

VIRTUALIZATION AND CONTROL IN MULTI-PROVIDER ENVIRONMENT: THE 5G EXCHANGE APPROACH



The 5G Infrastructure Public Private Partnership



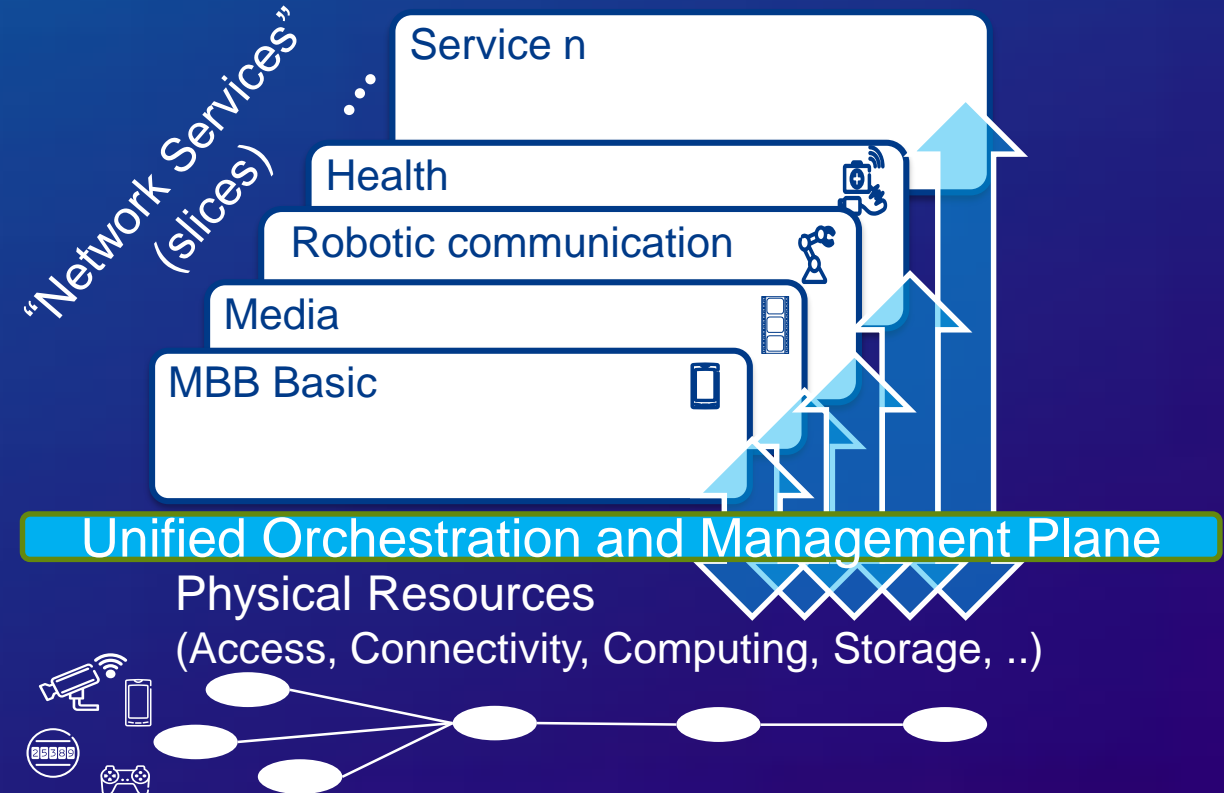
Robert Szabo



5G ONE NETWORK – MULTIPLE INDUSTRIES

From dedicated physical networks and resources for different applications...

...to a “network factory” where **resources are traded and** new architectures are “manufactured by SW”



PROGRAMMABILITY IS KEY FOR 5G

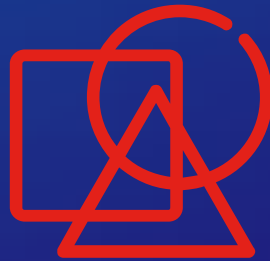
Service Agility

Shorten the time for service creation and service adaptation (e.g., scaling).



Service Diversity

Share a single infrastructure among multiple services with wide range of requirements.



Resource Efficiency

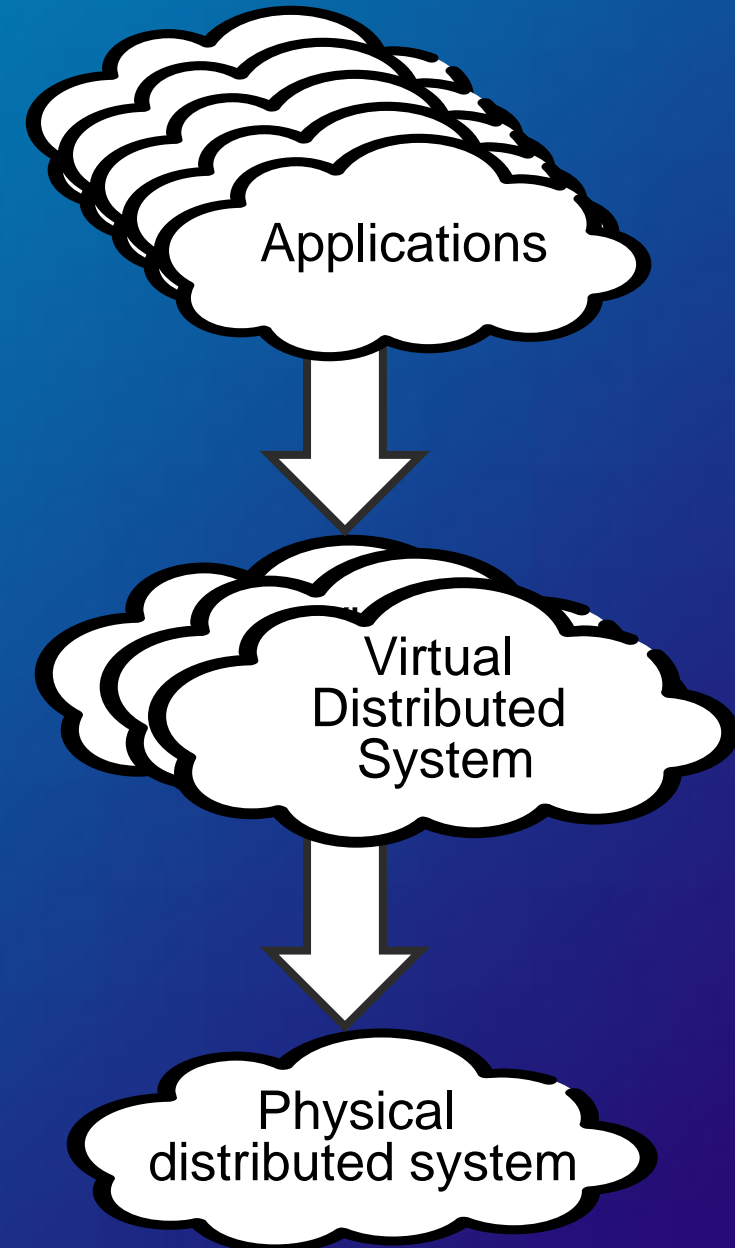
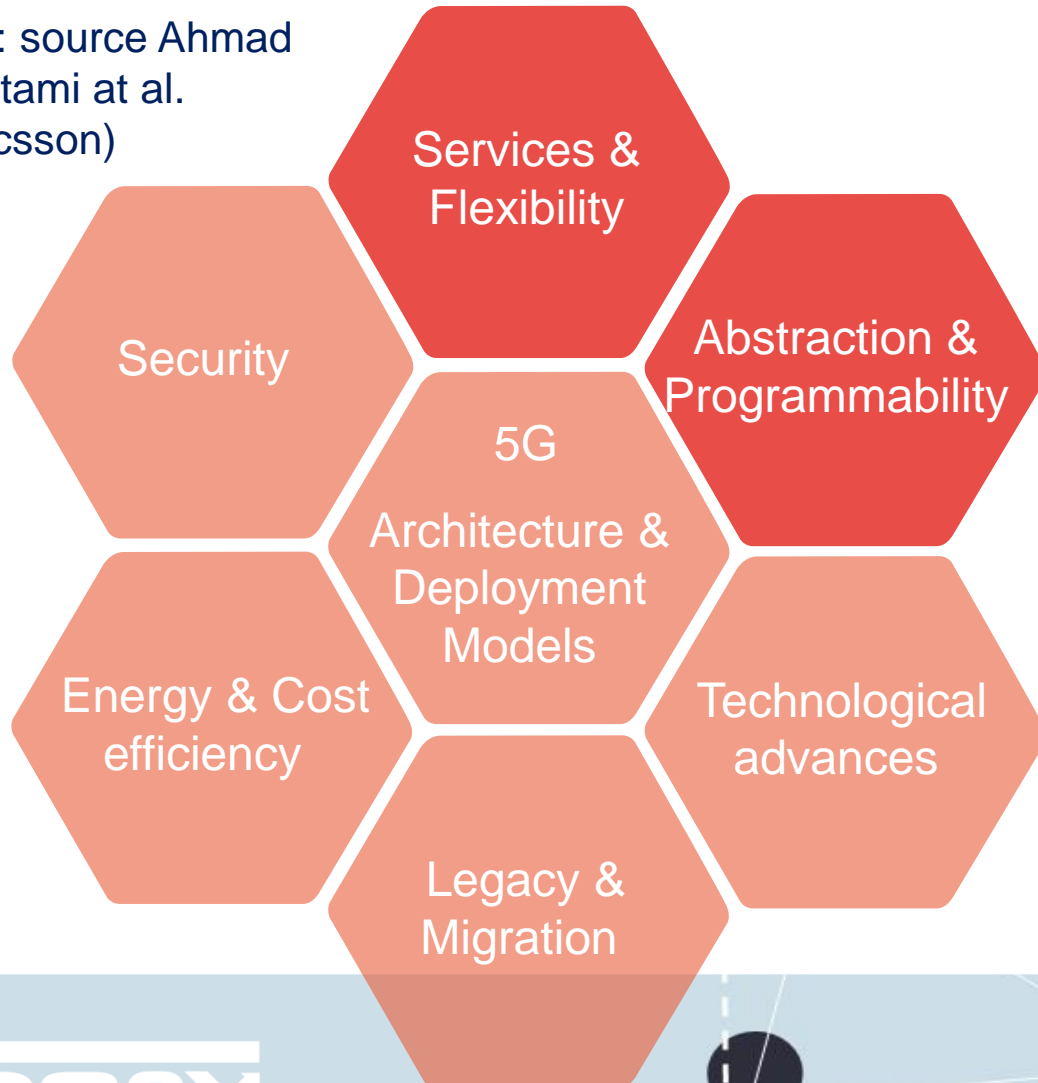
Dynamically allocate the right amount of resources when and where needed.



Source: Ahmad Rostami et al. (Ericsson)

5G BRINGS TOUGH REQUIREMENTS

Left: source Ahmad Rostami et al. (Ericsson)

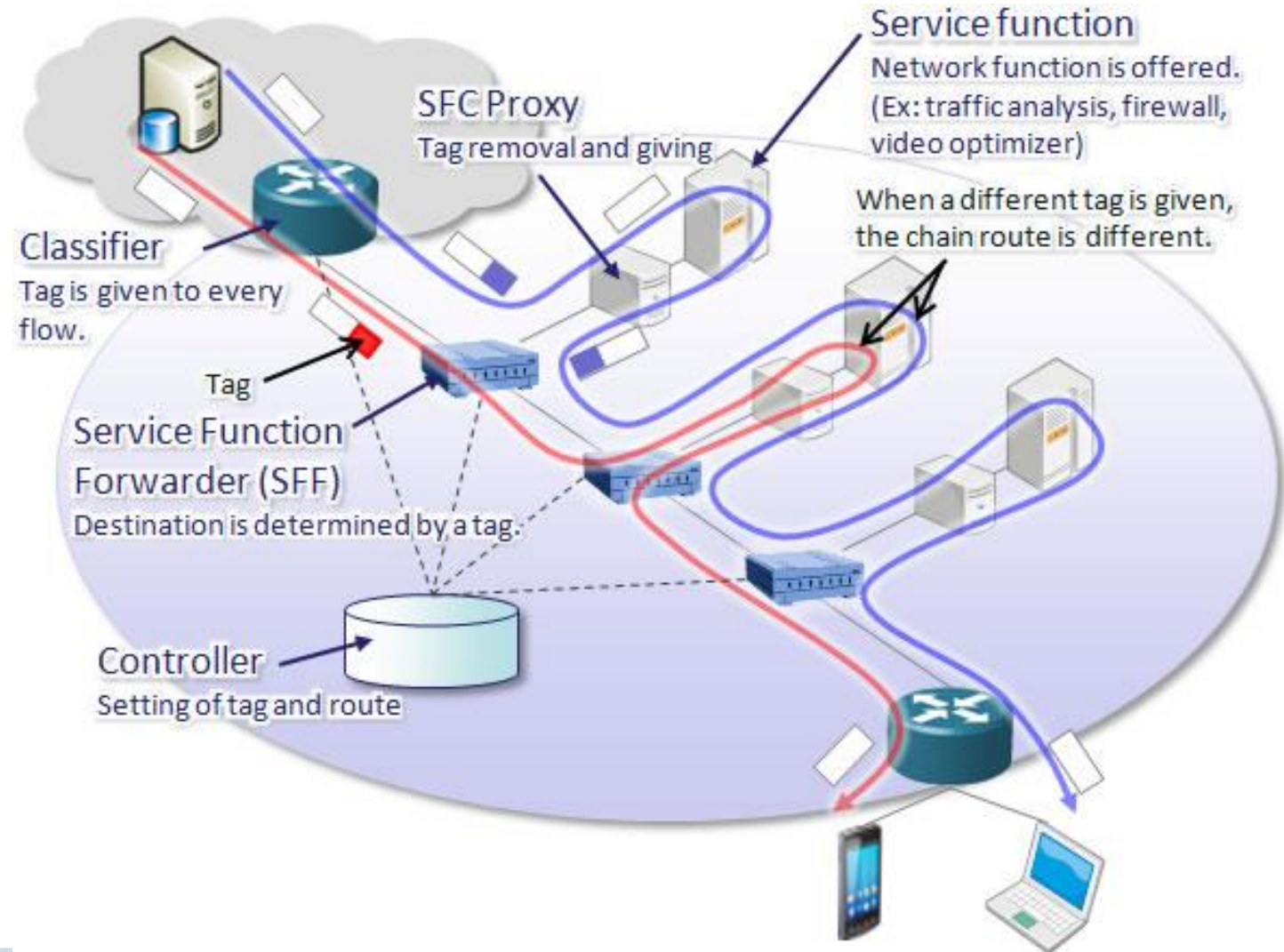


“World’s first demonstration of interoperability of new IETF method for service chaining involving six companies” -- February 12, 2015, source NTT <http://www.ntt.co.jp/news2015/1502e/150212a.html>

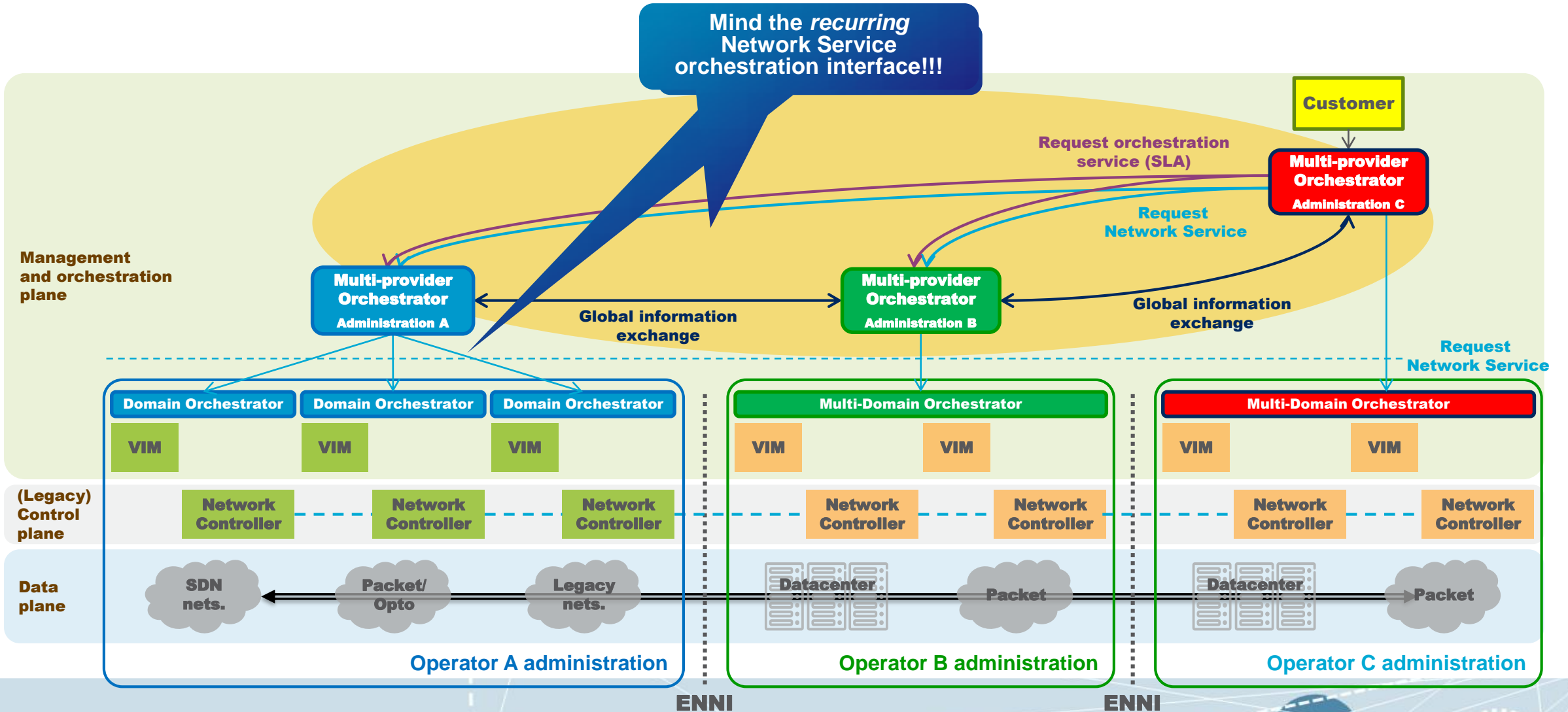
APPLICATIONS
➔

NETWORK
SLICES

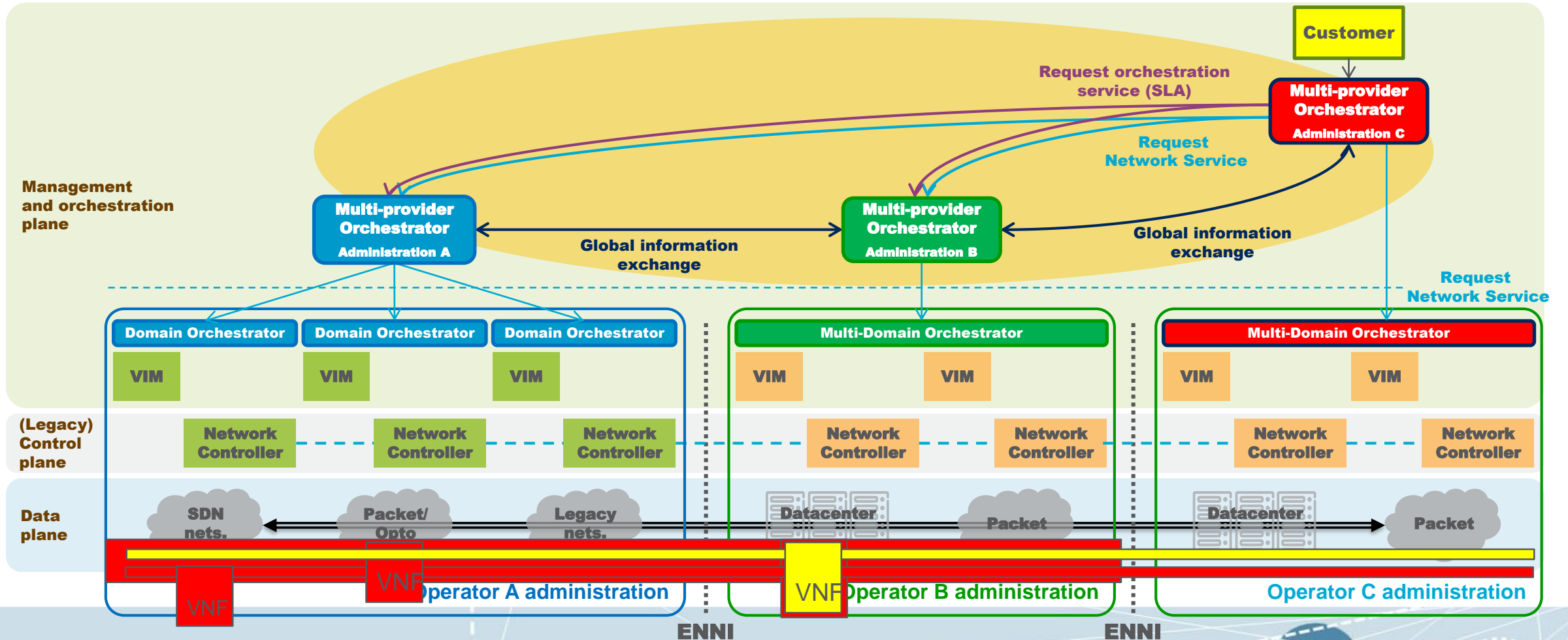
➔
NFV + SERVICE
FUNCTION
CHAINING (SFC)



MULTI-PROVIDER OPERATION



NETWORK SERVICE (~ SLICE)



SUMMARY

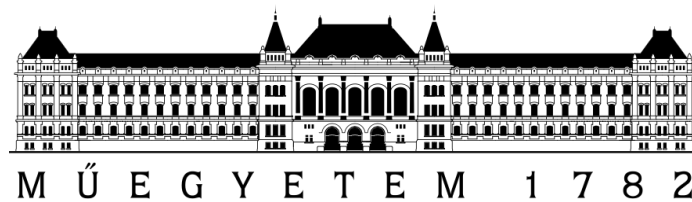
5GEx pursues
Abstractions and Programmability in
Multi-Provider Environments,
which are key
components for 5G ...

... to achieve
› Service Agility
and
› Service Diversity

PARTNERS



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