ETSI ENI PoC#4

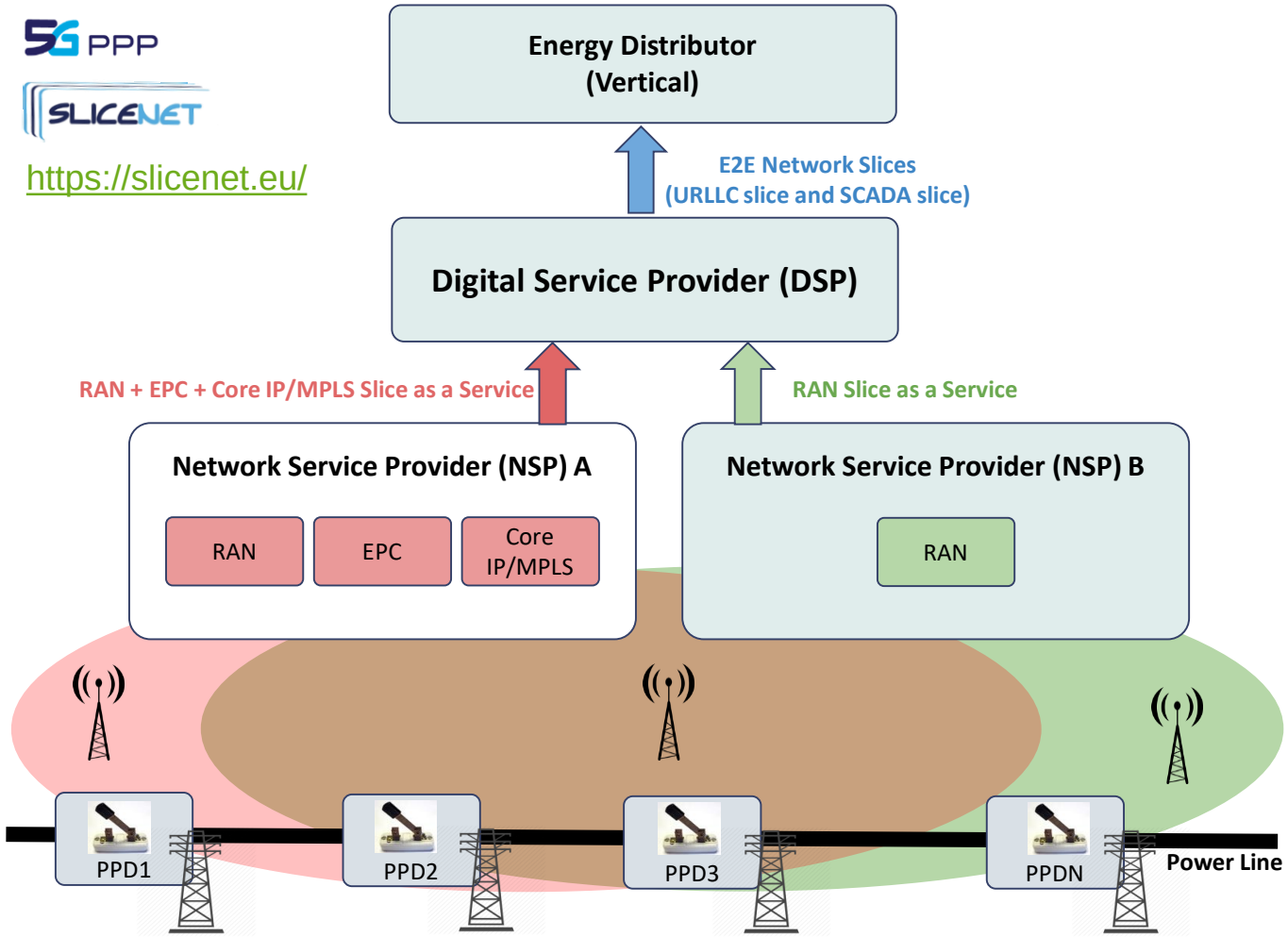
Predictive Fault management of E2E Multi-domain Network Slices

PoC Status and Demo @ ENI#15

PoC#4 Status

ENI PoC project #4: Predictive Fault management of Network Slices (Present Scenario)

https://slicenet.eu/



- PoC scenario is a power grid vertical, that uses 5G to provide time sensitive communications for grid protection mechanisms. A Network Slice is provided by a DSP for that effect.

- PoC is focused on the **NSP** functions
  - NSP A provides a network slice
  - NSP A monitors Sub-slices behaviour
  - NSP A predicts Sub-slice failure
  - NSP A decides best proactive mitigation strategy
  - NSP A enforces the actions necessary to keep the network slice operational and complying to the SLA.

https://eniwiki.etsi.org/index.php?title=PoC#PoC.234:_Predictive_Fault_management_of_E2E_Multi-domain_Network_Slices

ENI PoC#4 General Status Report

- PoC#4 is now completed
- SliceNet project has ended

ENI PoC#4 Goals attainment

Goal	Goal Status
Network Slice Fault Prediction: *Demonstrate the use of AI on performance data to be able to accurately predict failure situations on Network Slices and estimate their impact on an E2E multi-domain slice performance*.	This Goal is **partially attained.** *The use of AI on performance data to be able to accurately predict failure situations on Network Slices* has been fully proven and is already available on the PoC. Nevertheless, major changes in the PoC scenario have restricted the PoC to a single administrative domain, hence the *impact on an E2E multi-domain slice performance* will not be assessed by the PoC, only the impact on a network slice performance in general.
Policy-based Network Slice Management: *Evaluate the use of a policy-based structure for slice composition decisions, as well as the mechanisms for policy definition on that same context.*	This Goal is **fully attained**. The scenario has changed from the DSP composing slices (building a E2E Slice from partial slices) provided by different Network Service Providers (NSP) to one where the scope is a single NSP, but still there is a policy-based structure taking decisions about slice composition for the single domain

PoC#4 Demo

NSP Optimization

PoC#4 Next Steps

Next steps

- If there is interest in further exploration of PoC#4, a dedicated session can be set up.
- Otherwise, PoC#4 is completed.

Thank you!

The **SliceNet** consortium wishes to thank the **ETSI ENI ISG** for the opportunity to share our work with a community of such relevance, and also for all the insight that was brought to the project by this collaboration.