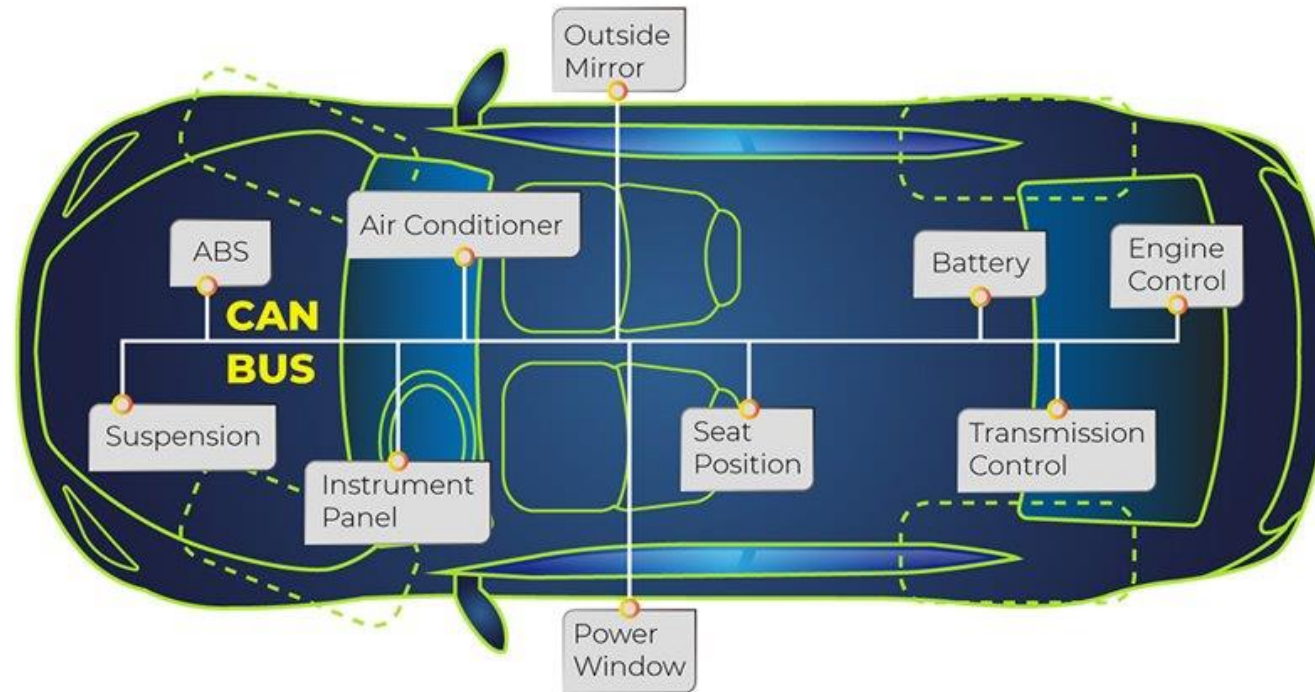
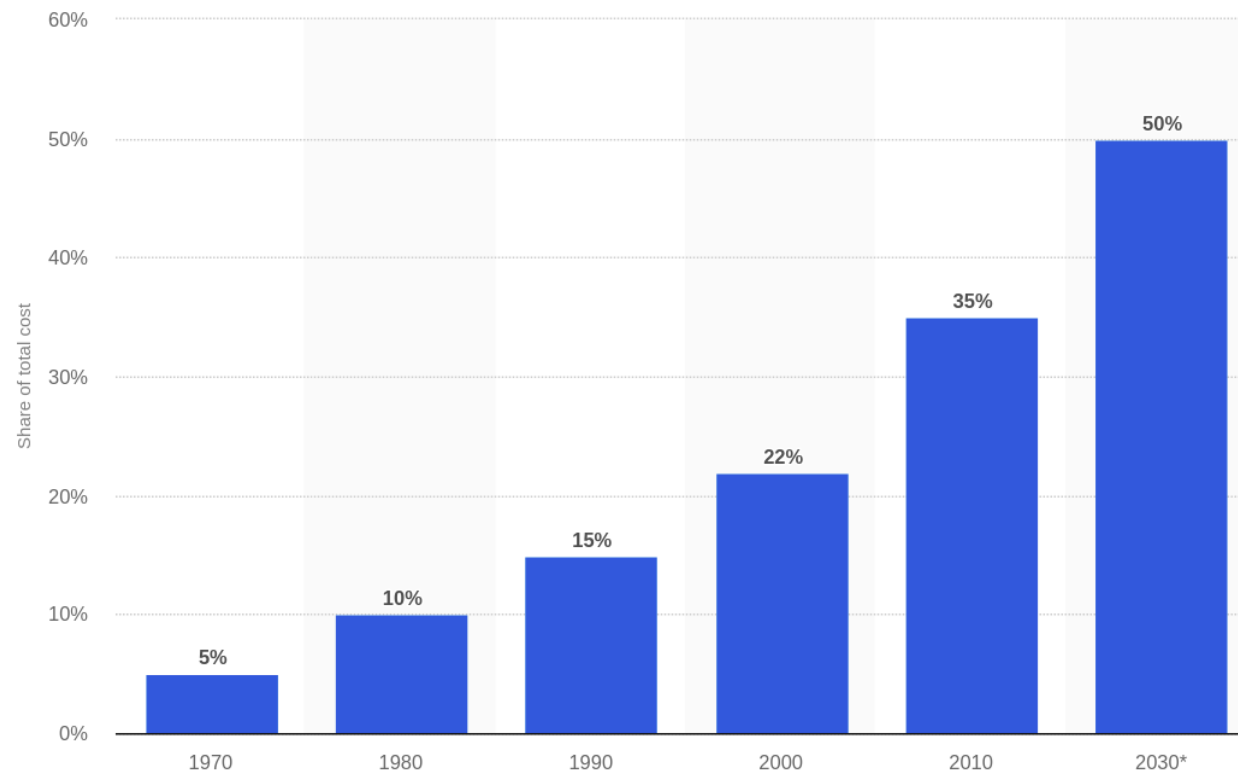


A Car or an Expensive IoT device?

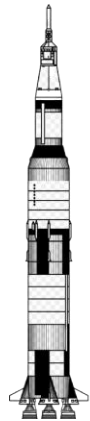


Why is Modern Car Expensive?

Automotive electronics cost as a percentage of total car cost



Automobile Software is Complex



145,000



12 million



25 million



100 million

Lines of code

Who controls it, You or they?



Life threatening moment



Challenges with Automotive Software



Extremely complex and convoluted supply chain



Absence of Integrity tracking for software during its lifecycle (UNECE, NIS)



Lack of reports on software assets and licenses
OTA installed (RXSWIN) and running on cars



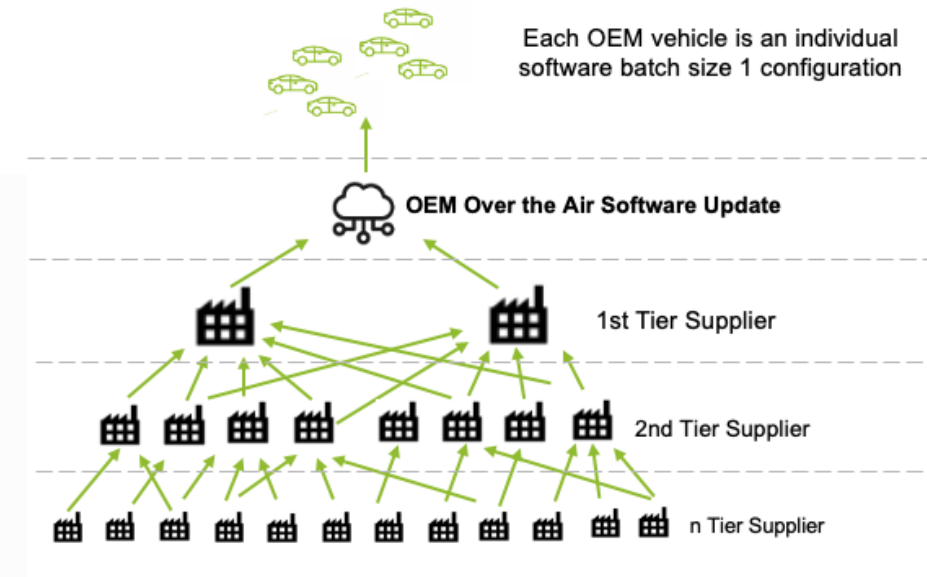
Absence of ingredient list in Software recipe



Centralized structure



Unavailability of (DLT / Blockchain) signed history



Recent Regulations

- UN Regulations on Cybersecurity and Software Updates
- Whitehouse executive order (14028)
- NTIA framed definition of Software Bill of Materials (SBOM)
 - minimum elements, roles and benefits

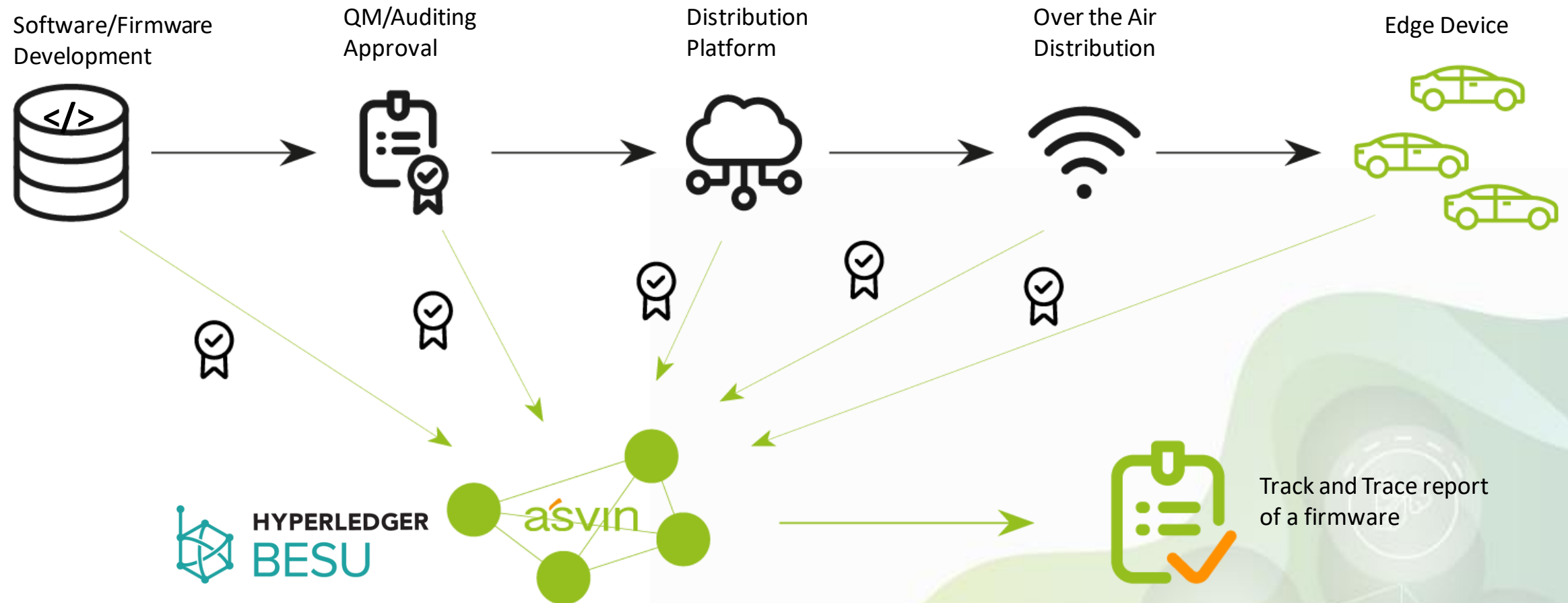


What is D-SBOM?

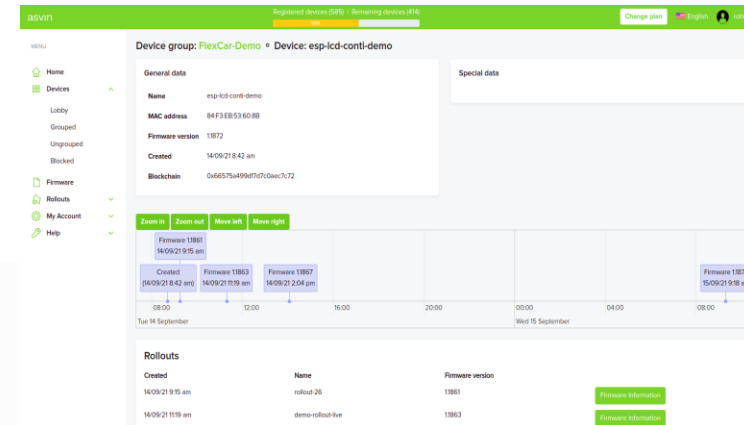
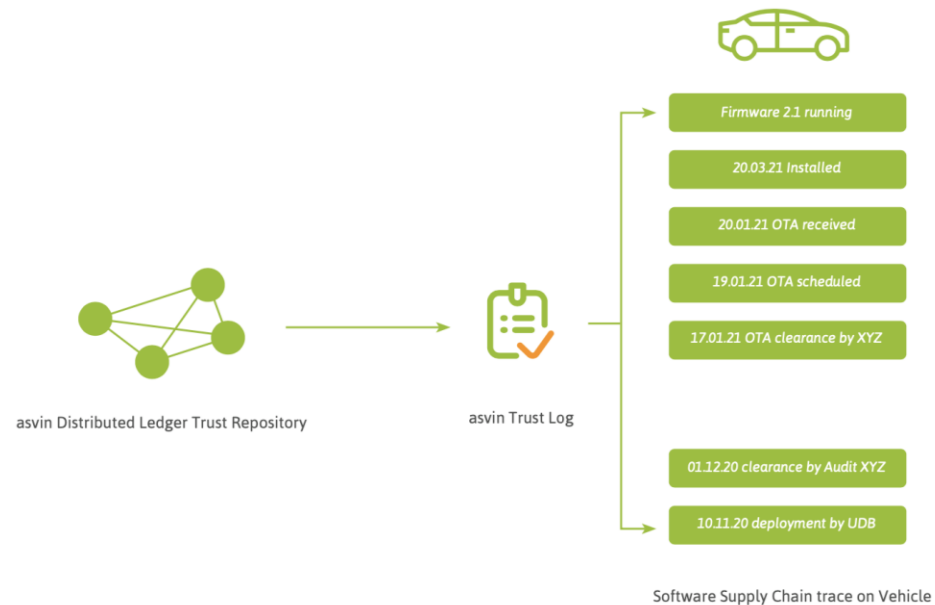
- Use of DLT to store, access and transfer SBOM
- A distributed ledger establish single truth
- Track the trail of software in multitier hierarchy
- CVE vulnerability monitoring for their cybersecurity risk
- Popular SBOM formats
 - Software Package Data Exchange (SPDX) by the Linux Foundation
 - CycloneDX by the OWASP foundation
 - Software Identification (SWID) tags by NIST



Secure Software Supply Chain



Immutable and Distributed Record



- Record the software meta information (license, versions and dependencies) on OTA shipment
- Analytics on software components in use
- Analytics on licenses and license dependencies for installed software

- Monitoring of software and license integrity
- Decentralized Ledger with secure API access for all actors in the software supply chain
- Immutable record of all of the above

What the Solution brings



Decentralized structure



Immutability



One shared Truth



Improved security



Greater Trust and
Transparency



True Traceability and
Auditability



Resilience

asvin

Thanks



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