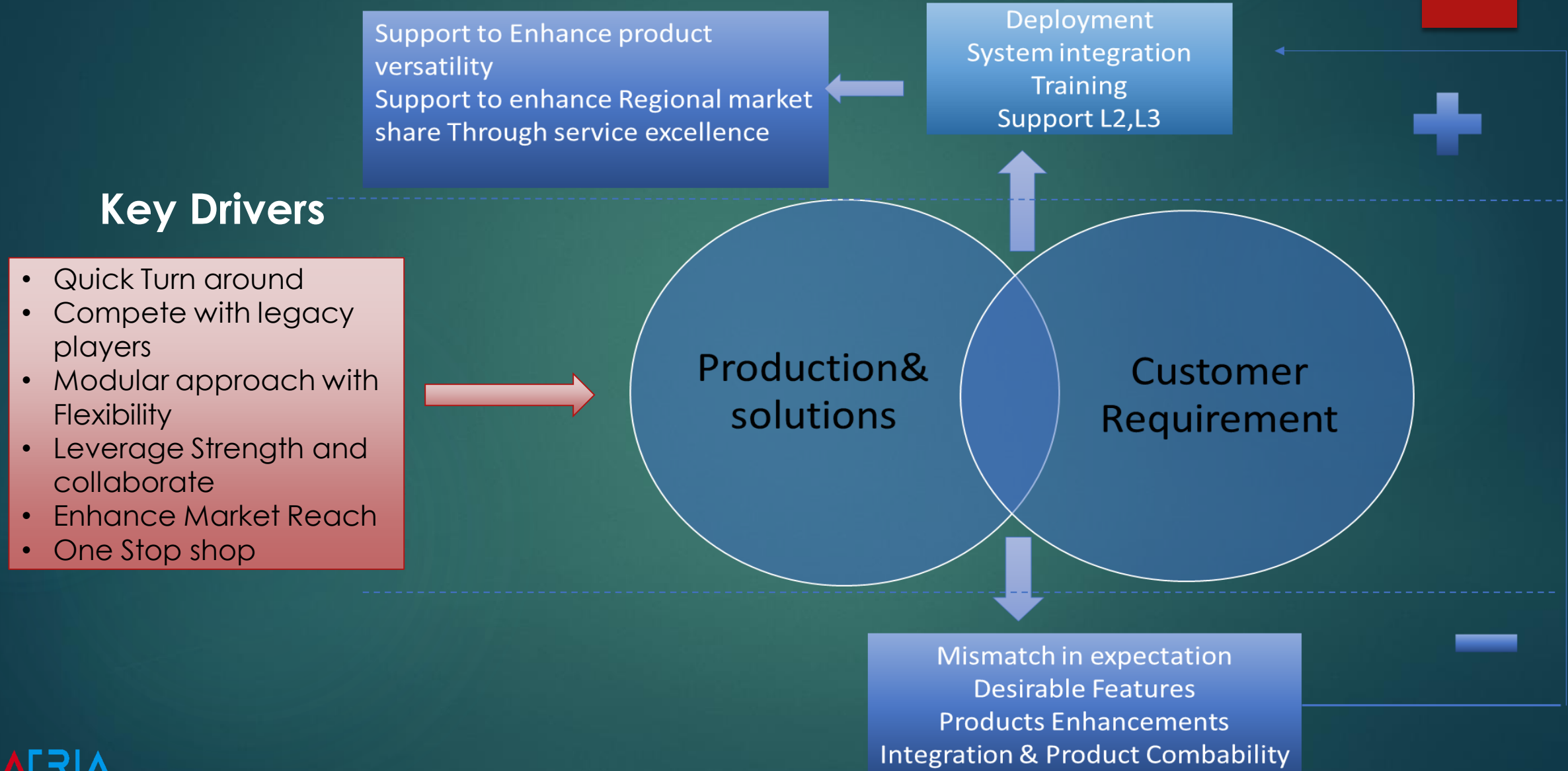


# SDN and NFV: **Bridging Gaps**

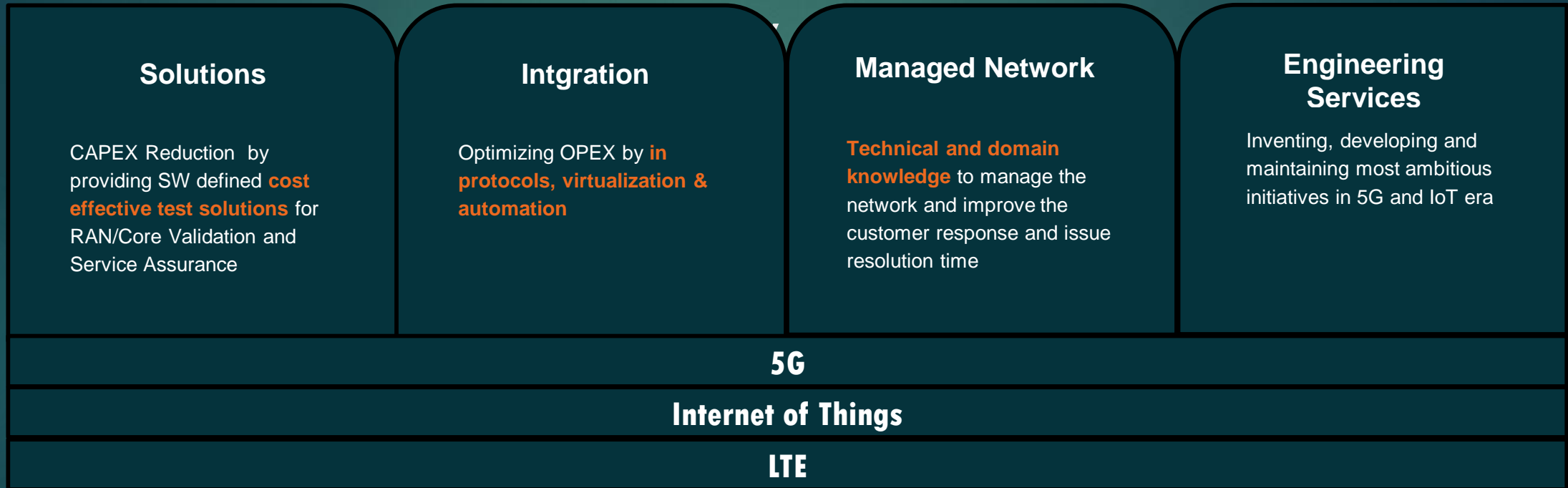
# Changing Dynamics

- ▶ Artificial intelligence and machine learning which analyses the behaviour of the system
- ▶ Monitoring Devices to give the complete analysis of data and support customer perceived network performance in IoT Era.
- ▶ Innovative ideas of 5G and IoT into reality specific to India deployment.
- ▶ Quick turn around time and reach to Customer through innovative products, ideas and analytics
- ▶ Digitalization initiative as set by government with executional supremacy.
- ▶ Support Enterprise segment and bridge the gap of requirement VS availability.

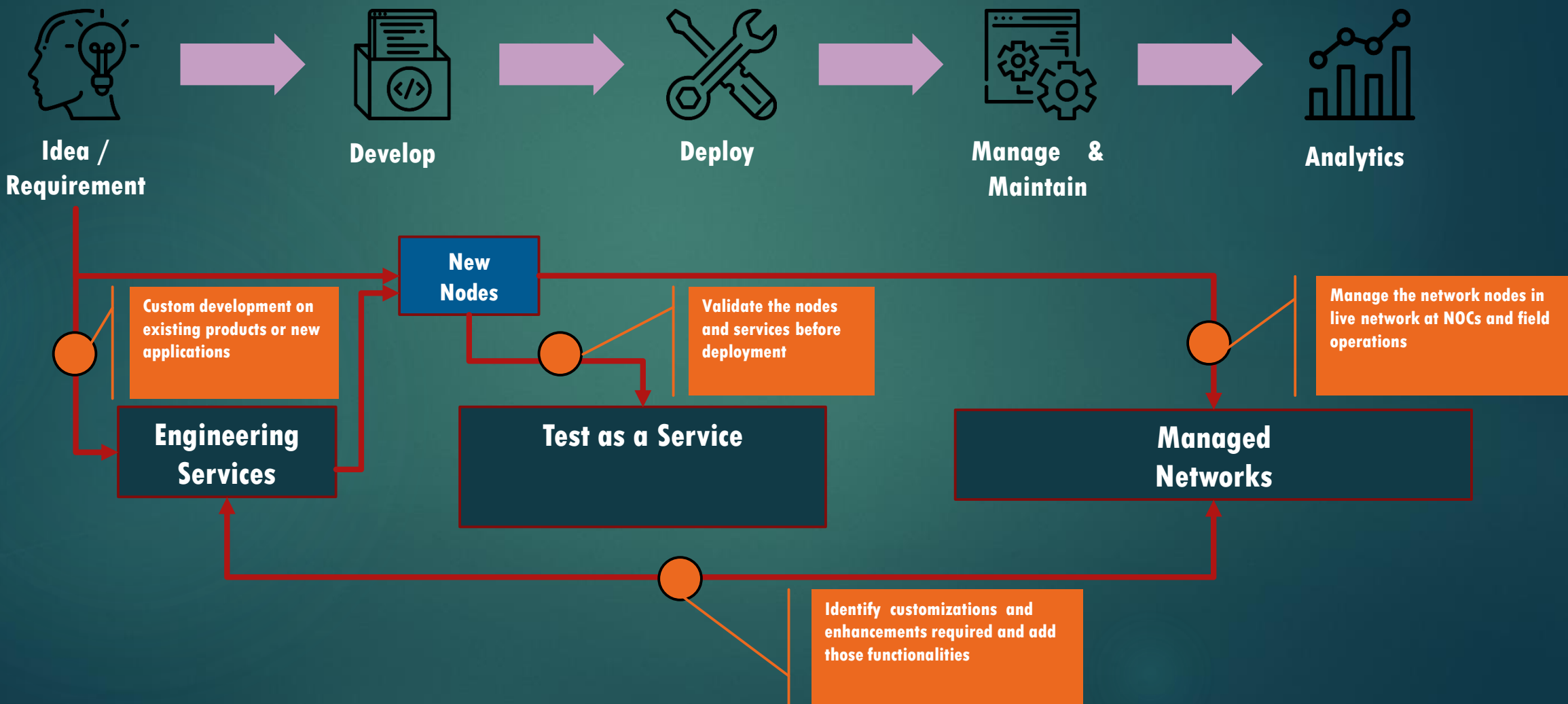
# Why SDR and NFV: Customer's Prospective



# Network Changing Dynamics



# New Product Service Life Cycle



## CLOUDIFICATION

Enterprises adopt the cloud as information technology infrastructure.

Performance of the cloud services.

Assessment and comparison of the perform virtualised or cloud infrastructure.

## NETWORK VIRTUALISATION

Operators develop, trial and implement virtualised network functions, developers and operators are faced with challenges to test and deploy their virtualised implementations.

Solutions are required to benchmark virtualised network functions under various conditions in the lab and then, as they are deployed in the network, Operators are challenged to understand their performance on an ongoing basis and to isolate and diagnose problems as network conditions change.

Benchmark virtualised network functions in the lab and to verify their performance

## NEW PRODCUTS AND SERVICES

As vehicles adopt higher levels of Assisted Driver & Safety functions the in-vehicle networking becomes complex, NFV and SDR becomes critical, and the reliability is essential.

New testing solutions will be needed to test and secure networking technologies used by vehicles. The development of autonomous cars will require real-world simulation solutions and emulation of GNSS cyber attacks.

Certified V2X emulation test bed to complement set of solutions for testing the conformance and performance of Automotive Ethernet.

# Key Challenges

- Too many moving parts and old network inventory across multiple domains which needs to work seamlessly
- Need quick turn around time and capex and opex reduction
- Revenue generation roadmap needs to be co-created : collaboration model
- Internet based model and standard API to drive across each domain like transport, RAN and cloud
- Assurance and fulfilment not stitched seamlessly towards end customer. Focus through software development and analytics needs to make it happen
- While ML and AI is being talked for network efficiency but gap is in network modelling which needs continuous joint development

# Key Challenges in NFV : testing and Integration

- IMS Testing
- VoLTE Testing
- LTE EPC and 5GC testing
- LTE EPC simulation for eNode b testing
- 5GC simulation for gNode b testing
- IoT platform (on cloud) testing

**Innovative Solutioning, testing and validation is the service differentiation**



Thank You

