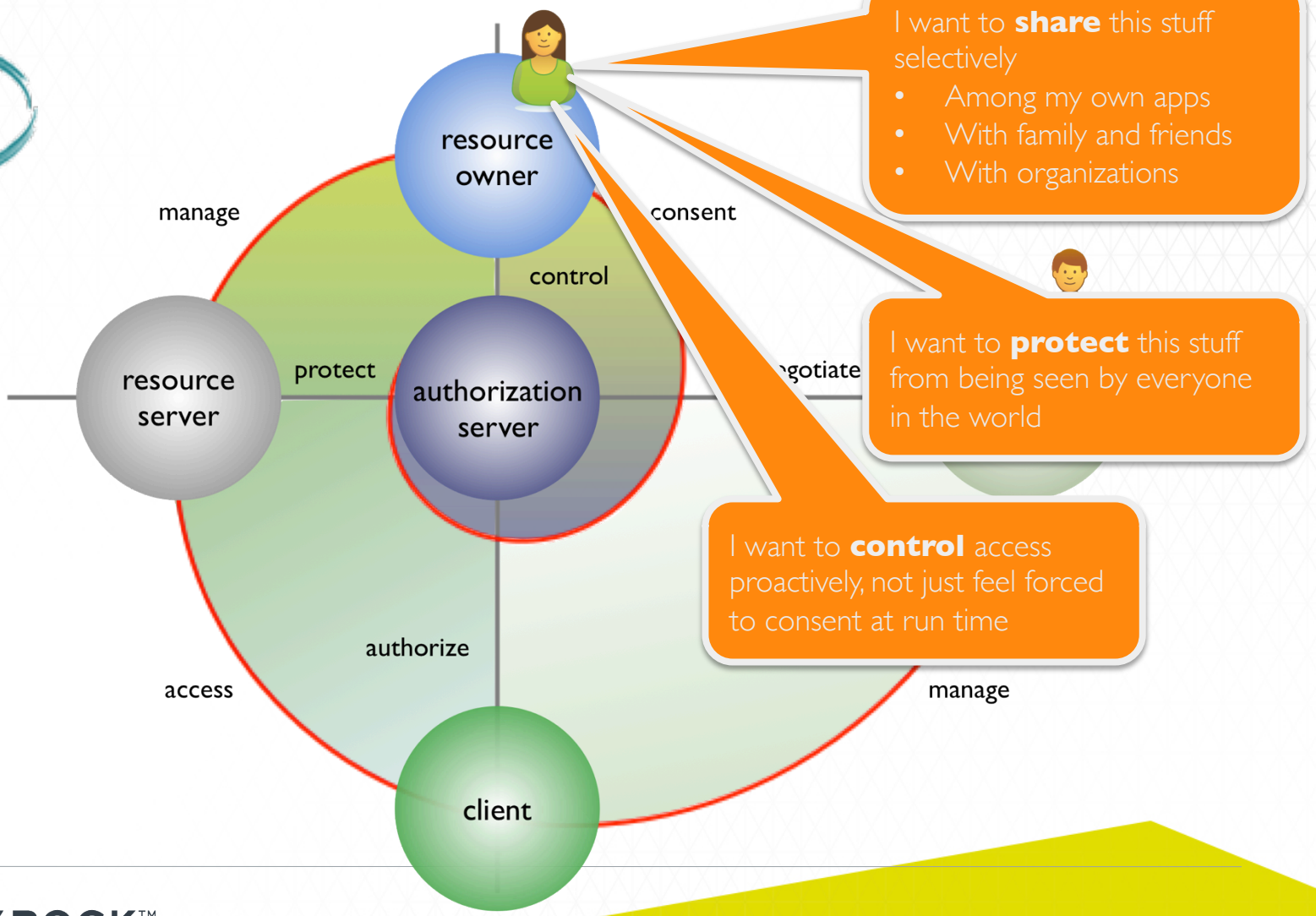



- It's a draft standard for "authorization V.next"
- It's a profile and application of OAuth V2.0
- It's a set of authorization, privacy, and consent APIs
- It's a Work Group of the Kantara Initiative
- It's not an "XACML killer"
- Founder, chair, and "chief UMAnitarian":
- It's heading to V1.0 in Q1 2015

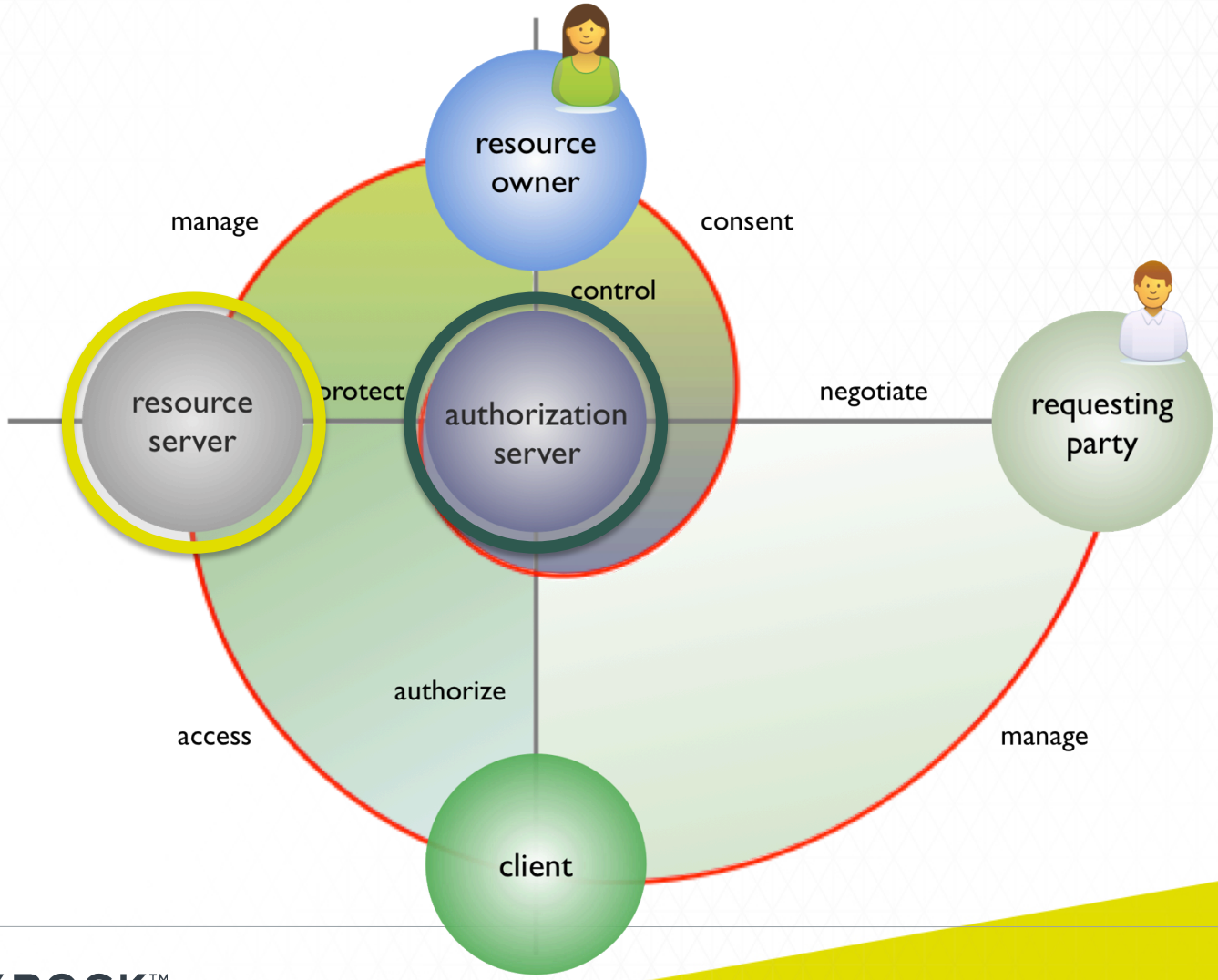
# The new Venn of access control



# The UMA protocol enables key new use-case options



# UMA is about interoperable, RESTful authorization-as-a-service



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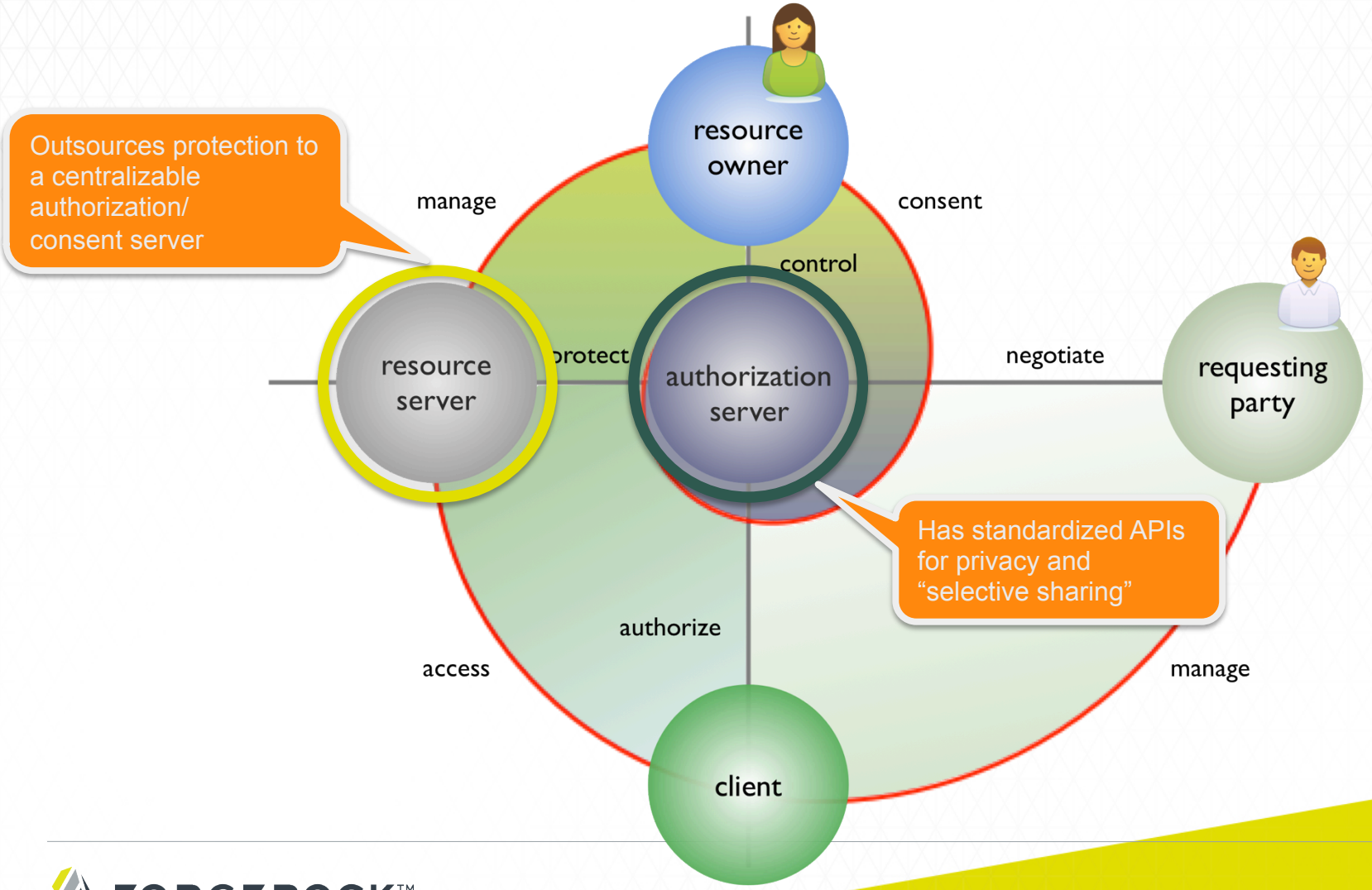

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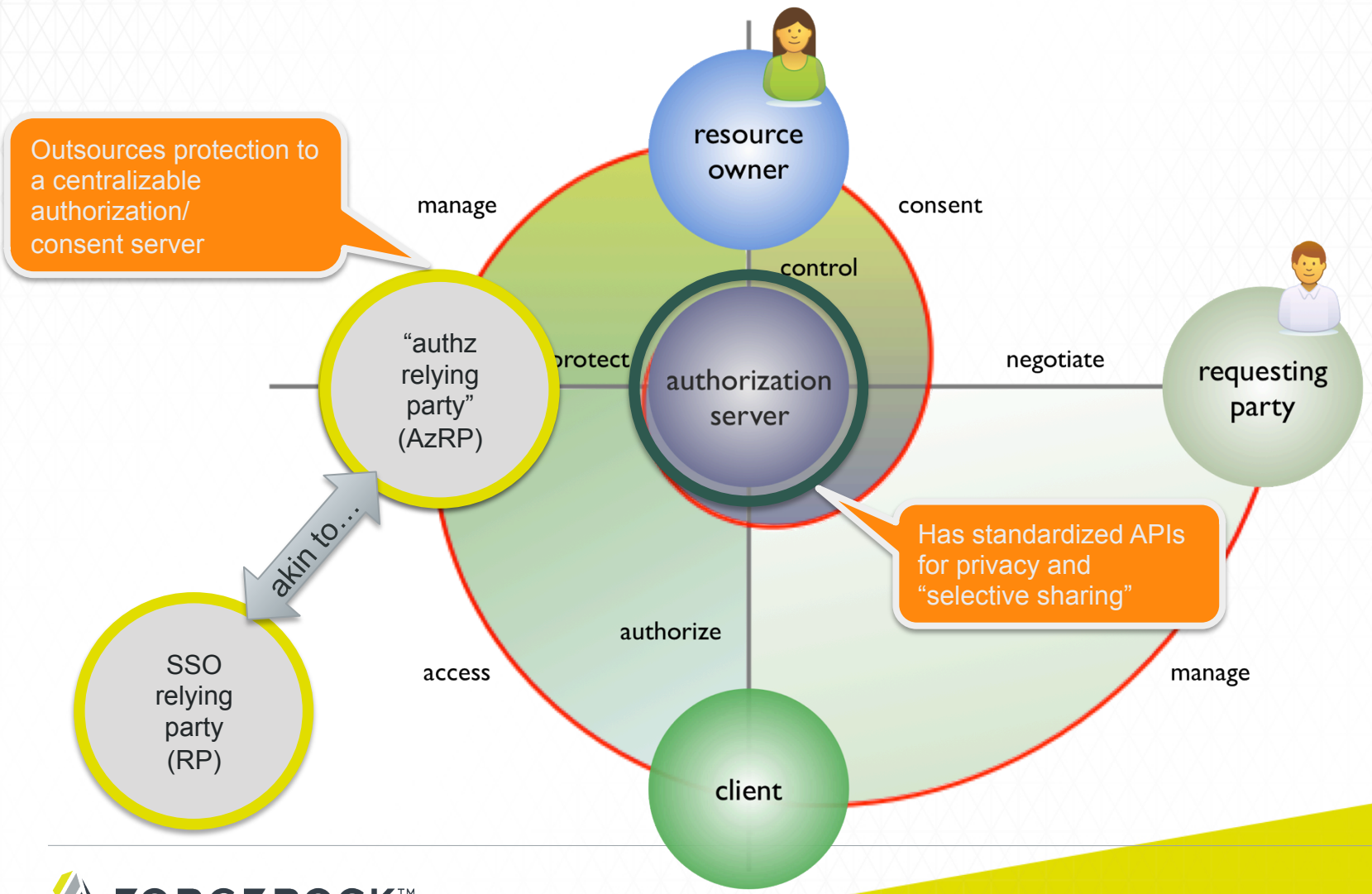

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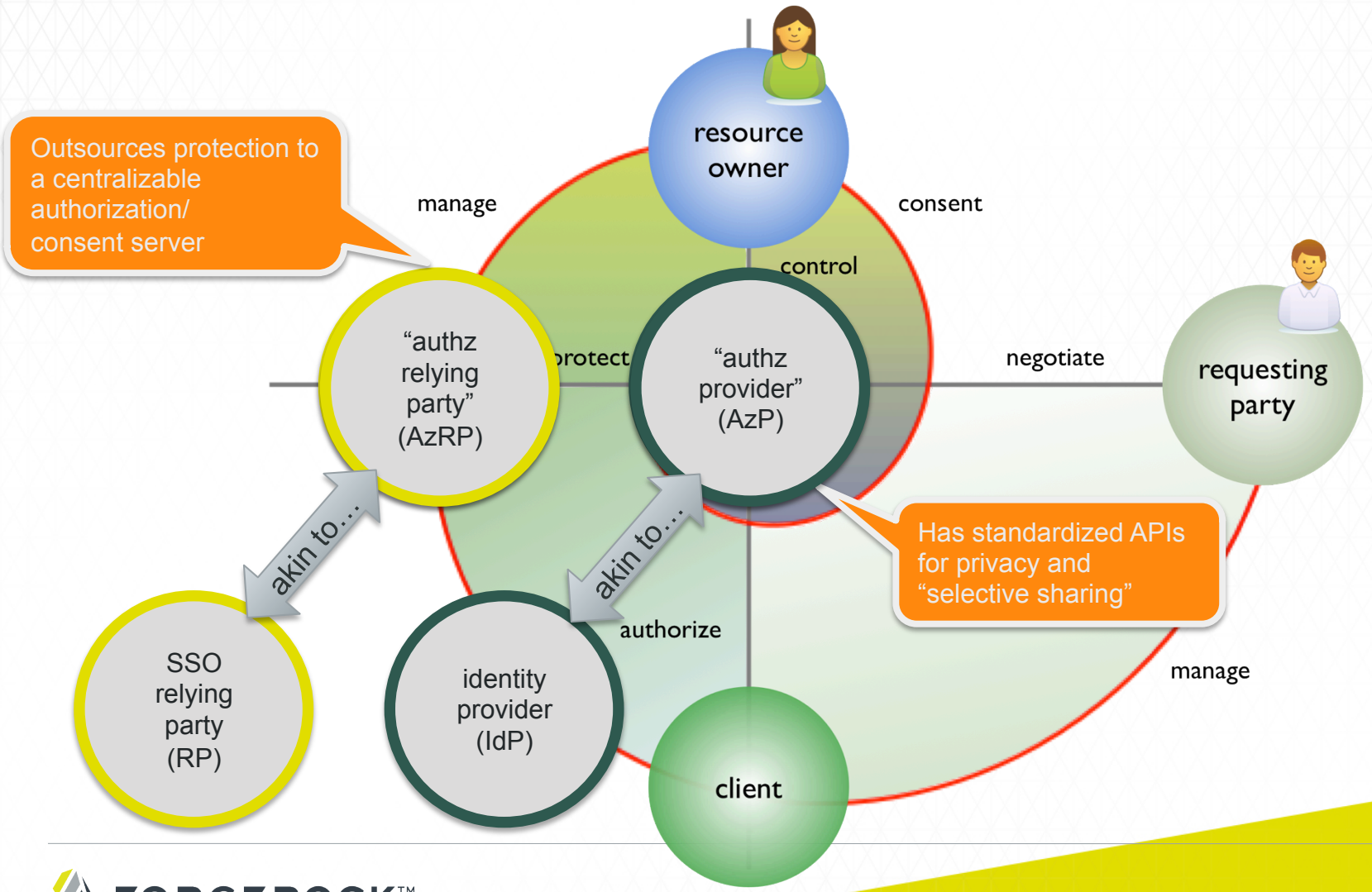
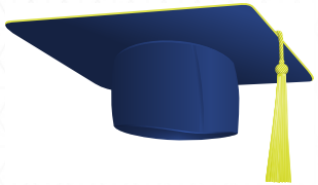


# Use-case scenario domains

Health

Financial



Education

Personal



Government

Media

Behavioral

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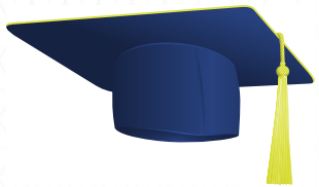
Financial



Education

Personal



Government

Media

Behavioral

Web

Mobile

API

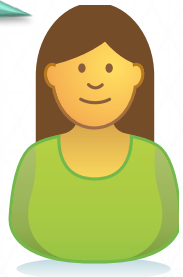
IoT

# UMA-enabled systems can respect policies such as…

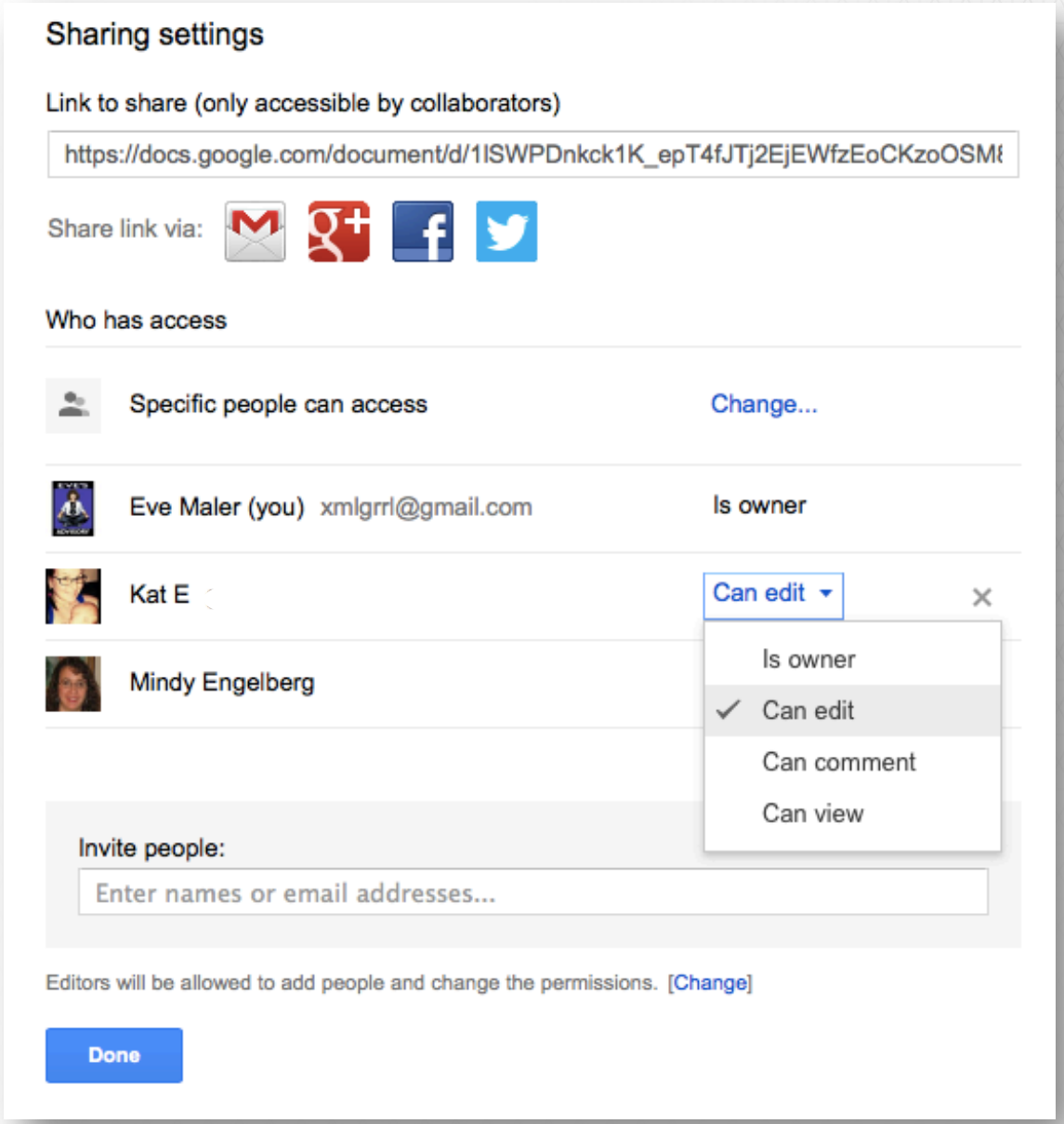
Only let my tax preparer with email TP1234@gmail.com and using client app **TaxThis** access my **bank account data** if they have **authenticated strongly**, and **not after tax season is over**.

Let my **health aggregation app**, my **doctor's office client app**, and the client for my husband's employer's **insurance plan** (which covers me) get access to my **wifi-enabled scale API** and my **fitness wearable API** to **read** the results they generate.

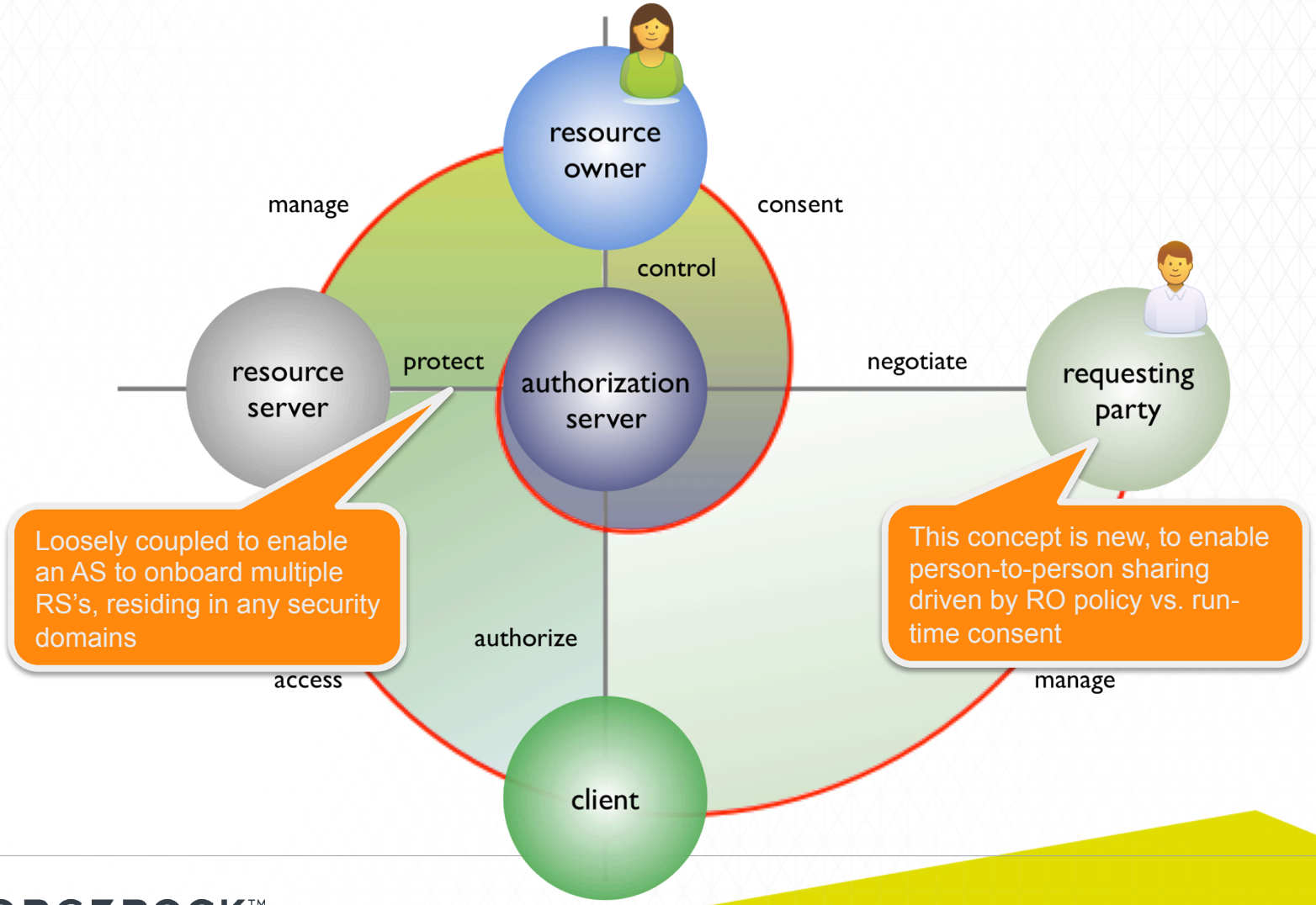
When a person driving a vehicle with an **unknown ID** comes into contact with my **Solar Freakin' Driveway**, alert me and **require my access approval**.



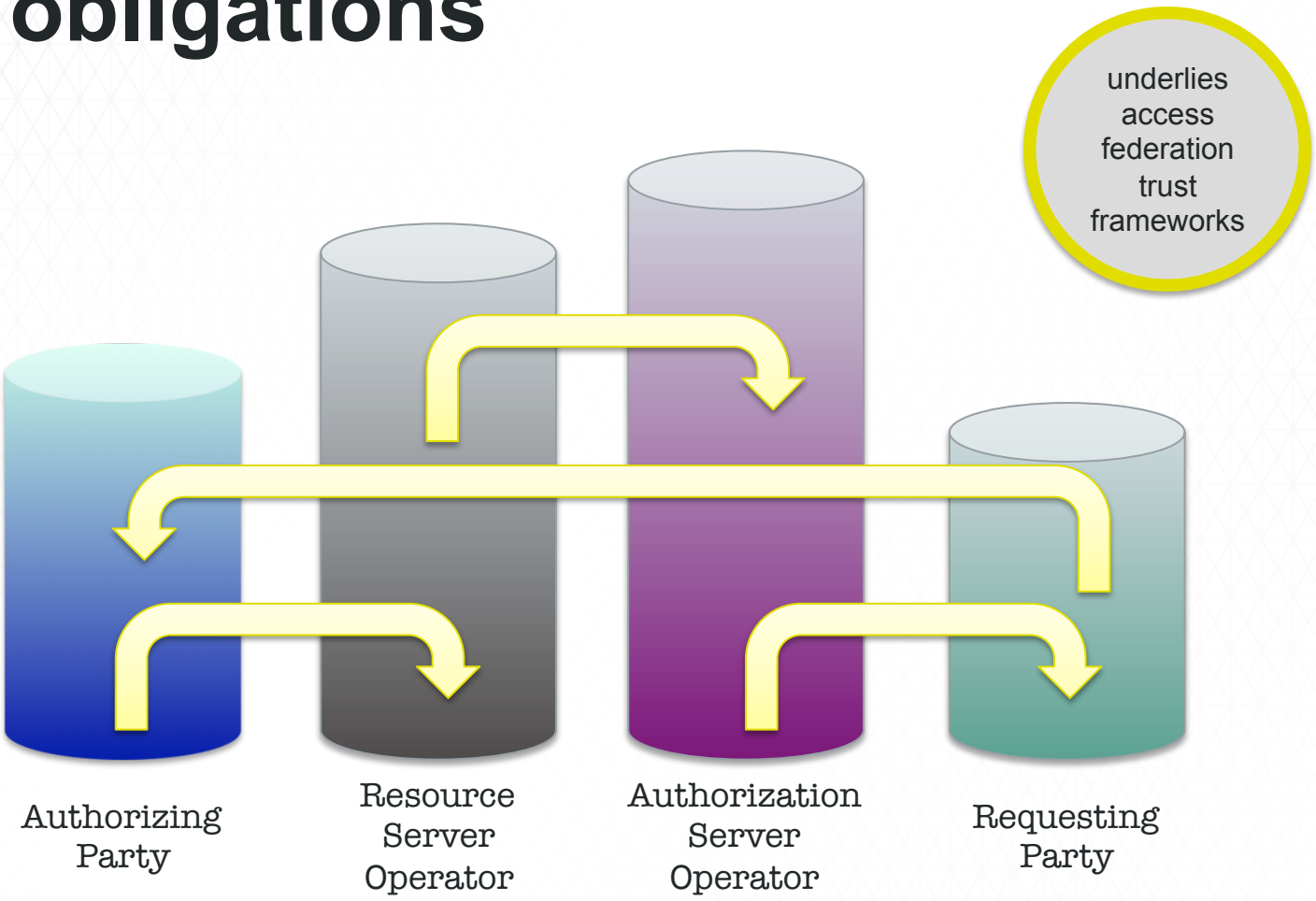
# The user experience can simulate OAuth or proprietary sharing paradigms, or even be invisible ("better than OAuth")



# Under the hood, it's "OAuth++"



# The UMA consent model supports robustly partitioned rights and obligations



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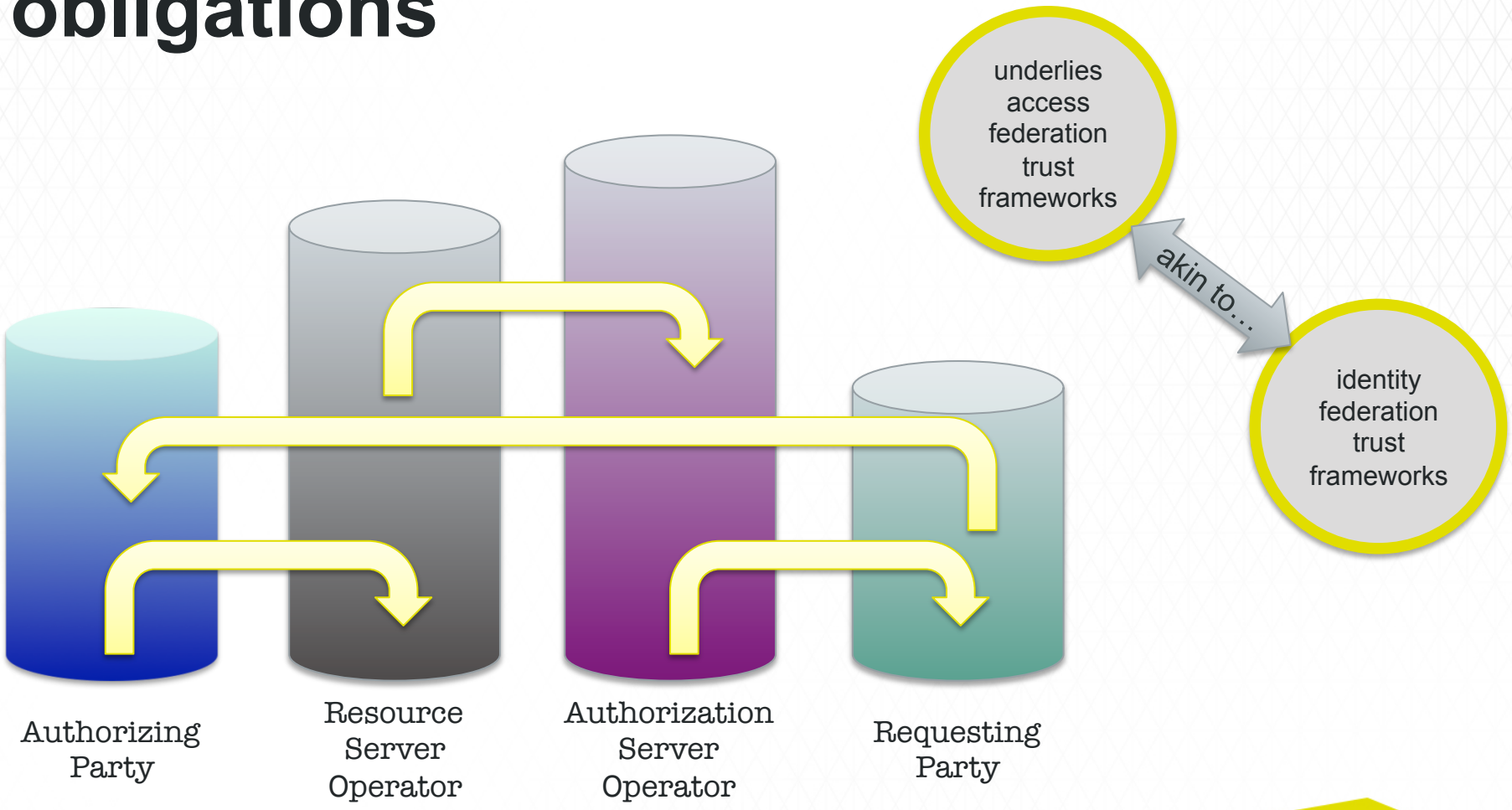

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# Thank you!

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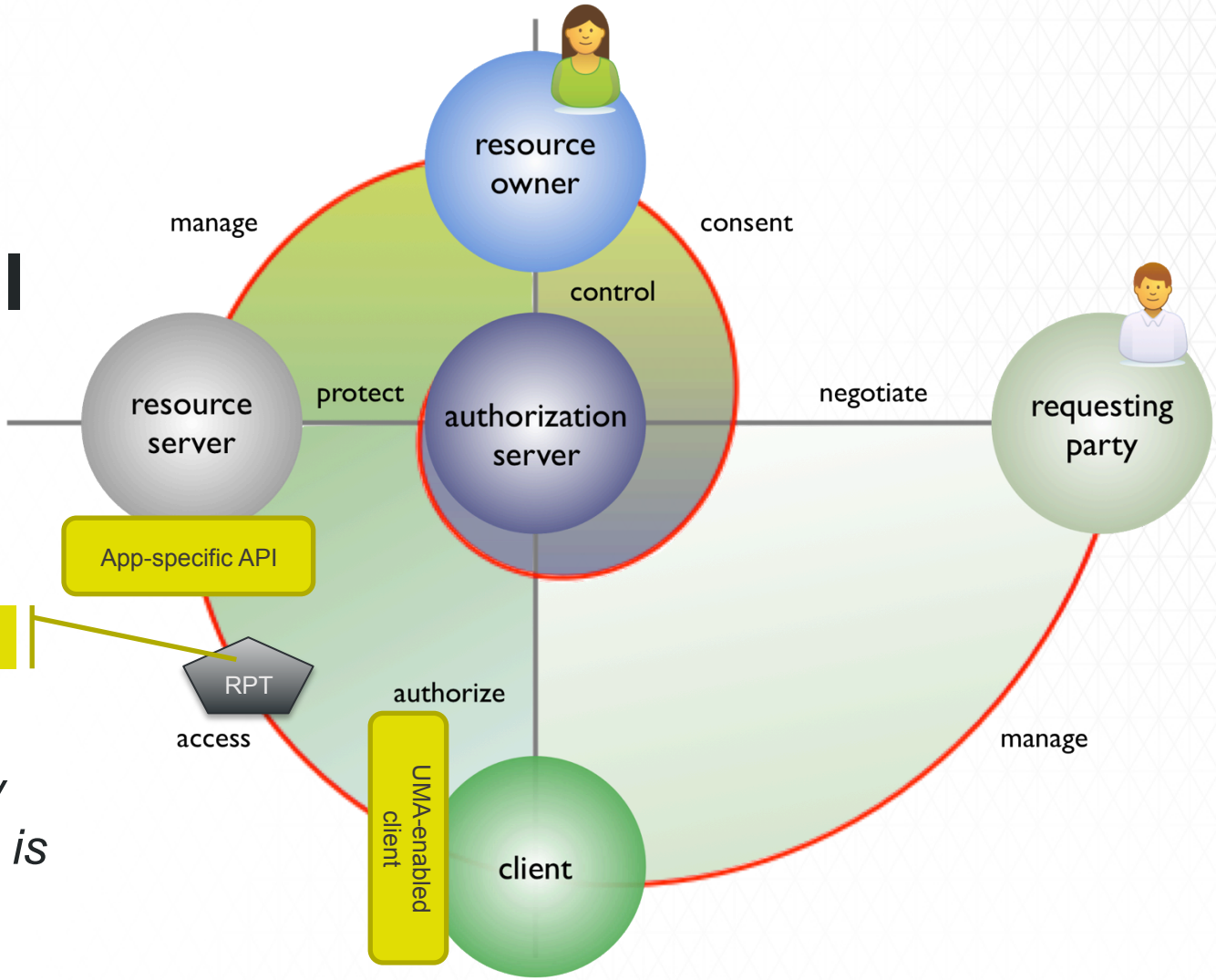
# Appendix:
# The gory UMA details

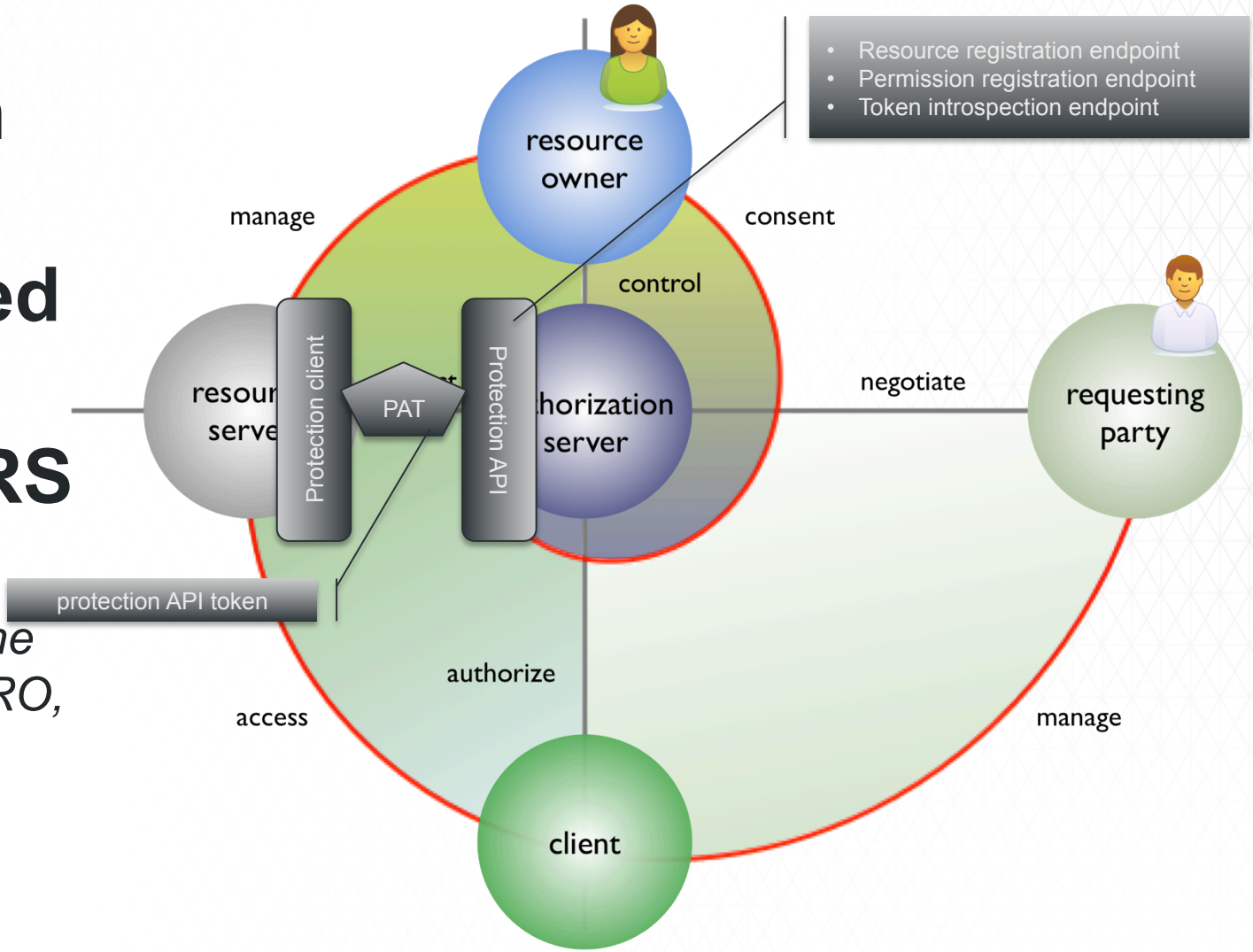
# The RS exposes whatever value-add API it wants, protected by an AS



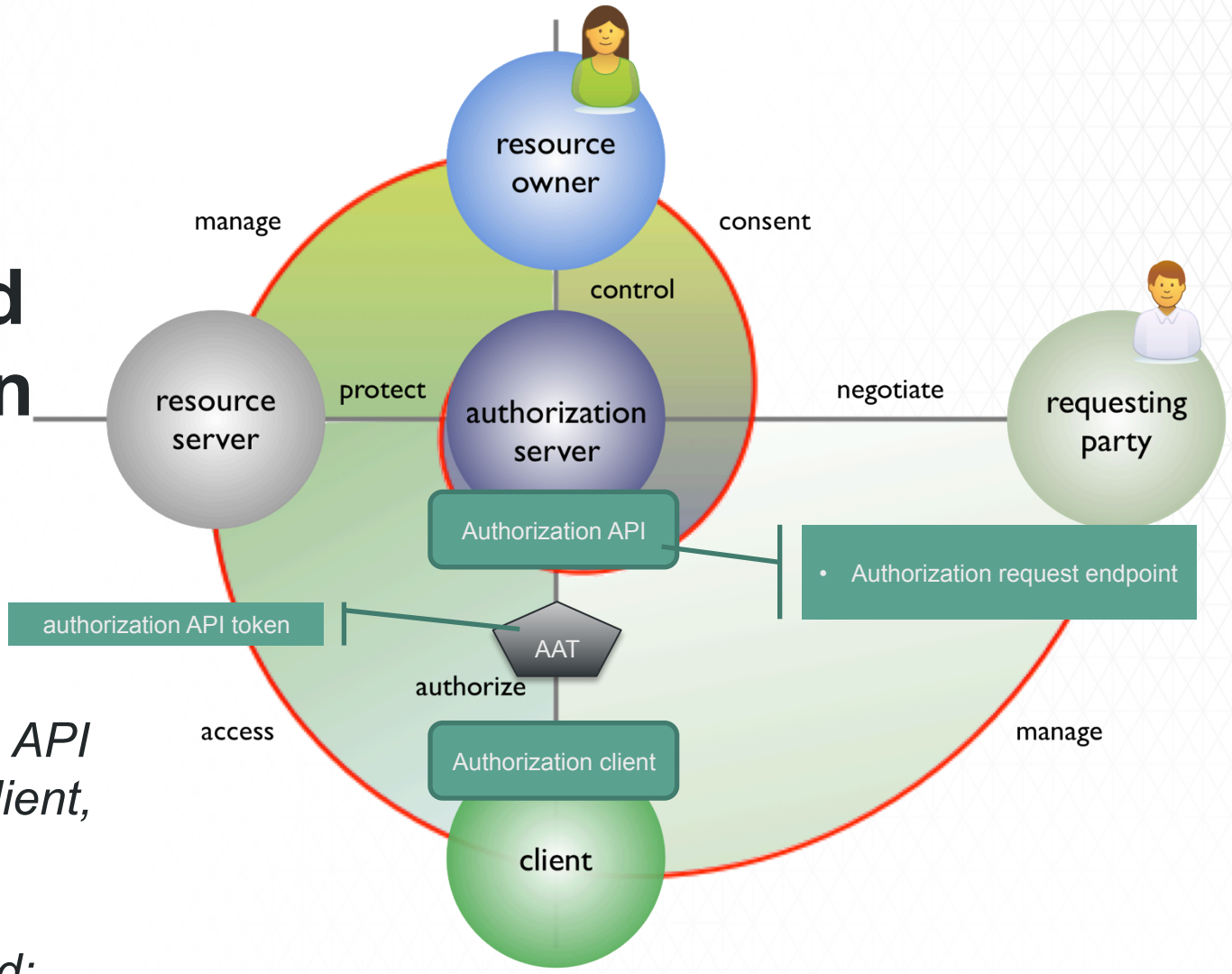

*The RPT is the main "access token" and (by default – it's profilable) is associated with time-limited, scoped permissions*

# The AS exposes an UMA-standardized protection API to the RS

*The PAT protects the API and binds the RO, RS, and AS*



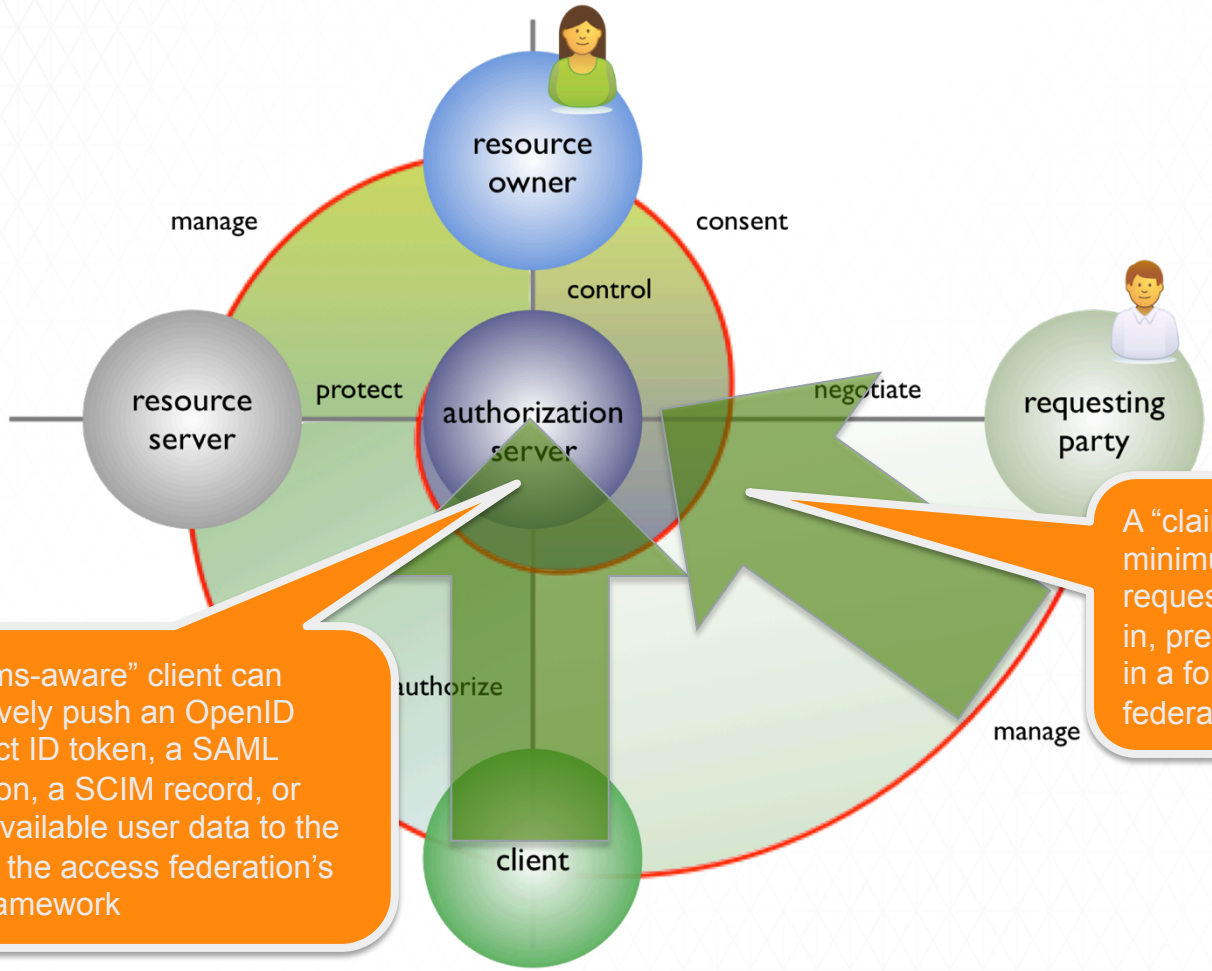
# The AS exposes an UMA-standardized authorization API to the client




*The AAT protects the API and binds the RqP, client, and AS*

*The client may be told: "need_claims"*

# The AS can collect requesting party claims to assess policy




A "claims-aware" client can proactively push an OpenID Connect ID token, a SAML assertion, a SCIM record, or other available user data to the AS per the access federation's trust framework

A "claims-unaware" client can, at minimum, redirect the requesting party to the AS to log in, press an "I Agree" button, fill in a form, follow a NASCAR for federated login, etc.