

Life Science LOGIN

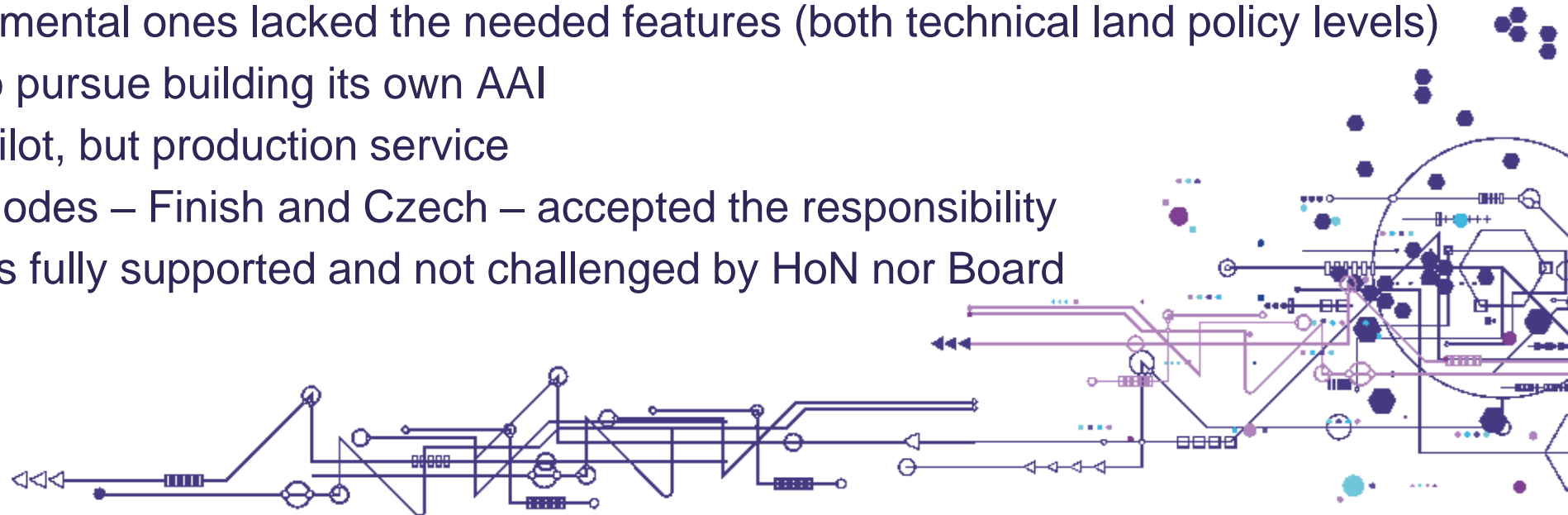
A Community AAI

Luděk Matyska

e-INFRA CZ & ELIXIR CZ
Masaryk University & CESNET

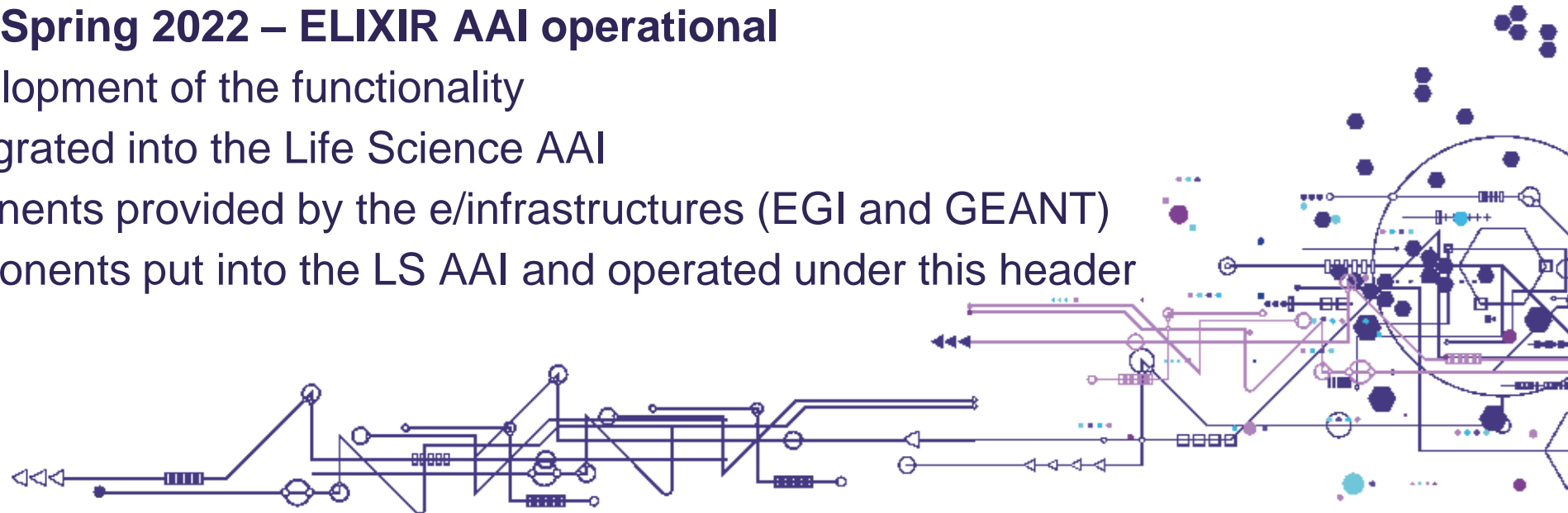
The Predecessor – ELIXIR AAI

- A generally acceptable user's digital identity as a condition for seamless collaboration and coordinated (e.g. through workflows) access to data and other digital services
 - Decades ago
 - A common agreement across large research infrastructures and e-infrastructures
- A decade ago absence of usable AAI for ELIXIR identified
 - No AA infrastructure actually available
 - Piloted/experimental ones lacked the needed features (both technical and policy levels)
- ELIXIR decided to pursue building its own AAI
 - Not another pilot, but production service
 - Two ELIXIR nodes – Finnish and Czech – accepted the responsibility
 - And it was fully supported and not challenged by HoN nor Board



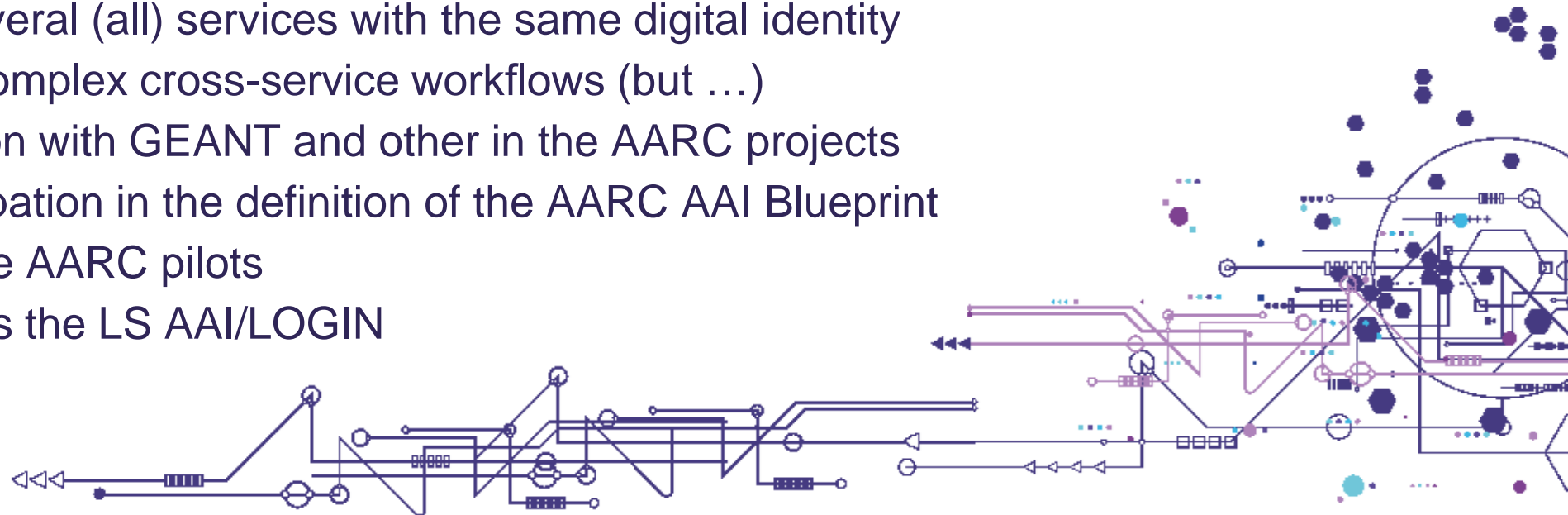
History of ELIXIR AAI in dates

- Autumn 2014 – use case gathering
- Spring 2015 – requirements and design
- Autumn 2015 – deployment starts
- Autumn 2016 – first release
 - Until that ELIXIR AAI in pilot status
 - Key components up and running already
- **Autumn 2016 to Spring 2022 – ELIXIR AAI operational**
 - Gradual development of the functionality
- Spring 2022 – migrated into the Life Science AAI
 - Some components provided by the e/infrastructures (EGI and GEANT)
 - Legacy components put into the LS AAI and operated under this header

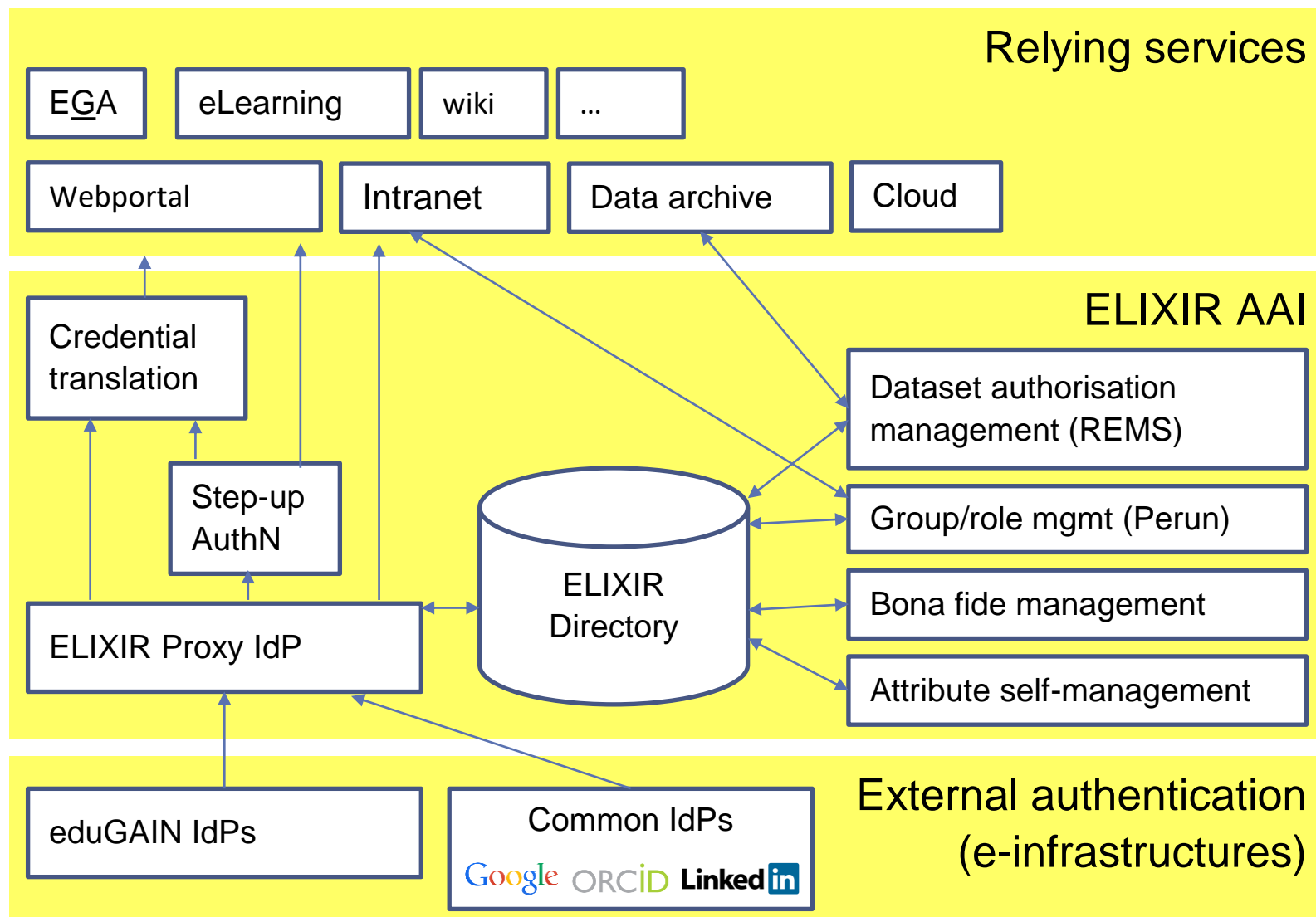


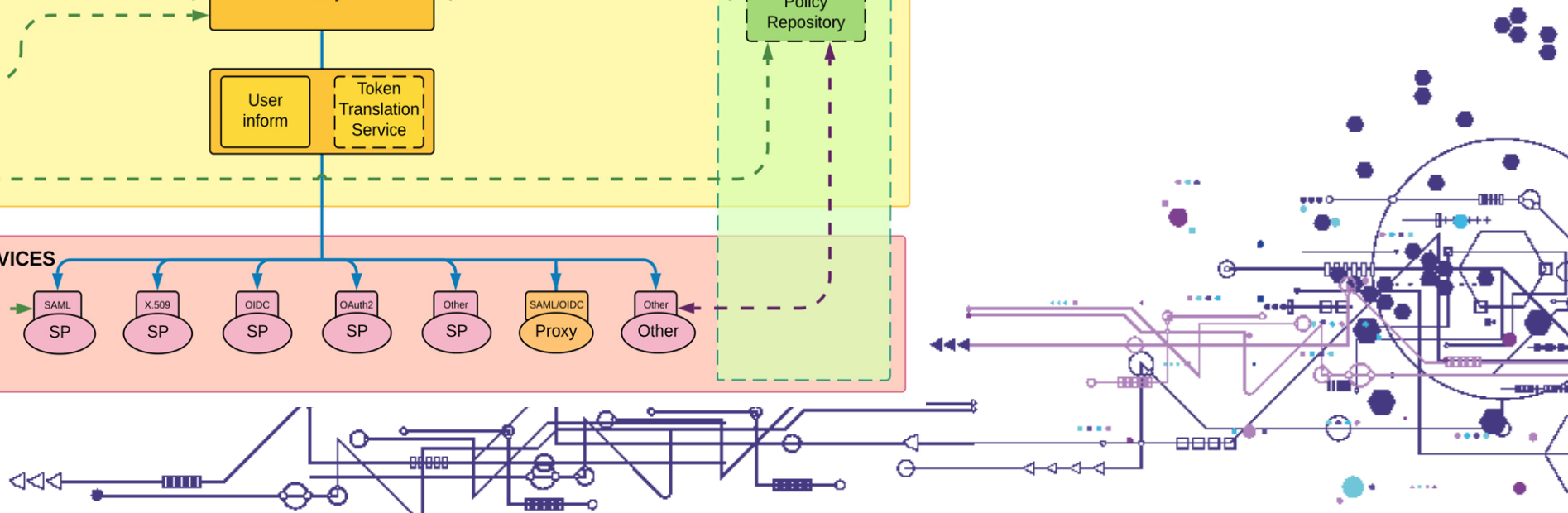
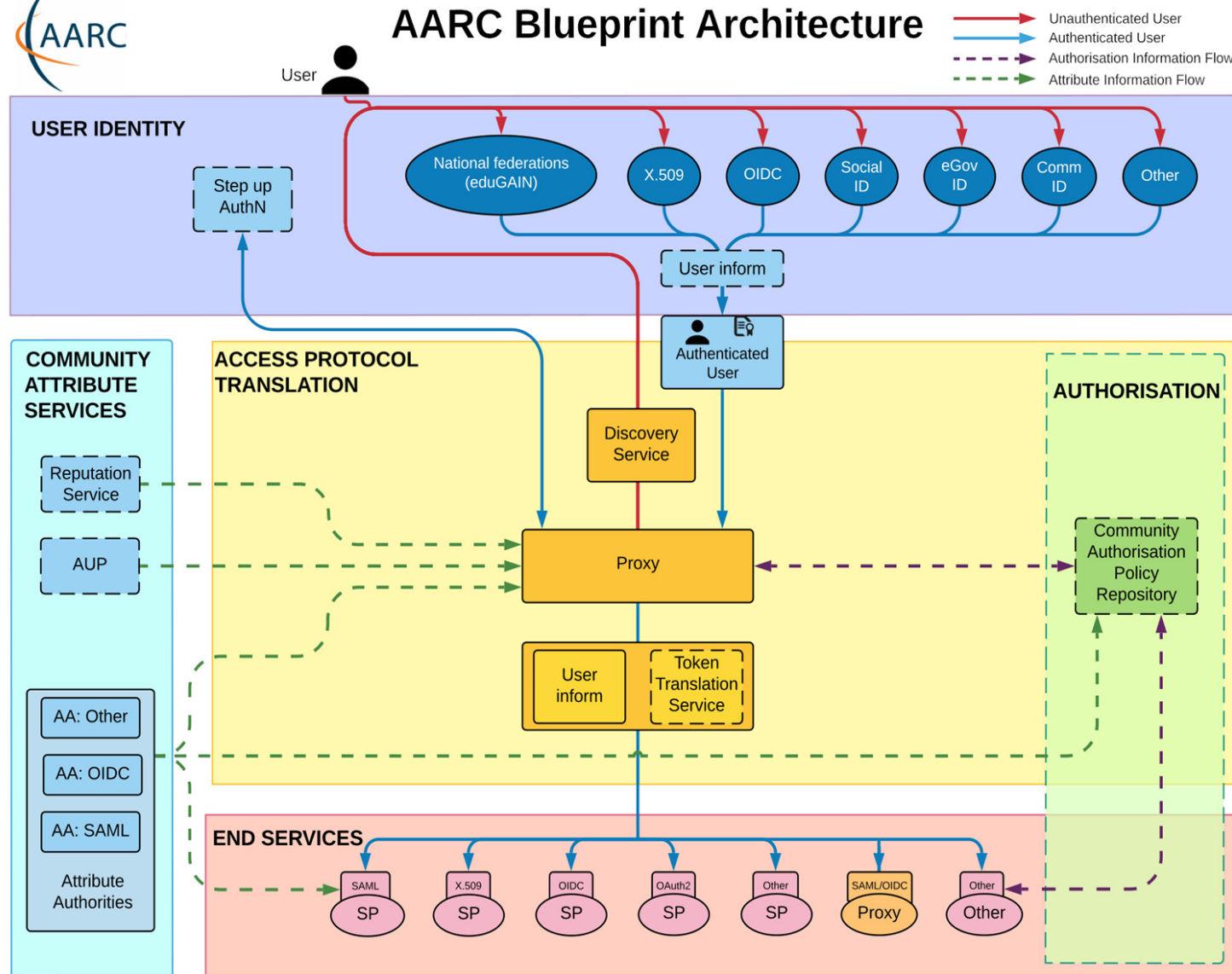
Key concepts of ELIXIR AAI

- Federated AA infrastructure
 - Using home organization where and when possible
 - Special setup for those without appropriate home organization e.g. people from industry
 - Accepting social network identity (e.g. Google) as the home organization
 - **Linking several accounts** (e.g. university plus social network); supports mobility
- Unique ELIXIR ID for all users
 - Access to several (all) services with the same digital identity
 - Support for complex cross-service workflows (but ...)
- Close collaboration with GEANT and other in the AARC projects
 - Active participation in the definition of the AARC AAI Blueprint
- Participation in the AARC pilots
 - Steps towards the LS AAI/LOGIN



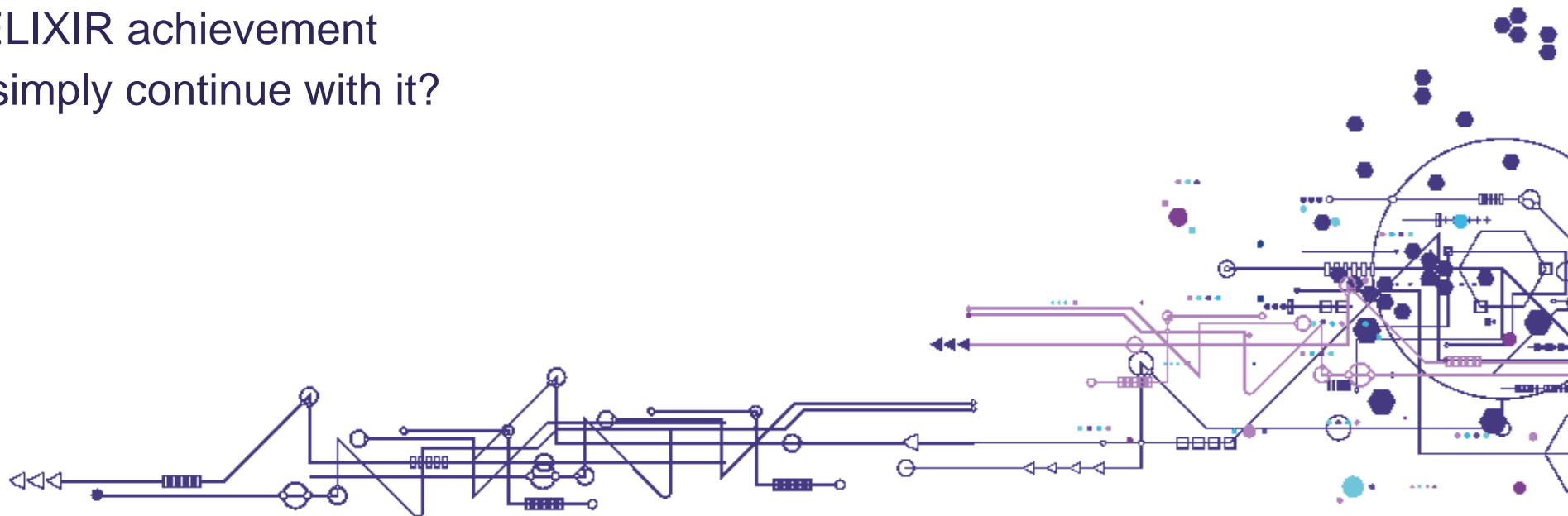
Structure of ELIXIR AAI





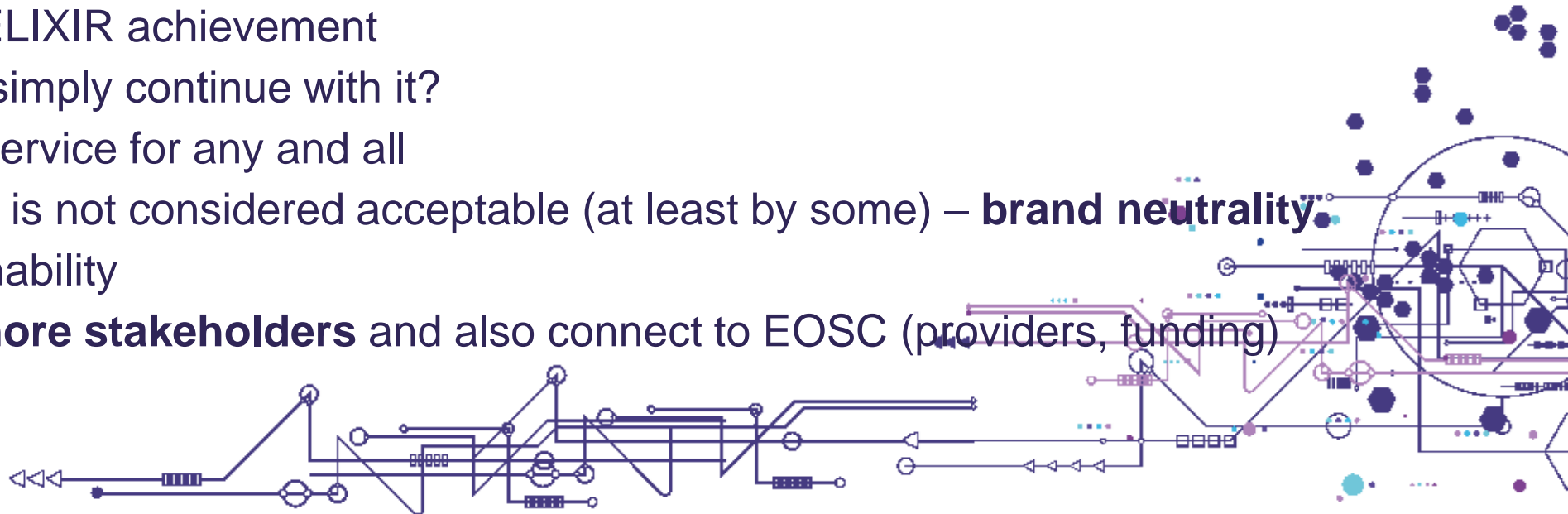
Transition towards LS LOGIN / LS AAI

- ELIXIR AAI in stable production for several years
 - EuroBioImaging accepted ELIXIR AAI
 - BBMRI AAI fully inspired by ELIXIR AAI
 - More than 9 thousand users in 2022
 - Almost 150 services connected (and almost the same number in testing)
 - ELIXIR AAI had (and have) impact on the general (AARC, now EOSC) AAI architecture
- Very successful ELIXIR achievement
- So why we don't simply continue with it?



Transition towards LS LOGIN / LS AAI

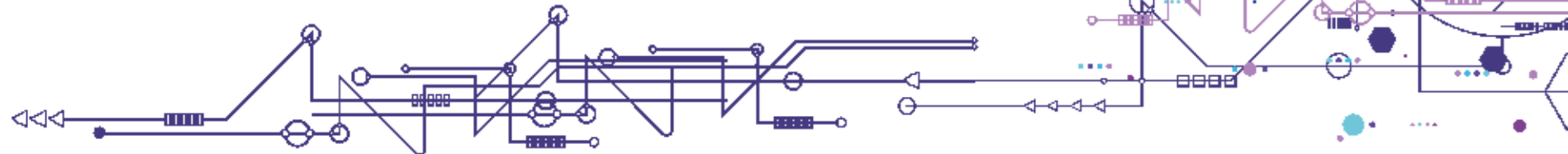
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- Very successful ELIXIR achievement
- So why we don't simply continue with it?
- AAI is a general service for any and all
 - Explicit brand is not considered acceptable (at least by some) – **brand neutrality**
- Long term sustainability
 - To **include more stakeholders** and also connect to EOSC (providers, funding)



Life Science AAI



- EOSC-Life project
 - Brings together the 13 Life Science 'ESFRI' research infrastructures (LS RIs) to create an open, digital and collaborative space for biological and medical research.
- Develop widely acceptable AA infrastructure
- Use ELIXIR AAI as a starting point
- Bring e-infrastructures on board
- Keep full compliance with the AARC Blueprint for AAI and contribute to its evolution



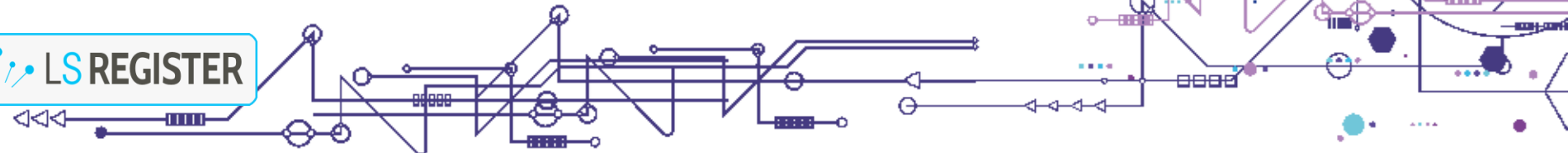
Steps towards LS LOGIN



- LS LOGIN (LS AAI) as the universal production quality service
- Inviting the e-infrastructures (EGI.eu and GEANT) to directly take care of some components
 - Alignment of the architecture
 - Sharing the common technology components
 - Developed as part of their more general solutions
- Spent several years to create the complete background for LS AAI
 - Policies and GDPR issues (provisional Data Controller, DPAs, Policies, ...)
 - To “replace” ELIXIR AAI components by those provided by e-infrastructures
 - Setting the whole complex environment for the LS AAI to come to production
 - Two years of piloting the LS AAI
 - **LS Login is a frontend of the LS AAI**

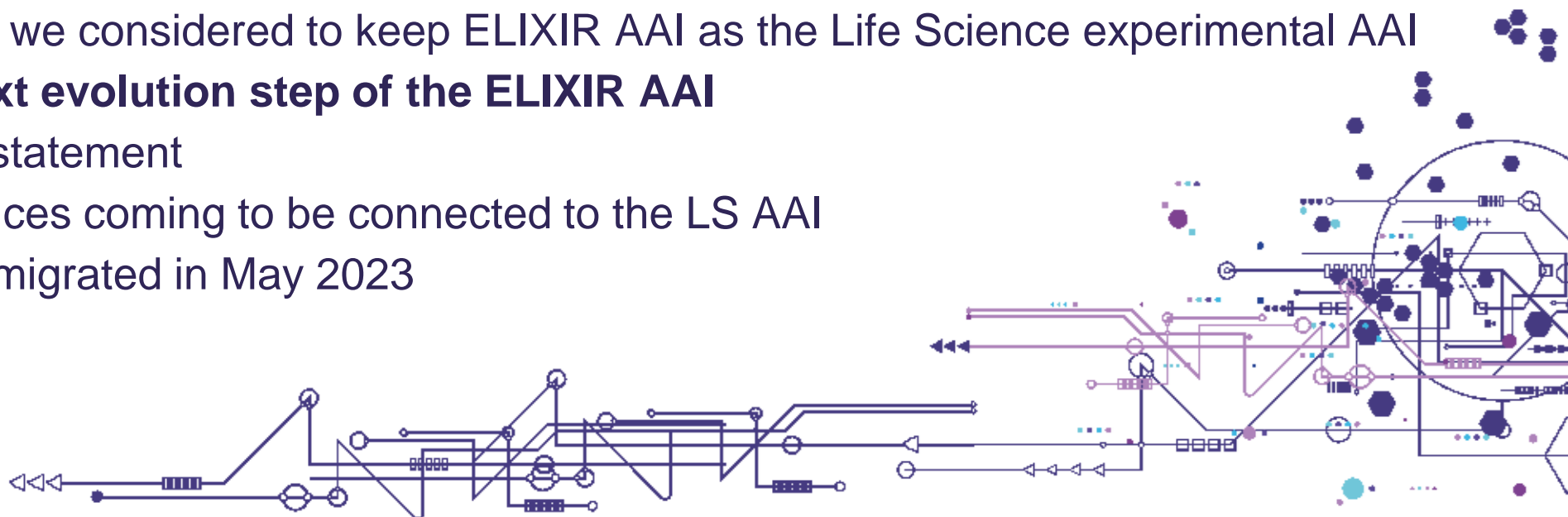
The LS LOGIN logo, featuring a stylized blue and green molecular structure above the text "LS LOGIN".

LS LOGIN at eIRG 2023

The LS REGISTER logo, featuring a stylized blue and green molecular structure above the text "LS REGISTER".

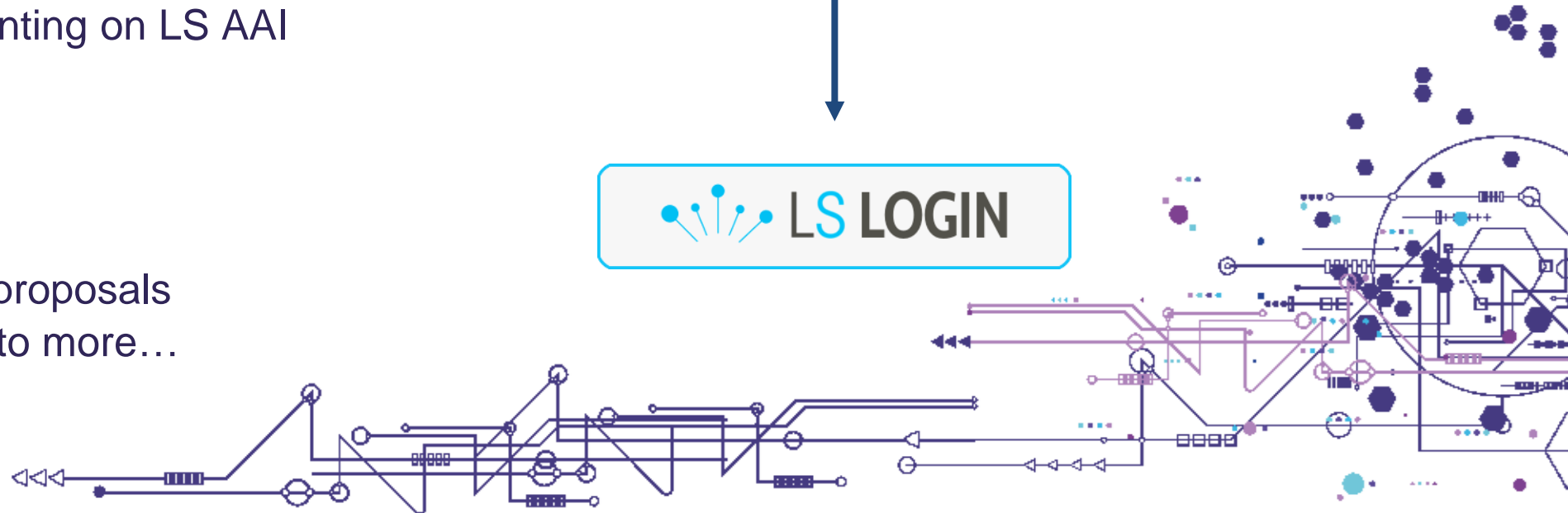
LS AAI Current Status

- LS AAI officially deployed on 11th April 2022
- All (9 thousand) ELIXIR AAI users migrated to the LS AAI
 - One day work, no direct impact on use of “ELIXIR becoming LS” AAI
 - All services immediately available through LS AAI
- **ELIXIR AAI decommissioned**
 - The only way to minimize risk of chaos and misunderstanding
 - Originally we considered to keep ELIXIR AAI as the Life Science experimental AAI
- **LS AAI is the next evolution step of the ELIXIR AAI**
 - The “official” statement
- Already new services coming to be connected to the LS AAI
- **BBMRI AAI** fully migrated in May 2023



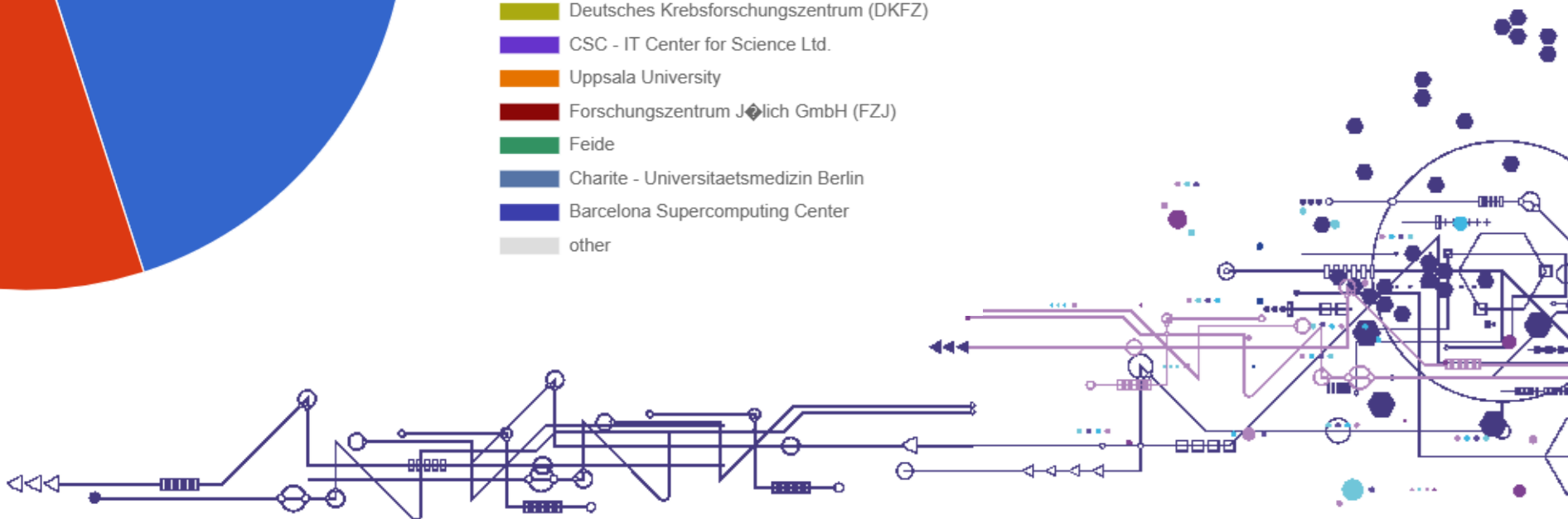
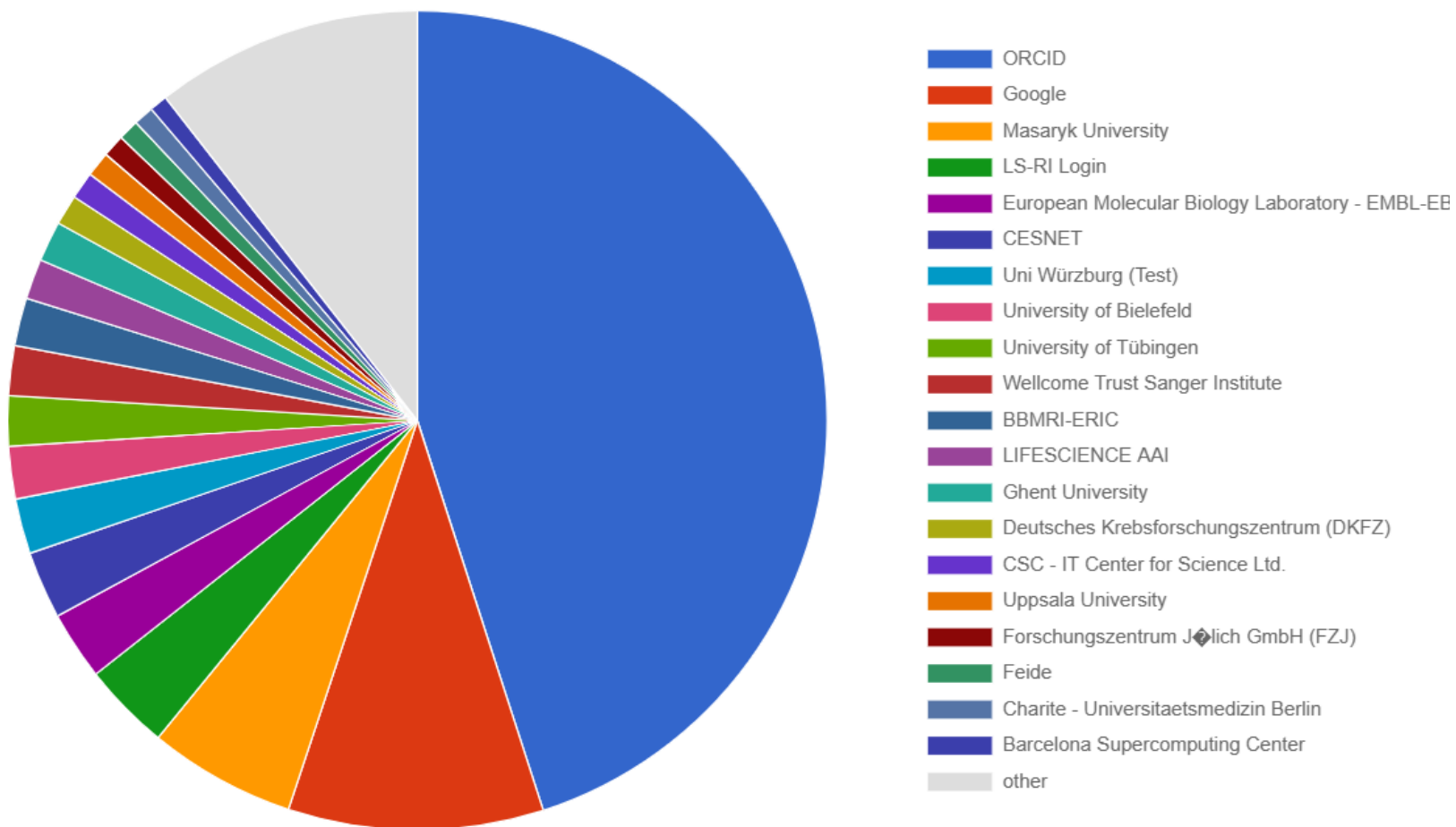
LS AAI Current Status

- 95 % increase in number of users
 - Around 17 thousand
- 20 % increase in number of services
 - More than 250
- ELIXIR AAI and BBMRI AAI fully migrated
- EuroBioImaging using LS AAI
- Instruct (ARIA) uses LS AAI
- Many projects counting on LS AAI
 - **GDI**
 - EUCAIM
 - EJP-RD
 - canSERV
 - TREs project proposals
 - Reaching out to more...



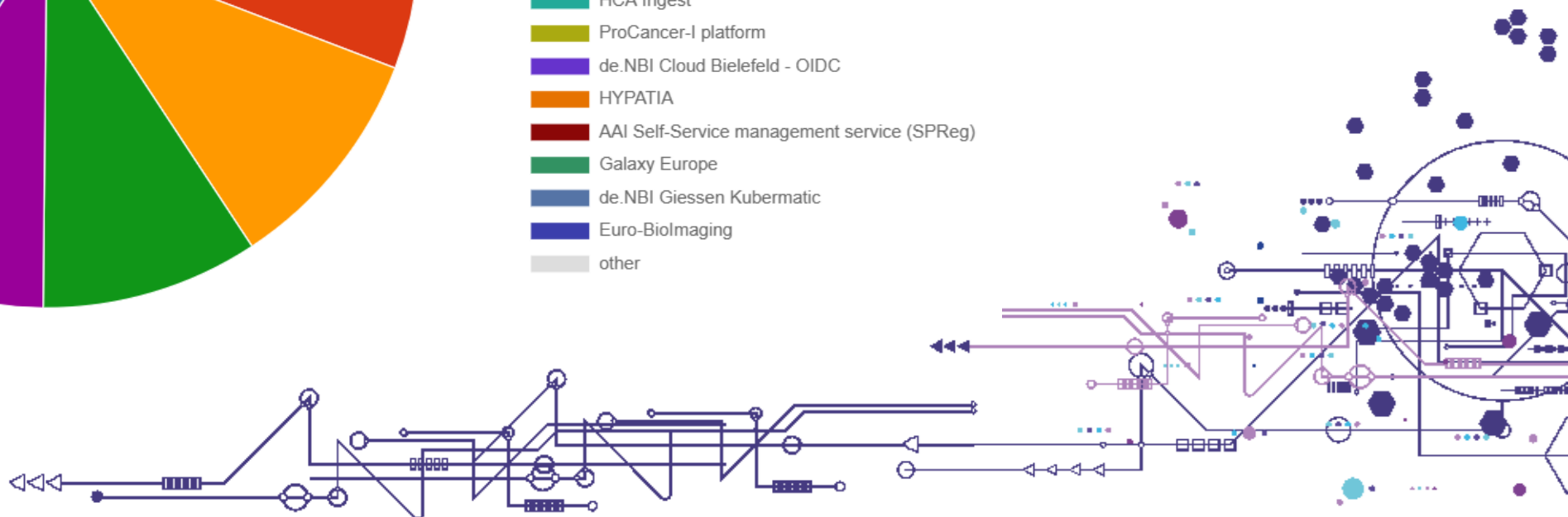
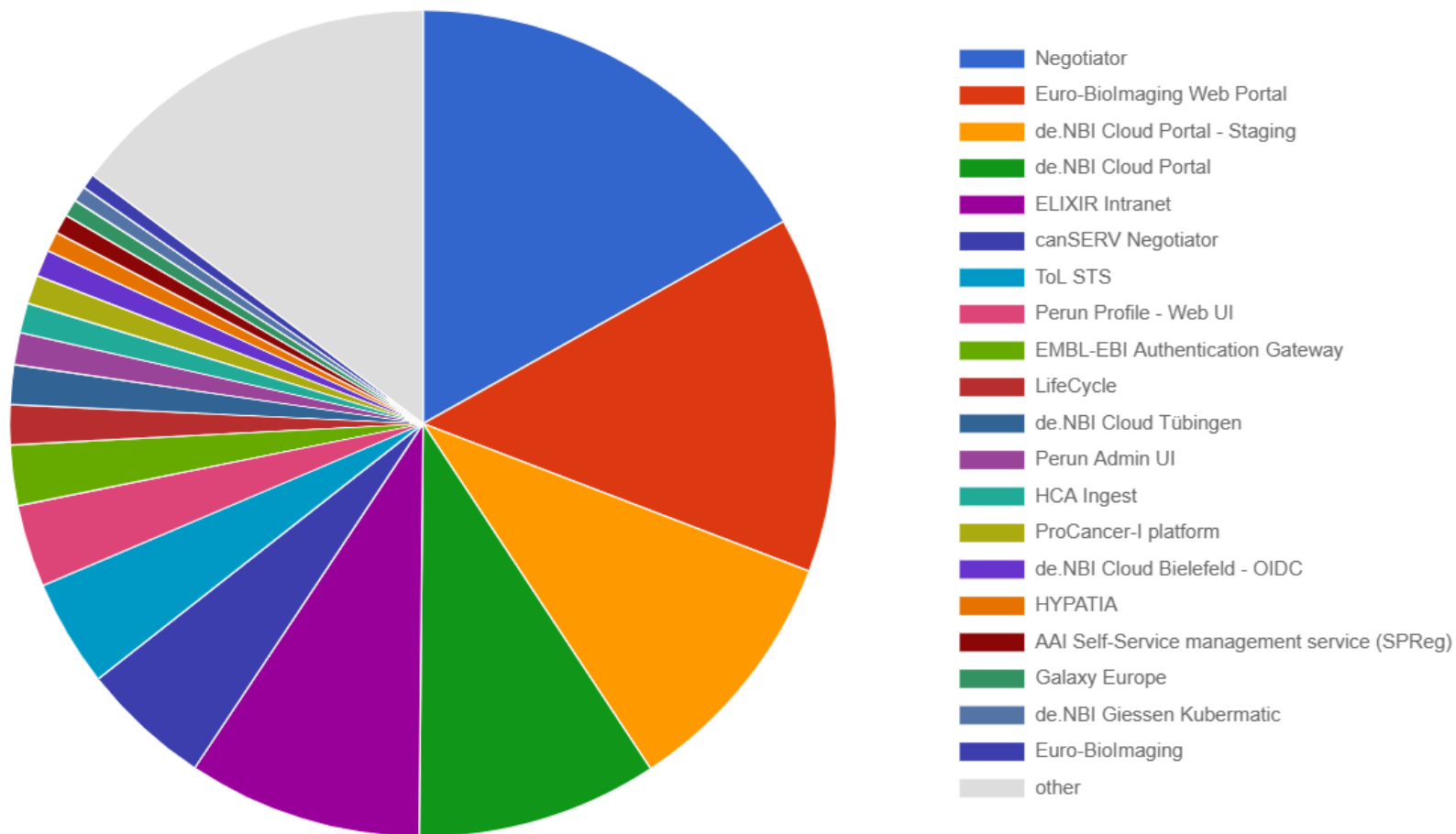
Identity providers

The chart shows the number of logins from each identity provider in the selected time range. Click an identity provider to view detailed statistics.



Service providers

The chart shows the number of logins to each service provider in the selected time range. Click a service to view detailed statistics. Only first access to a service is counted, because following logins are not going through the proxy.



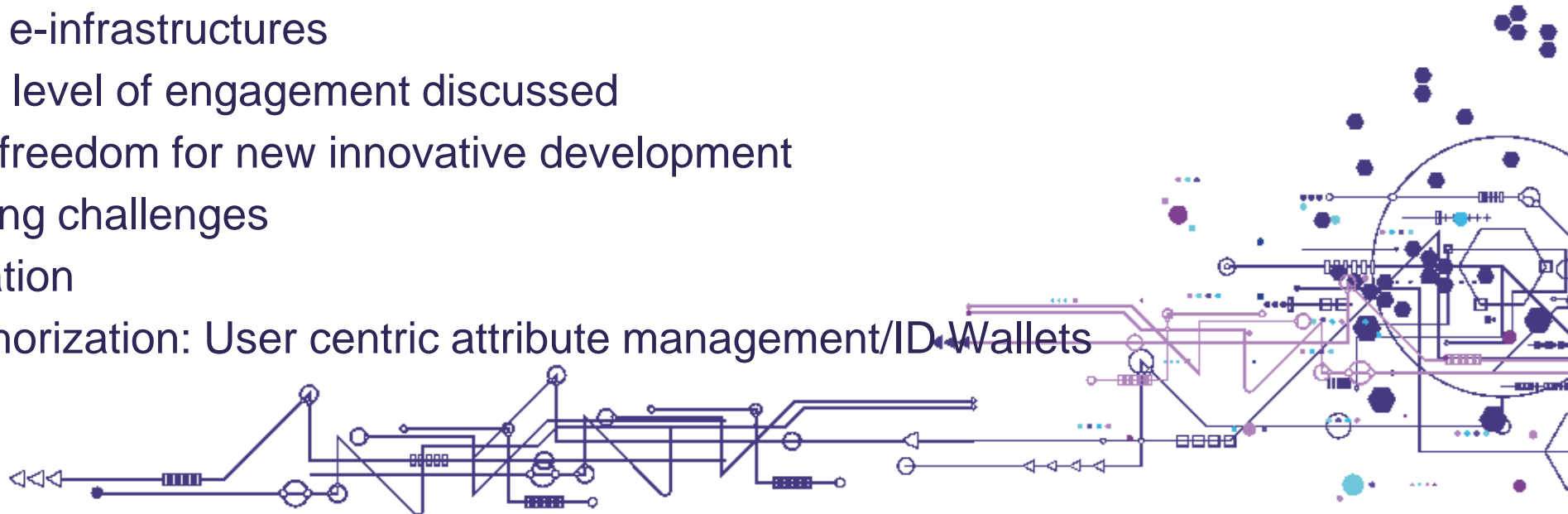
Future vision

- Sustainable stable operation
 - Technical: Dependency on the e-infrastructures vs fast innovation
 - Financial: ELIXIR, national funding, contribution from other LS RIs, projects
 - Governance: Masaryk University/ELIXIR CZ the Data Controller, EAB under consideration
- Trust building
 - Essential to be deployed in sensitive environment (human data, EHDS)
- Focus on Authorization support
- Delegation, GA4GH Passports and Visas
- eIDAS integration
 - User centric attribute processing
 - ID Wallet (eventually LS AAI Wallet)
- **The innovative exemplar of the EOSC Community AAI**
 - **Need for own control of the development**



Summary

- LS AAI the representative of EOSC Community AAI
- Full production service, to be used also in sensitive environments
 - Long history through ELIXIR AAI
 - Large user and service base
- Long term sustainability as the crucial part of the trust building
 - Guarantees that it makes sense to invest into using the LS AAI/LS LOGIN
- Collaboration with e-infrastructures
 - Currently new level of engagement discussed
 - To give more freedom for new innovative development
- New very interesting challenges
 - eIDAS integration
 - Focus on Authorization: User centric attribute management/ID-Wallets





Thanks and questions?

<https://lifescience-ri.eu/ls-login.html>

The logo for e-infra.cz, consisting of the text 'e-infra.cz' centered within a large circle, which is flanked by two curved lines on either side.

e-infra.cz