



cira

Secure IoT
Registry

Implementation of IoT SAFE using a Registry

RIPE 82 2021-05-20

Presented By

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FUTURE INTERNET Smart ...

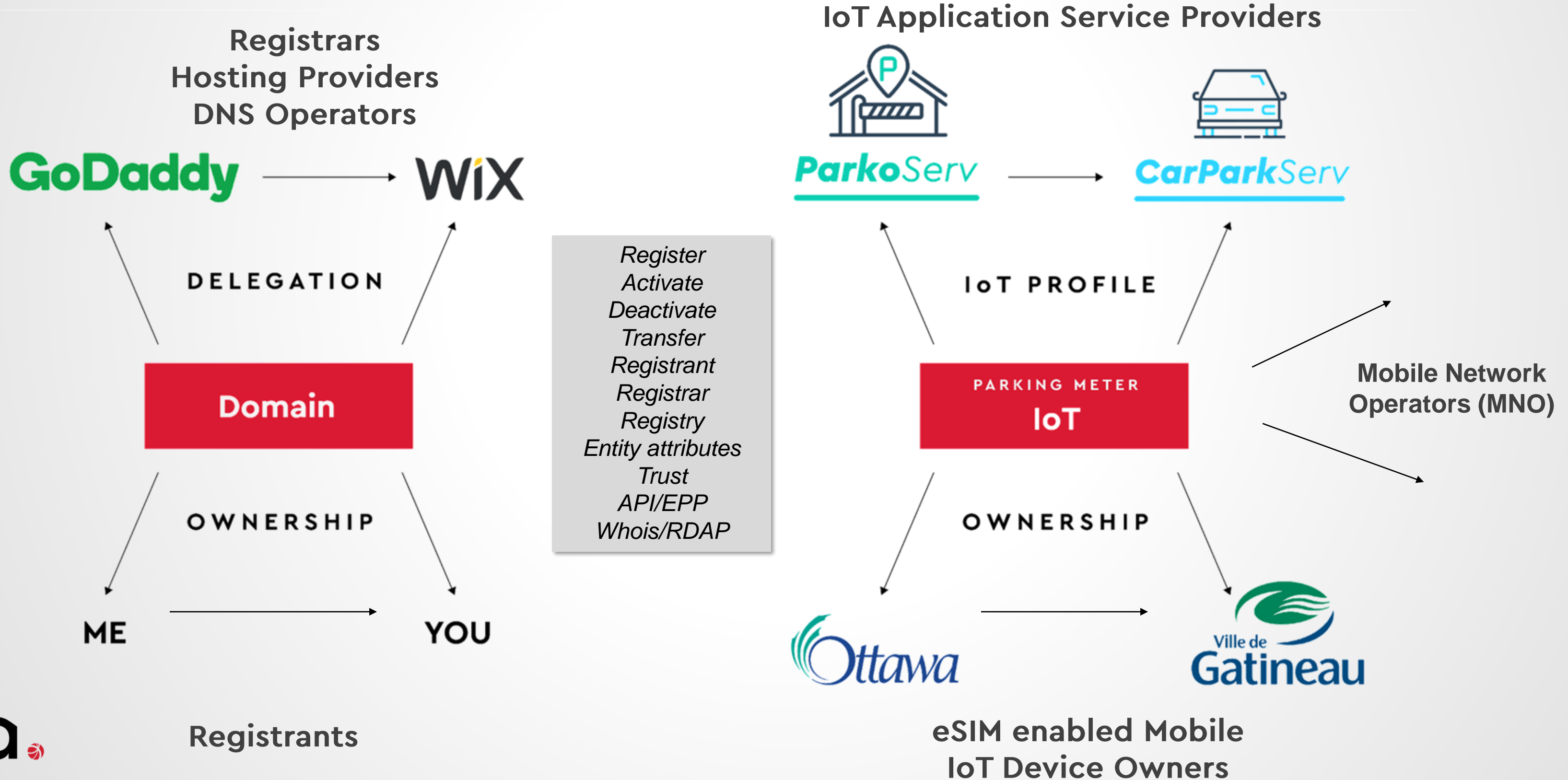


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THE OPPORTUNITY – SIMILARITIES BETWEEN

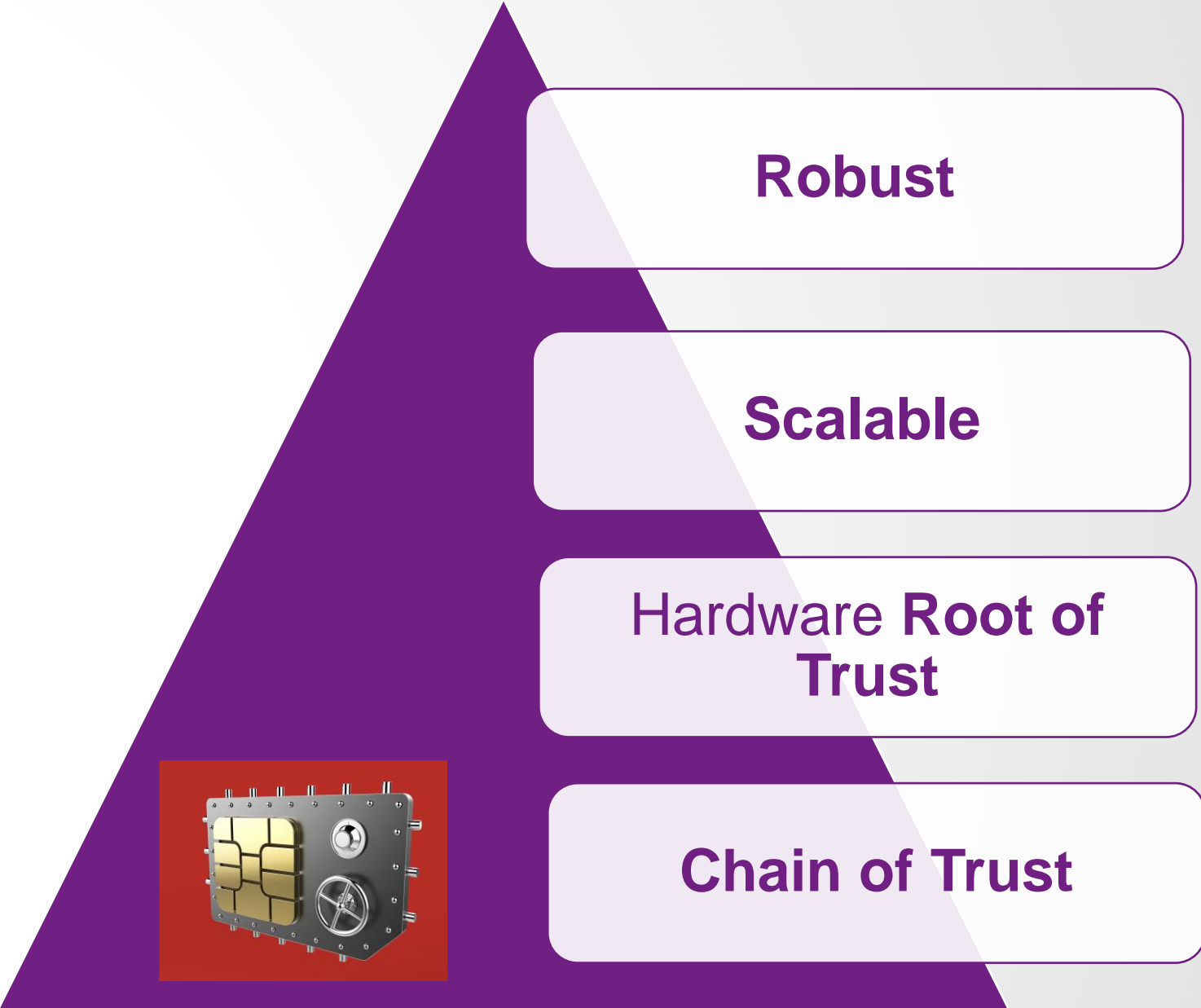
Domain Names & IoT SAFE enabled IoT Devices

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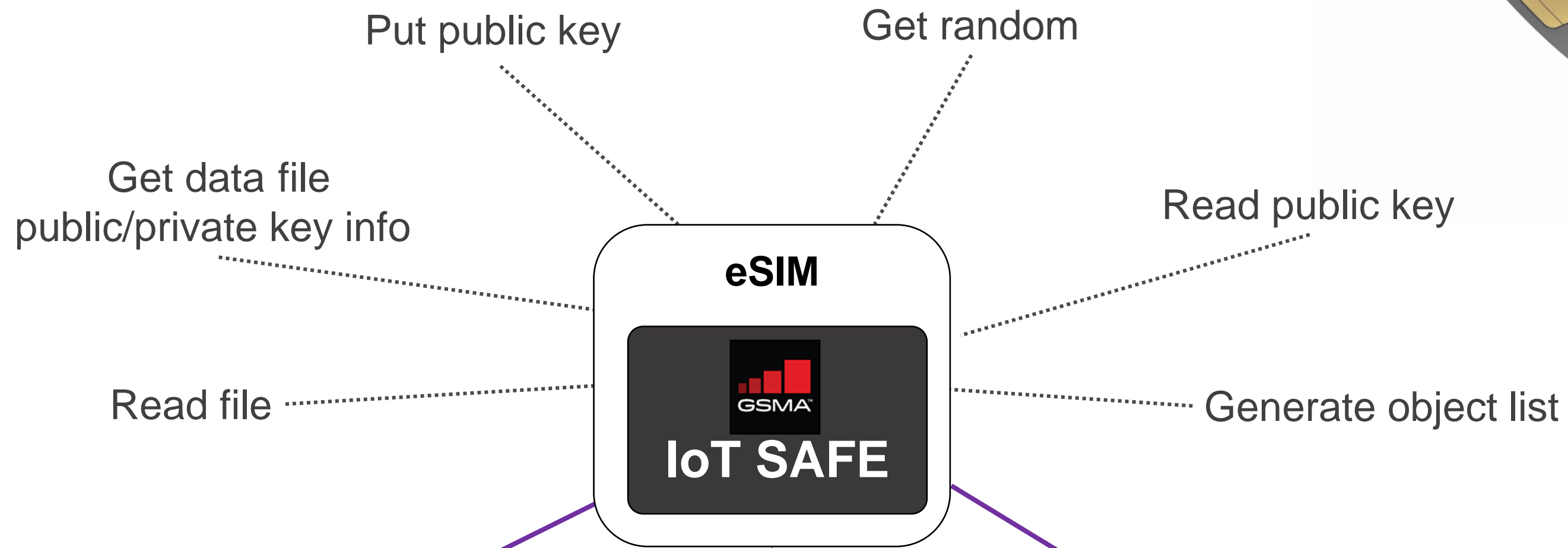


Standards Body to Enable
 Device manufacturers
 Service providers



<https://www.gsma.com/iot/iot-safe/>

eSIM ARE LIKE SMARTCARDS, MINI HSM OR TPM



Verify signature

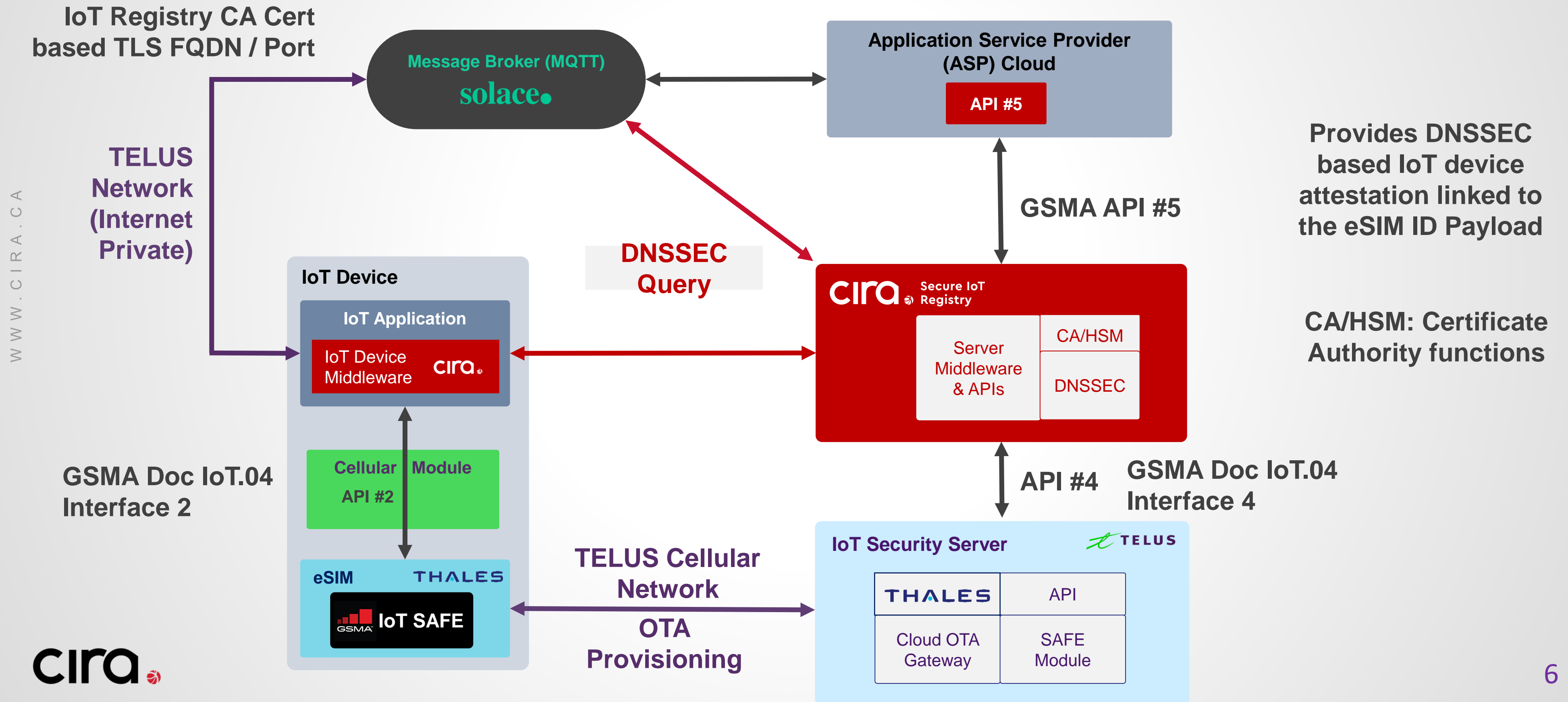
Generate key pair

Compute signature on eSIM to enable mutual TLS Handshake

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ZERO TOUCH REMOTE eSIM PROVISIONING

Building on the existing eSIM → MNO trust model

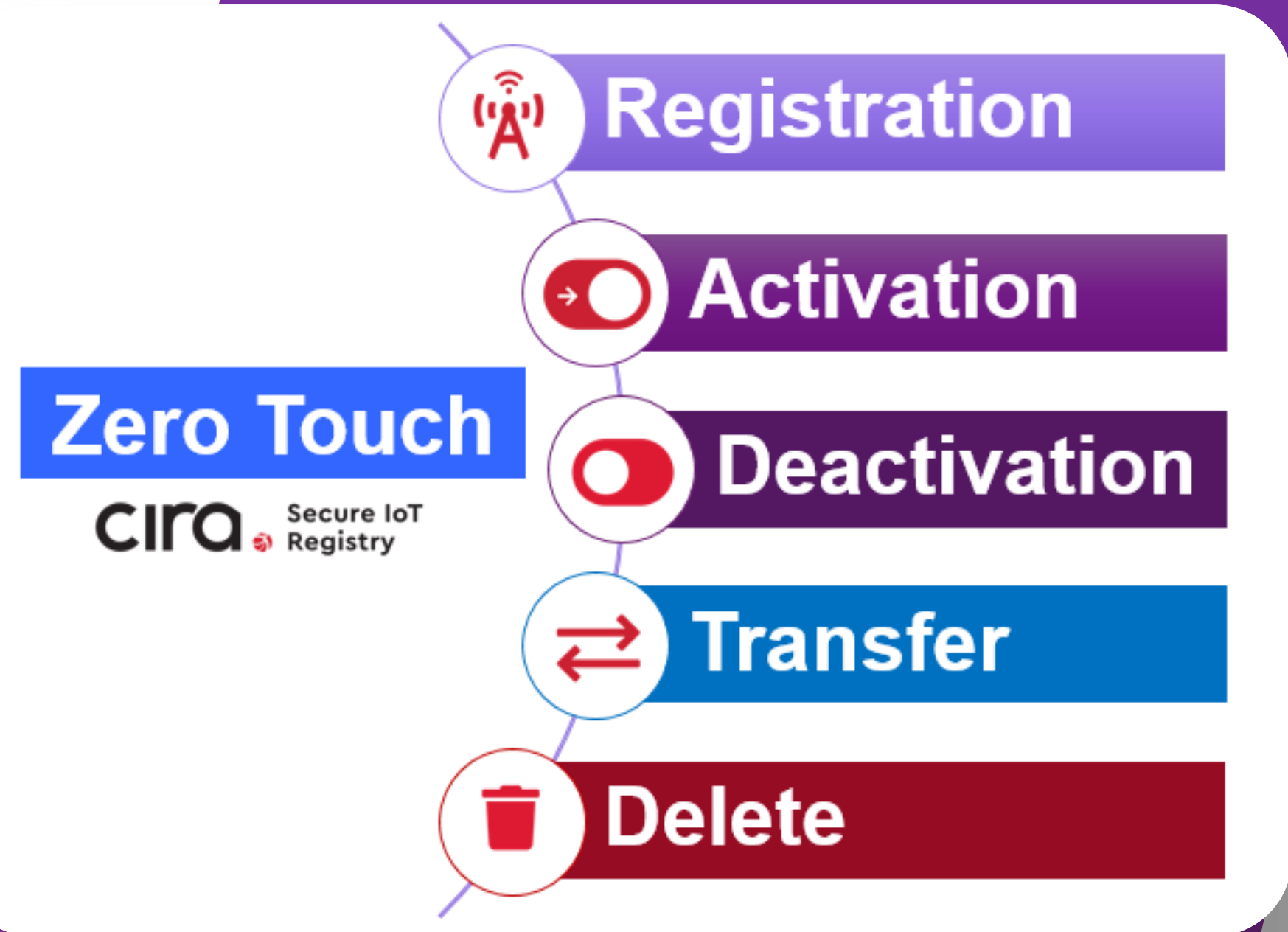


CIRA SECURE IoT REGISTRY

Zero Touch

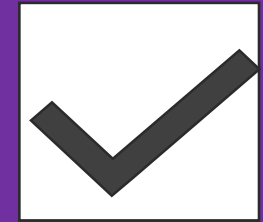
- Connects to correct MNO
- Pushes configuration / security certificates to the devices
- Provisioning/De-provisioning devices
- Changing MNO/service provider for devices
- Disconnecting from MNO

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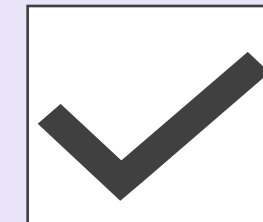




How can we have more opensource code that supports DANE/DANISH DNSSEC validation on mutual TLS connections?



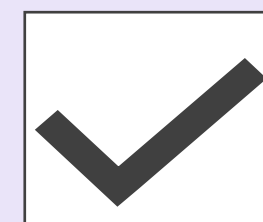
Should every ccTLD operate their own IoT Registry?



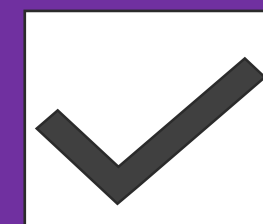
How should inter-registry registration activity be trusted?



Is the trust in operating a ccTLD leverageable to operate an IoT Registry?



How do we differentiate the IoT Registry from current hard coded locked-in major cloud provider solutions ;-)



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Thank You

<https://github.com/CIRALabs/CIRA-Secure-IoT-Registry>