NECOS
(Novel Enablers for Cloud Slicing)

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UFRN

19º WRNP
Workshop RNP
7 | 8 MAIO
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Qual o problema atacado no projeto e o que será gerado de novidade para atendê-lo?

automated and efficient resource allocation of a common infrastructure constituted by datacenters, along with their network interconnections, to attend heterogeneous IT service requests.

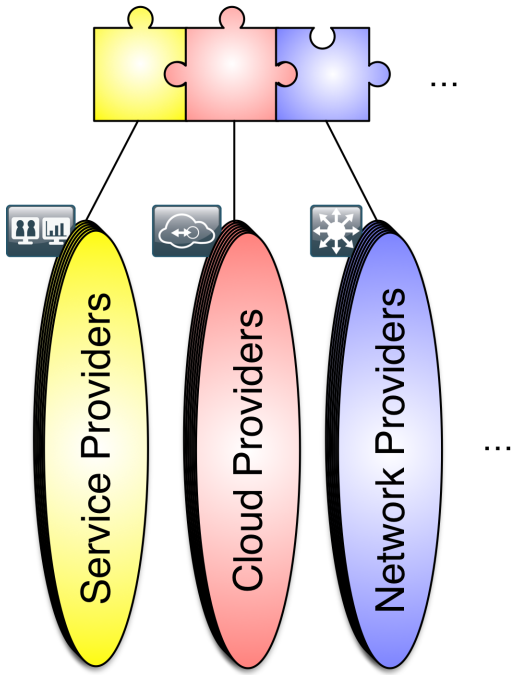
Evolve the cloud computing classic model, where different types of resources (computing, networks, etc.) are managed and allocated separately, towards a more aggregate model in perspective of the benefits:

- Cost (OPEX/CAPEX) reduction, mitigating the need for building new physical infra and hindering staff.
- Complexity optimizations, seeking to reduce operation time-responses, low resource usage.
- Wight of existing solutions (cannot attend both small players and resource-constrained edge infra).

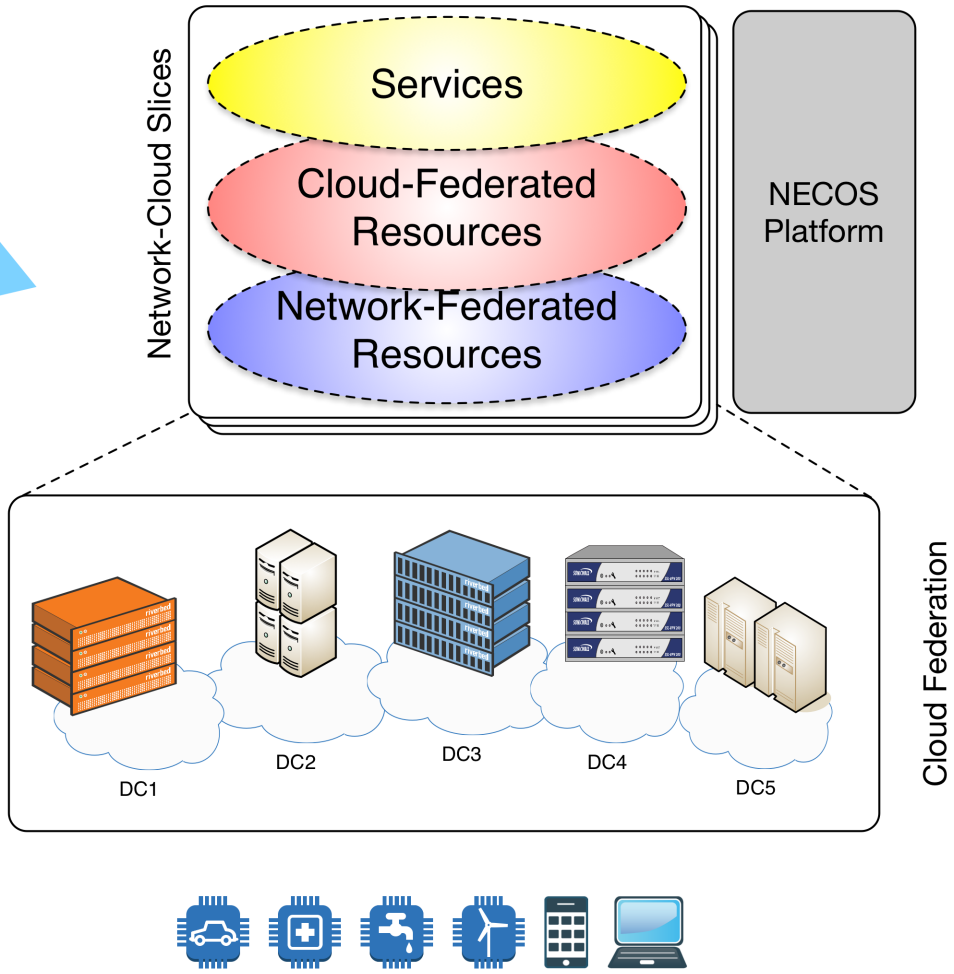
<u>Novelties:</u>

- Raising of the Network-Cloud Slice concept, which aims at unifying/aggregating different types of resources in a sense to orchestrate them in a joint vision.
- Lightweight Slice Defined Cloud (LSCD)
- Raising of the Slice as a Service model in a cloud-Federated environment

Conventional Cloud Service



NECOS Slice-Defined Network Cloud



Qual o público alvo, no Brasil e na Europa, do projeto e quais serão os benefícios gerados para eles ao final do projeto?

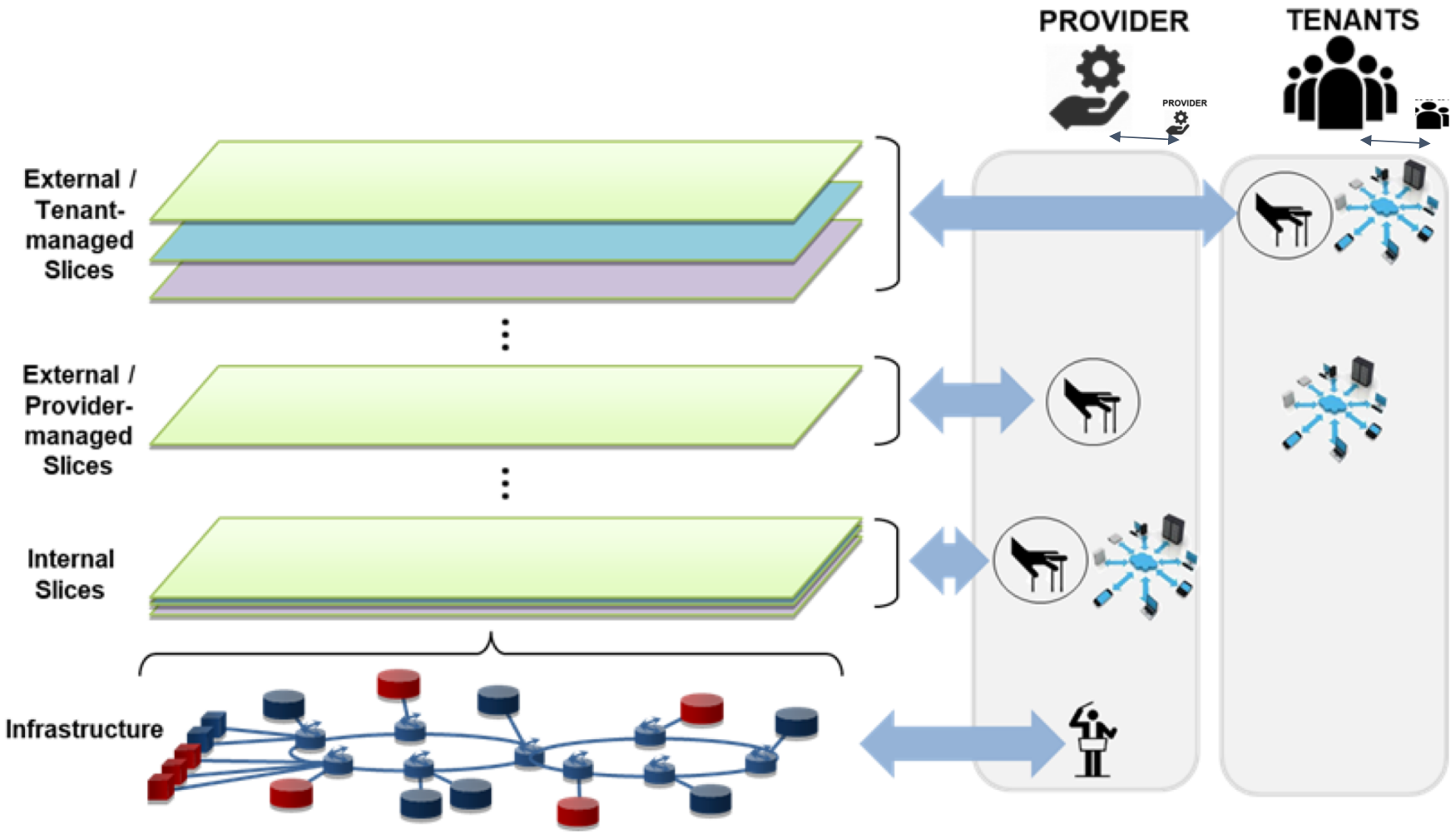
Small players/infrastructure owners

External view: Service developers -> top abstraction over a distributed infra more close to the final users

Internal view: Service providers can leverage NECOS LSDC concept for better designing and planning of their services

Marketplace: Infra Providers / Slice Providers vs. Tenants (ex: small players, start-ups)

- new business models beyond infrastructure sharing (e.g., current co-location and radio antennas or access network sharing) to broad resource trading in open win-win marketplaces


PROVIDER
TENANTS
PROVIDER
External / Tenant-managed Slices
External / Provider-managed Slices
Internal Slices
Infrastructure

If you could determine what is most innovative about your project in terms of the market, what would it be? And in terms of research?

Market innovation:

New service and business models (e.g., new choices in both control and responsibilities)

Scientific innovation:

Automated software-oriented workflows for both slice lifecycle deployment and management in federated cloud environments

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Thanks

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