

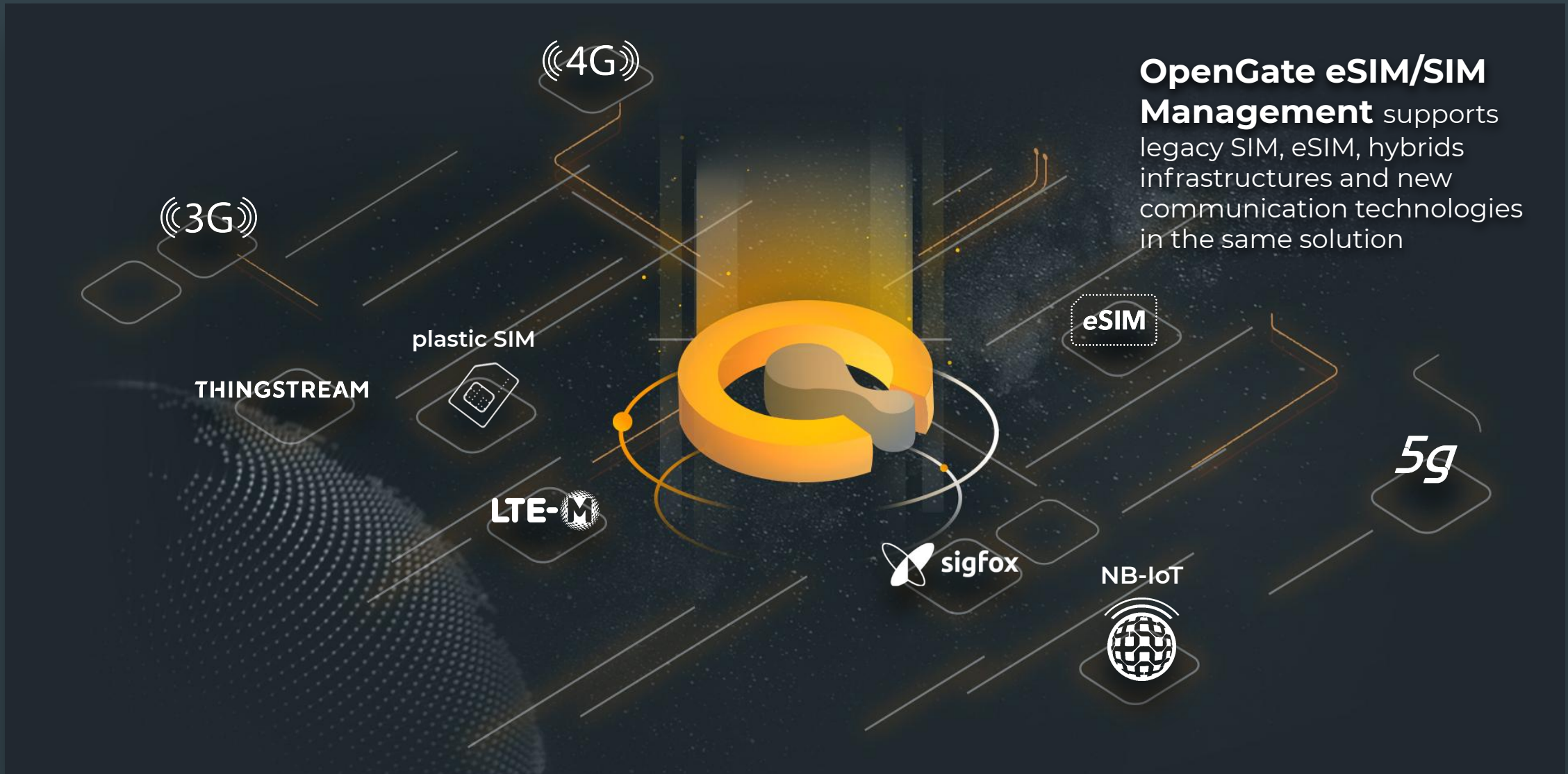
OpenGate IoT eSIM/SIM Management Module

It is a solution within the **OpenGate Framework** suite aimed at covering a problem of the M2M world



amplía))) A solution for now and the future

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amplía))) The eSIM concept

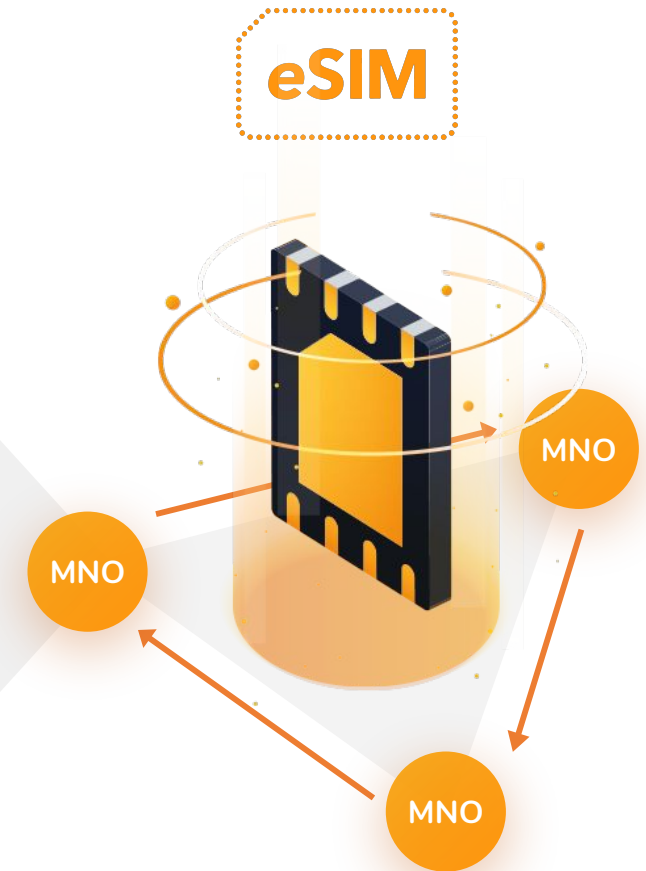
Migrate classic SIM cards to eSIM:
allowing to address the needs of modern industry



Classic **SIM**, is **always** associated with the **same operator**

The change from the traditional model to the eSIM alternative proposed is the following:

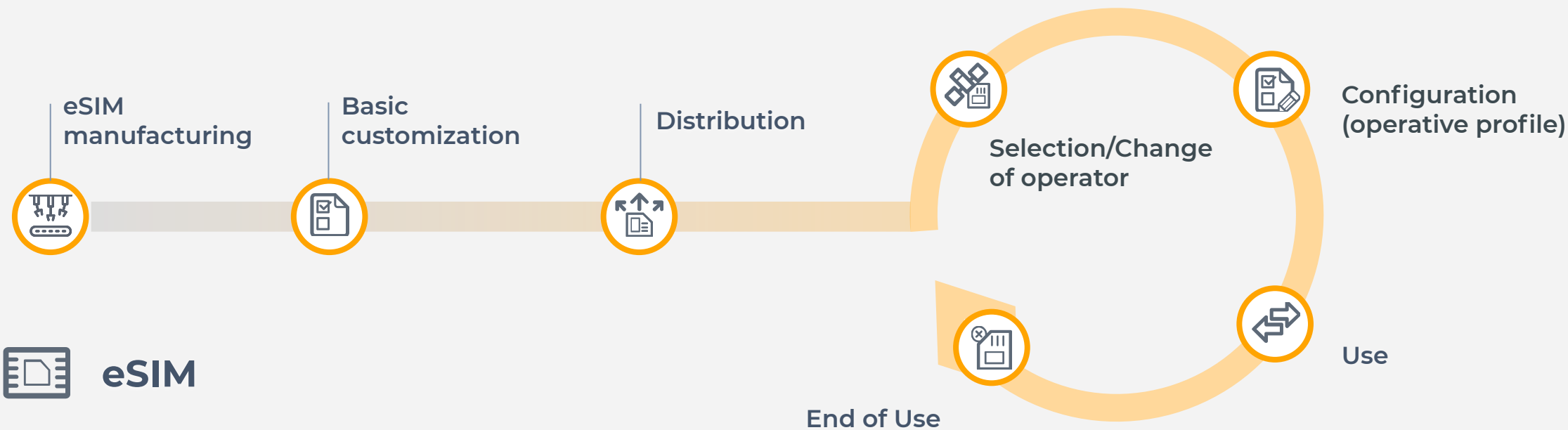
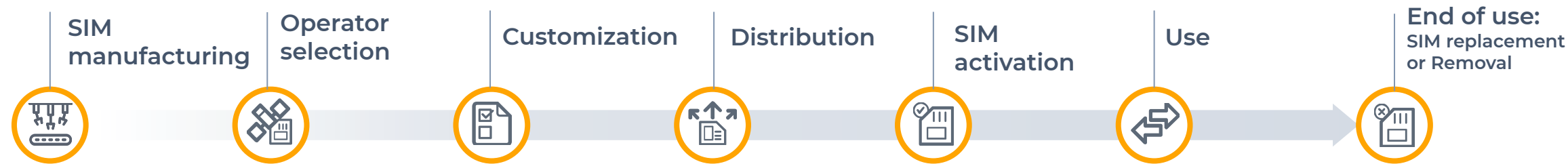
- In legacy devices with “plastic” SIM, **the insertion of a removable eSIM is offered, which meets GSMA standards**
- A lot of **new devices can have now an integrated eSIM module on its board as default**
- **Operators (MNOs) will provide new SIMs in an electronic format**
- The eSIMs have a **default profile, called "provisioning"**
- The **eSIM is configurable to another profile through OTA messages.**
- The possibility to **change eSIM profile contribute to reduce costs.**
- The **hybrid model (SIM+eSIM) can live together without any problem thanks to OpenGate IoT eSIM/SIM Management**



With **eSIM** it is possible to **remotely schedule and automate the operator change** without problems

amplía))) SIM vs eSIM life-cycle

Legacy SIM

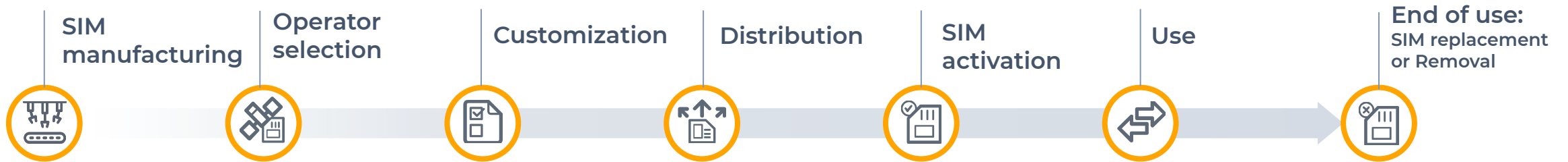


eSIM

amplía))) SIM vs eSIM lifecycle

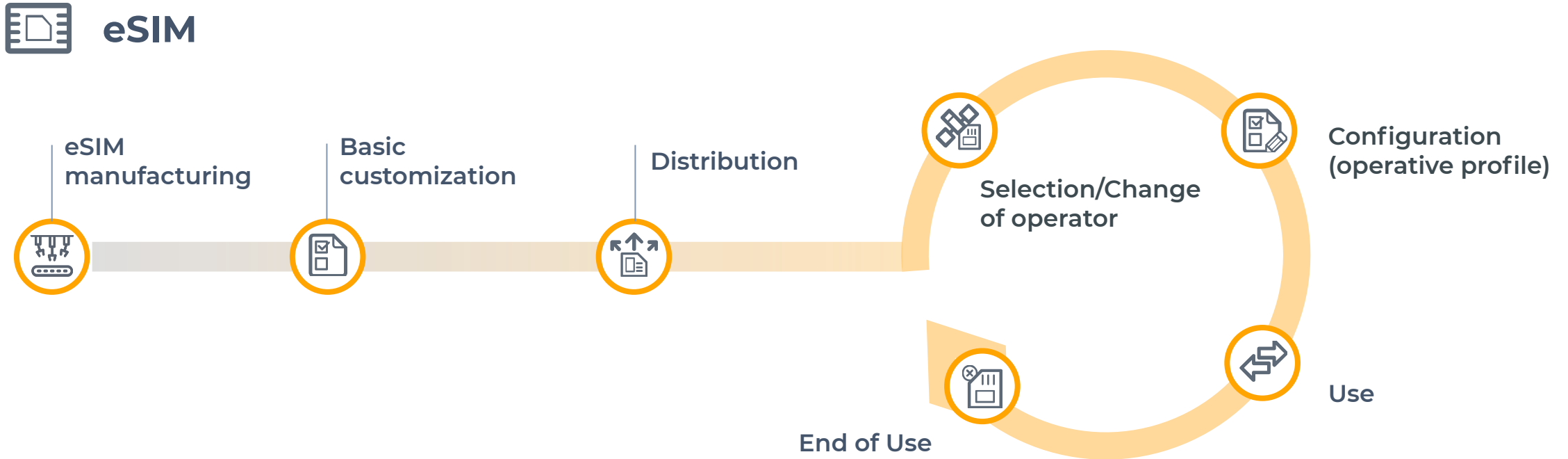


Legacy SIM



As you can see in the image, the life cycle of a traditional SIM card is linear. Although it is possible to modify the assigned subscription plan, SIM cards always belong to the same operator. If the card has a problem or the mobile service provider changes, this card must be physically replaced

amplía))) SIM vs eSIM lifecycle

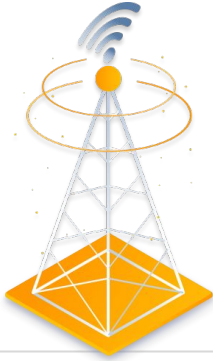


Thanks to the independence of the operator and its remote management, the life cycle of an eSIM can be extended.

If an operator change is needed, it is as simple as update the eSIMs remotely, and eSIM will only be removal when the end of use of the associated device occurs, or when device has an issue.

amplia))) eSIMs Management: limitations on current market offer

Mobile
Network
Operators
(MNOs)



Mainly offer **its own connectivity** service for previously qualified selected eSIM products

Selection of restricted SM partners and availability

Migration from the MNO platform **will be difficult** (locked)

eSIM / SM
Service
Providers



Restricted selection of eSIM products

Each provider has its “own” circle of MNOs that are pre-integrated and the interconnection with an MNO of another “circle” requires efforts (and incur costs for the customer that demands it)

Choice of subscription management service partner dictated by existing **partners**

IoT
Connectivity
Providers

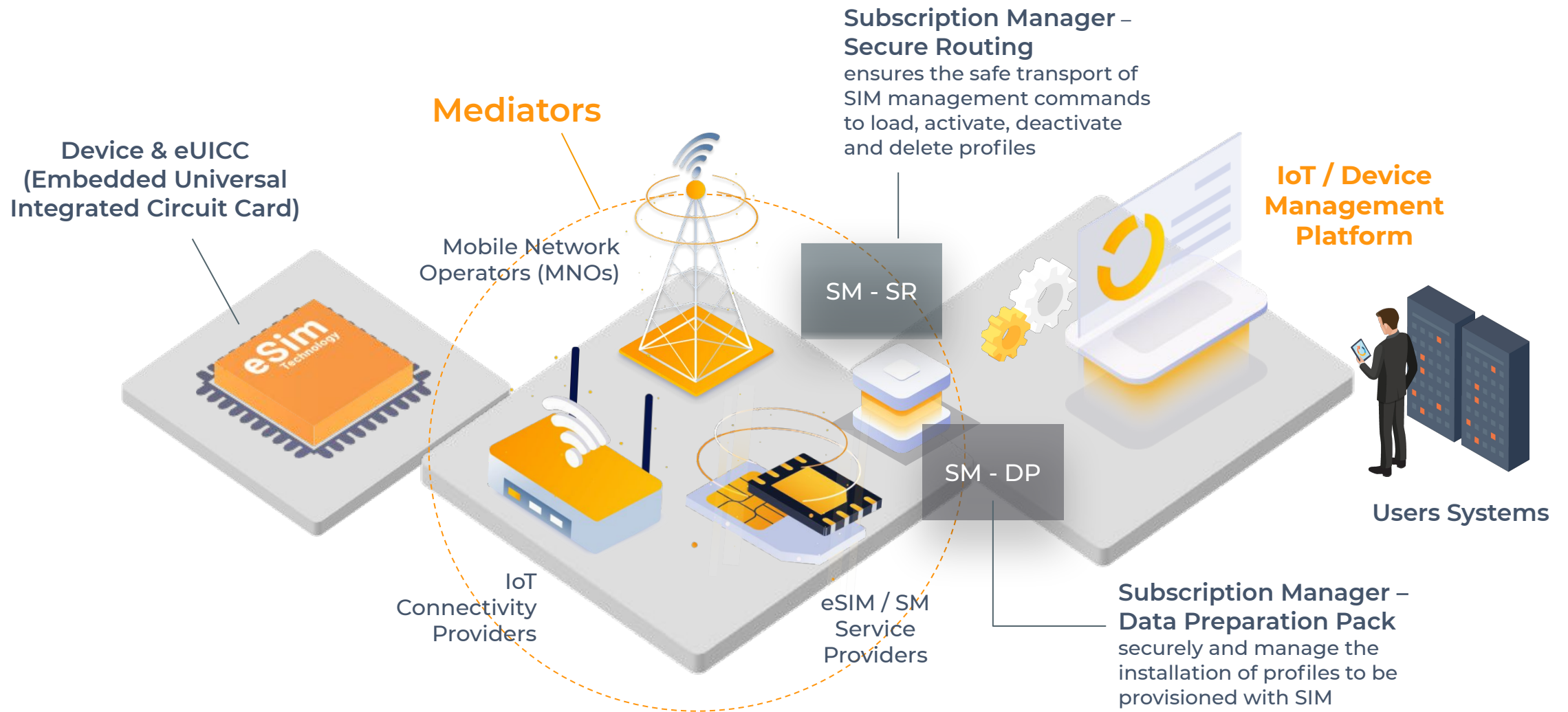


It is **not guaranteed that any new MNO** selected by the client will be addressed

Subscription management is done proprietary (multi-IMSI) or using the service of one of the main SM service providers

Option (e)SIM is generally **limited to one or two** qualified suppliers

amplia))) General eSIM Architecture Solution



amplia))) The OpenGate eSIM/SIM Management Solution

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Customer need MEDIATORS

OpenGate IoT eSIM/SIM Management is integrated through APIs with **mediators** when are needed to manage eSIM connectivity with mediators' SM-SR & SM-DP modules

OpenGate IoT eSIM/SIM Management

Users Systems

Customer is MVNO

OpenGate IoT eSIM/SIM Management has also its own SM-SR & SM-DP modules integrated for those customers who act as MVNO (root operator - have their own certificates to act as operator)

APIs

both ways
work together

SM - SR

SM - DP

Customer acting as MVNO has its eSIM default profile

Agreements needed

Third party (Local or global) Mobile Network Operators just to provide the connectivity infrastructure to allow competitive costs

eSIM / SM Service Providers

IoT Connectivity Providers

Mobile Network Operators (MNOs)

SM - SR

SM - DP

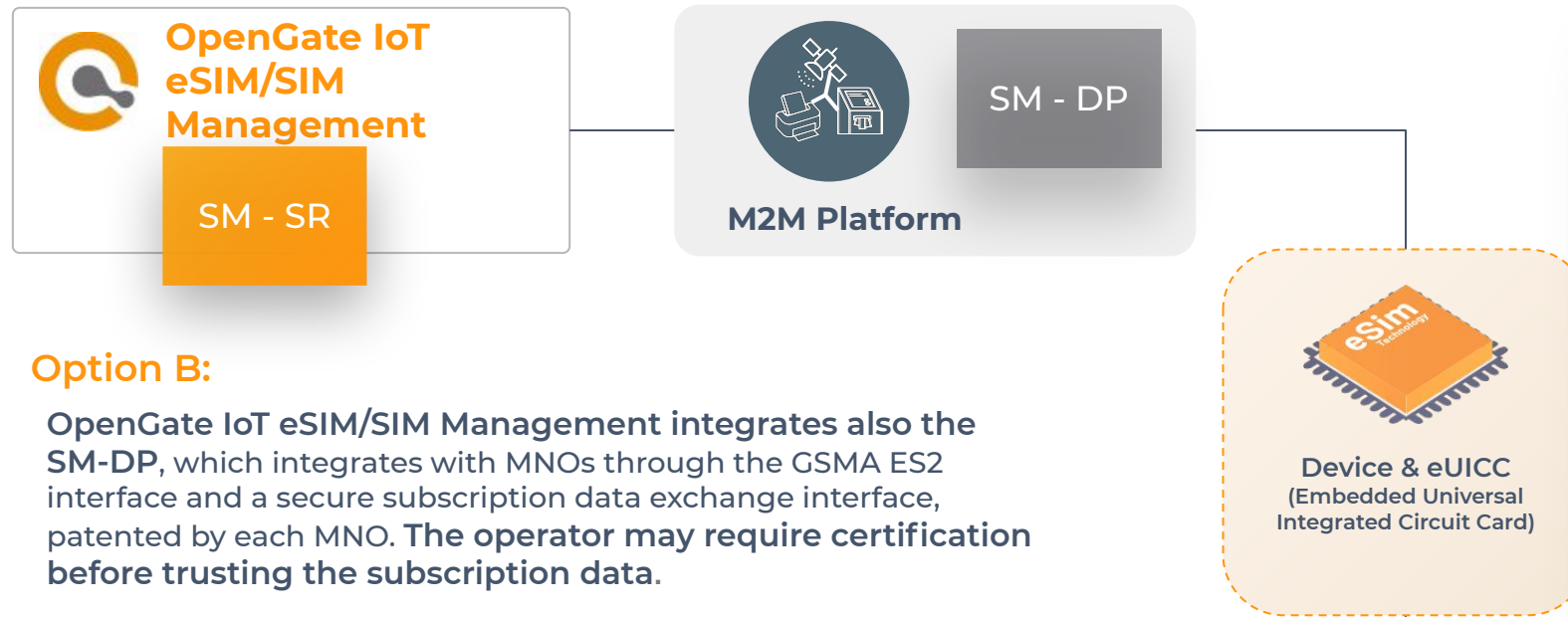
MNOs

Device & eUICC (Embedded Universal Integrated Circuit Card)

amplía))) More options when Customer is MVNO

Option A:

OpenGate IoT eSIM/SIM Management integrates only the SM-SR, which is integrated with the SM-DP of each MNO using GSMA ES3



Option B:

OpenGate IoT eSIM/SIM Management integrates also the SM-DP, which integrates with MNOs through the GSMA ES2 interface and a secure subscription data exchange interface, patented by each MNO. The operator may require certification before trusting the subscription data.

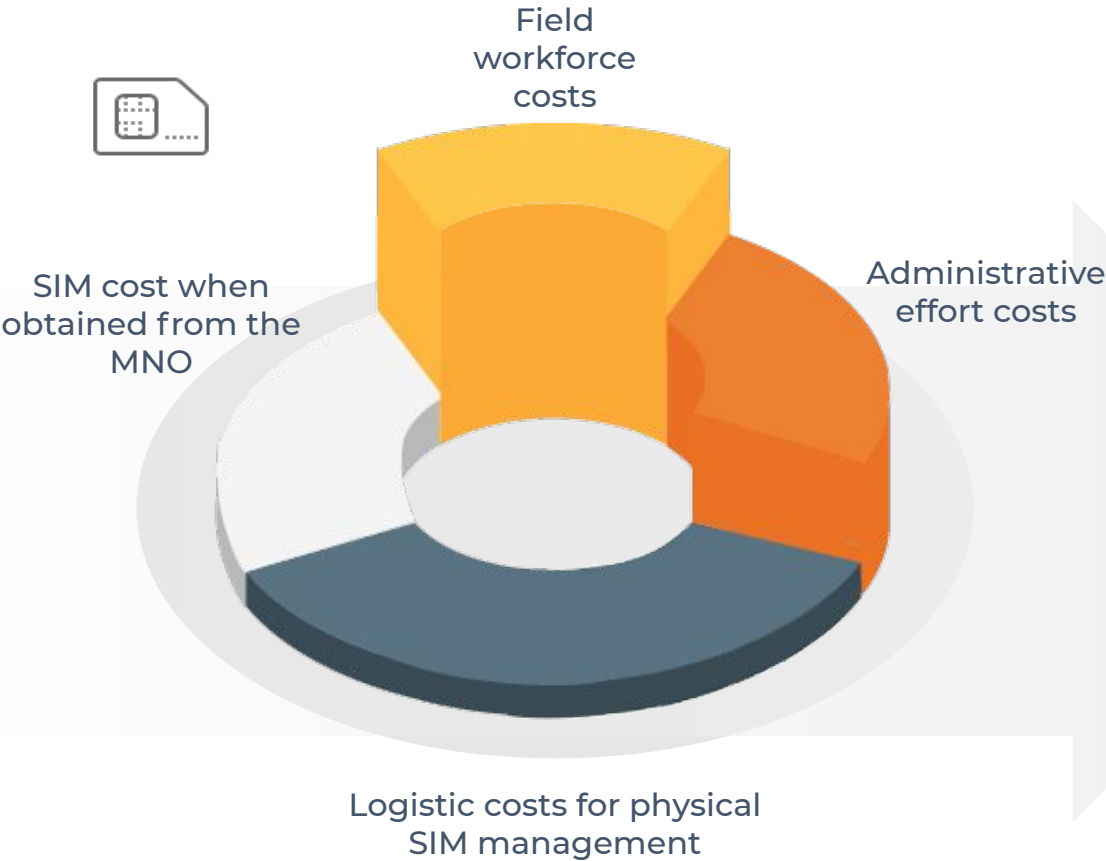


In both options...

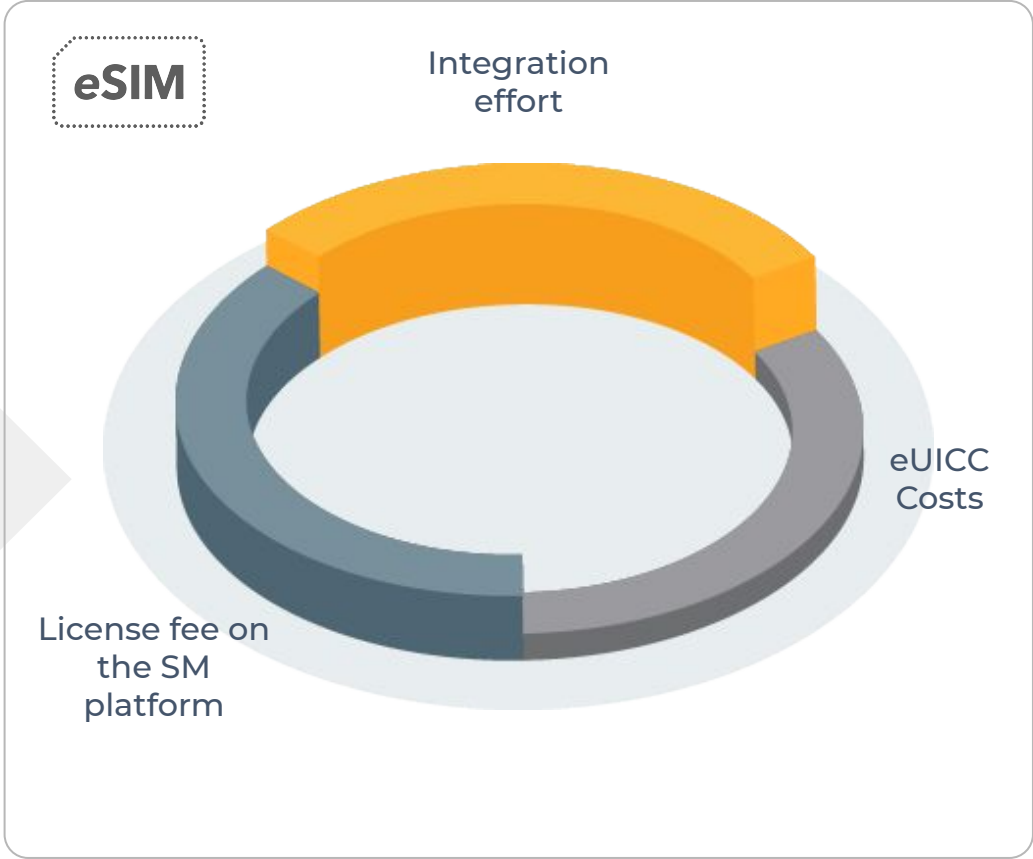
- OpenGate IoT eSIM/SIM Management handles in a unified way Devices, eSIMs and subscriptions integrated with the business processes in M2M and IoT operations
- OpenGate IoT eSIM/SIM Management ensures the subscription life cycle in a unified way.
- It is possible to create business rules for a dynamic change of subscriptions or sets of subscriptions based on customer's interests. Examples:
 - For rate change from a specific volume of subscriptions
 - Due to SLAs, etc.

amplía))) eSIM transition: Benefits and saves

Current scene: **Legacy SIM**



Proposed scene: **eSIM** management based on **OpenGate IoT eSIM/SIM Management** Solution



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Thank you



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