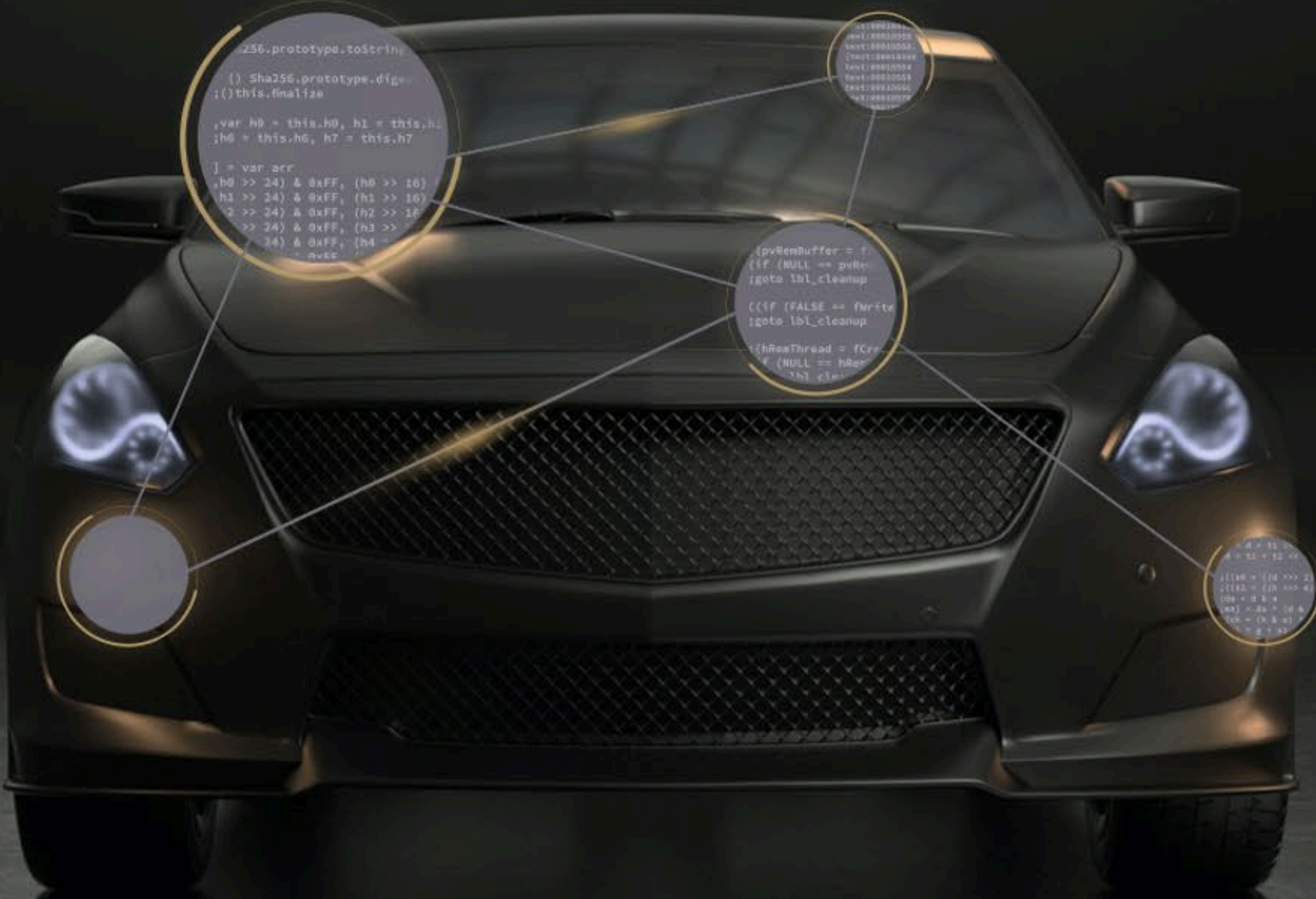


Supply Chain Transparency Through Digital Twins

A vision for eco-system harmonization and collaboration

Michael Engstler, CTO



Chronicle of Vulnerability Across a Supply-Chain

The screenshot shows a ZDNet article page. At the top, there is a navigation bar with the ZDNet logo, a search icon, and a list of categories: CXO, HARDWARE, MICROSOFT, STORAGE, INNOVATION, APPLE, SECURITY, MORE, NEWSLETTERS, and ALL WRITERS. Below the navigation bar, a 'MUST READ' banner highlights 'Microsoft cloud services outages continue into week two'. The main article title is 'Ripple20 vulnerabilities will haunt the IoT landscape for years to come', with a sub-headline: 'Security researchers disclose 19 vulnerabilities impacting a TCP/IP library found at the base of many IoT products.' The author is Catalin Cimpanu, writing for Zero Day on June 16, 2020. Below the article text is a large yellow graphic with the 'Ripple20' logo in the center. Surrounding the logo are nine categories of IoT devices, each with an icon: Industrial devices, Power grids, Medical devices, Home devices, Enterprise devices, Retail devices, Transportation, and Networking devices. To the right of the main article, there is a section titled 'MORE FROM CATALIN CIMPANU' featuring three smaller article teasers: 'Security: Children and parent info exposed in Georgia DHS data breach', 'Security: New self-erasing chip could be used to detect counterfeit or tampered products', and 'Security: Document-signing service Docsketch discloses security breach'.

Chronicle of Vulnerability Across a Supply-Chain



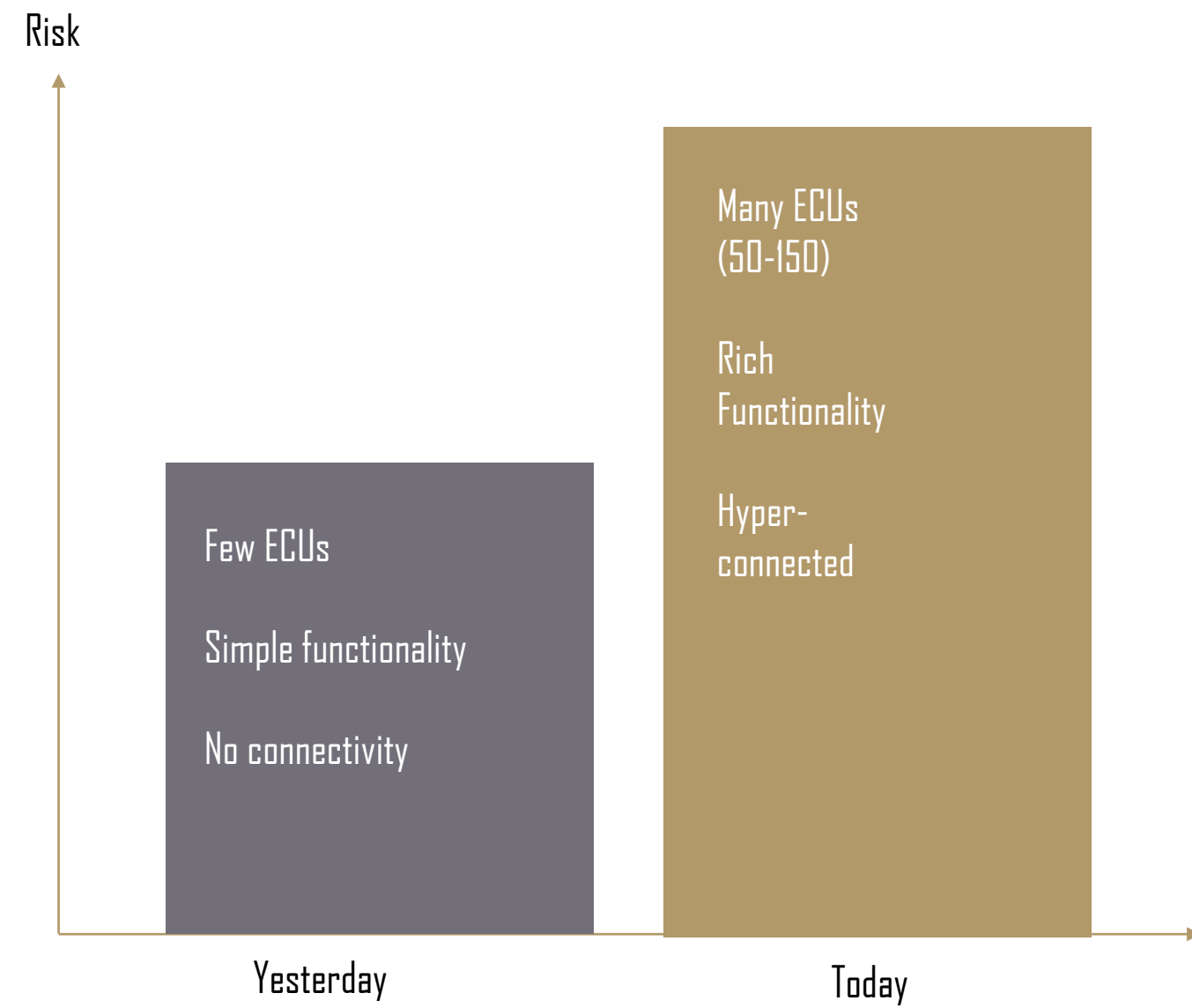
- Internal analysis of potential impacted components and suppliers

- Escalation to the supplier
- Investigation process at the supplier
- Issuing a fix

- Mapping vulnerable components to VINs
- Releasing an OTA campaign to fix the issue

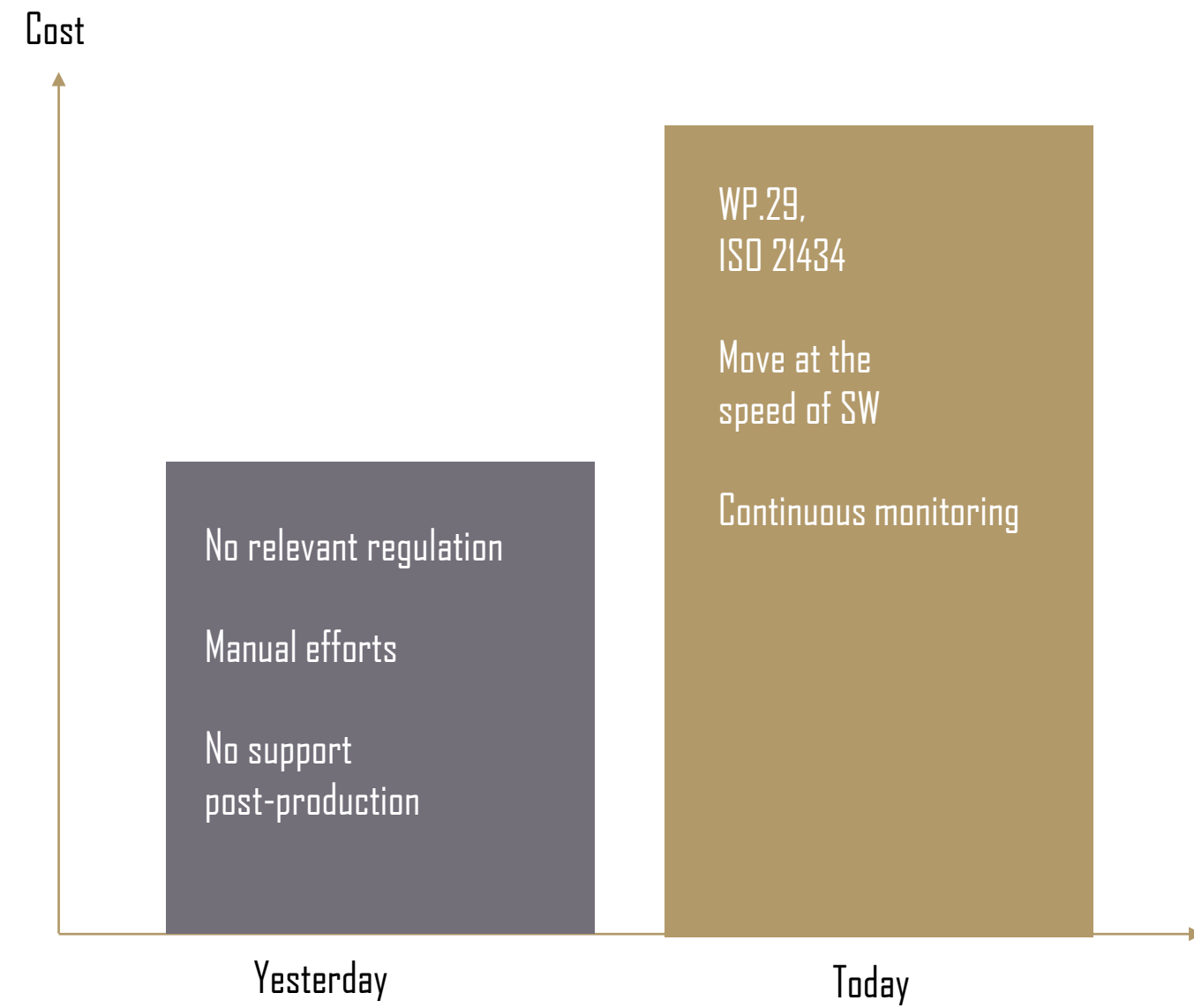
The Case For Transparency

Challenges



The Case For Transparency

Consequences



**How do you secure
the unknown?**

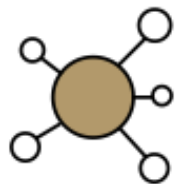
Cyber Digital Twin

0110
0010
110 ✓

Digital replica of vehicle components used for cybersecurity analysis

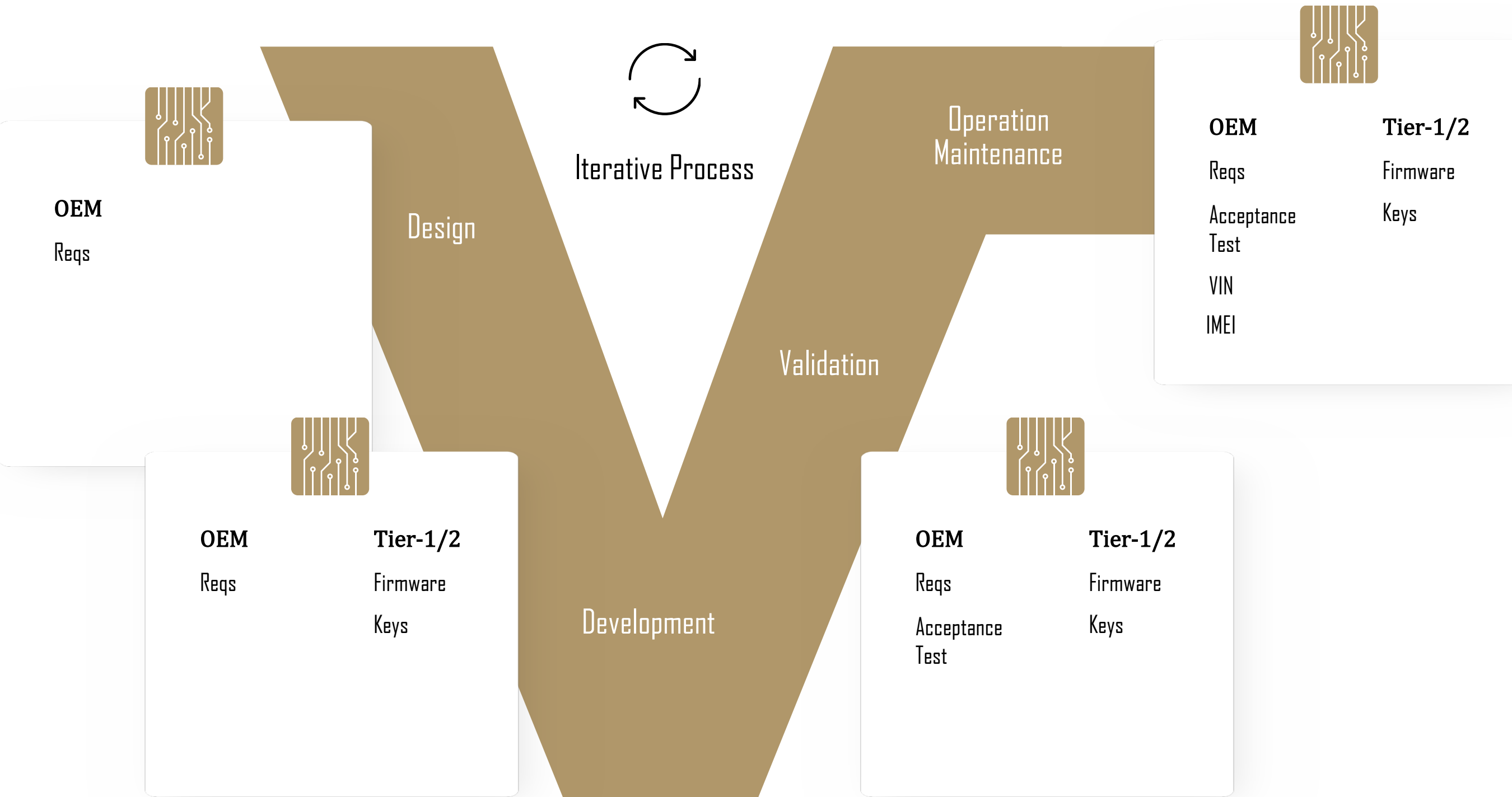


Captures the entire product "context" and metadata accumulated during the development process



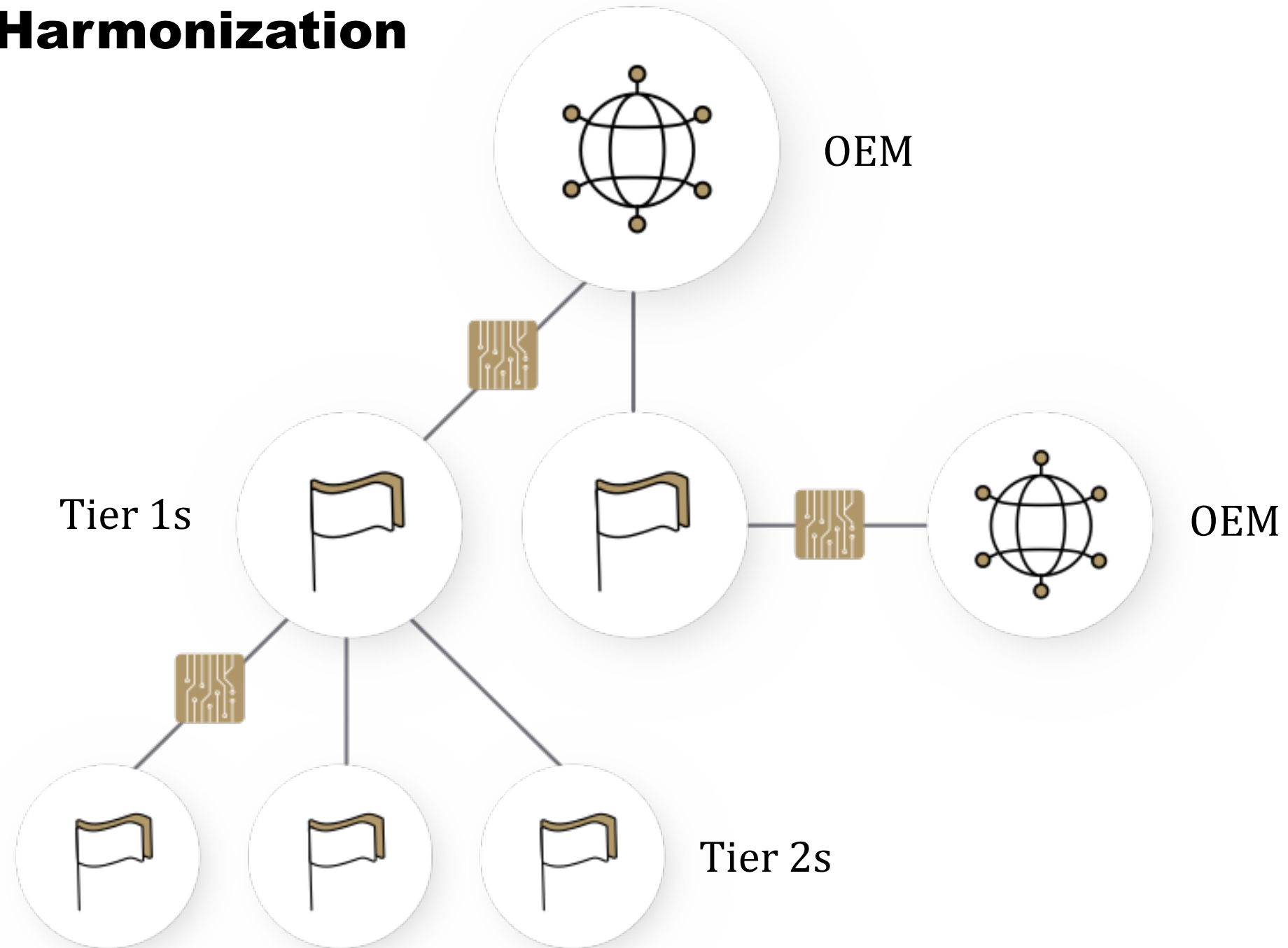
Transferrable across the supply chain and can be used throughout the product lifespan

Developing with Cyber Digital Twin



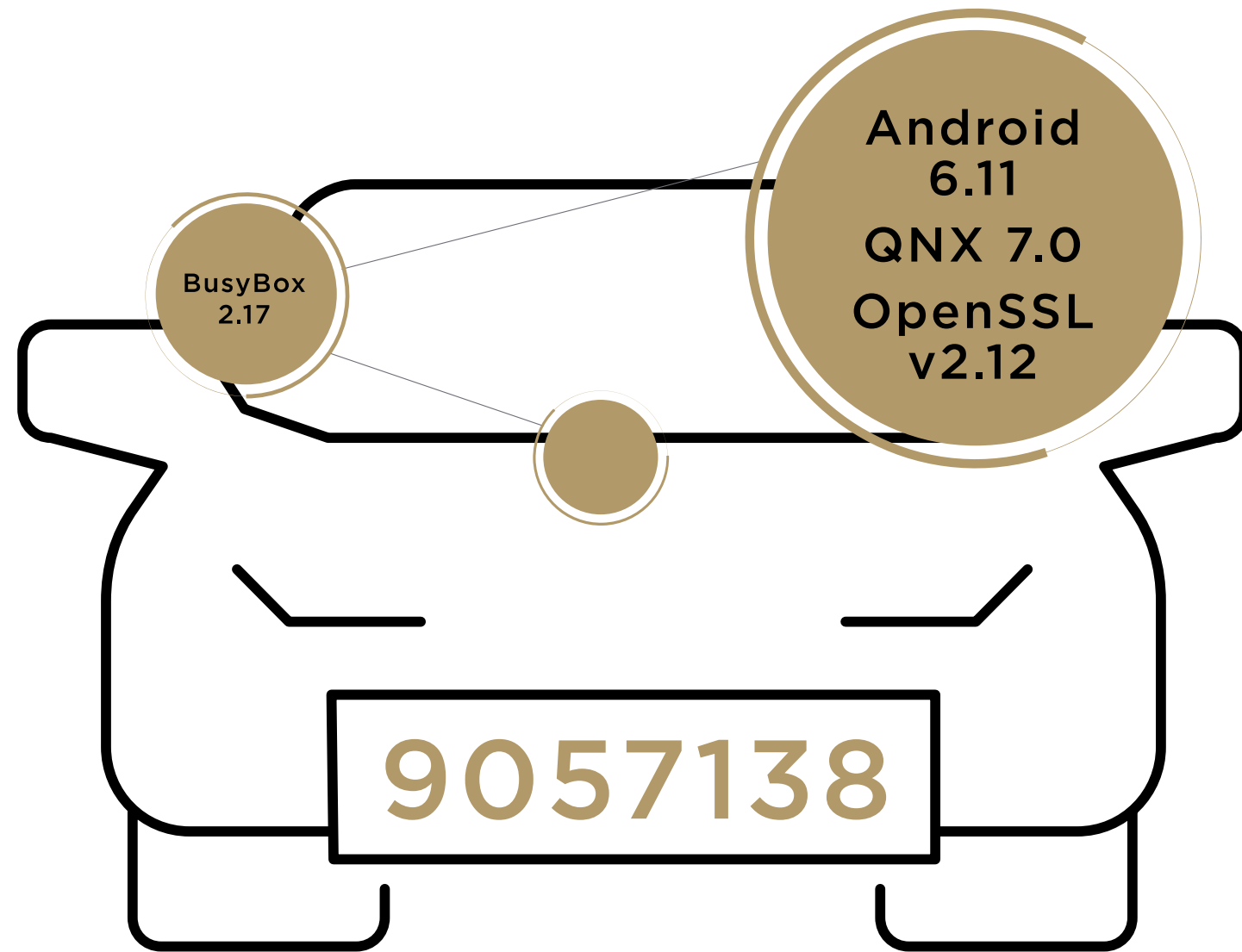
The Transparency Vision

Harmonization



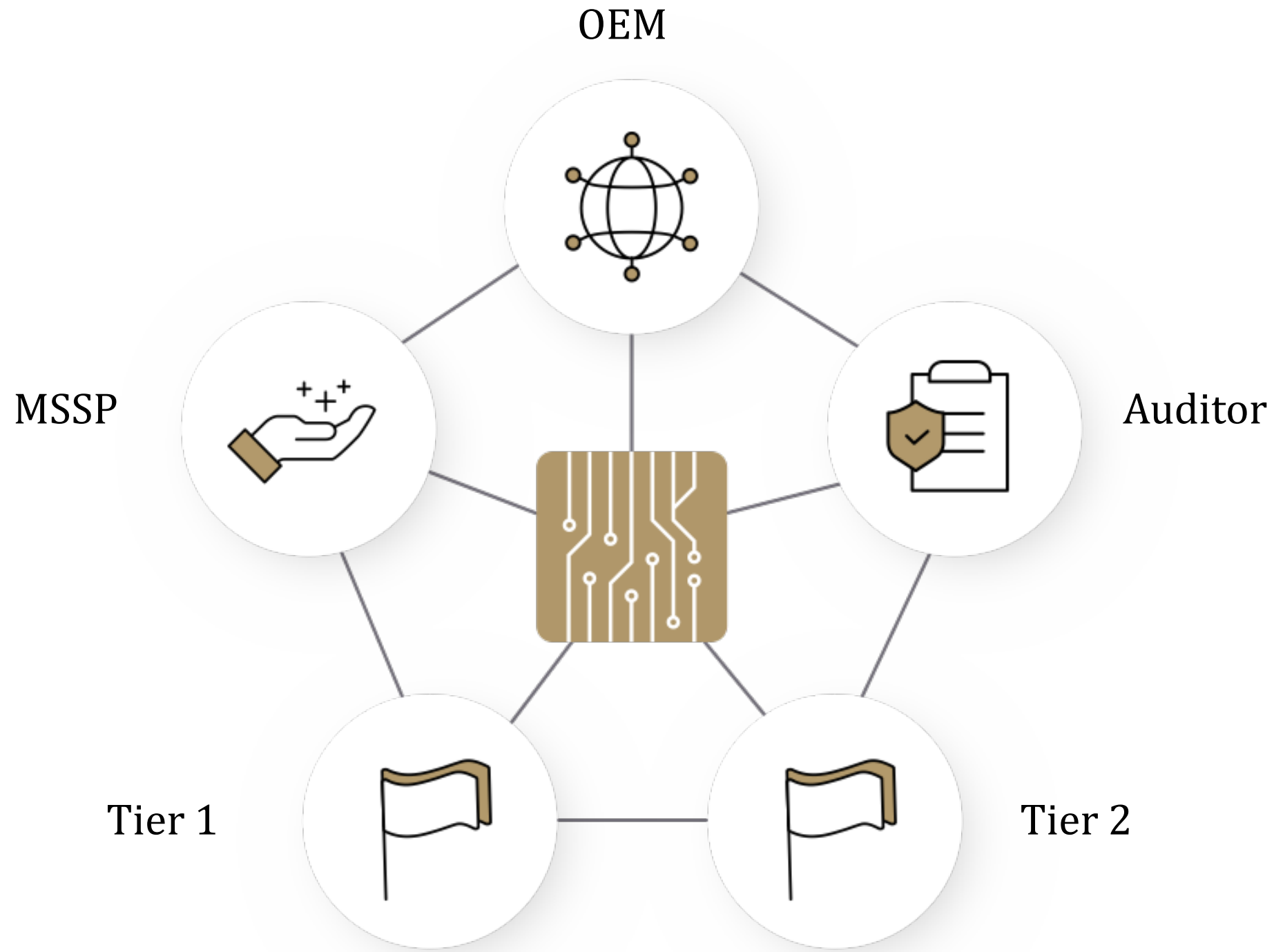
The Transparency Vision

VIN to S-BOM



The Transparency Vision

Collaboration

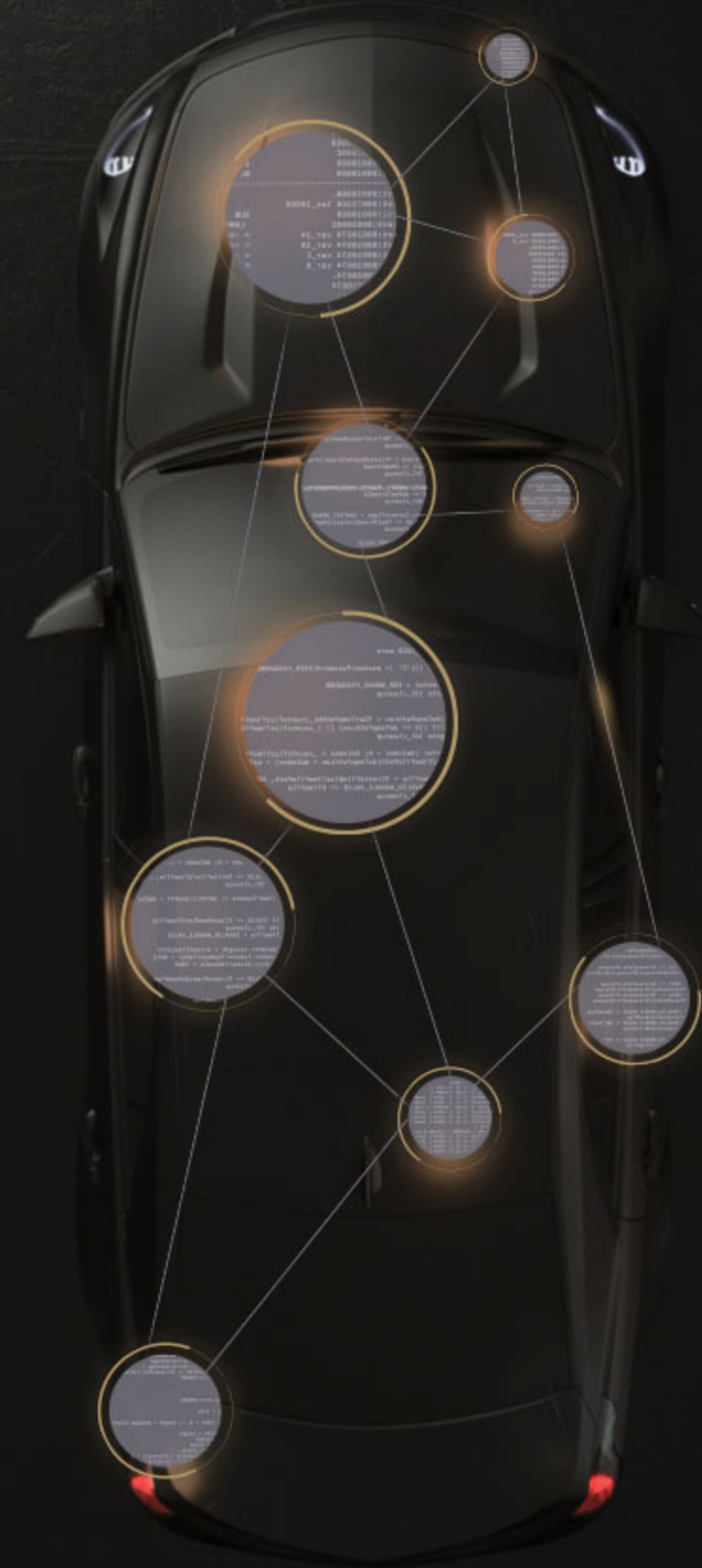


Cyber Digital Twins

- Harmonization
- Traceability
- Collaboration



Transparency

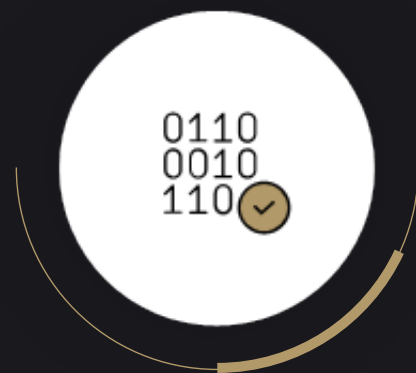




About Cybellum

We enable OEMs and their suppliers to develop and maintain secure products

Product Security Assessments & Operations powered by Cyber Digital Twins™ Platform



Vulnerability management throughout the
product lifecycle



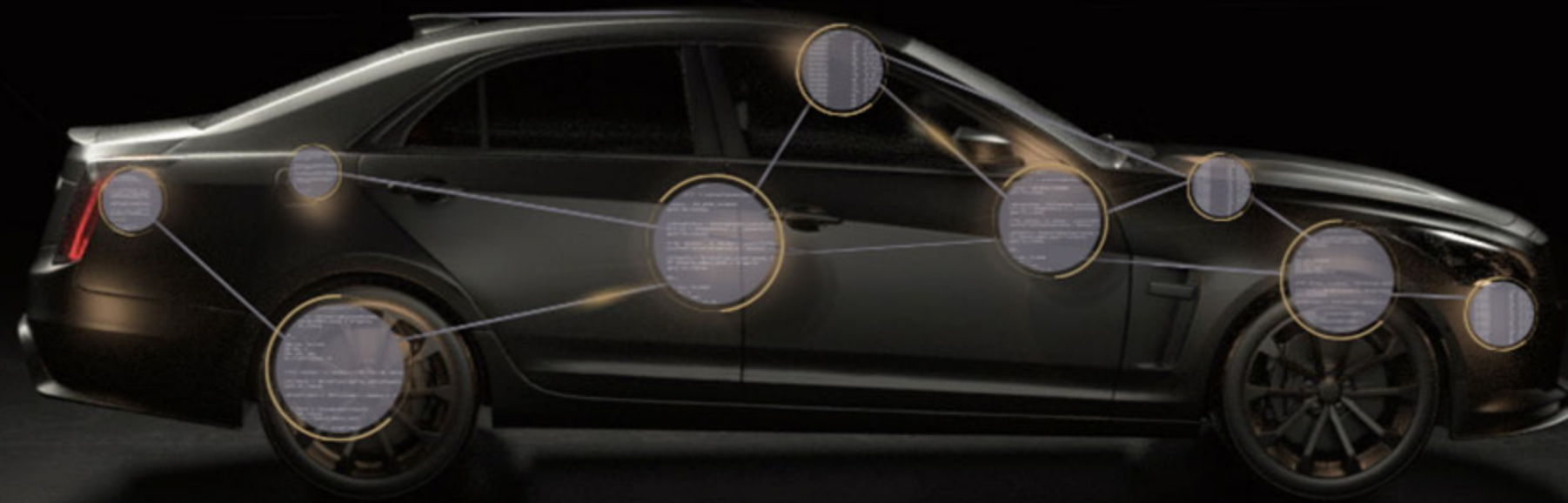
Compliance with security policies,
standards & regulations



Continuous monitoring and
incident response



Any question?



Thank you

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