The core objective of CogNet is to develop an open, scalable and high performing real-time network management platform that processes data from multiple network nodes and enables autonomic infrastructure management while demonstrating the capability to scale to the network topologies and address the levels of resource optimisation required by 5G.

**CogNet Architecture**

- Network Function Virtualization infrastructure (NFVi)
- Virtual Network Function (VNFs)
- Management and orchestration block (MANO) based on NFV ETSI standard
- Machine Learning (ML) block which consists of the following blocks:
  - **CogNet Smart Engine**: receives and pre-processes records, selects algorithms, then applies selected models
  - **CogNet Optimizer**: transforms the outputs of CSM into optimisation functions
  - **Policy Distribution**: translates the policies from the Policy Repository and send them directly to the MANO Block, Tenant Controller and OSS/BSS/VTN

**How Machine-Learning algorithms can help the network environment:**

- Traffic classification
- Anomaly detection
- Demand forecasting
- Autonomous policy generation
- Visualization

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