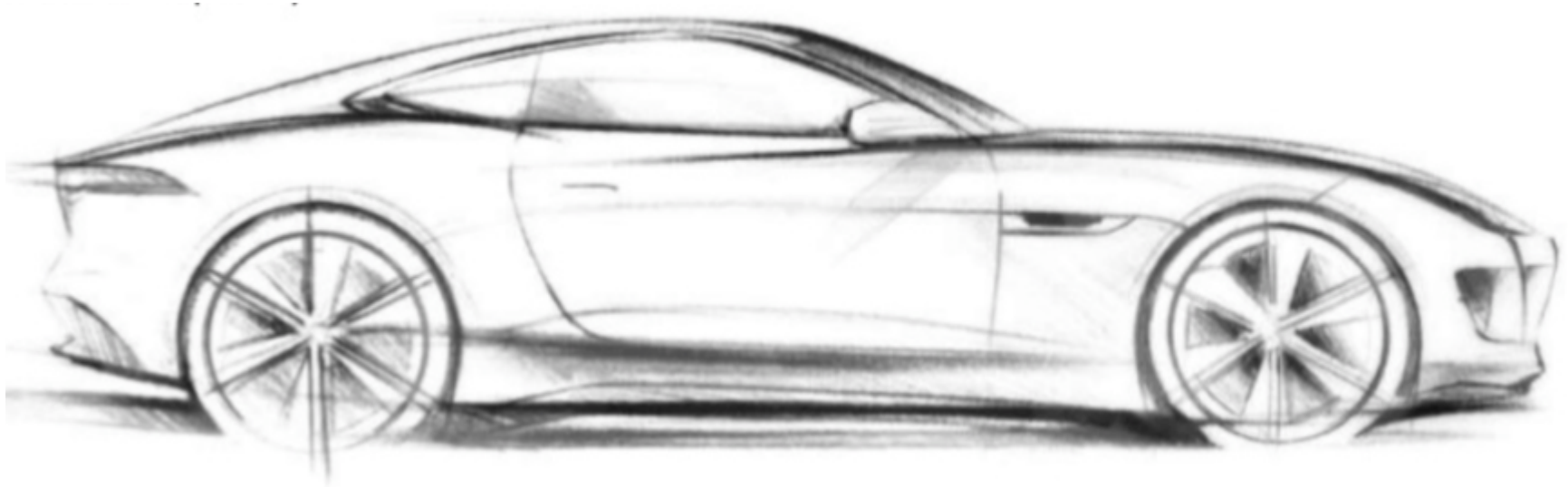
Supply chain evolution from horseless buggies to driverless cars

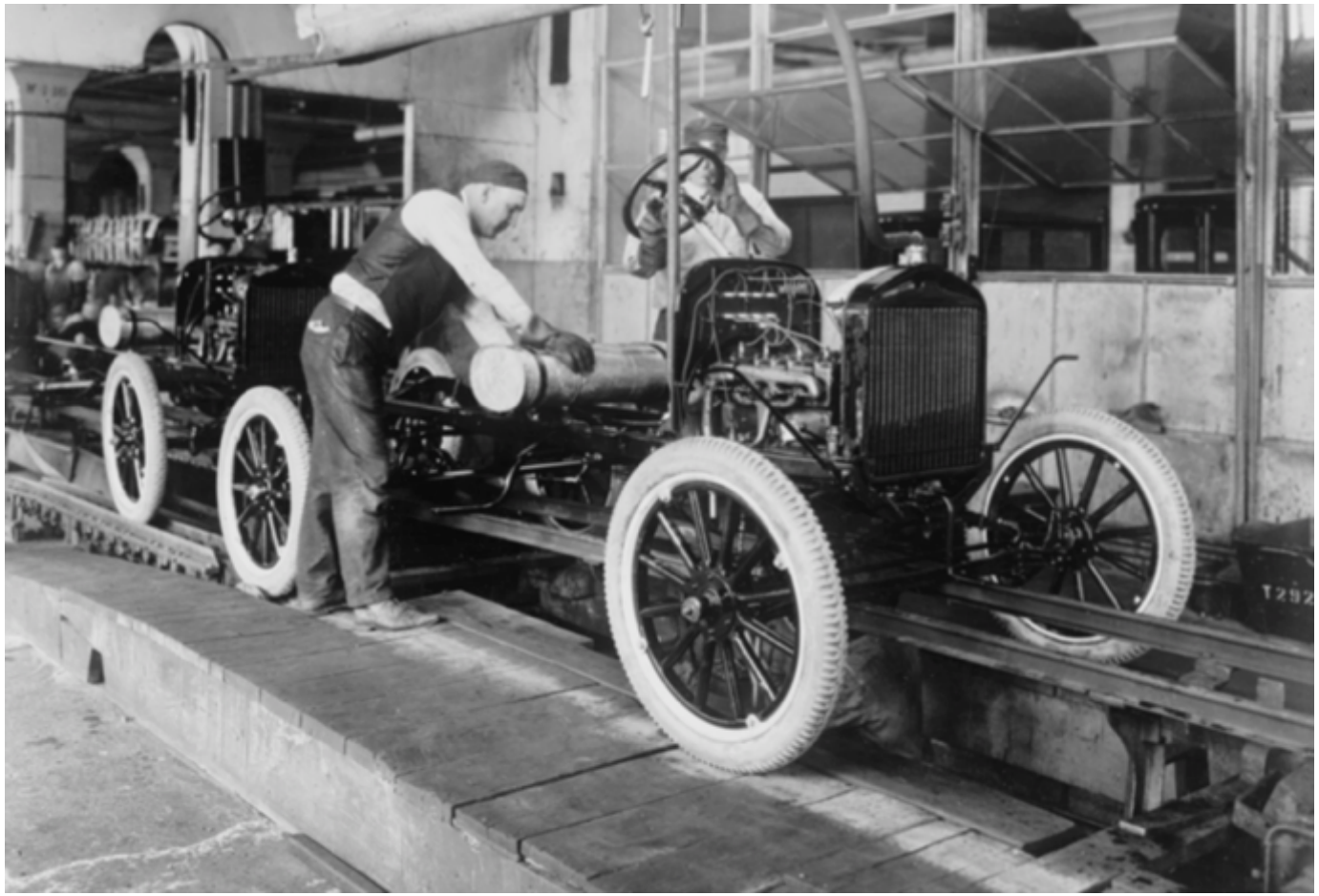


Val Bercovici
Founder & CEO

PENCiLDATA

@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

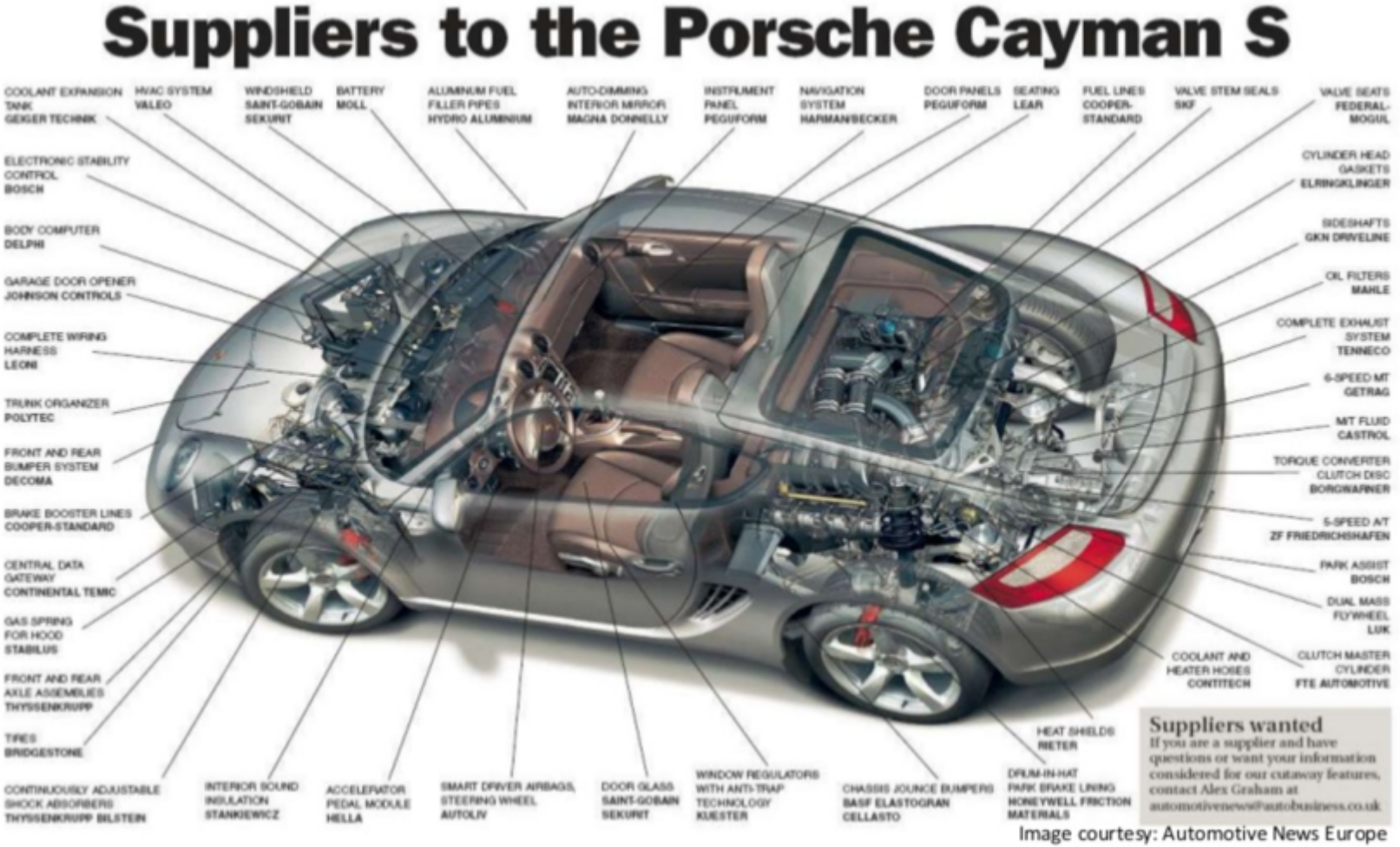


Image courtesy: Automotive News Europe

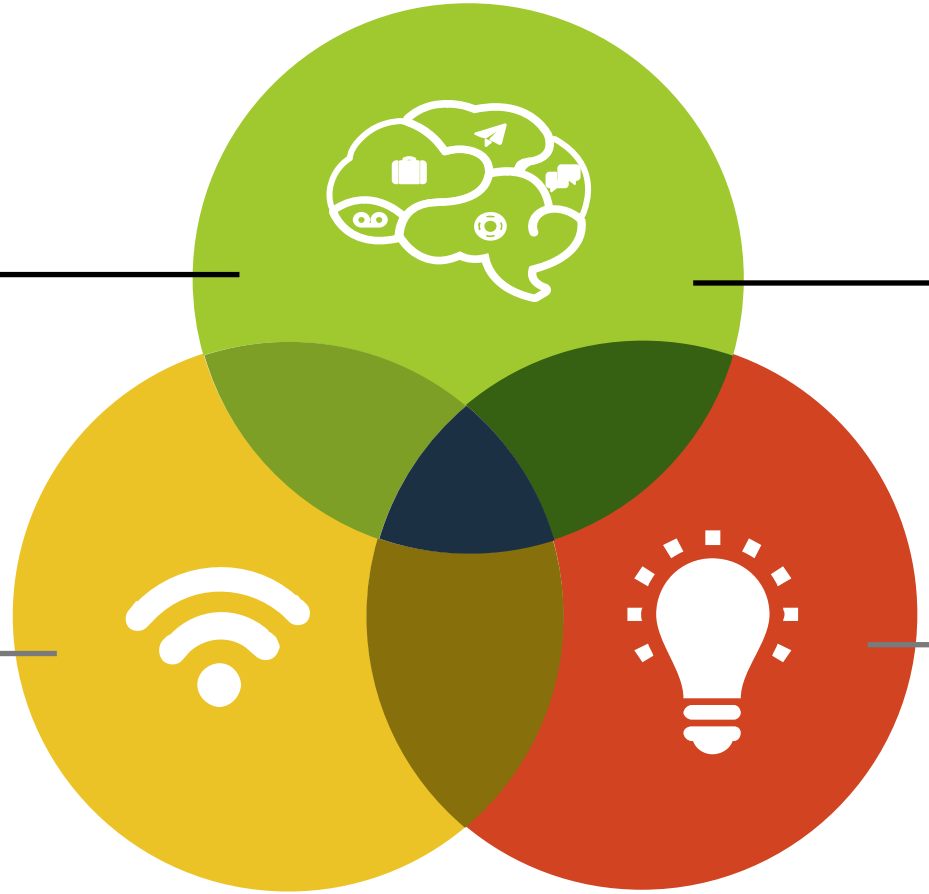
IoT Fatigue

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

Tectonic Auto Industry Shifts

Autonomous
From horseless to Driverless

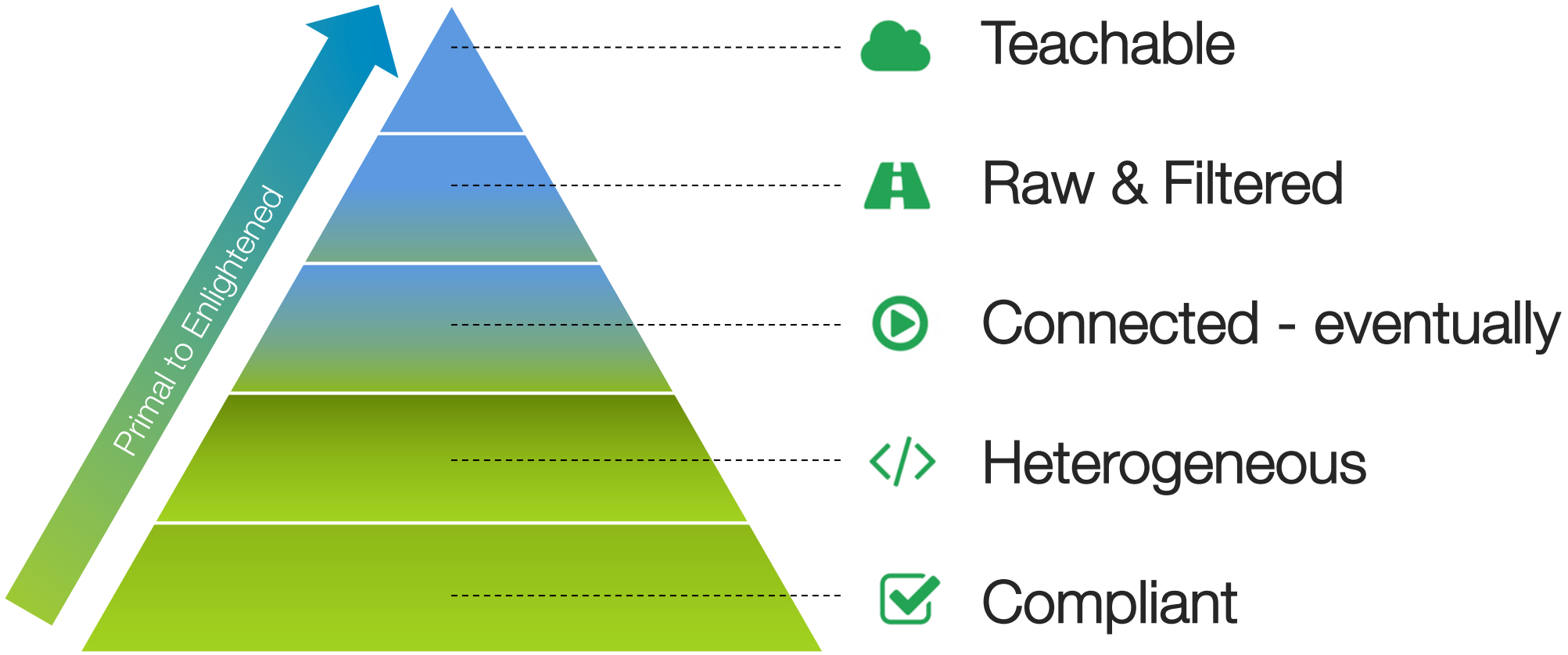
DATA, DATA, DATA
Captive Audience = Unprecedented Marketing



Connected
5G enables peer to peer communications at scale

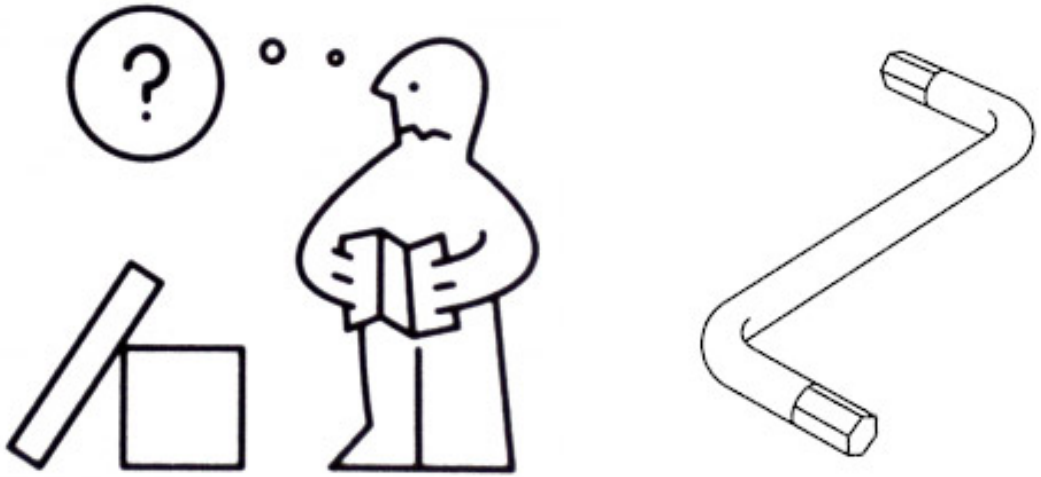
Electrification
Disrupts massive Oil Industrial Complex

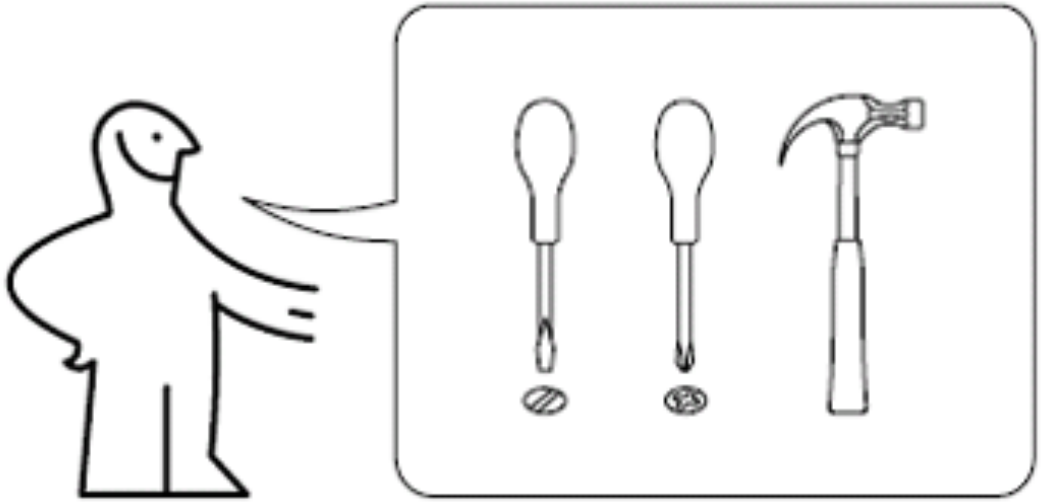
Data Hierarchy of Needs



Tools

- Software supply chain:
  - Aggregation
  - Verification &
  - Distribution
- Data:
  - Provenance
  - Lineage
  - Immutability as needed
  - Valuation



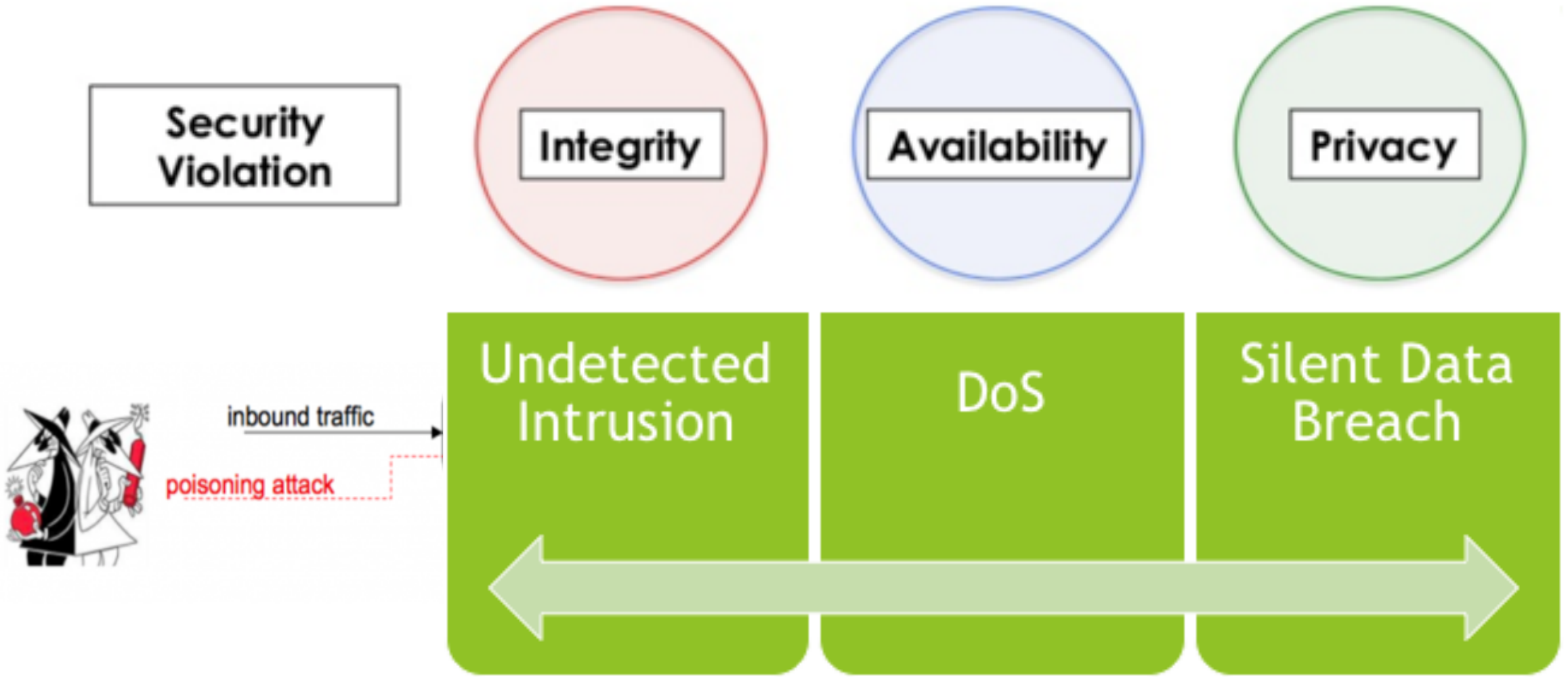


Software 2.0 = Teaching Algos with Data

OpenAI

TESLA

Data Poisoning

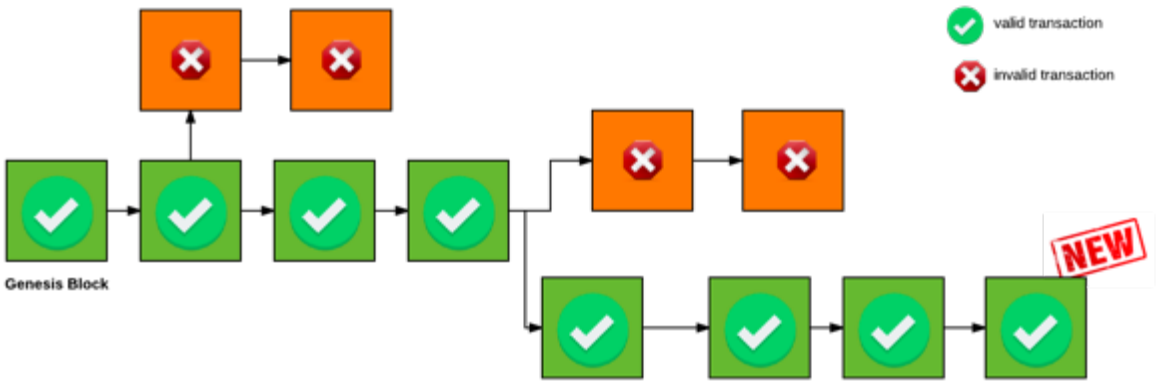


One Chain to Bind Them

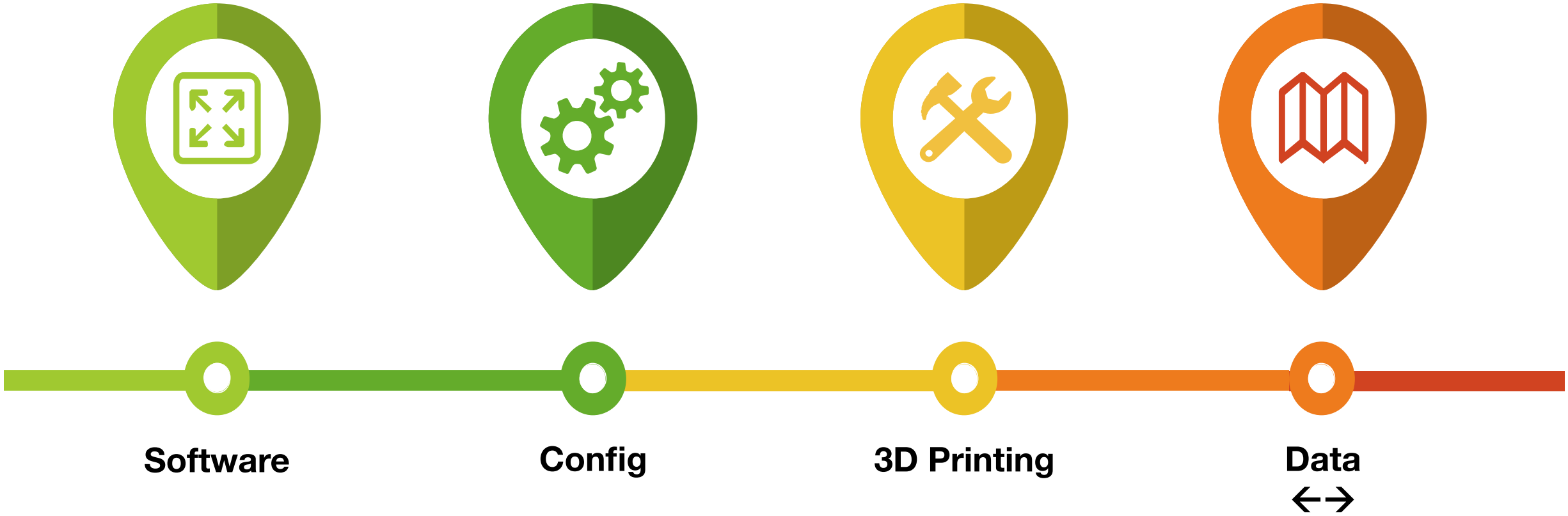
Blockchain Nodes on fleet of vehicles

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

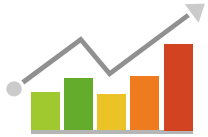


Digital Supply Chain



Ecosystem

Rideshare



Loyalty

Service
(incl Preventative)

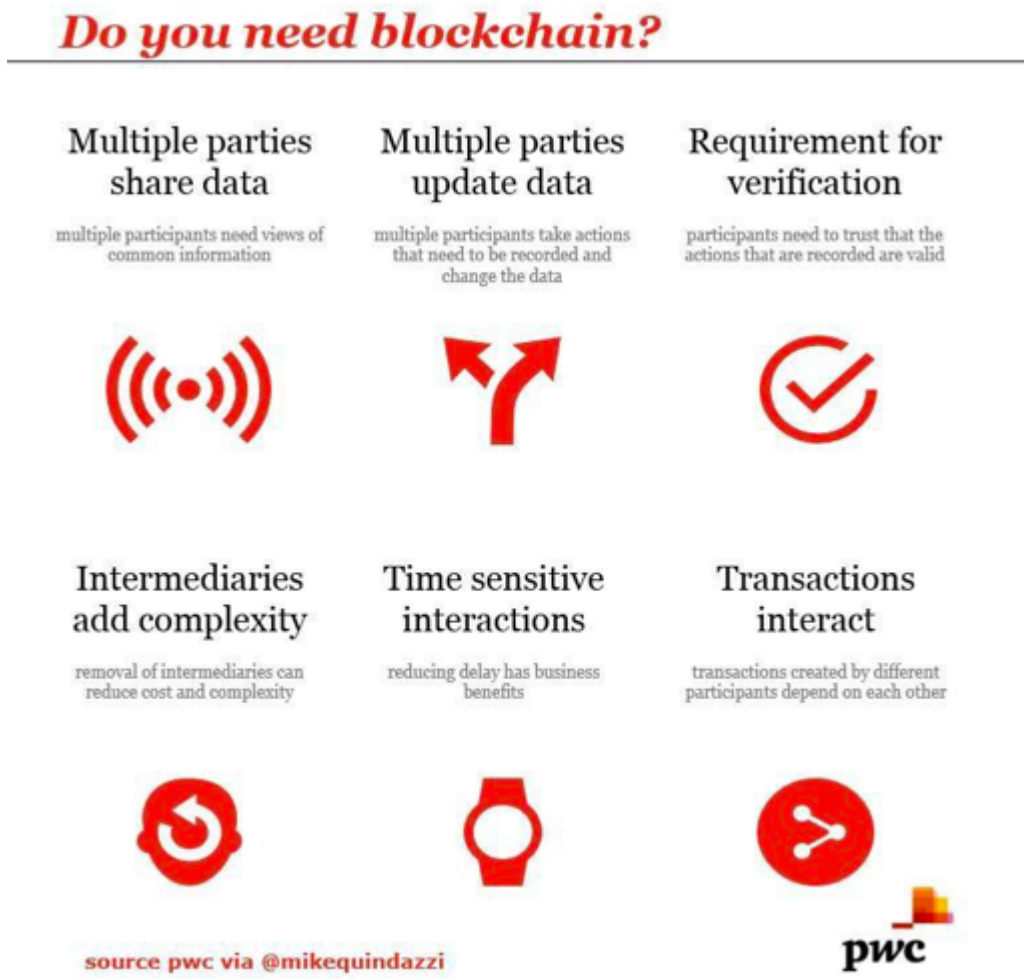
Connectivity

Security
(Public & Private)

Insurance

Registration

Decentralized Supply Chain



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

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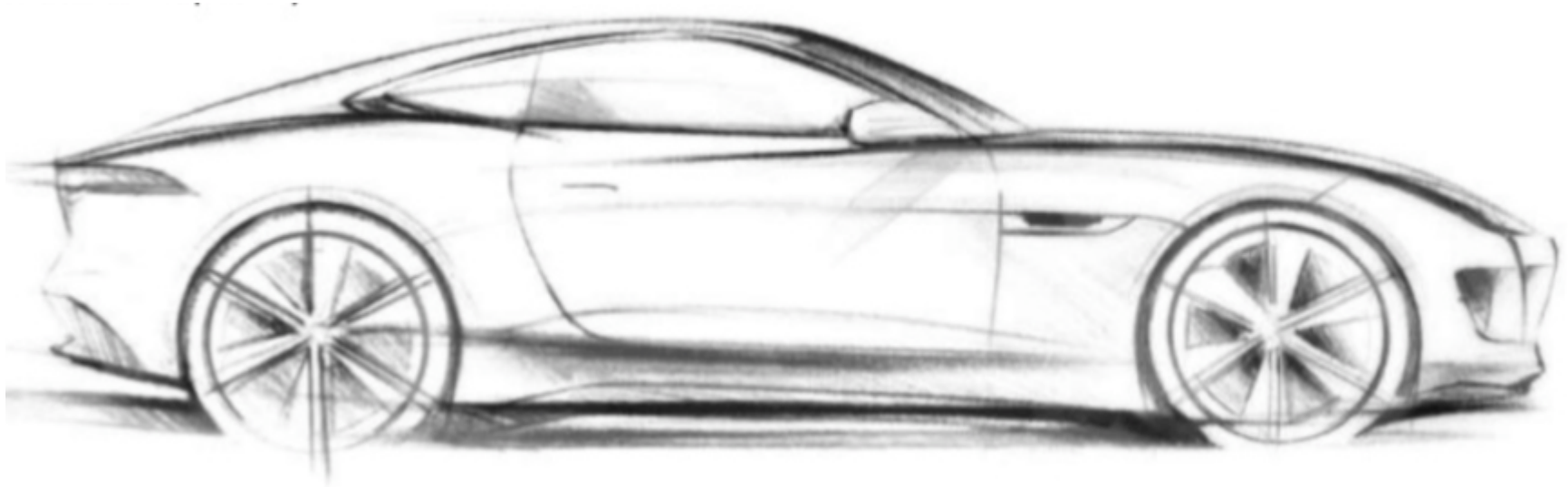

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