Two-wheelers connectivity & cyber protection

for a safer ride and parking

THALES
Building a future we can all trust

The evolution of connected e-bikes and motorbikes is shaping the future of mobility. In recent years e-bikes have evolved into highly efficient, eco-friendly machines that redefine urban commuting. Likewise, connected motorbikes take biking to the next level, integrating cutting-edge technology for enhanced safety, navigation, anti-theft including a better user experience. This new way of moving embrace a world of smart and sustainable personal transport.But the rise of connected two-wheelers brings along with it both opportunities and challenges.

While the connectivity integration offers exciting features, it also exposes the vehicles to potential cybersecurity risks.

That is why both connectivity and cybersecurity are critically important for connected two-wheelers, as benefits can only be fully achieved when accompanied by robust security measures that protect the vehicle, the rider and their data.

These technical evolutions are inspired by initiatives such as those from ACEM*'. The two-wheeler technology trends in Europe are leaning towards standards enhancing safety, electric mobility and connectivity. The industry is shifting to sustainable solutions mirroring the changing dynamics of urban mobility and environmental awareness.

* ACEM : European Association of Motorcycle Manufacturers

Connectivity and cybersecurity are opening a world of services

CONNECTIVITY

- **Real-time navigation:** Get the most accurate and real-time traffic updates.
- **Remote location:** Find and locate your 2-wheeled vehicle.
- **Remote Monitoring:** Track your motorcycle's health and receive diagnostic alerts.
- **Emergency Assistance:** With one touch, alert authorities or loved ones in case of an accident.
- **Social Sharing:** Share your rides and stats with a community of enthusiasts.
- **Anti-theft:** Get instant information from your bike/motorbike and secure it from theft and trig alarm.
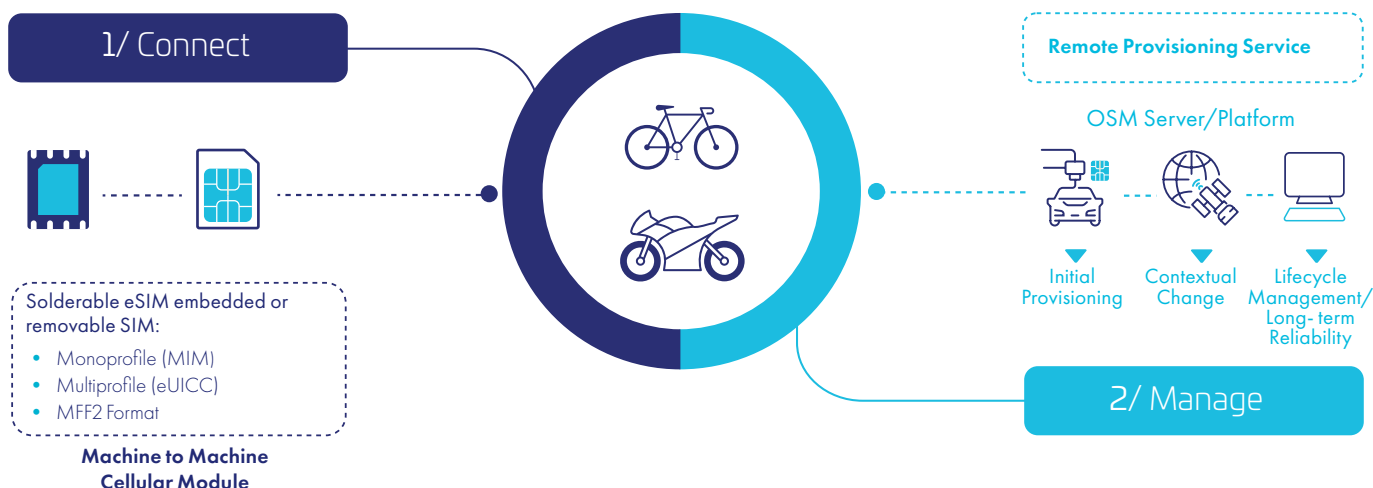
CYBERSECURITY

- **Access & Start Control:** Safeguard your e-bike or motorcycle against unauthorized access.
- **Remote Updates:** Deliver automatic security updates for a worry-free experience (secure FOTA).
- **Original spare part:** Ensure that only original spare parts can be mounted on 2 wheelers.
- **Data Encryption:** Keep personal information and ride data secure.
- **Monetization:** Activate new features securely and remotely.
- **Privacy:** Authorize services and manage related user consent in line with GDPR.

LEVERAGE THALES TRUSTED & SECURE SOLUTIONS TO:

- **Connect & manage** remotely 2 wheelers value added services during a lifespan.
- **Protect any bike and motorbike** for a safer ride and parking.

Thales connectivity for long run operation

Easy and secure provisioning anytime anywhere
Optimized Connectivity Lifecycle Management

1/ Connect

Solderable eSIM embedded or removable SIM:
- Monoprofile (MIM)
- Multiprofile (eUICC)
- MFF2 Format

Machine to Machine Cellular Module

Remote Provisioning Service

OSM Server/Platform

Initial Provisioning

Contextual Change

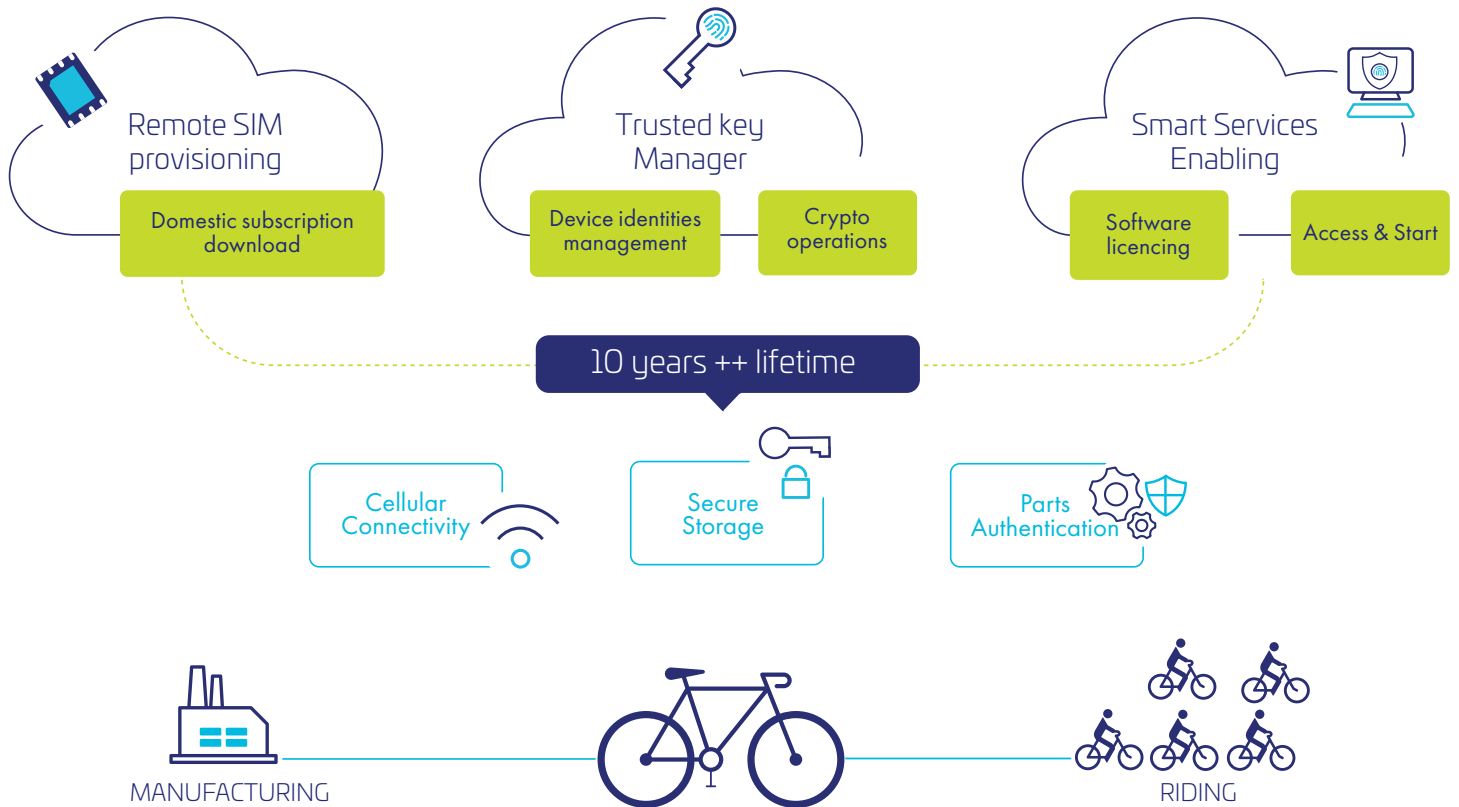Lifecycle Management/ Long- term Reliability

2/ Manage

Connected 2-wheeler means cybersecurity needs

Thales solution bring trust throughout the entire lifetime of two-wheelers by safeguarding essential assets and protecting digital identities, thanks to secure storage and robust authentication methods.

How? with a comprehensive solution to protect all critical assets during a lifetime.

Remote SIM provisioning
- Domestic subscription download

Trusted key Manager
- Device identities management
- Crypto operations

Smart Services Enabling
- Software licencing
- Access & Start

10 years ++ lifetime

- Cellular Connectivity
- Secure Storage
- Parts Authentication

MANUFACTURING — RIDING

Why choose Thales solutions?

- **Our 25-year experience** in the production and implementation of Connectivity and Cybersecurity solutions in highly demanding markets such as Automotive, Telecommunications, Banking and Government

- **Our technical connectivity expertise** – member of Global Platform, GSMA and other standardization bodies

- **Our Cyber expertise** ISO/SAE 21434 certified (Standard for Road Vehicles Cybersecurity Engineering)

- **At the cutting-edge of post-quantum crypto** (PQC) technologies for enhanced protection

- **Our Group-policy** aimed at reducing the environmental impact and risks arising from Thales activities and products.

THALES

Building a future we can all trust

thalesgroup.com