

# What is the eSIM and why introducing it?

CME Sharing Initiative

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SIM cards as a connector between mobile phone and provider have experienced a huge evolution in the past 25 years – next evolutionary step is the eSIM

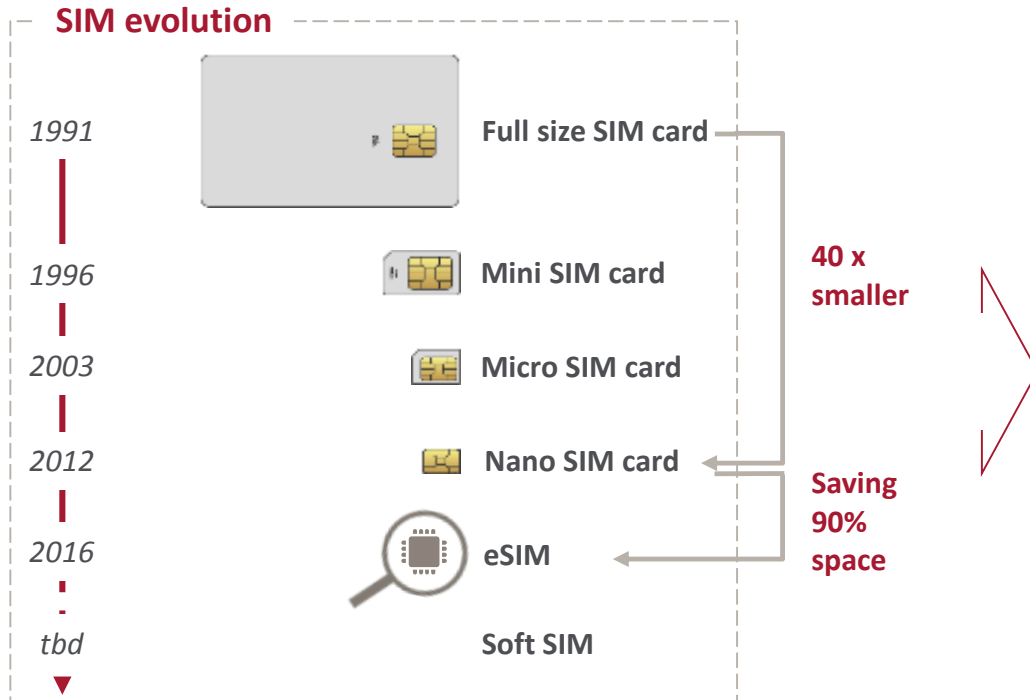
## Function of SIM cards



- **Connector** between mobile phone and provider
- **Storage** of required **network data** for the usage of mobile services and authorization, like
  - **International Mobile Subscriber Identity (IMSI)** to identify network participants
  - Series of numbers and algorithms for the **encryption of data**
  - Temporary, **network relating data**
- **Additional Data Storage like** Phone directory, SMS, call history
- One SIM is assigned **to one operator**, which can not be changed

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## Evolution of SIM cards



- **Size of SIM cards** was **reduced** over the past 25 years
- **Next evolutionary step** is the introduction of the **embedded SIM (eSIM)**
- **Saving 90% space** compared to Nano SIM card (including the SIM slot and contacts)

eSIM is a hardware-based and non-removable SIM in which the personal eSIM profile is provisioned remotely

## Key Characteristics of the eSIM



eSIM

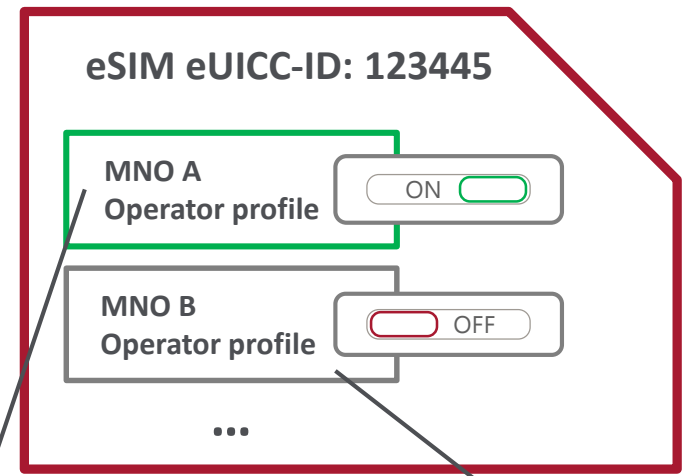
eSIM is a **non-removable** SIM hardware integrated in the device

Standard to **replace today's SIM** card, can be assigned to **multiple operators**

The required data are stored in a **personal eSIM profile**

eSIM profile is **transferred over-the-air** to the device

**First devices** have hit the market in **Q1 2016**



### MNO A operator profile

- Title
- ICCID
- MSISDN
- IMSI
- Other information

### MNO B operator profile

- Title
- ICCID
- MSISDN
- IMSI
- Other information

eSIM is not the same as a Soft SIM and differs from current solutions in the market

## Dispelling prejudices



### **eSIM is not a Soft SIM**

(SIM functionality carried out by SIM hardware, not by software layer)



### **eSIM is not the same as Apple SIM**

(standard SIM with multi IMSI; not supported by all operators)



### **eSIM requires the same registration process as standard SIM cards**

(tariff, signature, credit check, etc.)

# Introduction of eSIM is mainly driven by Market and MNO demands

## Drivers for the eSIM



**Market**



**MNO**

Demand for **smaller devices**  
(B2B, handset manufactures)

Demand for **more resistant / smaller devices**  
(B2B / B2C, IoT)

Convenient **switch of operator**  
(difficult with integrated SIM, e.g. Cars, IoT cases (Container))

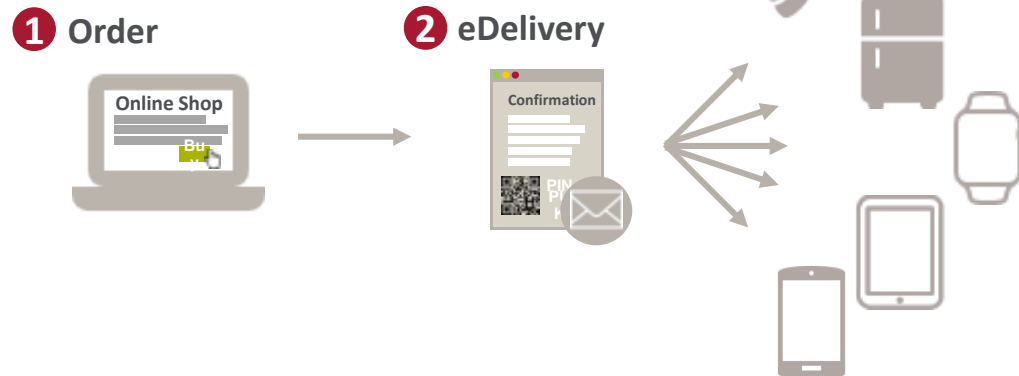
**Digitalization** of the last physical  
Element  
(Digital Sales Channel)

**Elimination of physical SIM distribution**

Enabling new **business models**  
(Roaming, growing interconnectedness, IoT)

The rapid ordering process, flexible change of providers and use of up to five devices with the same profile make the eSIM more customer-friendly

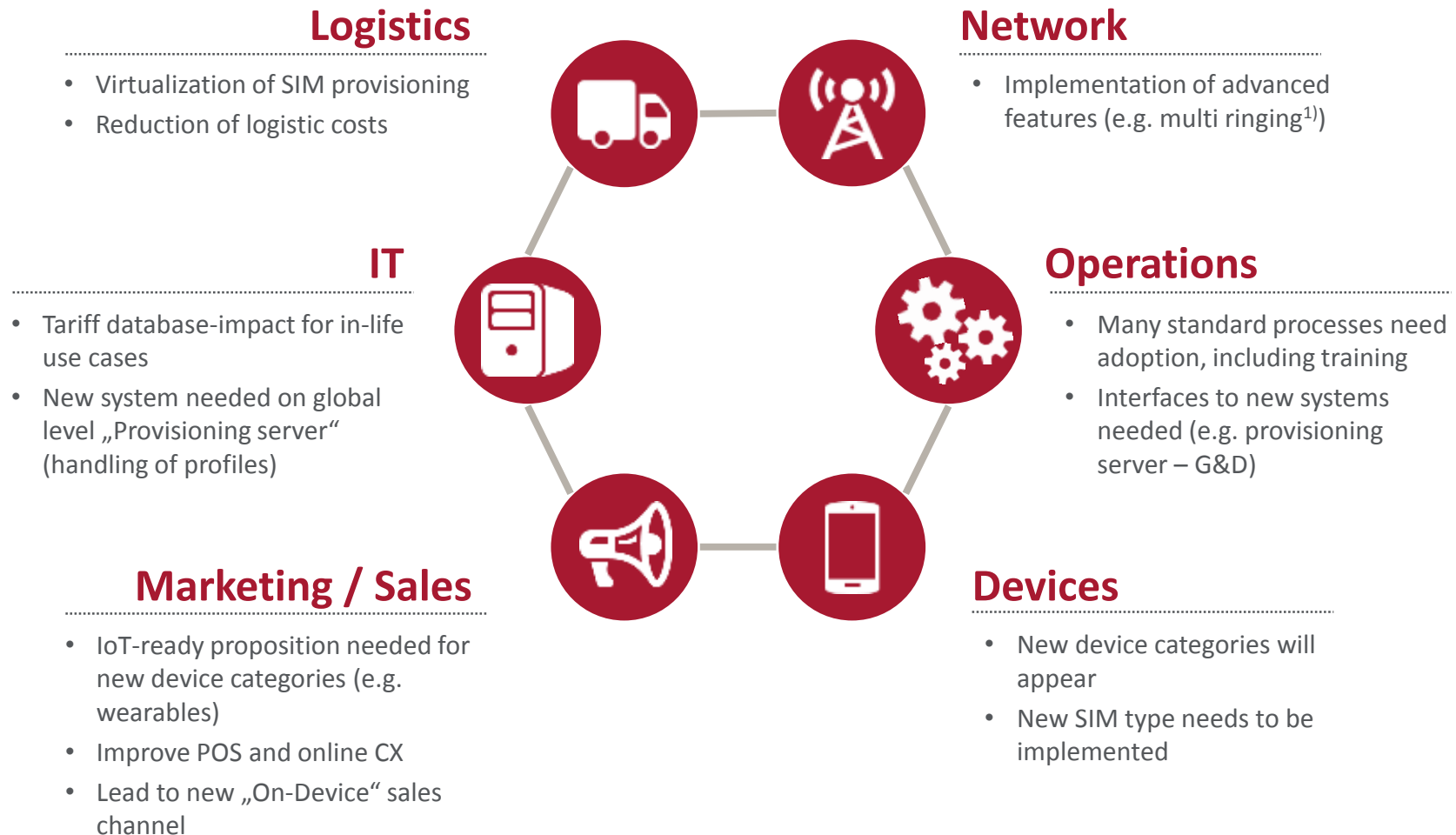
## Improvements in Customer experience – Delivery and activation of Simcards



- Details in Backup*
- Rapid and comfortable **ordering / activation process** using **over-the-air / eDelivery**
  - Easy and flexible **change of providers**
  - Customers are able to use **multiple devices** with the same eSIM profile

# Introduction of the eSIM affects almost every function in the value chain and leads to many changes handling daily work

## Impacts on areas of the MNO business

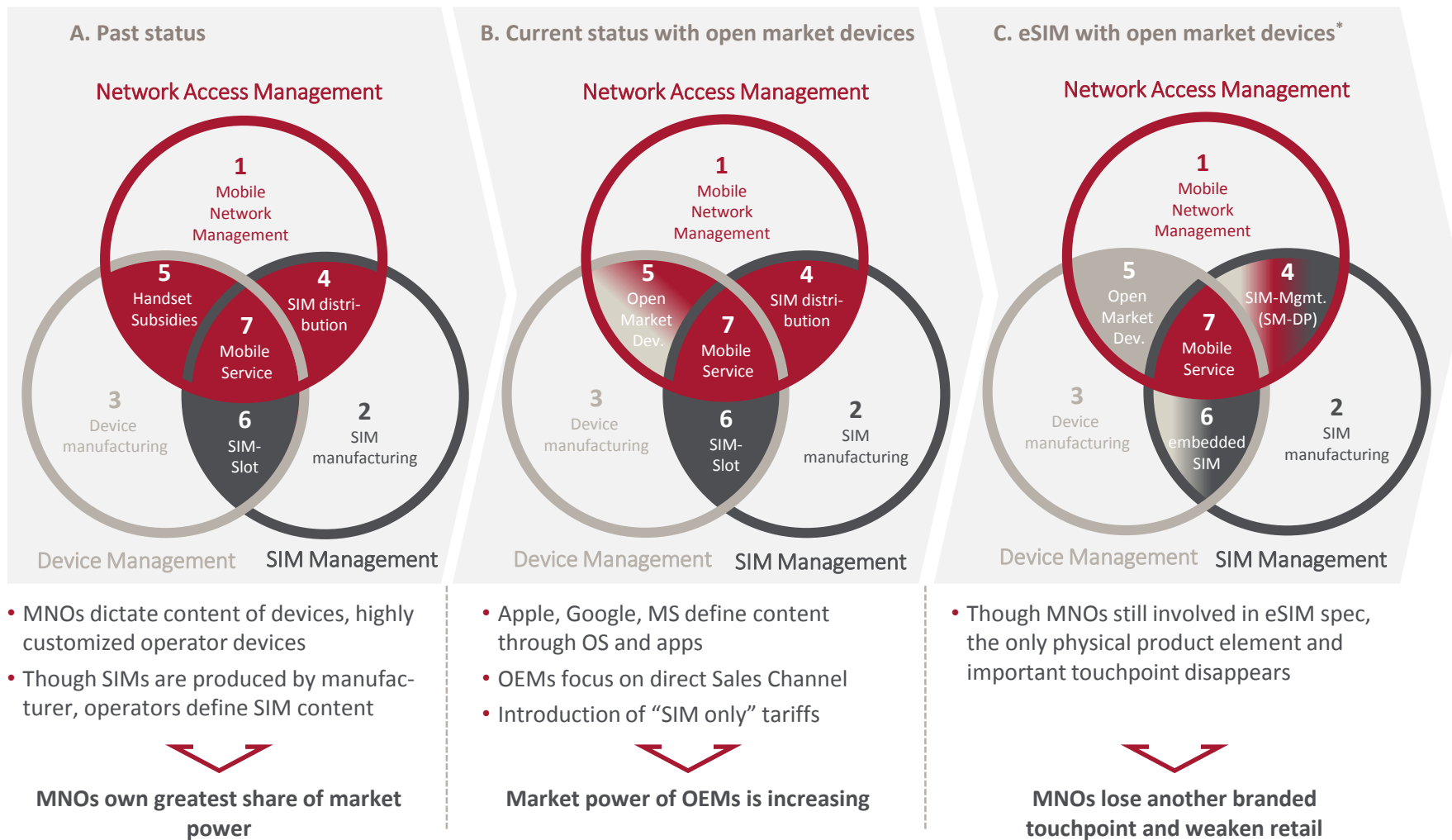


1) Customers are able to use separate devices with the same eSIM profile



OEMs market power increases while MNOs are losing role as key player in market and must handle growing dependencies from other players

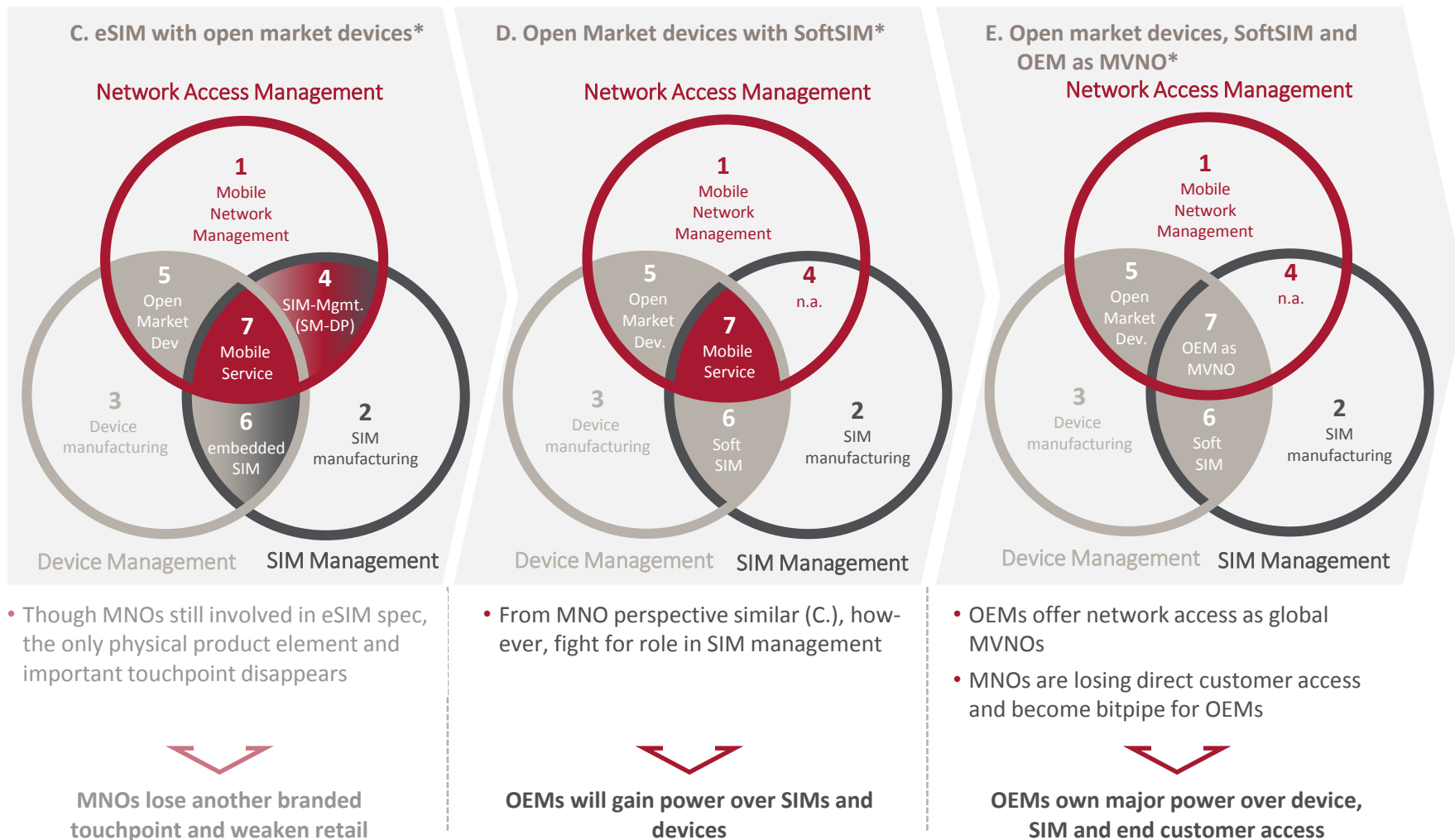
## Impact on the power of market players with eSIM



\* - Outlook

A complete loss of control might be a potential future scenario. That is why MNO need to clarify role definitions for a future operating model

## Impact on the power of market players with SoftSIM



\* - Outlook



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