



Trustful hyper-linked entities in dynamic networks

# reTHINK / 5G

## Open Portable Trusted Identity for Services

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- Web-centric approach to design 5G Service Architecture
  - In the context of 5G being a *holistic end-to-end network infrastructure*, reTHINK project results are relevant for end-to-end service delivery and thus are very likely to impact and be impacted by architectural decisions
  
- Web Identity management for 5G transformation
  - One focus of the reTHINK work is the design and development of security and portability features, relying on trusted third party *user-selected identity providers*.
  - The emphasis on identity management and the expected impact on convergent, multi operator services relying on trusted identity providers, suggests that the result are of significant importance in the context of the future 5G infrastructure.



# reTHINK Identity in 5G



- Identity for the Internet of Everything
  - connecting human beings, digital services & things
  - reconciling 2 faces of identity: authentication and reachability
  
- user-centric approach
  - for choice of identity of service, etc.
  - trust information for better empowerment
  - distributed architecture: close to the user
  
- will be demonstrated in several scenarios
  - Enterprise Conversational
  - Smart Contextual Assistance
  - My City



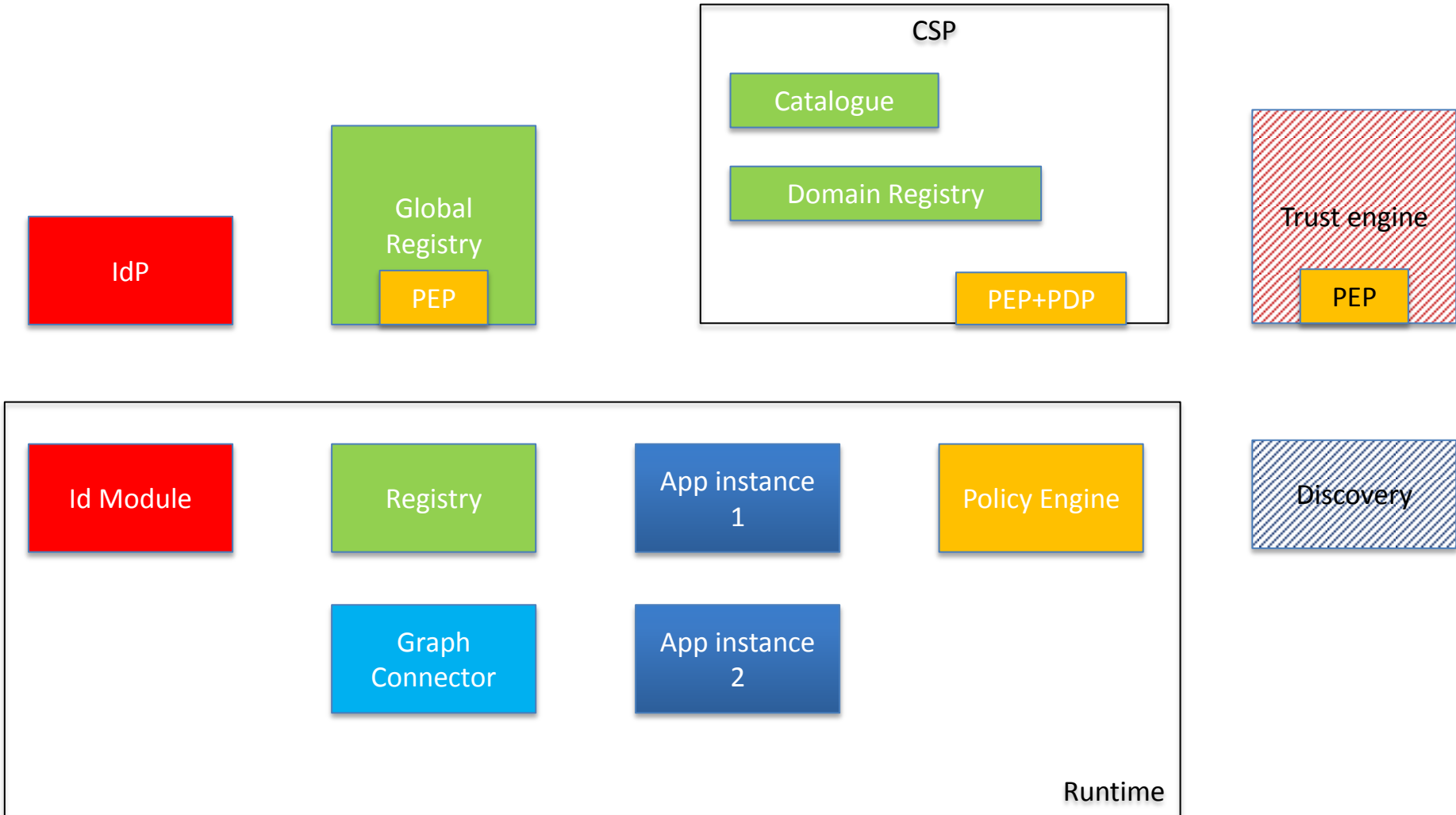
# reTHINK Global Identity and Reachability Framework



- Cross domain, interoperable
  - communicate with user identified in other services
- Identity portability across service providers
  - without losing identity details or contact lists
- Identity decoupled from service providers
  - use of Independent Identity Provider (IdP)
- Globally searchable
  - across any domain
- Trust-enhanced identity features
  - IdP-certified identity
  - complemented by Trust Engine



# reTHINK Support services: the big picture





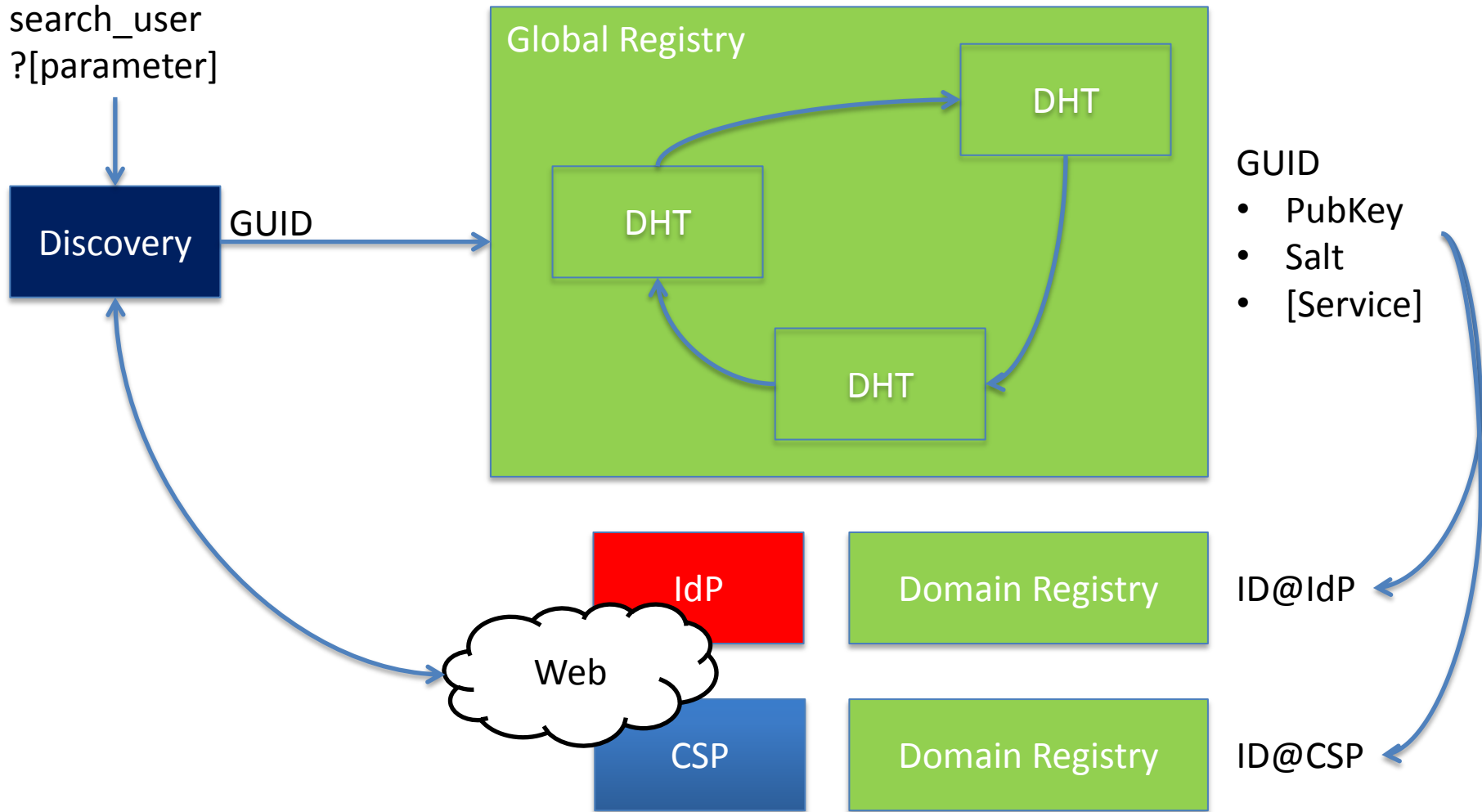
# Portability & Reachability



- A global user-managed identifier
  - spans across multiple domain
  - created by the user
  - associated with domain accounts (IdPs & CSPs)
- published in a distributed Global Registry
  - on top of which discovery services may be built
- used as the seed of a distributed social network
  - implemented through GraphConnector



# Portability: Registry & Discovery









# Identity & Trust



- user control his identity through local Identity Module
  - chooses his Identity Provider to authenticate himself and get identity tokens for peers
  - also checks received identity tokens
- 2 basic trust modules
  - authentication validation: checks a given identity token against the issuing IdP and provides an indicator, that the identity is authenticated or not

anonymous	not authenticated	authenticated	trusted
no identifier displayed	any identifier displayed	identifier authenticated	identifier is authenticated and trusted
			

- white-/black-list: indicates whether the given identity is already known for good or malicious behaviour
- should be extensible to innovative features
  - calculations based upon social relationships
    - based upon GraphConnector: a distributed, qualitative/quantitative-weighted social network that takes care of “like” 👍 and “dislike” 👎
  - usage of specific policies

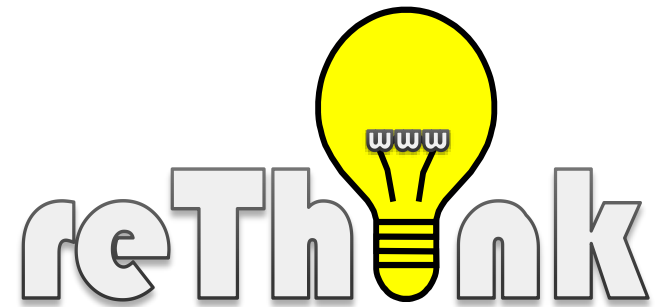




# reTHINK for 5G



- reTHINK envisions to overcome the main challenges of traditional Telco and OTT models by providing a new web centric P2P architecture
- reTHINK devolves the communication session management to the endpoint
  
- The aim of reTHINK identity & reachability framework is to have
  - Non-service-bound Identities
  - Cross domain interoperability
  - Globally searchable and reachability
  - Portability
- This is achieved using a set of specialized components (support services)
  - Identity & Trust management
  - Directory services
  - Graph connector
  - Policy & governance



**Thank You!**

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# Changing the DNA of Telcos and Webcos



## A new GENOME: Good Enough Network of Moving Endpoints

- It is a change of DNA for Telcos
  - Position services between VoLTE and VoIP
  - Unlicensed, non-territorial, quick to launch
  - Independent identities
  - Adopt 'Good Enough' QoS service
  - Accept 3<sup>rd</sup> party software downloads to devices
- It is a change of DNA for Webcos
  - Independent identities
  - Interworking with non-subscribers
  - Collaborative QoS routing with SLA

