



P.A.ID Strategies

Payments - Authentication - Identity

Devices - People - Transactions



Opening Remarks

6th February 2020

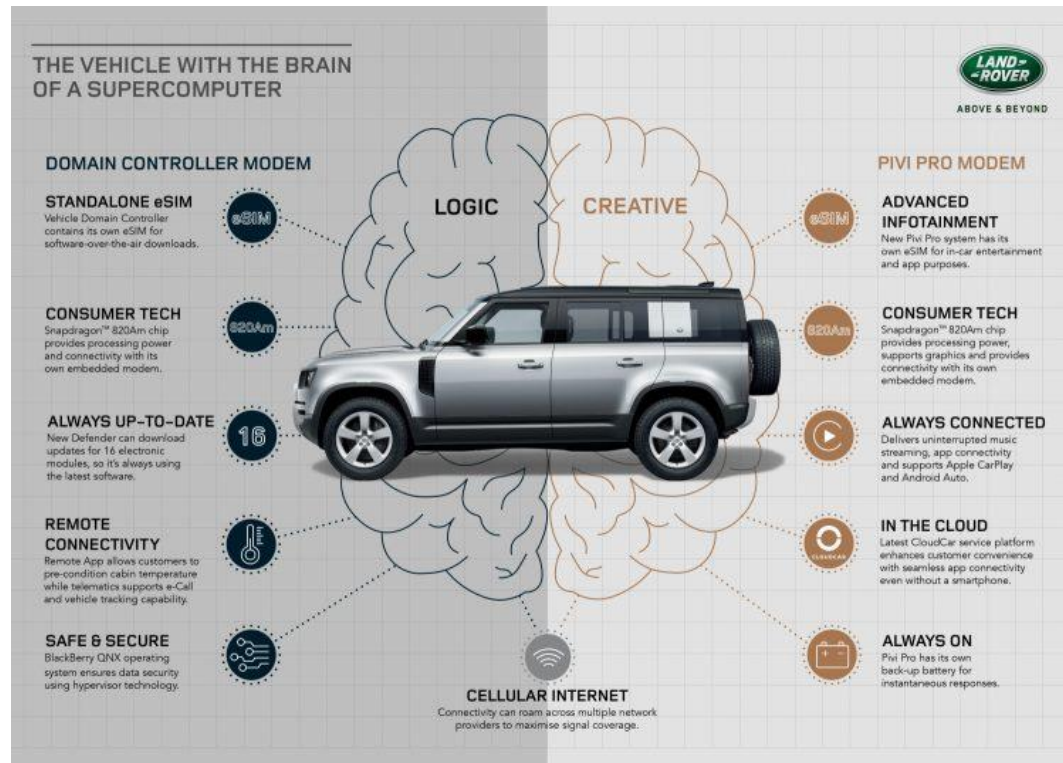
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Quick Recap + Update

At last year's event, sessions and speakers highlighted:

- The need to improve/deliver a digital customer experience for eSIM consumers
 - *Service providers should take the lead in developing and implementing an app-based approach (as GigSky and Truphone have done) to strengthen their customer relationships and better target services and options to consumers (or risk 3rd parties gaining a foothold)*
- IoT use cases and delivery, managing it effectively and optimizing the supply chain
 - *Automotive continues to lead with new growth strongest in tracking and supply chain/logistics applications*
 - *Pilots and trials are increasing in industrial and utilities sectors for in-field and infrastructure applications*
- Standards/specifications, regulation and roaming
 - *(Permanent) roaming remains an issue in notable countries, such as China, Russia, Brazil and Singapore*
 - *Availability and technical configuration of LTE-M and NB-IoT networks mean issues still to be fully resolved*
 - *SIM registration creates questions in many countries from a KYC and compliance perspective for eSIM but there has been a proliferation in the past 12-24 months in the numbers of companies with suitable solutions for this*
- eSIM and iSIM
 - *Now we have growing supplier developments and agreements with OEMs and partners to implement and deploy iSIM-based IoT with companies including Arm, Deutsche Telekom, Huawei, Qualcomm, Telit all involved*
 - *iSIM to be added to the GSMA eSIM specifications*

Notable Product Launches



New Land Rover Defender features dual-eSIM implementation for enhanced connectivity enabling “Software-Over-The-Air” (SOTA) updates and Pivi Pro infotainment services



Lenovo ThinkPad X1 Fold and Motorola RAZR V4 both feature eSIMs; highlighting how eSIM can be seen as a new and attractive feature, enabling new form factors.



The RAZR V4 is the first eSIM-only smartphone and the X1 Fold is the first folding PC. Flexible connectivity is a feature of both products' marketing campaigns.

Latest Developments

Selected recent developments:

- Ericsson has announced its new consumer-orientated eSIM solution
 - *Claims its fully-automated solution offers remote provisioning of user profiles and device management in a more flexible way and help service providers improve the customer experience (adding/removing additional/secondary devices, travel and roaming, try-before-you-buy, service back-up/redundancy, marketing and events options)*
 - *Believes eSIM advantages could drive a 10-15% increase in consumer service revenues (based upon user survey results)*
- HMD filed an eSIM trademark application for “SIMLEY”
 - *Items included mobile and communications services for Nokia-branded smartphones*
 - *Also included additional use cases relating to financial services (banking and crypto), user authentication / digital identity, LBS (marketing?) and service/device insurance*
- More OEMs, such as Xiaomi, implementing eSIM in wearables and other personal consumer devices
- Hyundai, Kia, Seat, Tata and VW all announced new models of eSIM connected cars
- Nordic Semiconductor and iBASIS completed extensive field trials for eSIM for LTE-M and NB-IoT
 - *Testing conducted in 24 countries to prove capabilities of eSIM with LPWA networks and devices for IoT*
 - *Necessary to address concerns around in-building coverage of traditional cellular networks*

Data + Outlook

Mobile & SIM Shipments

SIM Cards

eSE (inc. eUICC)

Shipments in 2019

Growth represents units/shipments

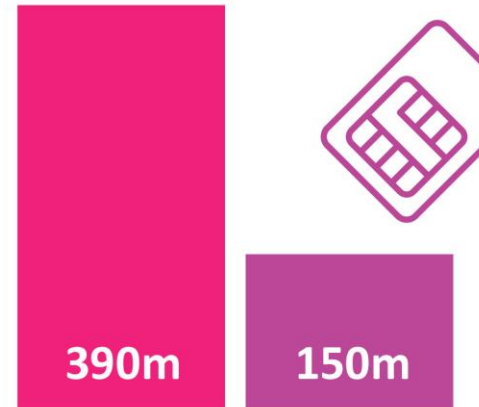


12.7%
Growth to 2023

SIM card shipments will be down
3.5% to 5.3 billion units in 2019



134.2%
Growth to 2023



eSE's

150m

eSIMs

From 2018-2023 the SIM card market will grow by \$35 million and the eSE (inc. eUICC) market will grow by \$799 million.

Note: Data and forecast published in 3Q19 from P.A.ID Strategies' Market Intelligence Service:
Digital Secure Solutions – Credentials, Embedded + IoT Devices

About Us



- >15 years analyst and consulting experience + 20 years of marketing experience with leading distributors and tier 1 vendors
- Payments, Authentication, Identity, Security + Connectivity
- Digital solutions, smart cards, credentials, keys, mobile, M2M + IoT, embedded, software, platforms, services
- Addresses innovation and disruptive technologies, strategies, companies
- Relates the application of technology to business processes, customer proposition and user demand

Expertise + Focus



- Insight and intelligence
- Interaction between four core areas
- Understanding effect and impact, addressing barriers
- Devices, technology, vendors, service providers
- Service delivery, user acceptance, go to market strategy



P.A.ID Strategies

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Contact Us



■ info@paidstrategies.com



■ @jrdevlin1



■ devlin.john



■ <https://www.linkedin.com/company/15078000>