



5G CORE & SERVICE-BASED ARCHITECTURE – JULY 2021

COVID-19 AND THE LACK OF 5G BUSINESS CASES BEYOND MOBILE BROADBAND ARE SLOWING THE MIGRATION TO STANDALONE MODE



Table of Contents

ABSTRACT4

KEY TAKEAWAYS5

THE PANDEMIC AND THE LACK OF 5G BUSINESS CASES BEYOND MOBILE BROADBAND HAVE DIVIDED THE SA WORLD: CHINA VS. THE REST6

 CHINA ALONE ACCOUNTED FOR 75% OF THE TOTAL 5GC SBA MARKET IN 2020 7

In 5G core, NRF, NEF, and NSSF kept CSPs busy 8

In 5G Data Management, we found 3 distinct approaches to implement UDM..... 8

And interworking between 4G and 5G is the most challenging part of UDM rollout..... 8

 CHINA PROPELLED HUAWEI AND ZTE TO COMMAND 80% OF GLOBAL 5GC SBA SALES IN 2020 9

Huawei rules the 5GC SBA world, at least for now 9

ZTE comes in second for 5GC SBA sales market share10

Meanwhile, Ericsson has the highest number of 5GC SBA contracts worldwide.....10

CSPs like Ericsson’s cloud-native dual mode 5G core10

With its AirGile core platform, Nokia comes second in 5GC SBA contracts.....11

 FROM 7 5GC SBA NETWORKS IN 2020 TO 12 IN JUNE 2021, THE SLOW PACE CONTINUES11

This is far from what we expected last year!.....11

 5GC SBA ROLLOUTS ARE AFFECTED BY A VARIETY OF BUSINESS...12

Stuck in MBB land, the monetization of 5G use cases is a chief business challenge12

Well, the Korean CSPs found it hard to justify the move to SA13

Meanwhile, there is light at the end of the tunnel: 5G private mobile networks many use cases are on the rise13

But in the end, it all boils down to when to move to a cloud-based architecture13

 ...AND TECHNICAL CHALLENGES14

BEARING IN MIND ALL THE FOREGOING, THE 5GC SBA MARKET WILL GROW AT SOLID DOUBLE DIGITS THROUGH 2026 15

 5G CORE WILL CONTINUE TO MAKE THE BULK OF SALES THROUGH 2023.....16

 ASIA PACIFIC WILL BE THE LARGEST MARKET THROUGHOUT THE FORECAST PERIOD16

THE MULTI-DOMAIN NATURE OF 5G CORE SBA BRINGS A BROAD RANGE OF VENDORS..... 17

 BUT THIS CROWD IS MAKING THE CURRENT 5GC SBA ECOSYSTEM STRUCTURALLY CHALLENGED17

The main trend is continuation with existing vendors.....17

 TRADITIONAL TELECOM NETWORK EQUIPMENT VENDORS SEE 5GC SBA AS BUSINESS AS USUAL17

 ...SO DO MOBILE CORE NETWORK SPECIALISTS18

Cisco’s strategy for 5G core is a pure software play.....18

AT&T powers Microsoft Azure for Operators.....19

And Mavenir brings 15 years of core networks expertise and is already challenging the traditional equipment vendors.....21

 THE LIST OF SDM SPECIALISTS IS SHORT BUT SOLID22

Enea is a 55-year old Swedish company that has data storage and operating systems in its DNA23

Computaris went from billing and PCRF to HLR24

HPE launched its 5G core stack in 202024

Oracle is leveraging its 2013 Tekelec acquisition to offer a full set of 5G SBA NFs25

BY CONTRAST, THE LIST OF PCRF VENDORS IS VERY LONG26

Struggling Openet was acquired by Amdocs27

NSSF AND CHF IS BRINGING OSS/BSS PROVIDERS ON BOARD27

Amdocs has been leading the BSS market for more than a decade28

SYSTEM INTEGRATORS AND PROVIDERS OF IT SERVICES BRING ALL PIECES TOGETHER28

AND FINALLY, AS IF ALL THESE VENDORS WERE NOT “OPEN” ENOUGH, TIP AND HPE ARE TAKING CARE OF IT29

Abstract

As 5G goes far beyond mobile and will eventually become THE network that bridges all networks together, a new sophisticated service-based architecture (SBA) is being designed by the Third Generation Partnership Project (3GPP). Although many of the network functions featured in the SBA come from existing ones currently active in 2G/3G and 4G networks, novel ones such as the network slice selection function (NSSF) are being introduced and will soon be launched. Based on a service provider survey and discussions with many vendors, this report analyzes dozens of functions and then sizes and forecasts the SBA market by ranking, focusing on the most imminent ones to be implemented in each region.