GDPR, PSD2, CIAM, and the Role of User-Managed Access (2.0)

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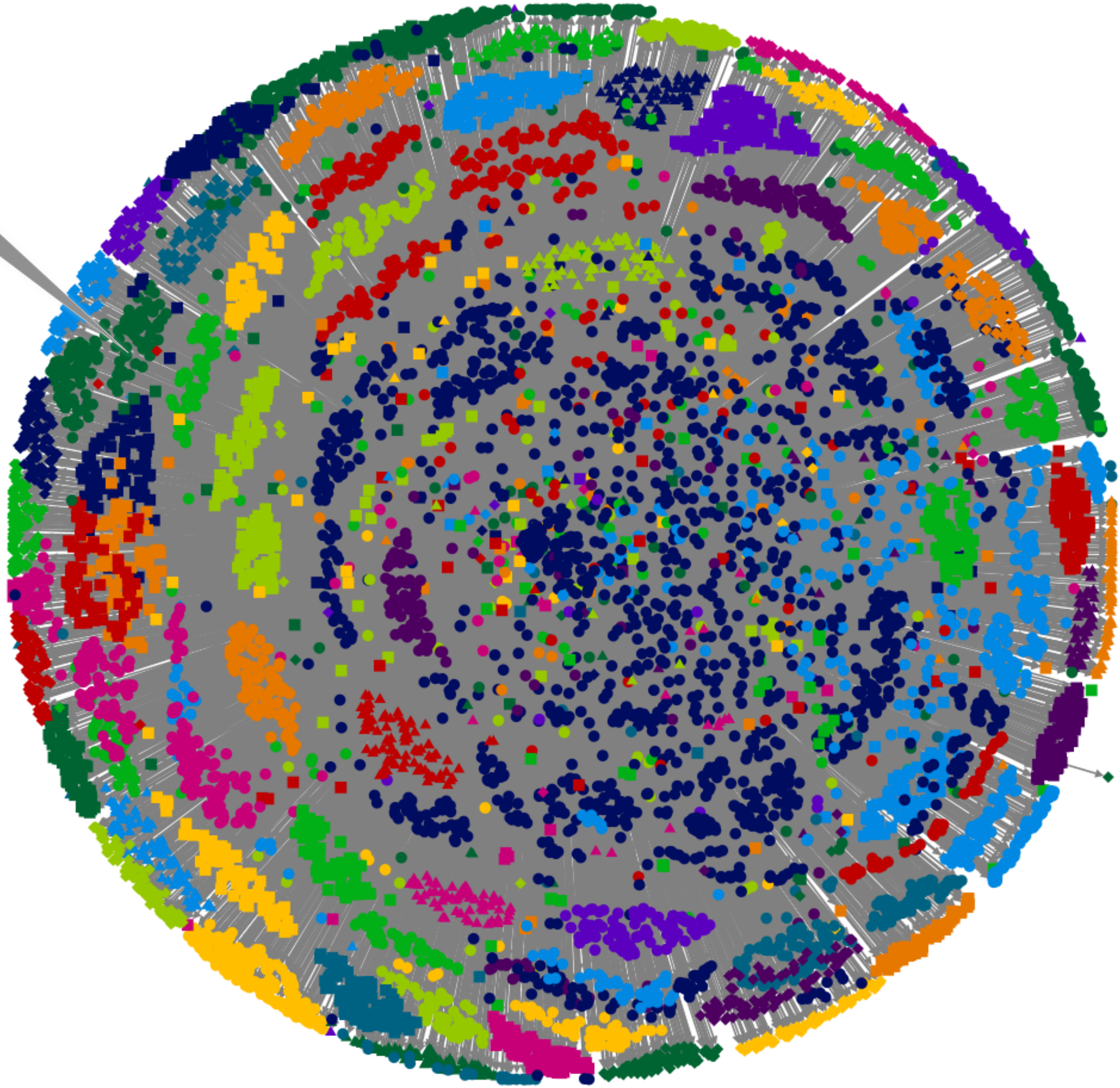
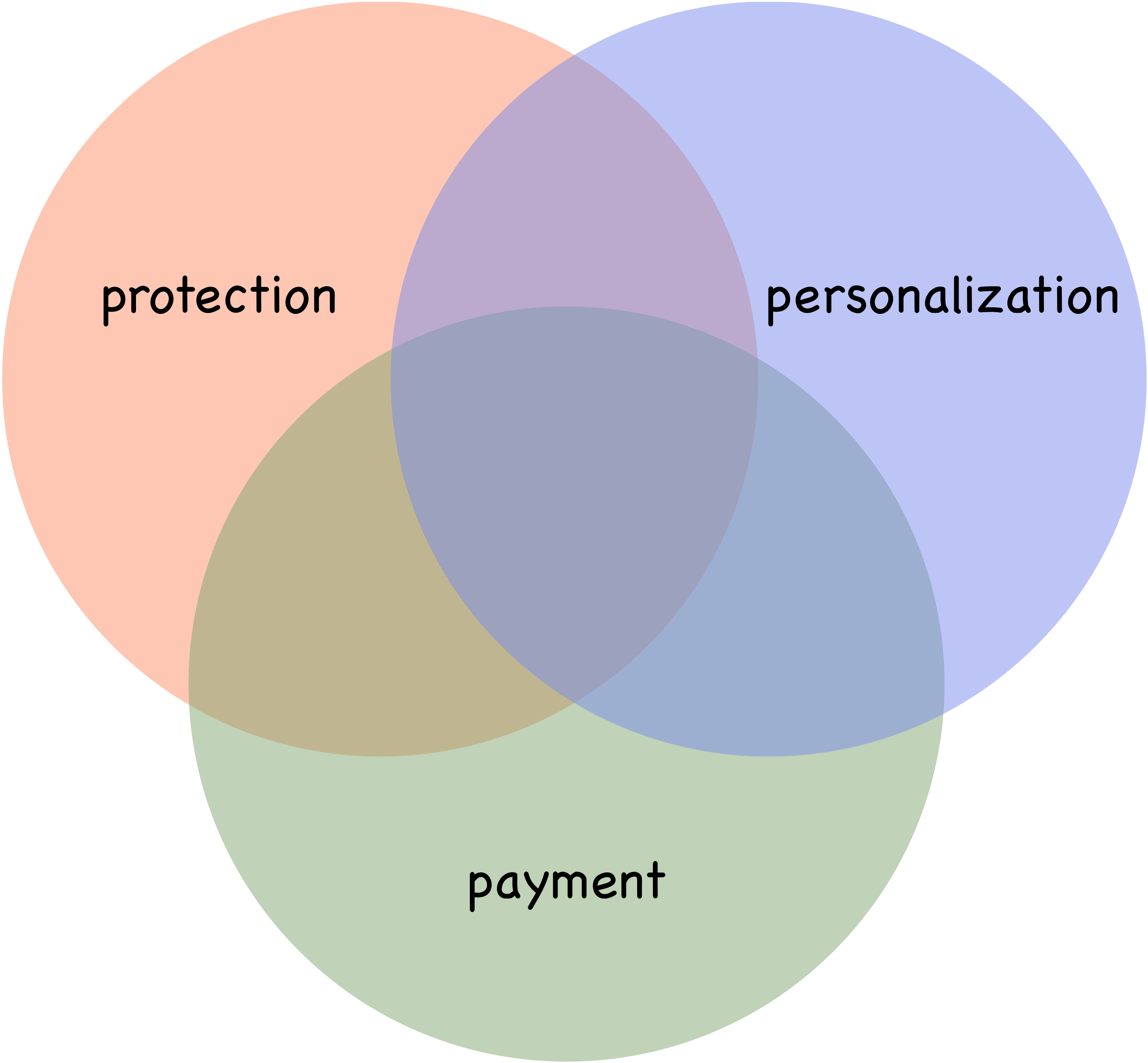
Kantara CIWUSA17 pre-conference workshop 11 Sep 2017

LIKE A BOSS



We're all individuals!

I'm not



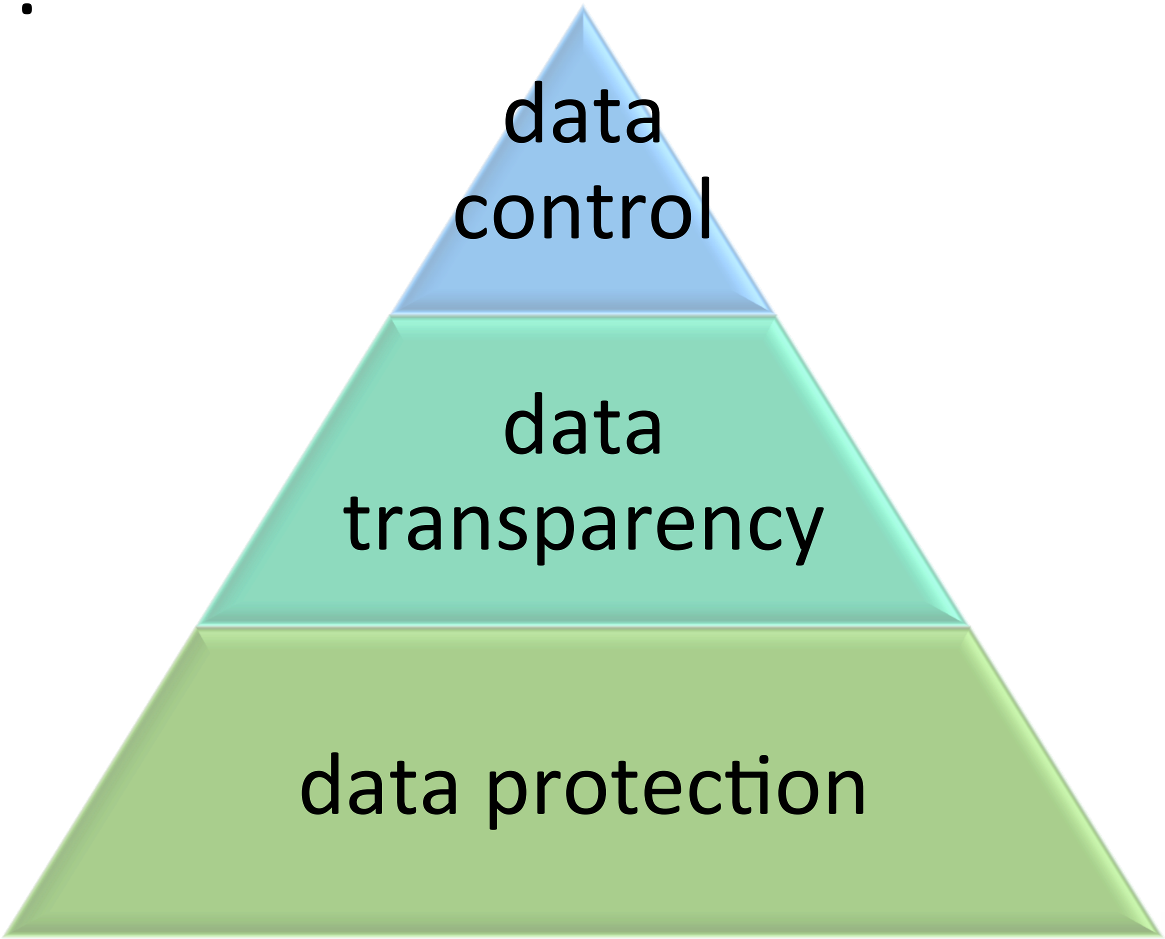
protection

personalization

payment

What makes data privacy regulations different this time around?

- Virality
- Aspirations



Take steps

Identify intersections between digital transformation opportunities and user trust risks

Conceive of personal data as a joint asset

Lean in to consent

Take advantage of identity and access management for building trust

https://www.flickr.com/photos/adpowers/16808090/ | CC BY 2.0

How can UMA be relevant to these imperatives?

The UMA extension grant enhances OAuth in the following ways:

- The resource owner authorizes protected resource access to clients used by entities that are in a requesting party role. This enables **party-to-party authorization**, rather than authorization of application access alone.
- The authorization server and resource server interact with the client and requesting party in a way that is asynchronous with respect to resource owner interactions. This lets a resource owner **configure an authorization server with policy conditions at will**, rather than authorizing access token issuance synchronously just after authenticating.

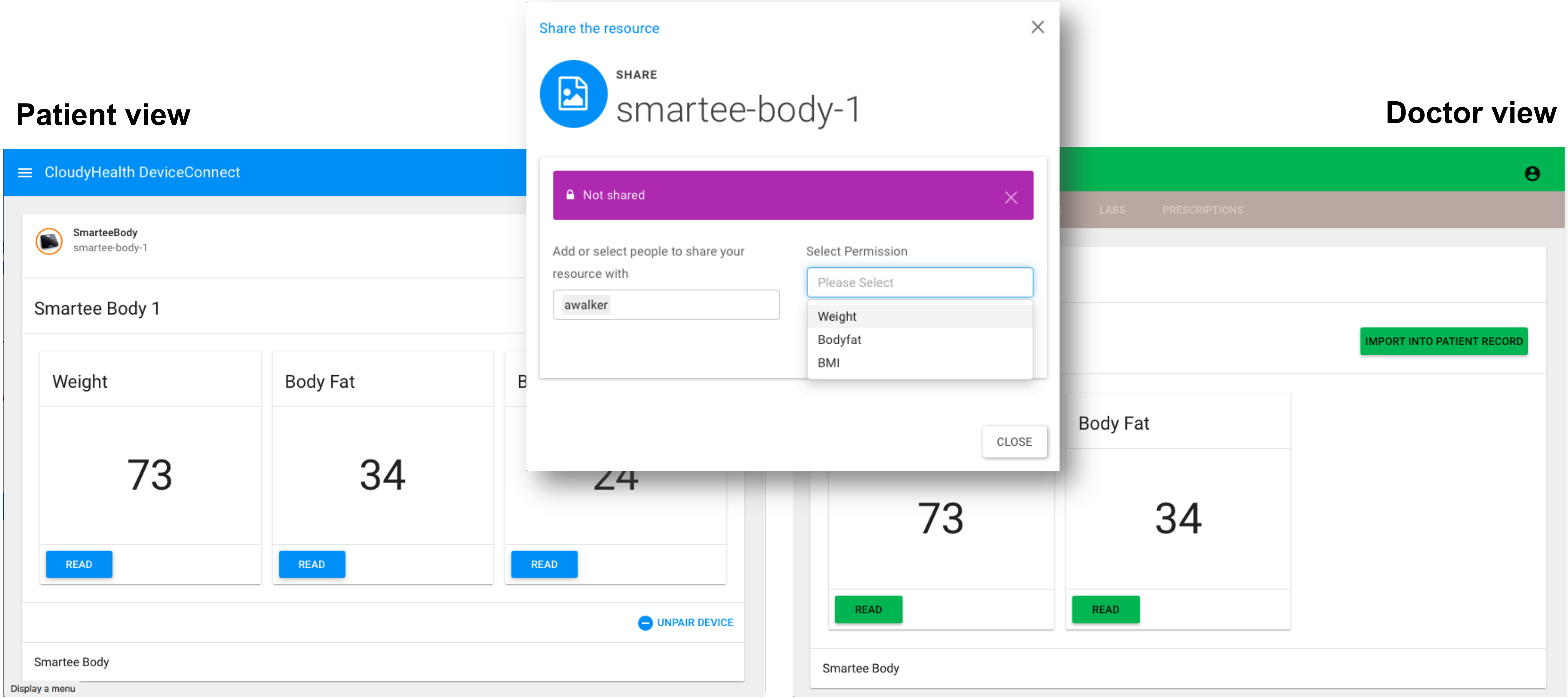
UMA's federated authorization enhances the UMA grant as follows:

- **Multiple** resource servers operating in different domains can communicate with a **single** authorization server operating in yet another domain that acts on behalf of a resource owner.
- A service ecosystem can thus automate resource protection, and the **resource owner can monitor and control** authorization grant rules through the authorization server over time.
- Authorization grants can **increase and decrease** at the level of individual resources and scopes.

What does it enable?
Pinpoint sharing without caring what others want first

Patient view

Doctor view



CloudyHealth DeviceConnect

SmarteeBody
smartee-body-1

Smartee Body 1

Weight	Body Fat	B
73	34	24
READ	READ	READ

UNPAIR DEVICE

Smartee Body

Display a menu

Share the resource

SHARE
smartee-body-1

Not shared

Add or select people to share your resource with

awalker

Select Permission

Please Select

- Weight
- Bodyfat
- BMI

CLOSE

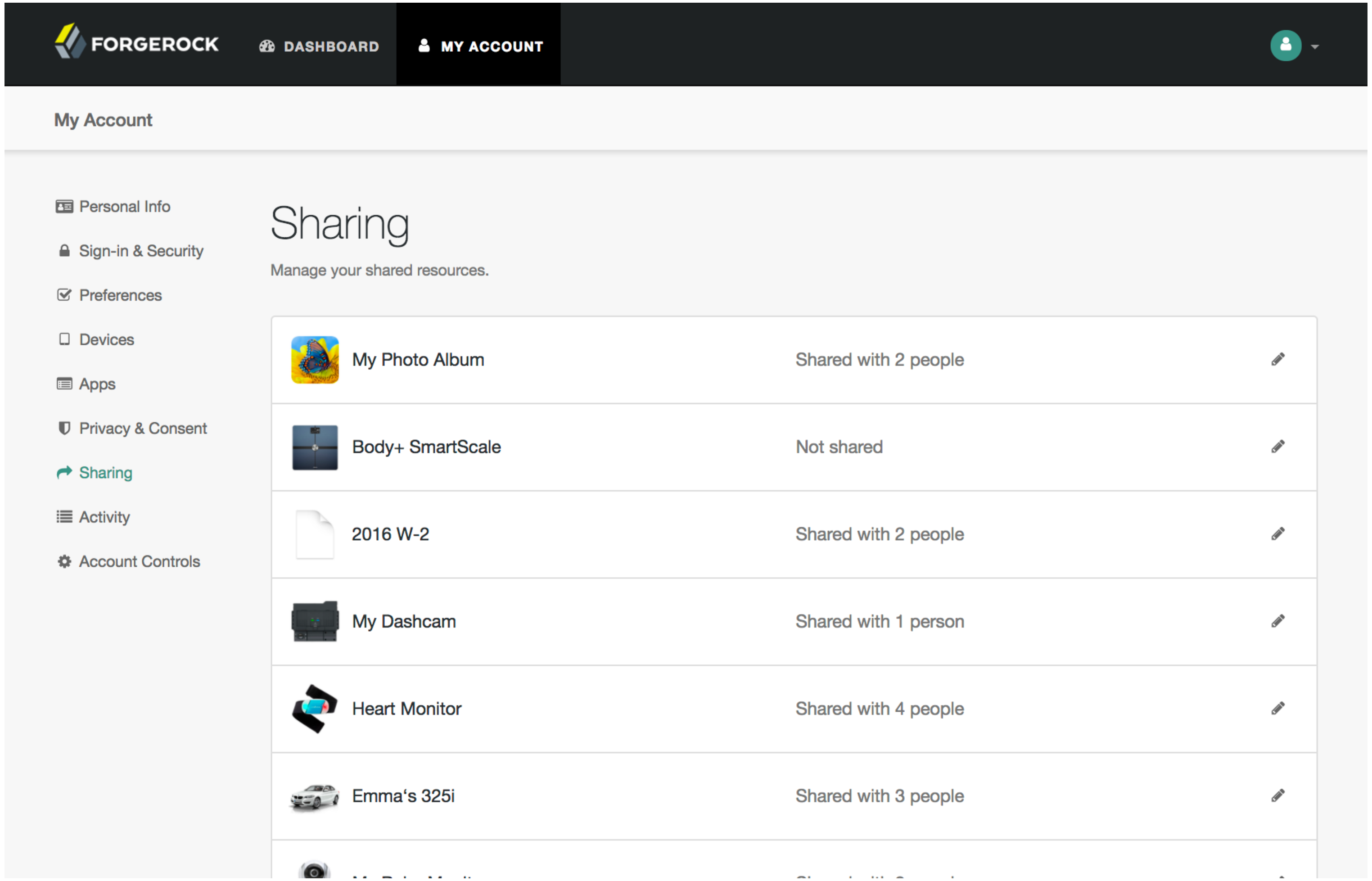
LABS PRESCRIPTIONS

IMPORT INTO PATIENT RECORD

	Body Fat
73	34
READ	READ

Smartee Body

What does it enable?
“Single pane of glass” control



Sharing

Manage your shared resources.

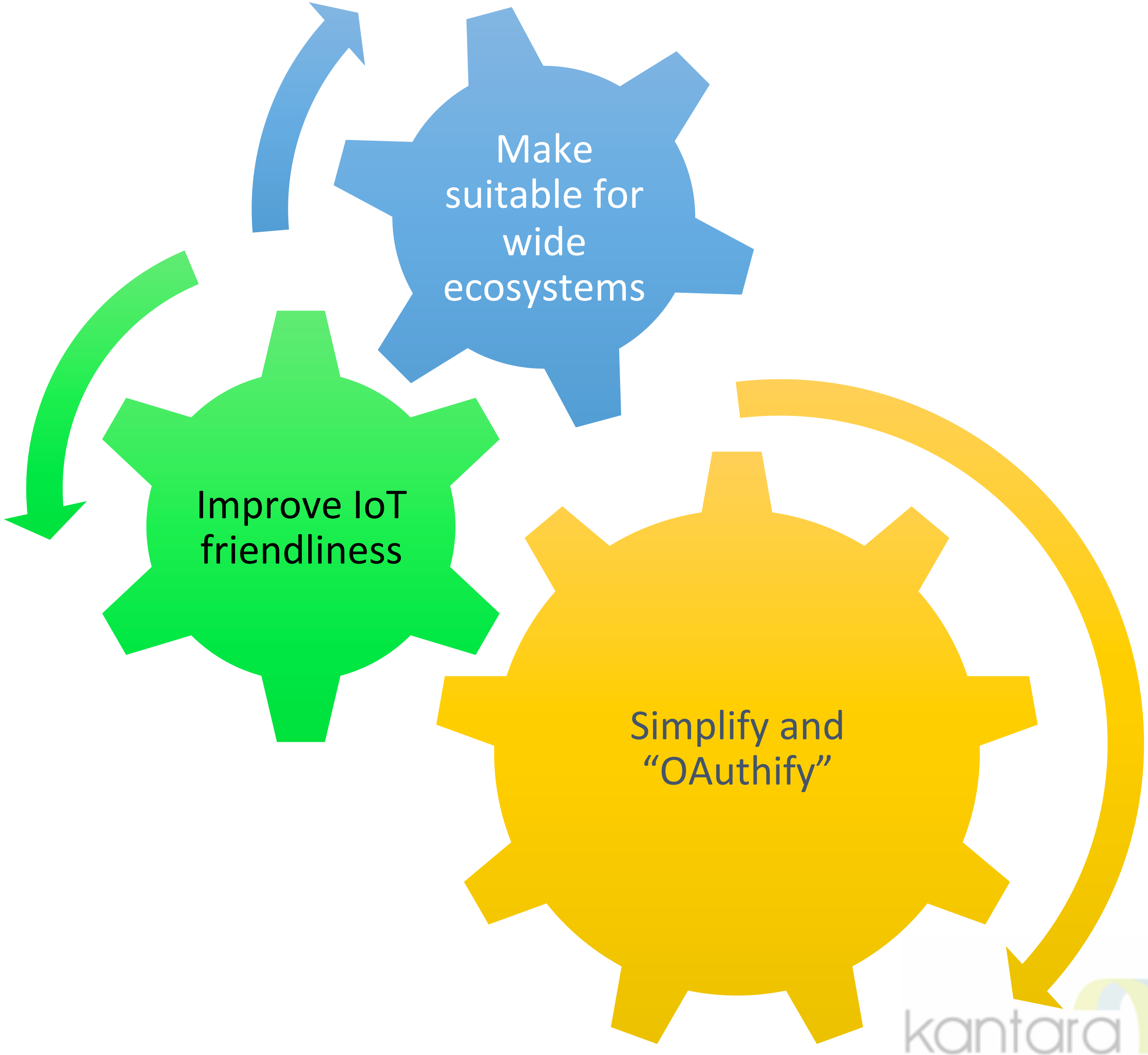
My Photo Album	Shared with 2 people
Body+ SmartScale	Not shared
2016 W-2	Shared with 2 people
My Dashcam	Shared with 1 person
Heart Monitor	Shared with 4 people
Emma‘s 325i	Shared with 3 people

What’s UMA 2.0 all about?

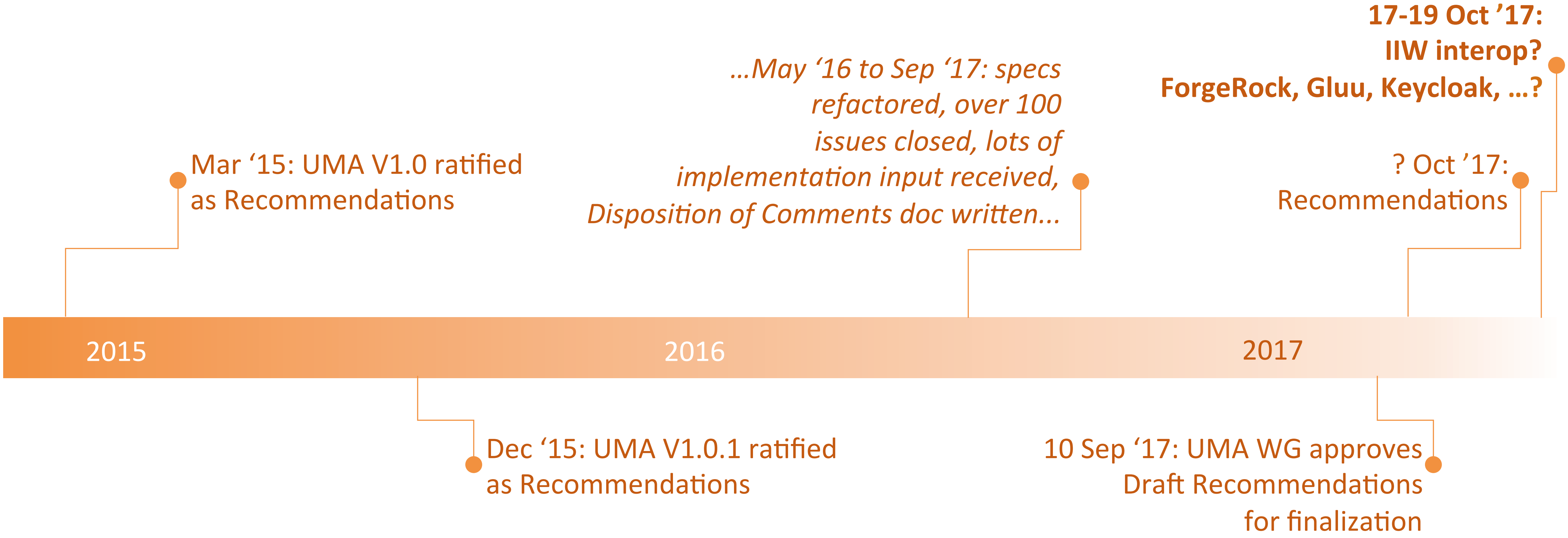
- UMA1 built all this capability using OAuth and OpenID Connect piece-parts
  - Some of its design preceded (and influenced) modern OAuth, OIDC, JWT, etc. practice
- We collected implementation experience
  - In the meantime, the Internet of Things happened, a natural fit for UMA, as did HEART
- So we embarked on an upgrade roadmap

UMA2 goals

- Wide ecosystem = when Alice knows who she wants to share with (or a class of “who’s”), but the service managing her access has never met them before they attempt access
- We believe we have met all these goals and increased security



Timeline



Mar ‘15: UMA V1.0 ratified as Recommendations

Dec ‘15: UMA V1.0.1 ratified as Recommendations

…May ‘16 to Sep ‘17: specs refactored, over 100 issues closed, lots of implementation input received, Disposition of Comments doc written…

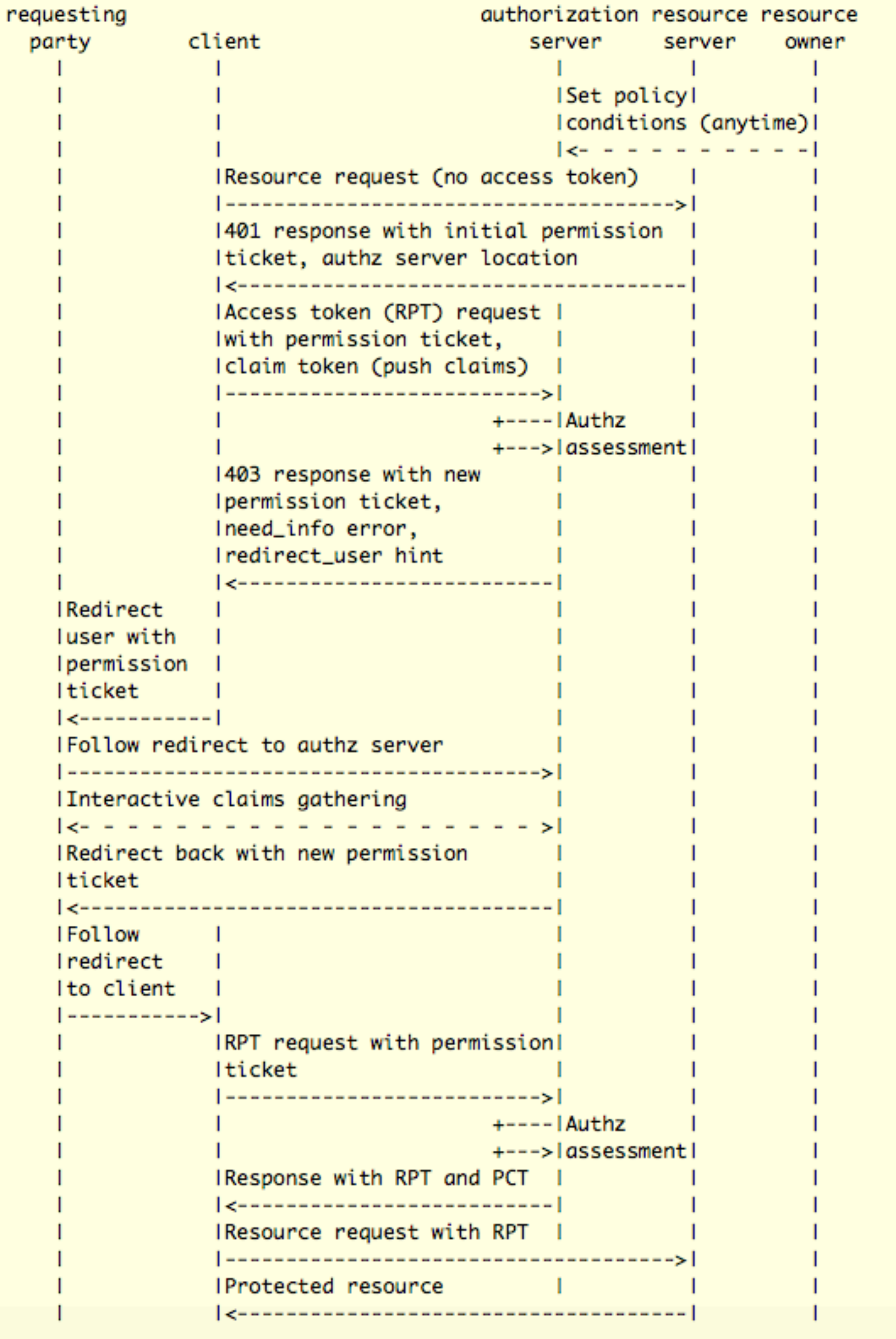
10 Sep ‘17: UMA WG approves Draft Recommendations for finalization

? Oct ’17: Recommendations

17-19 Oct ’17: IIW interop? ForgeRock, Gluu, Keycloak, …?

Want to get a little geeky? Here’s the whole UMA grant in a nutshell

- All major options, with success paths
- Find links to detailed swimlanes at tinyurl.com/umawg



```
requesting                              authorization resource resource
  party        client                       server      server    owner
    |            |                            |          |         |
    |            |                            |Set policy|         |
    |            |                            |conditions (anytime)|
    |            |                            |<- - - - - - - - - -|
    |            |Resource request (no access token)     |         |
    |            |-------------------------------------->|         |
    |            |401 response with initial permission   |         |
    |            |ticket, authz server location          |         |
    |            |<--------------------------------------|         |
    |            |Access token (RPT) request  |          |         |
    |            |with permission ticket,     |          |         |
    |            |claim token (push claims)   |          |         |
    |            |--------------------------->|          |         |
    |            |                       +----|Authz     |         |
    |            |                       +--->|assessment|         |
    |            |403 response with new       |          |         |
    |            |permission ticket,          |          |         |
    |            |need_info error,            |          |         |
    |            |redirect_user hint          |          |         |
    |            |<---------------------------|          |         |
    |Redirect    |                            |          |         |
    |user with   |                            |          |         |
    |permission  |                            |          |         |
    |ticket      |                            |          |         |
    |<-----------|                            |          |         |
    |Follow redirect to authz server          |          |         |
    |---------------------------------------->|          |         |
    |Interactive claims gathering             |          |         |
    |<- - - - - - - - - - - - - - - - - - - ->|          |         |
    |Redirect back with new permission        |          |         |
    |ticket                                   |          |         |
    |<----------------------------------------|          |         |
    |Follow      |                            |          |         |
    |redirect    |                            |          |         |
    |to client   |                            |          |         |
    |----------->|                            |          |         |
    |            |RPT request with permission |          |         |
    |            |ticket                      |          |         |
    |            |--------------------------->|          |         |
    |            |                       +----|Authz     |         |
    |            |                       +--->|assessment|         |
    |            |Response with RPT and PCT   |          |         |
    |            |<---------------------------|          |         |
    |            |Resource request with RPT   |          |         |
    |            |-------------------------------------->|         |
    |            |Protected resource          |          |         |
    |            |<--------------------------------------|         |
```

UMA2 is not the end of our work

UMA Legal

- Exciting work on a **legal framework**, a major underlying portion of which is just being completed
- We have been working with legal expert **Tim Reiniger**, who wrote the Virginia digital identity law

Extensions and futures

- The Work Group has saved off a variety of exploratory ideas for future work in GitHub issues with the label `extension`
- Examples:
  - Integration points for consent receipts
  - Optimized flows that remove the need for the permission ticket

Thank you!
Questions?

UMA

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