



# Identity and the Connected Car

Jimmy Smerud, CISSP, ITIL  
Jimmy.Smerud@ForgeRock.Com

# Convergence

Operational Technology

Internet, Cloud, Cybersecurity

Internet of Things

Digital Identity



Information Technology

Safety, Availability, Embedded

# Identity's Unique Role



**Customer Experience**



**Security,  
Privacy, and  
Consent**

# Digital Identity is Everywhere in Connected Cars

Owners



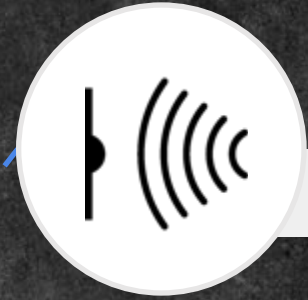
Drivers



Mechanics



Sensors



Devices



Vehicles



# Non-Person Identity Attributes



MFD. IN JAPAN BY HONDA MOTOR CO., LTD; 2/'04  
GVWR 4320LBS GAWR F 2160LBS R 2250LBS  
THIS VEHICLE CONFORMS TO ALL APPLICABLE  
FEDERAL MOTOR VEHICLE SAFETY,  
AND THEFT PREVENTION STANDARDS IN EFFECT  
ON THE DATE OF MANUFACTURE SHOWN ABOVE:  
V.I.N. **JHLRD77874C026456**



iPad

64GB

Class B specifications. FCC ID: BCG-E2328A and IC: 579C-E2328A  
IMEI 010004000100000 Serial V00000JW0T0

# Digital Identity



The information that makes something unique

# Connected Car Hacked

July 2015

Chris Valasek

Jeep Cherokee

Charlie Miller



Wireless Attack

Kill Engine



Track / Steer



Brake / Disable

# Credentials and Authentication:

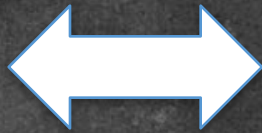


Establishing Digital Trust and Assurance



# Privacy and Consent





Password-less  
Tokens (Key,  
Phone, FIDO)

Identity-Driven IVI  
Personalization

AGL Identity Binding & Binder to accept  
standards-based identity tokens;  
integrated with AGL security framework  
and contributed to Unified Code Base



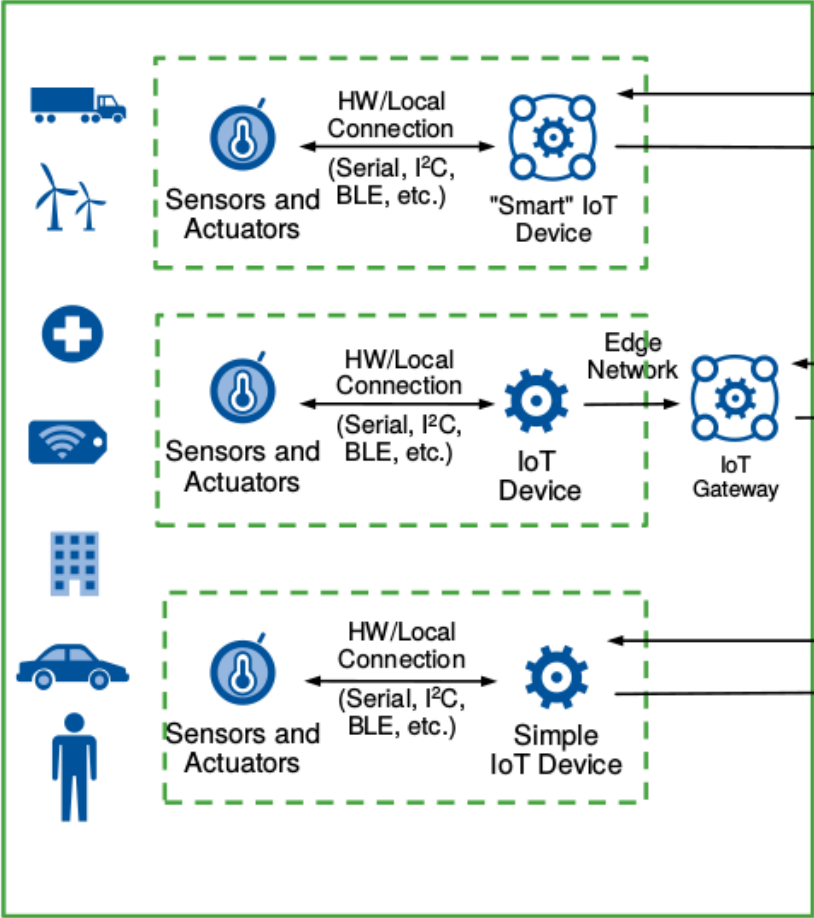
Standards-  
based  
Identity  
Tokens

- User Self-Service
- Identity Management
- Owners
- Drivers
- Maintainers
- Vehicles
- Software Services
- Credential Management
- Authentication
- Authorization

Same Tech Enables:  
User-to-Vehicle  
User-to-Cloud  
Vehicle-to-cloud  
Vehicle-to-X

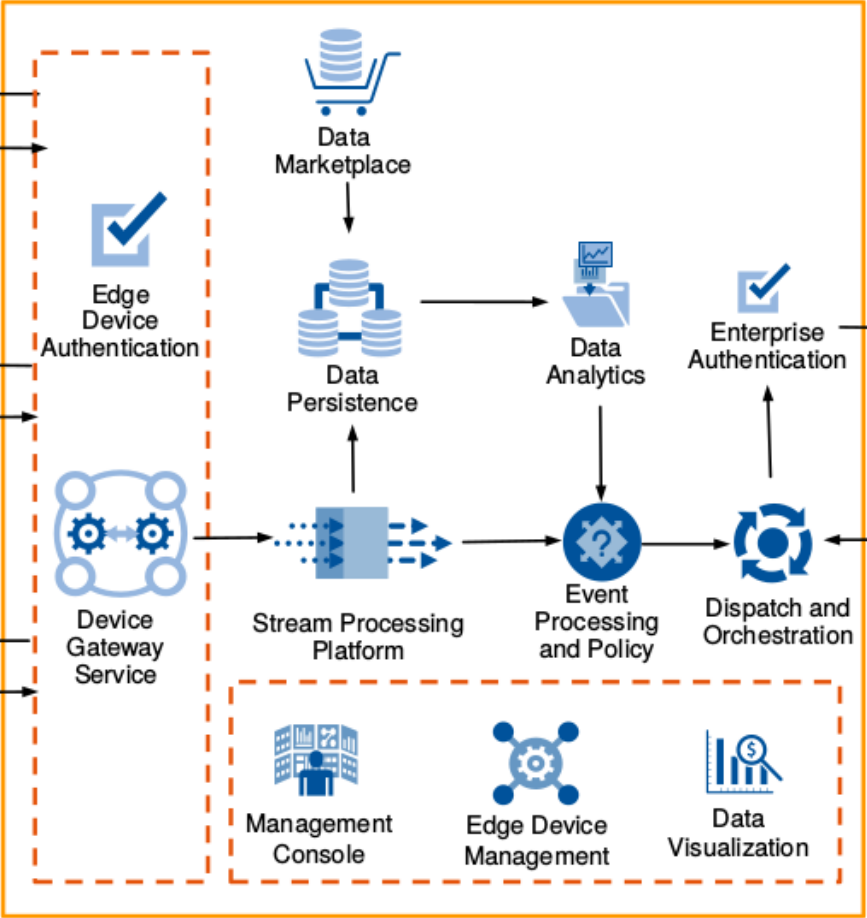
# IoT Reference Architecture

## Edge



Long-Haul Internet Connectivity (Wi-Fi, Cellular, etc.)

## Platform



## Enterprise

