

Key eSIM Statistics

April 2024



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Consumer eSIM Market – Size & Worth

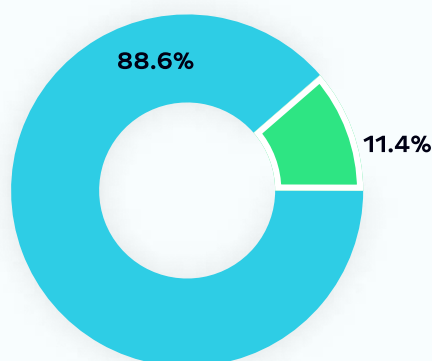
1. The global eSIM market size was estimated to be between USD 7.3 billion and USD 10.8 billion in 2021.
2. The global eSIM market size was estimated to be at USD 8.34 billion in 2022.
3. The lowest estimation of the global eSIM market size is USD 17.5 billion by 2030.
4. The global eSIM market size is expected to grow at a CAGR between 7% and 10.2% from 2022 to 2030.
5. The global eSIM market size is projected to reach USD 19.35 billion by 2031, growing at an estimated CAGR of 10.5 % from 2023 to 2031.

6. The global eSIM market reached a value of nearly \$4.8 billion in 2023, having grown at a compound annual growth rate (CAGR) of 29.8% since 2018.



7. The market is expected to grow from \$4.7 billion in 2023 to \$14.8 billion in 2028 at CAGR of 25.4%.
8. The market is then expected to grow at CAGR of 18.5% from 2028 and reach \$34.6 billion in 2033.

9. The connectivity services market was the largest segment of eSIM market segmented by solution (solutions: hardware, connectivity services), accounting for 88.6%, or \$4.2 billion of the total in 2023.



10. Going forward, the connectivity services segment is expected to be the fastest growing segment in the eSIM market segmented by solution, at CAGR of 25.7% during 2023-2028 period.

11. The connected car market was the largest segment of the eSIM market segmented by application (applications: connected car, smartphone and tablet, wearable device, other applications), accounting for 39.2% or \$1.8 billion of the total in 2023.

12. Going forward, the smartphone and tablet segment is expected to be the fastest growing segment in the eSIM market segmented by application, at CAGR of 28.8% during 2023-2028 period.

13. The automotive market was the largest segment of the eSIM market segmented by vertical (verticals: automotive, consumer electronics, energy and utilities, manufacturing, retail, other verticals), accounting for 39.6% or almost \$1.9 billion of the total in 2023.

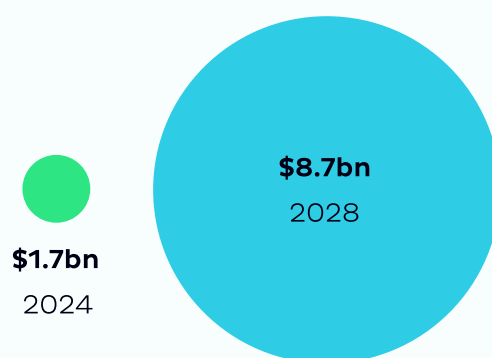
14. Annual eSIM card shipments in the automotive industry will approach 84.1 million by 2028, a nearly sevenfold increase over 2023.

15. Total shipments of eSIMs in the automotive market will surpass 463 million mark between 2023 and 2028.

16. Going forward, the consumer electronics segment is expected to be the fastest growing segment in the eSIM market segmented by vertical, at CAGR of 27.9% during 2023–2028 period.

17. Travel SIM and eSIM market will grow from \$1.7 billion in 2024, to more than \$8.7 billion by 2028.

18. The travel eSIM market will grow by 410% between 2024 and 2028 making up a significant portion of the overall eSIM market.



19. In 2021 there were 1.2 billion of eSIM connections across smartphones, smartwatches, laptops and tablets.

20. In 2021 there were 850 million eSIM connections across smartphones.

21. In 2025 there will be 3.4 billion eSIM connections.

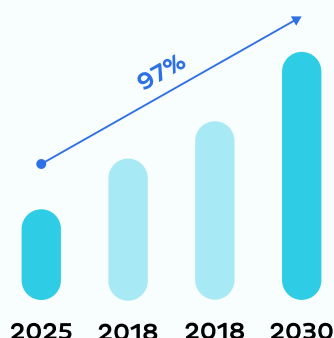
22. In 2025, the eSIM adoption across smartphones will be between 25% (low adoption) and 40% (high adoption) worldwide.

23. In 2030, there will be 6.7 billion eSIM connections.

24. In 2030, the eSIM adoption across smartphones will be 76% worldwide.

25. The number of eSIM connections will have grown by 183% between 2021 and 2025.

26. The number of eSIM connections will grow by 97% between 2025 and 2030.

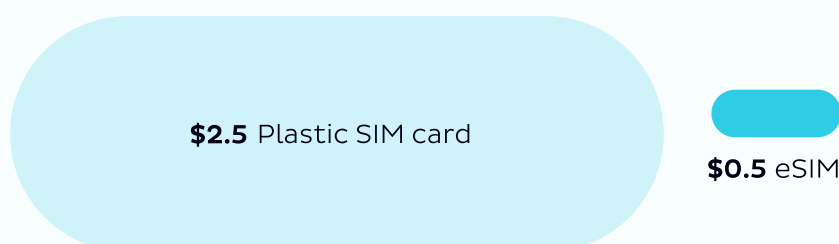


27. The number of eSIM connections will have grown by 458% between 2021 and 2030.

28. The eSIM adoption across smartphones will grow by approx. 43 percentage points between 2025 and 2030 (medium adoption scenario).

29. The average cost of a plastic SIM card is 2.5 US dollars (inclusive of the card itself, the packaging, and delivery).

30. The average cost of eSIM is between 20 and 50 cents.

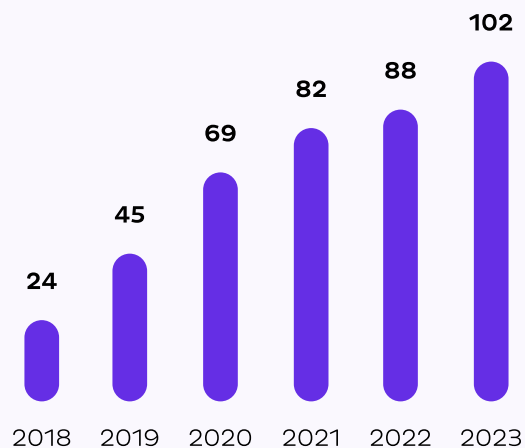


31. Switching to eSIMs results in up to 80% decrease in SIM card costs.

32. To put this into perspective, an SP with 1 million subscribers and approx. 50% gross additions per annum could save 1 million US dollars of costs per annum by switching to 100% eSIM provisioning.

eSIM Market Share by Region

33. 102 countries across the world supported eSIM at the beginning of 2023.



34. 52% of countries globally supported eSIM at the beginning of 2023.

35. The number of countries supporting eSIM increased by 325% between 2018 and 2022.

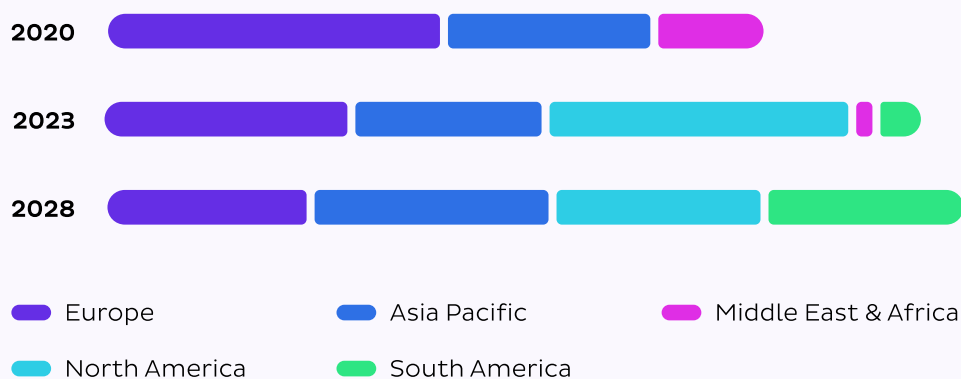
36. The year-on-year growth of countries supporting eSIM has decreased from 53% between 2018 and 2019 to only 7% between 2021 and 2022 to pick up by 16% between 2022 and 2023.

37. In 2020, Europe had 41% of the global eSIM market share, followed by APAC at 25% and MENA at 13%.

38. In 2023, North America had between 36.9% and 42% of all eSIM sales, followed by Western Europe at 30% and the Asia Pacific at 23%, South America at 5% and Middle East and Africa at 2%.

[Infographic](#) ➔

39. APAC will be the fastest developing region in 2023–2028, at a CAGR of 28.9%, followed by North America, growing at 25.2% CAGR, Western Europe with a CAGR of 24.6% and South America, where the market is expected to grow at 24.1% CAGR.



40. China will be the largest single eSIM market, with 500 million eSIM connections by 2025.

41. Between around 20% (low adoption) and 35% (high adoption) of smartphone connections could be eSIM in China by 2025.

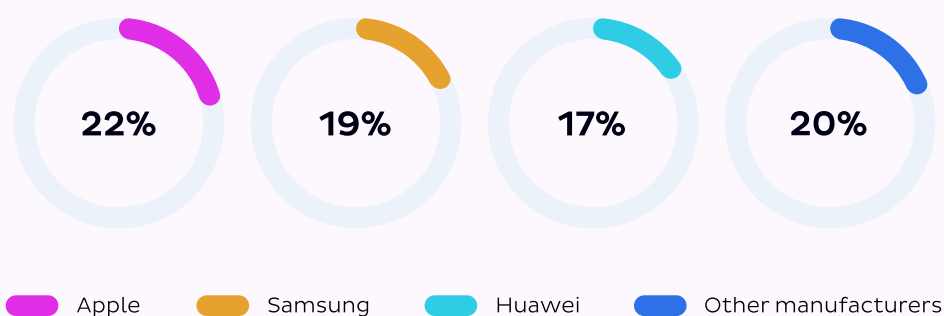
eSIM Compatibility in Consumer Devices

- 42.** eSIM was initially launched for the IoT market, in 2010.
- 43.** eSIM for consumers was launched in 2016.
- 44.** The first eSIM-capable smartphone – Pixel 2 – was released by Google in 2017.
- 45.** Apple released its first eSIM-only smartphones – iPhone XR and iPhone XS – in 2018.
- 46.** The first eSIM-only smartphone was Motorola RAZR, released in 2019.
- 47.** The first eSIM-only iPhone was the iPhone 14, launched by Apple in September 2022 to the US market only.
- 48.** As of April 2024, Apple has 2 eSIM-only smartphones in the US market – the iPhone 14 and iPhone 15.
- 49.** 15% of smartphones sold since 2020 support eSIM.
- 50.** eSIM-capable smartphone shipments increased by 11% YoY in 2022, reaching 424 million units
- 51.** Cellular-connected device shipments dropped by 3% in 2022.
- 52.** As of April 2024, there are 169 smartphones supporting eSIM in the market.
- 53.** The number of eSIM-capable smartphones increased by 106% between March 2023 and April 2024.
- 54.** Xiaomi, Vivo and Nokia launched their first eSIM-compatible smartphones in 2022.

55. Honor, TCL Communications launched their first eSIM-compatible smartphones in 2023.

56. Samsung has the highest number of eSIM-capable device models, 30, followed by Apple with 24 models and Google and Motorola with 20 models each.

57. Apple has the highest eSIM-capable device adoption rate, 22%, followed by Samsung with 19% and Huawei with a 17% adoption rate. All other manufacturers combined hold a 20% adoption rate.



58. According to a survey run in 2021, over 80% of OEMs planned to adopt eSIMs by 2025.

59. As of April 2024, 9% of OEMs adopted eSIM in their devices.

60. In 2022, between 350 million and 382 million eSIM-capable devices were shipped.

61. The total available eSIM-capable consumer device market was at 427 million units in 2022.

62. The total available eSIM-capable smartphone market was at 293 million units in 2022.

63. In 2023, there were 439.5 million eSIM-capable consumer device shipments.

64. In 2023, there were 986 million eSIM-capable consumer devices available in the market.

eSIM-compatible
devices shipments

439.5 million

eSIM-compatible
devices in the market

986 million

65. In 2027, there will be 3.5 billion consumer devices that leverage eSIM technology available in the market.

66. As of 2024, about half of all connected devices in the US feature eSIMs.

67. By 2025, 60% of all smartphone unit sales are estimated to be eSIM-compatible.

68. By 2030, almost every 3 in 4 (70%) cellular devices will support eSIM technology.



16 billion
devices by 2030.

Value from stat #70

69. By 2028, 67% (approx. 590 million) of overall smartphone shipments (880.6 million) will be eSIM-capable.

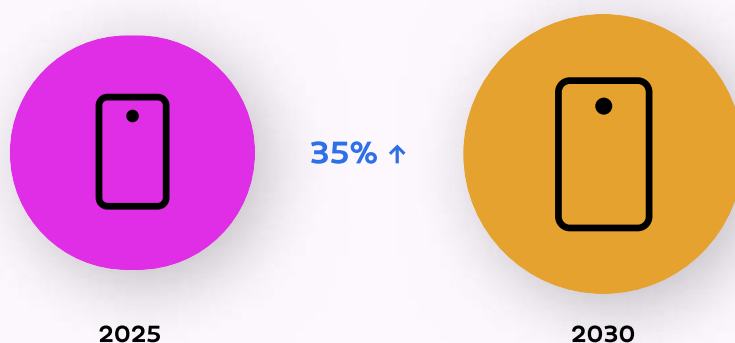
70. The demand for eSIM-enabled devices will keep growing to reach 16 billion devices by 2030.

71. The demand for eSIM-enabled devices will increase by 1354.5% between 2024 and 2030.

72. By 2030, 100% of smartwatches and drones will be equipped with eSIM, followed by 92% of connected cars, 82% of smartphones and 79% of tablets.

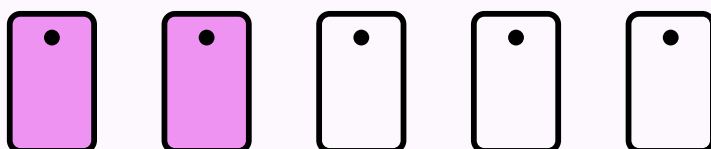
73. By 2025, 99% of smartwatches will support eSIM followed by laptops at 73% and smartphones at 47%.

74. The share of smartphones supporting eSIMs will increase by 35 percentage points between 2025 and 2030.



75. eSIM-capable device shipments will grow at 21% CAGR during 2021-2039. XR devices, gateways and drones will register the highest growth.

76. 2 out of 5 eSIM capable shipments in 2030 will be a smartphone.



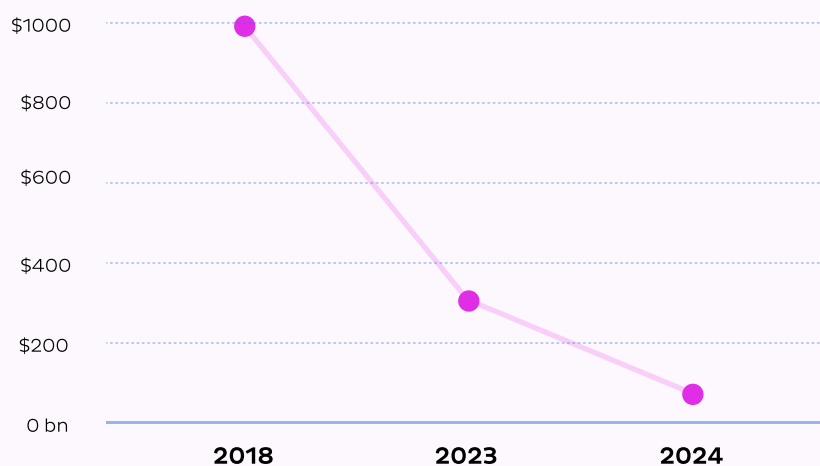
77. Consumer devices will make 55% of the total eSIM-capable device shipments in 2030.

78. Another research suggests there will be 14 billion eSIM-capable device shipments by 2030.

79. 82% of all smartphone shipments by 2030 will support eSIM.

80. In 2023, the most affordable eSIM-capable smartphone was around \$300.

81. In 2024 (April), the most affordable eSIM-capable smartphone costs less than \$100.



82. The price of the most affordable eSIM-capable smartphone decreased by 300% between 2023 and 2024. (Mobilise)

eSIM Adoptions by Mobile Operators

83. In 2018, 2 years after the introduction of eSIM to the consumer market, only 45 operators around the world had offered commercial eSIM services.

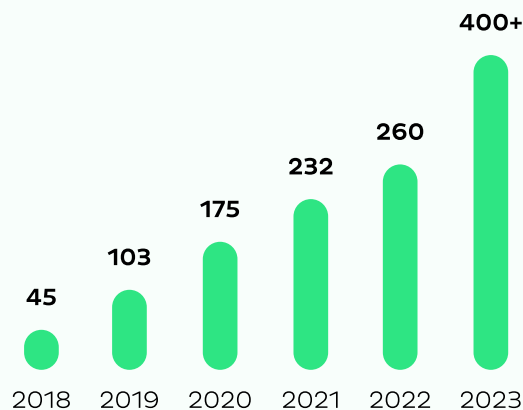
84. Between 2019 and 2021, the operator adoption of consumer eSIM increased by 125%.

85. Between 2021 and 2023, the operator adoption of consumer eSIM increased by over 72%.

86. The number of operators supporting eSIM increased by 789% in 5 years, between 2018 and 2023.

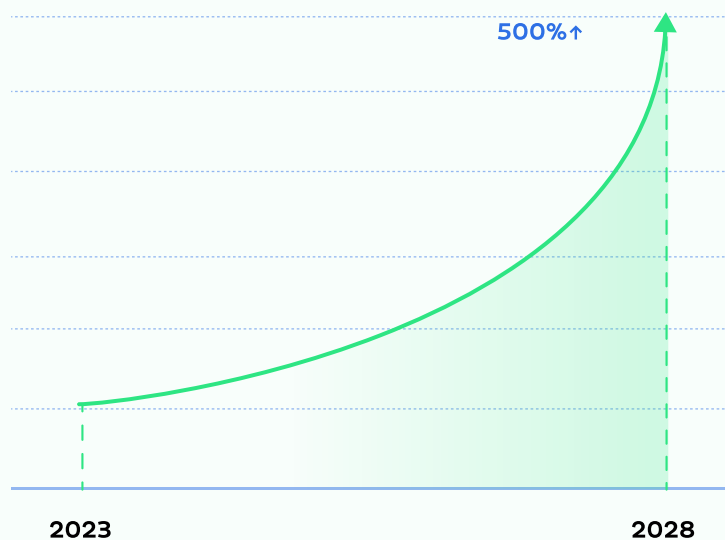
87. In 2021, almost 90% of MNOs had plans to offer eSIM services by 2025, with 98% aiming to do so by 2025.

88. As of June 2022, more than 260 operators (MNOs and MVNOs) have launched commercial eSIM services for smartphones.



89. At the end of June 2023, over 400 operators, MNOs, MVNOs, and global roaming providers, offered commercial smartphone eSIM services.

90. Retail spending on services provided by travel eSIM providers, such as eSIM aggregators, MNOs, and MVNOs, is expected to skyrocket by 500% between 2023 and 2028.



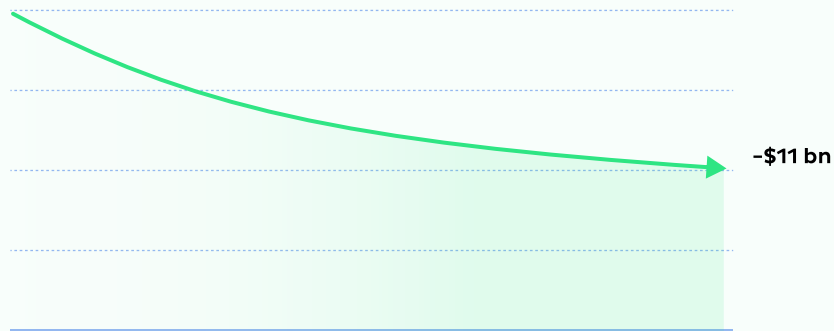
91. By 2028, the global travel eSIM market is projected to approach a value of \$10 billion, representing more than 80% of the entire travel SIM expenditure.

92. By 2028, retail spending on travel connectivity services, including roaming packages and travel SIMs, will exceed \$30 billion.



93. In 2022, Brits alone accumulated over £539 million (\$673 million) in unexpected roaming charges.

94. Traditional carriers may face up to \$11 billion in lost roaming revenue to digital-first travel eSIM providers.



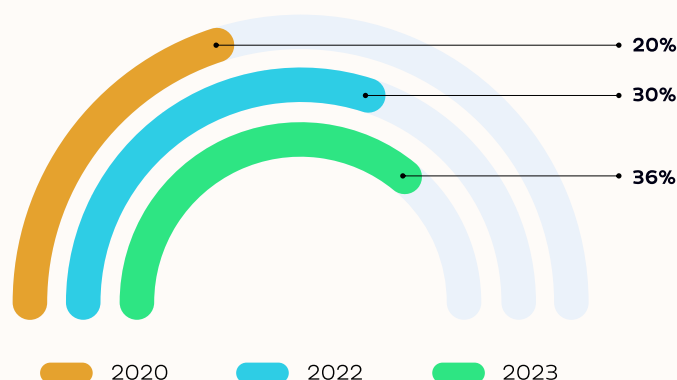
95. 9 in 10 travellers are ready and willing to use travel eSIMs if given the option.

eSIM Awareness and Adoption by Consumers

96. In 2020, consumer awareness was at 20%.

97. As of 2022, less than 30% of consumers are aware of eSIM.

98. In 2023, consumer awareness was at 36%.

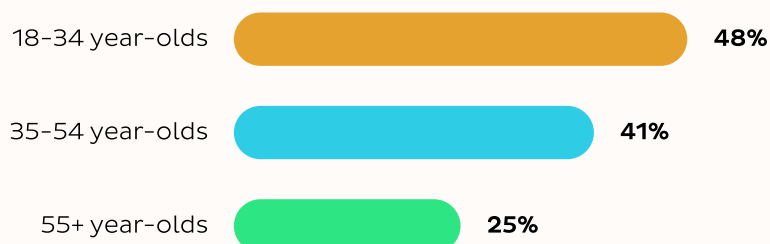


99. Consumer awareness increased by less than 10pp between 2020 and 2022.

100. Consumer awareness increased by more than 6pp between 2022 and 2023.

101. Consumer awareness about eSIM varies from 26% in the UK to 48% in South Korea.

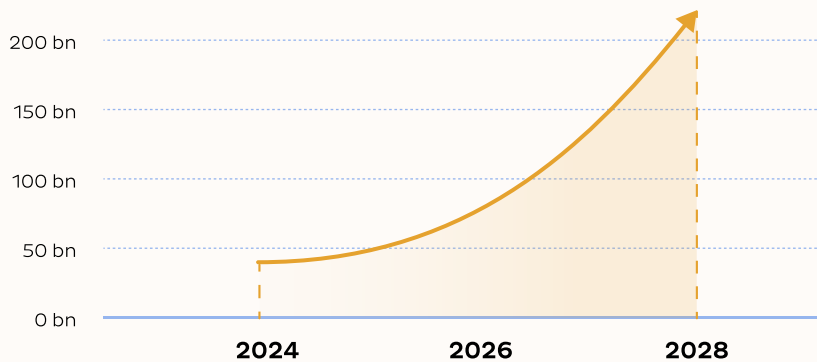
102. Consumer awareness about eSIM varies by age group. It's 48% for 18–34-year-olds, 41% for 35–54-year-olds, and 25% for 55+-year-olds.



103. 58% of consumers across the US, UK and Australia are aware of eSIM.

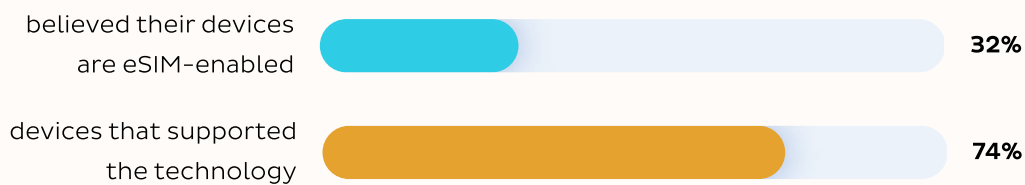
104. The number of consumer eSIM profile downloads increased by 130% in 2022.

105. The global number of eSIM users will increase from 40 million in 2024 to an estimated 215 million in 2028.



106. Fewer than 1% of eSIM-equipped smartphones were estimated to use the technology in 2022.

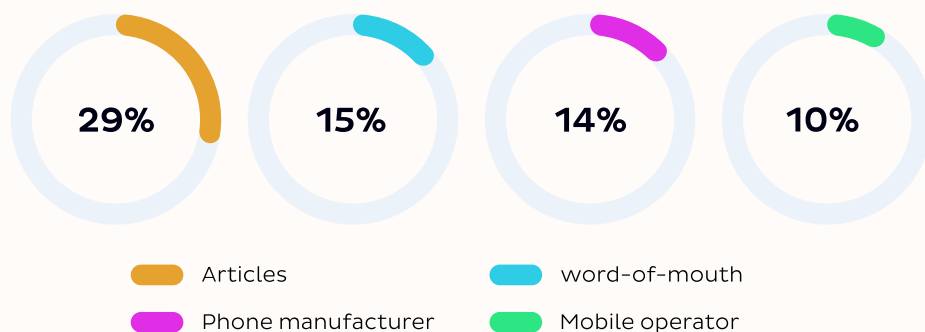
107. While just 32% of smartphone users believed their devices were eSIM-enabled, in reality, 74% actually supported the technology.



108. The majority of consumers find out about eSIM from articles (29%), or through word-of-mouth (15%).

[Infographic →](#)

109. Only 14% of consumers found out about eSIM from their smartphone manufacturer, followed by 10% who learned about the technology from their mobile operator.



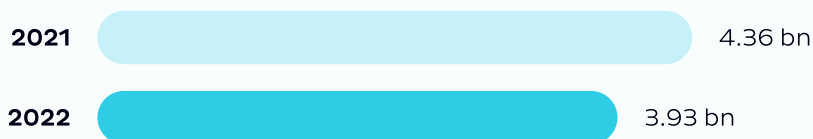
110. 16% of consumers don't see the benefits of eSIMs.

111. Consumers like eSIM for its ability to provide greater flexibility and speed (32%), less hassle (20%) and cost savings while travelling (18%).

eSIM and Sustainability statistics

112. Removable SIM card shipments reached 4.5 billion plastic cards in 2020.

113. Plastic SIM card shipments declined from 4.36 billion in 2021 to 3.93 billion in 2022.



114. The SIM card industry contributes to around 140,000 tonnes of CO₂e emissions per annum.

115. The plastic SIM card has a carbon footprint of 229 grams during its three-year lifetime.

116. The carbon footprint of an eSIM is 123 grams during its three-year lifetime.

117. The carbon footprint of plastic SIM cards is approximately 46% higher than that of eSIMs.



About Mobilise

Global connectivity for your app.

We're a team of telecom experts, software developers, and designers who build digital-first products and services that connect people around the world. Our background is in the telecoms industry, where we provide a fully digital and modular BSS platform – HERO – and consumer eSIM solutions.

With our most recent solution, Embedded Connectivity SDK, you don't have to be a telecoms network provider to offer your customers mobile connectivity. Our SDK sits seamlessly on top of any existing app, within any industry, to give your customers embedded connectivity solutions whenever they need it. Providing global connectivity, greater security and a seamless customer experience that will keep your customers coming back for more.

Learn more about how Mobilise can help you achieve global connectivity!



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