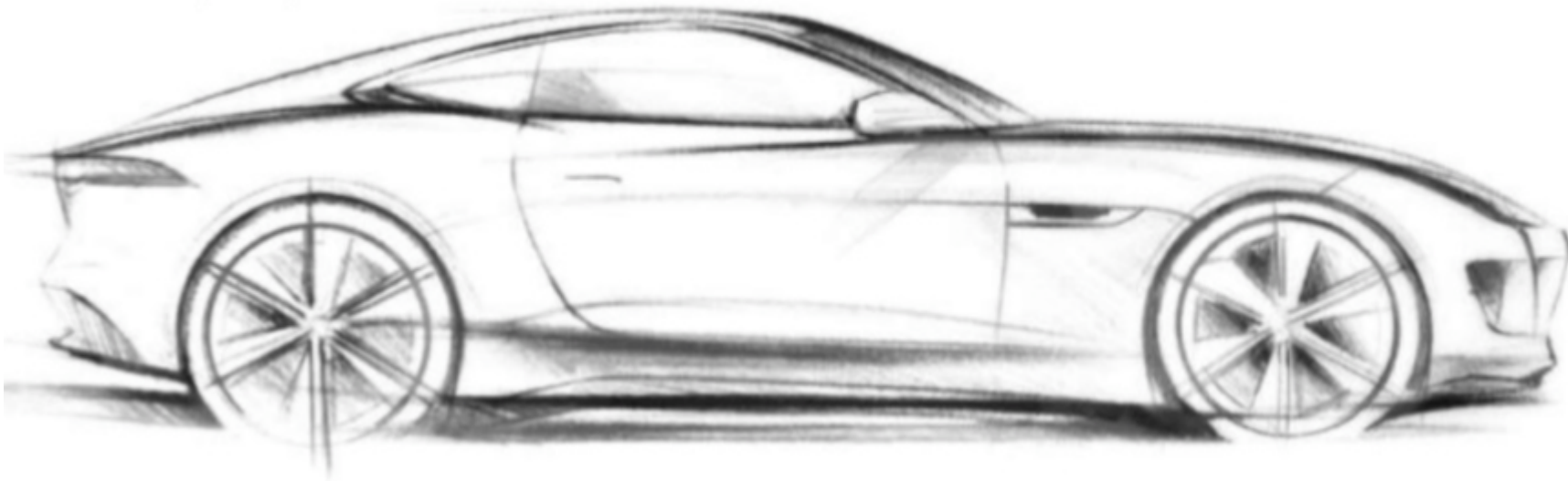


Supply chain evolution from horseless buggies to driverless cars



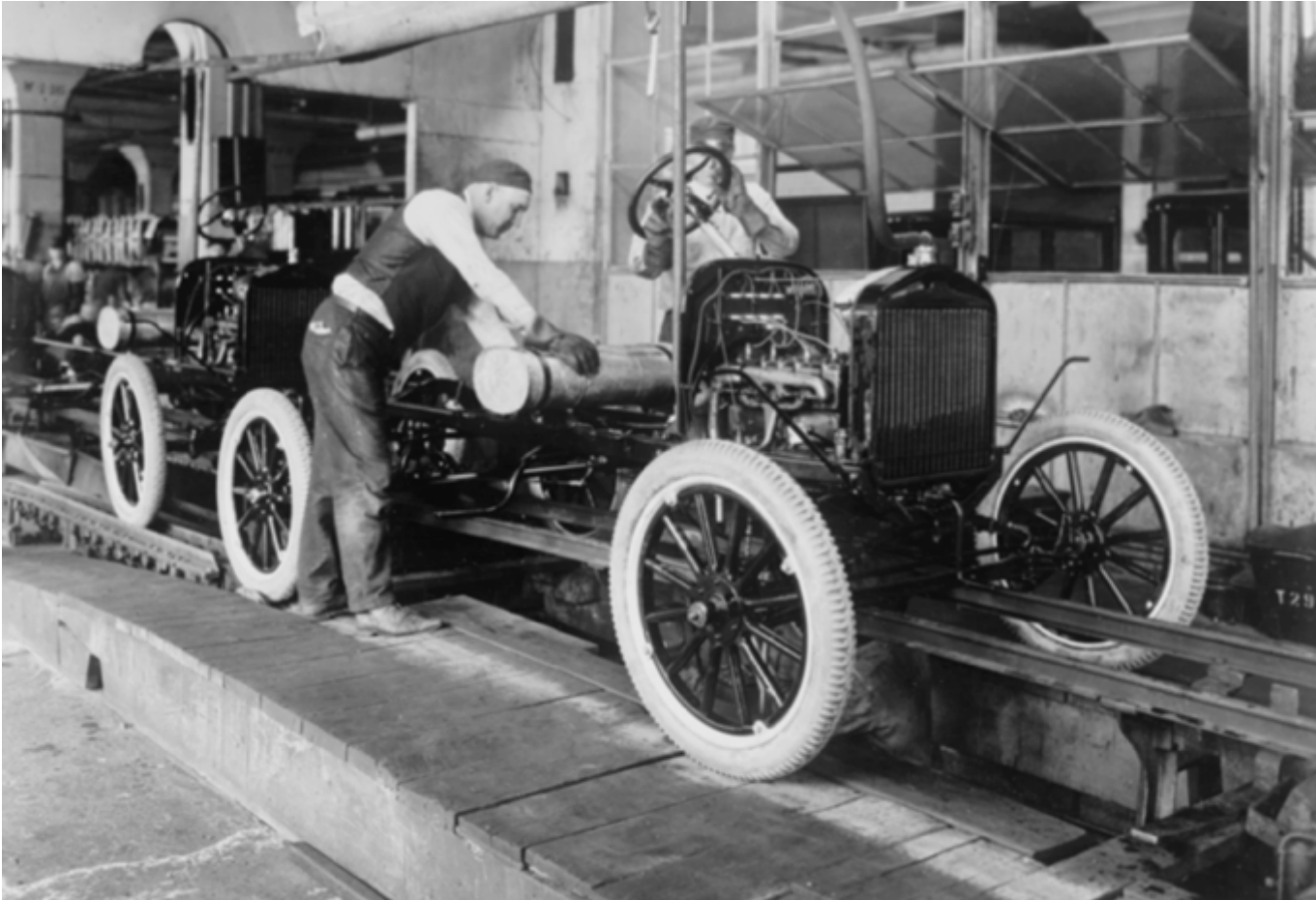
Val Bercovici
Founder & CEO



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@valb00
@Pencil_DATA

Context



<http://www.scotsusa.com/heritage/on-this-day-100-years-ago-henry-t-ford-installed-the-first-moving-assembly-line/>

- 105 years old
- Global manufacturing
- Broad supply chains
- Highly regulated
- ~ 100M Cars
- Will soon never be same

Complexity to Date

Suppliers to the Porsche Cayman S

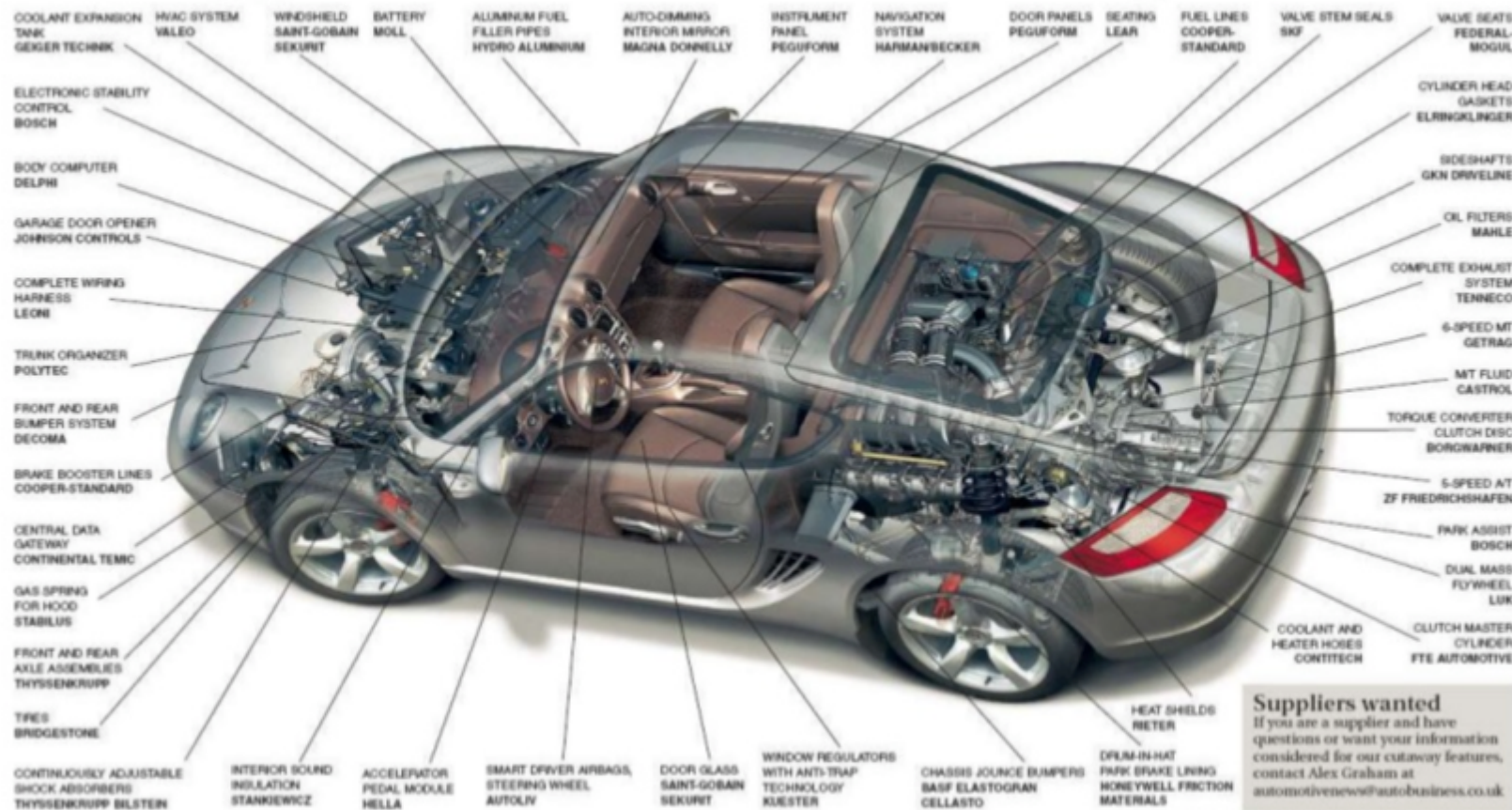


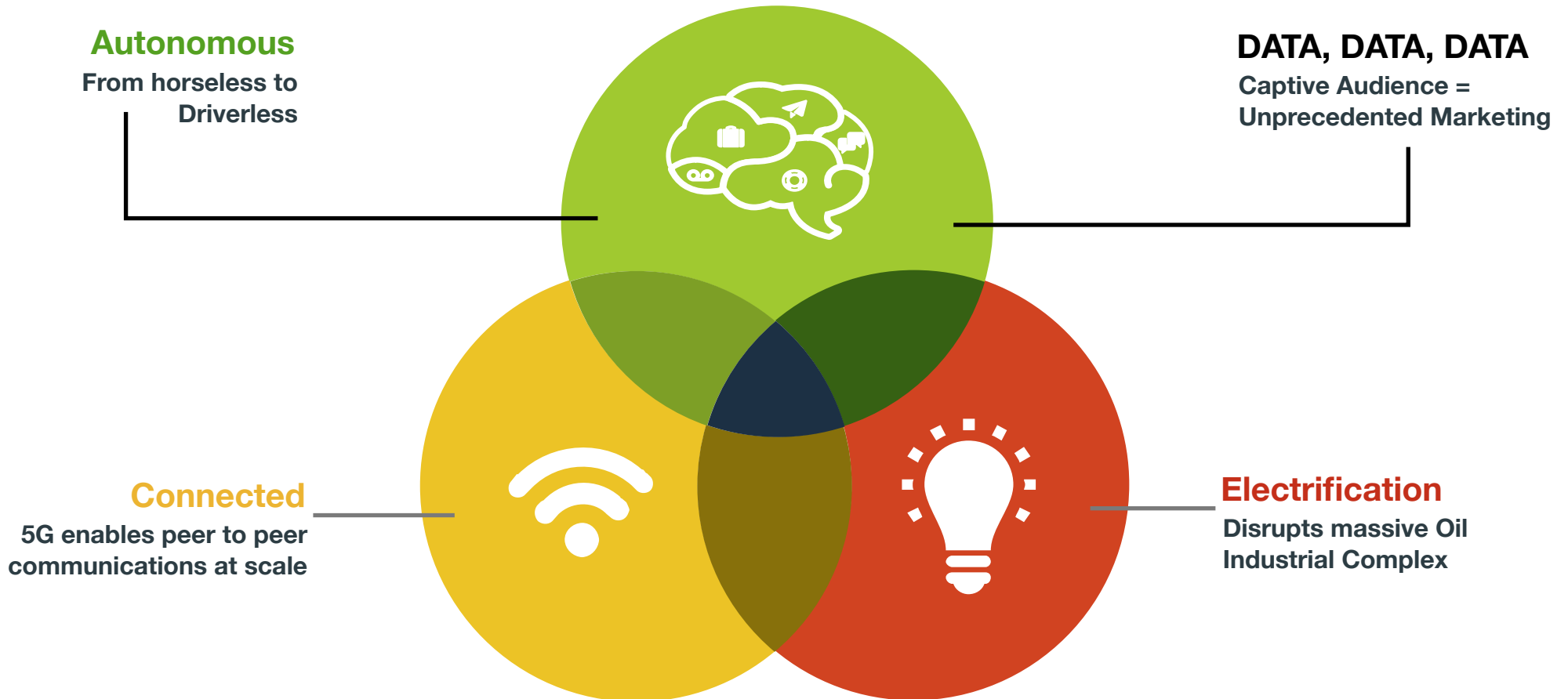
Image courtesy: Automotive News Europe

IoT Fatigue

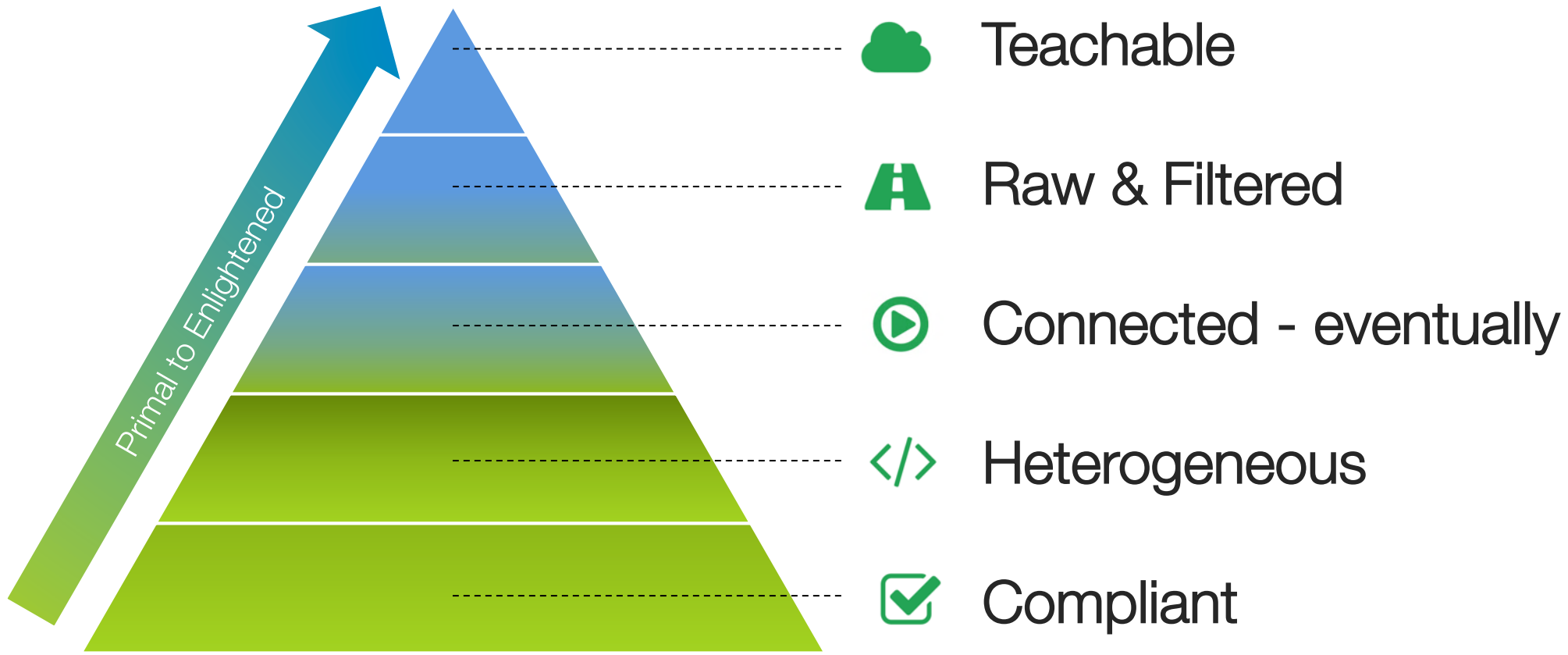


<https://www.yaabot.com/31856/iot-fatigue-real-thing-happens-avoid/>

Tectonic Auto Industry Shifts



Data Hierarchy of Needs



Tools

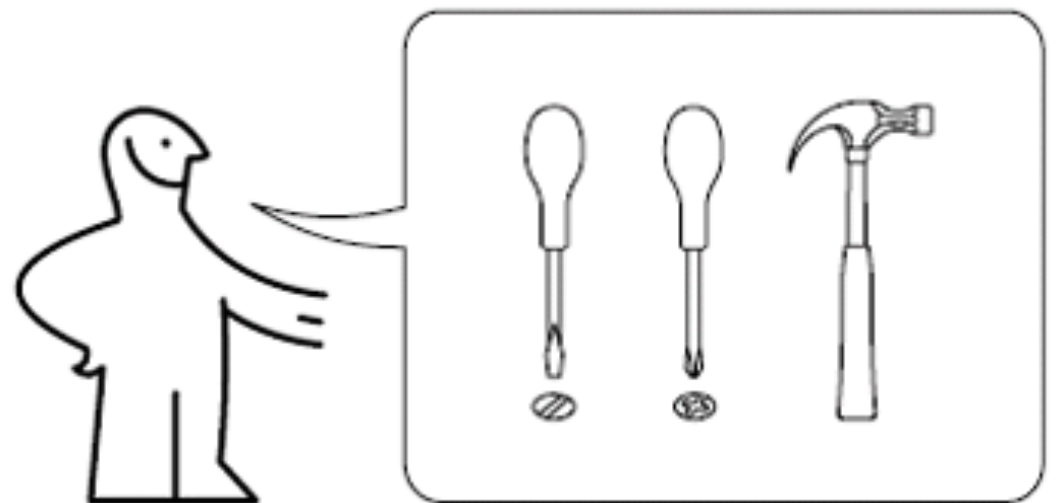
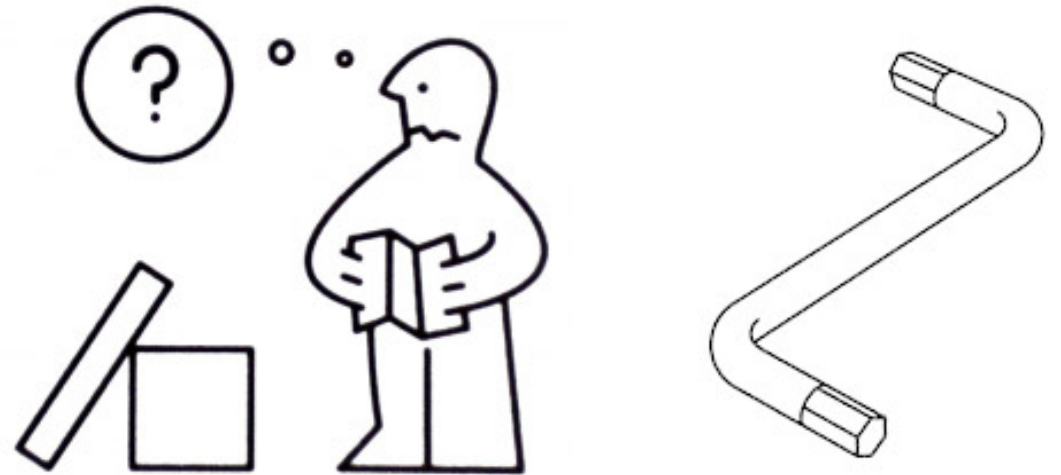
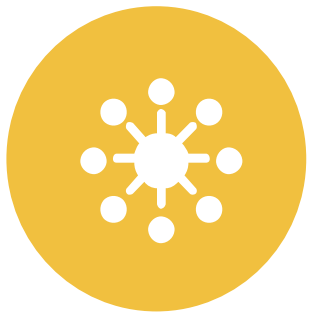


- Software supply chain:

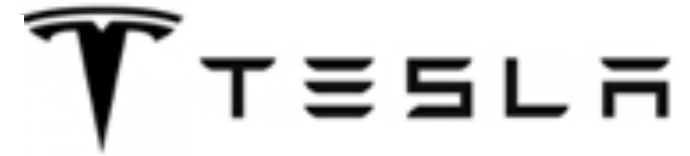
- Aggregation
- Verification &
- Distribution

- Data:

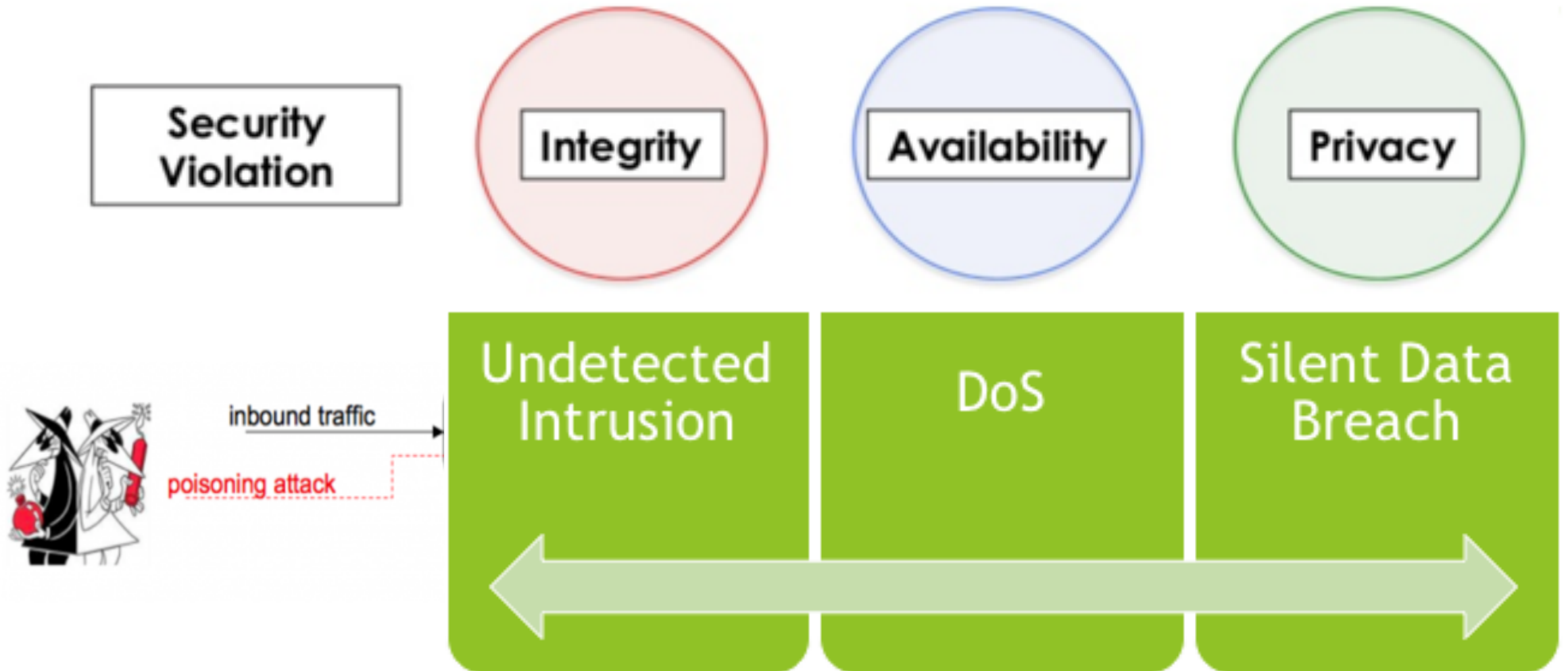
- Provenance
- Lineage
- Immutability as needed
- Valuation



Software 2.0 = Teaching Algos with Data



Data Poisoning

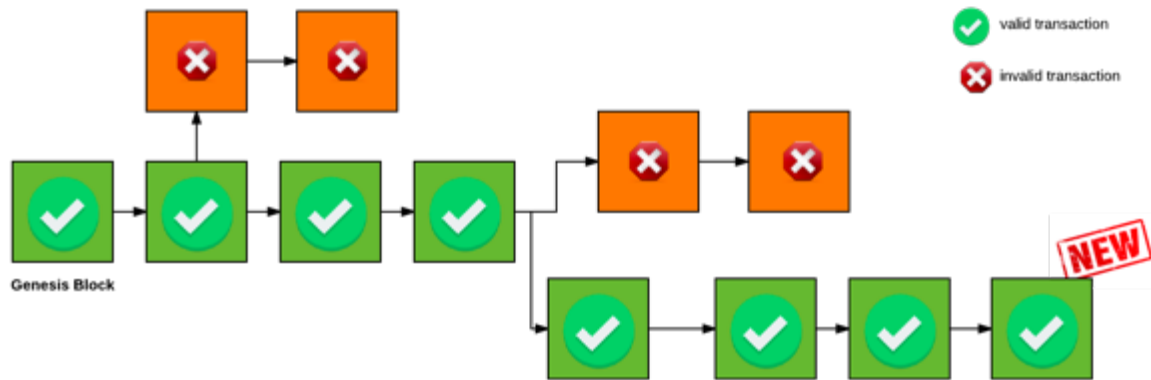


One Chain to Bind Them

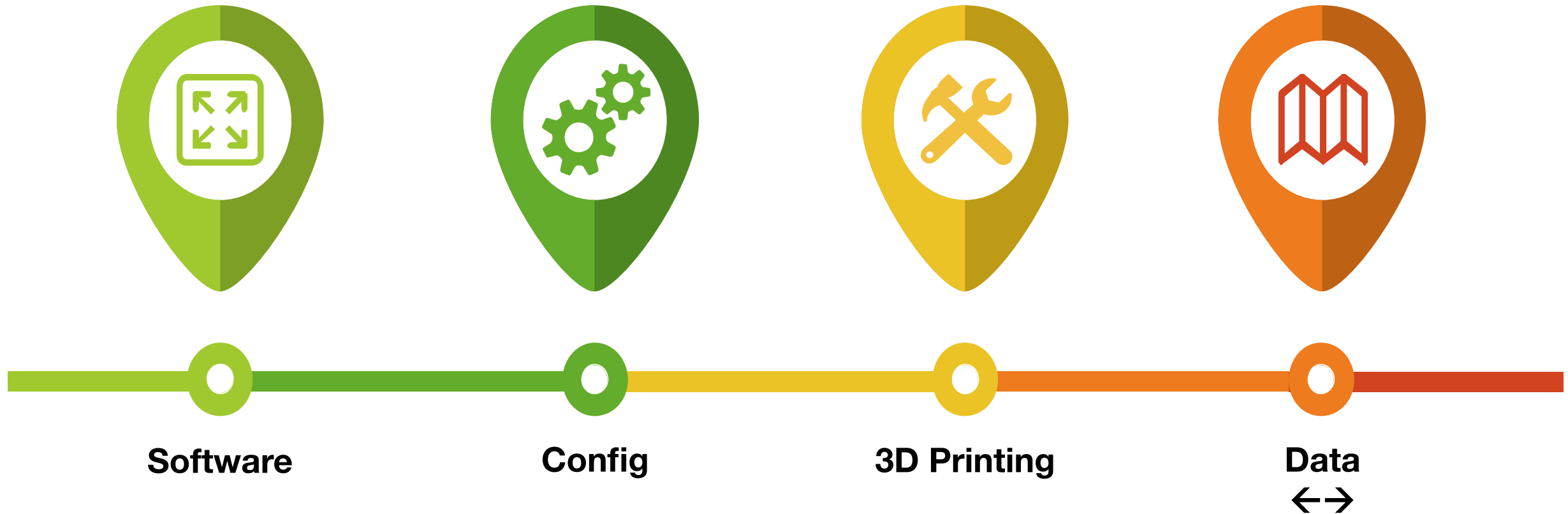
Blockchain Nodes on fleet of vehicles

Natural deployment model. Secure the genesis block and create distributed set of nodes with mining Proof of Work as:

- Miles / Kilometers driven
- Regenerative braking energy gained
- Roads mapped via LIDAR
- Images classified from cameras
- Incident / Event info exchange over 5G



Digital Supply Chain

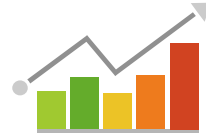


Ecosystem

Rideshare



Loyalty



Service
(incl Preventative)

Connectivity



Security
(Public & Private)

Insurance



Registration



Decentralized Supply Chain

Do you need blockchain?

Multiple parties share data

multiple participants need views of common information



Multiple parties update data

multiple participants take actions that need to be recorded and change the data



Requirement for verification

participants need to trust that the actions that are recorded are valid



Intermediaries add complexity

removal of intermediaries can reduce cost and complexity



Time sensitive interactions

reducing delay has business benefits



Transactions interact

transactions created by different participants depend on each other



Value Add



Digital Ownership Certificates



Asset & Assembly Tracking



Proof of Origin



Trusted Maintenance Tracking



Integrated Financial Transactions



Collaborative Product Master Data

Enabler



Integration in existing manufacturing process



Trusted Devices



Asset Management System



In the field interface

Business Metrics



Loyalty Program\$

Hidden Gem – New MRR / ARR
Partner / Ecosystem Heavy



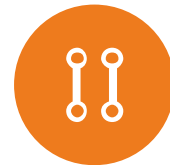
Compliance (Right to Repair)

Optimize for Superset of Legal Jurisdiction
Adapt to evolving L3-L5 Autonomous Regulations



Global Manufacturing

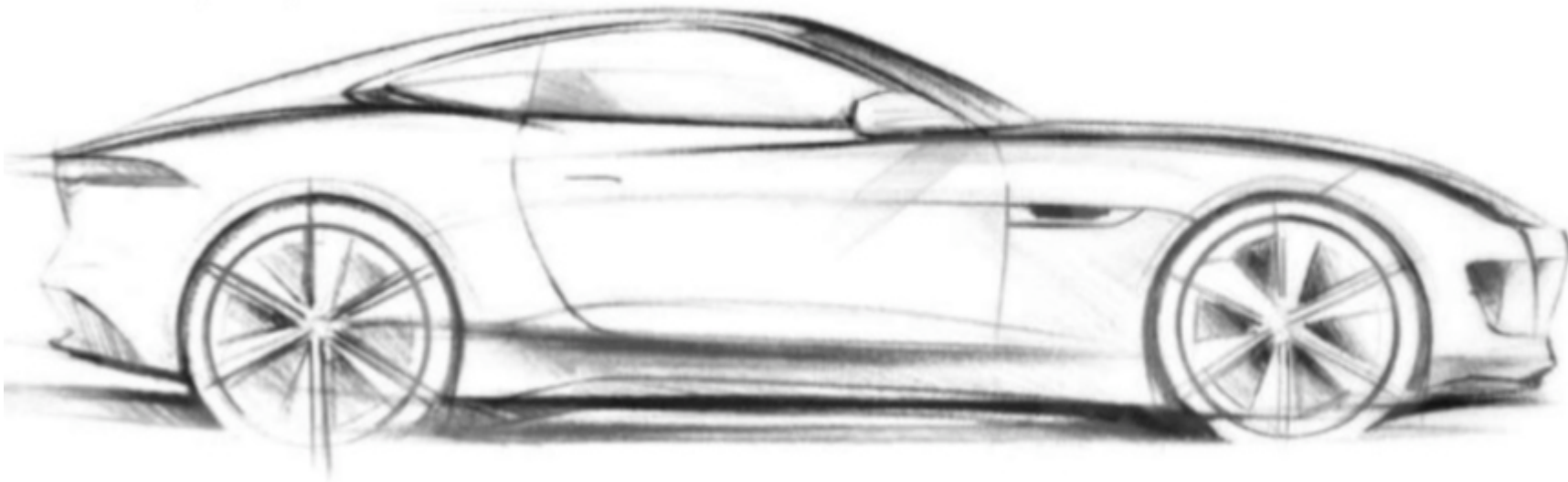
Robotic Assembly Optimizes for Location
Raw Material Supply Chain (Li-on, Cobalt, ...)



Recalls & Fines (DieselGate)

Avoidance via Machine Learning Predictions
Efficient Recall Processing via Gaming Theory

Supply chain evolution from horseless buggies to driverless cars



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