

Cloud Based
Telco Networks
Journey to a
Cloud Native
Operator

Telco Cloud: The journey has only started

Communication Service Providers (CSPs) have started virtualizing their networks, but there is a demand for a cloud native approach to match business needs.

CSPs main challenges



Complex network management

57% of CSPs are experiencing difficulties in end-to-end (E2E) service management



Demanding 5G services

3.5 bn of 5G subscriptions globally are expected by the end of 2026



Coopetition with hyperscalers

USD **5 bn** will be invested by Microsoft alone in IoT and "intelligent edge"



Complex network security

49% of CSPs believe that network complexity can bring new vulnerabilities



Lack of right skill set/profile

47% of CSPs feel they need to attract the right skills and re-train employees



Higher costs but steady revenues

2.5 - 5.7% contraction in CSPs revenues worldwide due to Covid-19

Why cloud native telecom network functions?

NFV brought many benefits, nonetheless to benefit from 5G and next generation networks, NFV is not enough and Cloud Native strategy is a must.

Cloud native approach can enable the drivers to CSP invest in new technologies

Drivers of CSPs that tend to be innovative

82% Identified **reduced time to market** for new services

80% Identified improving ability to **adapt to changing business conditions**

73% Identified **reduced creation time for new service innovation**

Drivers of CSPs that tend to be traditional

60% Identified **reduced OpEX**

44% Identified **reduced time to market** for new services

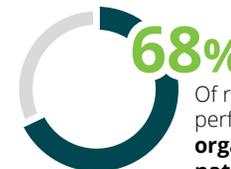
44% Identified **improving ability to adapt to changing business conditions**

Industry considerations regarding CSPs adopting a cloud native approach



40%

Of **CAGR growth** between 2019 and 2025, relative to expenses on multi-cloud network infrastructure, hardware and professional services



68%

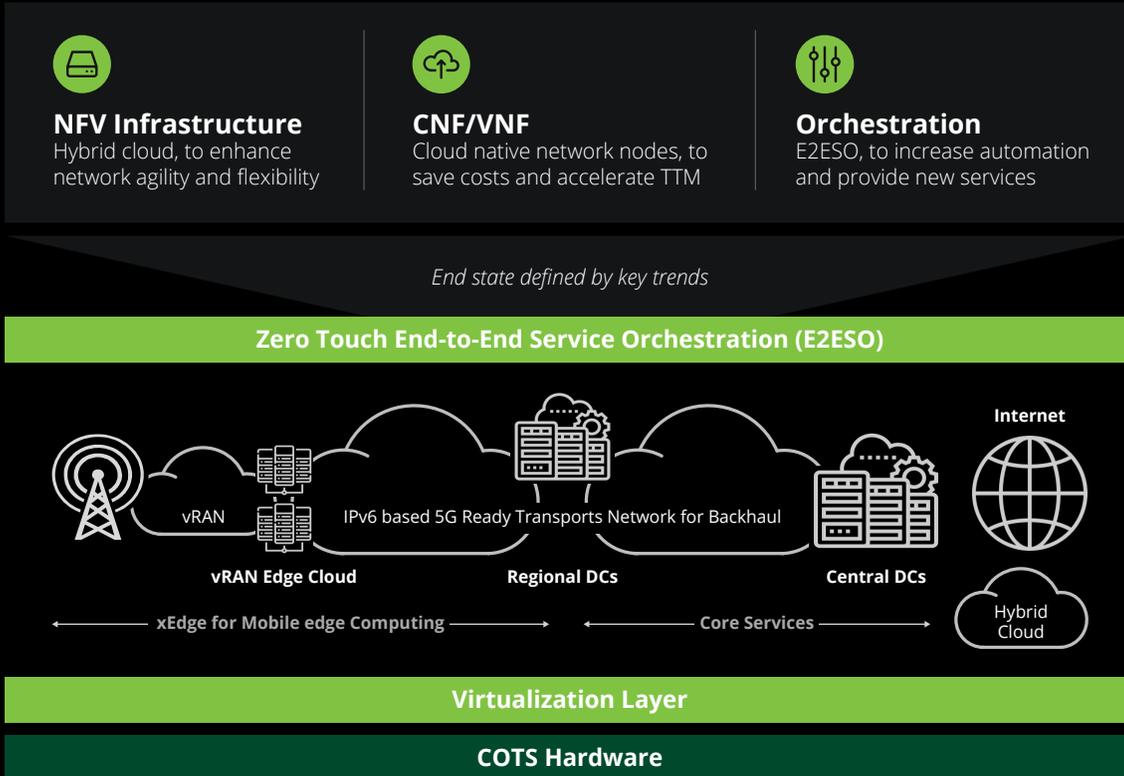
Of respondents, from a survey performed by O'Reilly, said their **organization has adopted cloud native infrastructure**. The main respondents were from Software companies and only a few from Telco companies

Sources: Analysis Mason, Cisco, Ericsson, IMB, Microsoft, oreilly.com, TM Forum, Analysis Manson

Telcos need to transform themselves in E2E cloud native Digital Service Providers (DSPs) in order to enable 5G and next generation networks

The Digital Service Provider network architecture

The future network is expected to have high levels of automation, enabled by a virtualized infrastructure that runs cloud native services, orchestrated by an E2ESO.



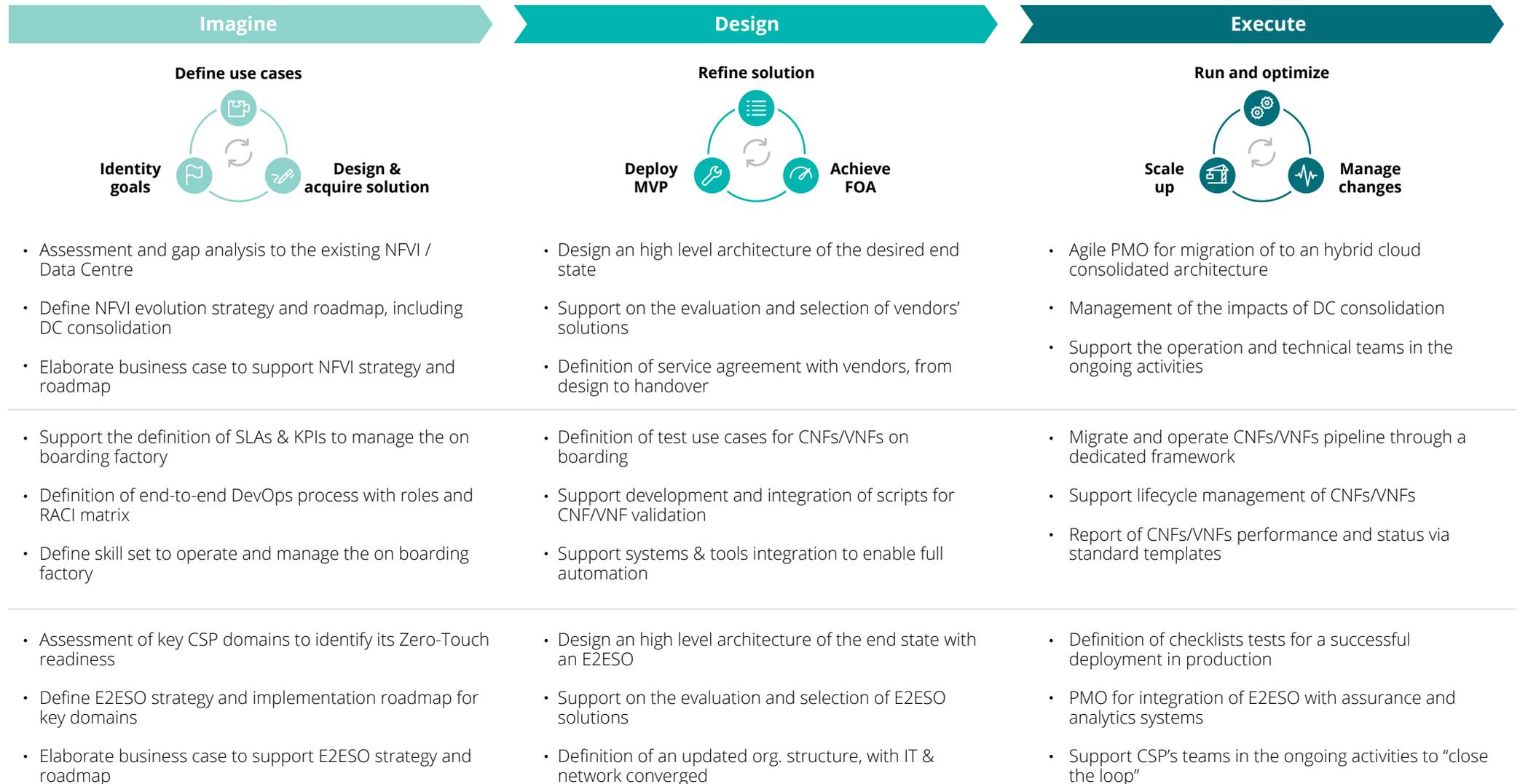
The journey to cloud native telco networks

The journey to cloud native is broken down into four maturity stages, each build on top of the previous one.



Telco Cloud Offer

Deloitte propose an Agile methodology adapted for each Telco maturity level and challenges in order to achieve cloud readiness, structuring the offer into 3 expertise areas for an effective implementation.



Our experience

Our team has extensive experience in supporting organisations evaluating, defining and implementing solutions to adopt a Cloud Native strategy.



Virtualization Demand Management

Deloitte has defined a Demand Management and reporting process according to IT best practices and adapted to client's context to support all NFV initiatives on requirements gathering, budget estimation, feasibility analysis and design.

Managed demand for 13 countries, with more than 1000 NFV initiatives analysed while supporting the creation of an NFV governance Agile model.



NFVI Sourcing Strategy

Deloitte supported the client implementing a network architecture based on trends such as NFV through the definition of a sourcing strategy and a roadmap aligned with the organization business drivers and market evolution.

Designed a detailed NFVI architecture and analysed 8 VIM solutions, 12 NFVI hardware vendors and 8 on-boarding suppliers.



E2E Process For Virtualized Network Functions

Deloitte has defined an E2E strategy, from on boarding to operations, across product and service lifecycle in order to accommodate the virtualized infrastructure, platforms and tools.

Managed an E2E transformation of the core network, which resulted in a 30% reduction of VNF on boarding time.



E2E Orchestrator Sourcing Strategy

Deloitte developed an RFP for vendor selection regarding a service orchestration solution. The definition of requirements had to take into account the integrations with all of the building blocks of the network as well as tender support.

Defined more than 500 requirements across domains to select a service orchestration solution and tested 3 use cases in a PoC phase.



From Pipelines To Cloud: Operator's Playbook

Deloitte has set up a partnership to develop a comprehensive whitepaper that explores a possible methodology and roadmap for a CSP's virtualization journey, focused on the technology dimension.

Defined a transformation roadmap for the E2E virtualization of a network, identifying 4 main Ages that a Telco has to go through.

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