5G Edge Automation & Intelligence
“Edge computing is an integral technology towards 5G. This dynamic duo of complementary technologies will enable a plethora of use cases that will enable them to flourish in its full potential.

While 5G reduces the network latency drastically, edge computing will place compute and storage within the telco infrastructure eliminating backhaul latency. This will positively impact the experience of enterprises and consumers alike.”

Chris Pearson, President, 5G Americas
“The ultimate goal of the unique symbiosis between 5G and edge involves increased performance guarantees, enhanced workload balancing, improved processing capabilities and performance via 5G edge automation and optimization, with greatly reduced human intervention.”

Meryem Simsek, Lead Scientist, VMware
“Carriers are embracing AI/ML technology to deliver the promise of 5G and increased levels of automation in the network. The convergence of communication and computing is creating innovative opportunities to deploy and integrate 5G, edge artificial intelligence and cloud capabilities. This can help address a diverse set of use cases that ultimately deliver better business outcomes across a range of industries.”

Clark Chen, Senior Staff Engineer and Research Manager at Intel
Autonomic decision-making driven by external goals and context.
C-SON and D-SON control loops in O-RAN.
General framework of 5G (core) network automation
Intelligent Automation solution architecture.
3GPP network slice lifecycle management
Edge automation and control framework.
Distributed edge to meet the need of 5G applications

<table>
<thead>
<tr>
<th>Deep edge 1,000s of sites</th>
<th>Edge 10s-100s of sites</th>
<th>Central data centers &lt;10 sites</th>
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</thead>
<tbody>
<tr>
<td>~1-5ms RTT latency</td>
<td>~5-20ms RTT latency</td>
<td>~20-50ms RTT latency</td>
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<tr>
<td>&lt; 20 services/site</td>
<td>10 to 80 services/site</td>
<td>&gt; 40 services/site</td>
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</tbody>
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Public clouds

Internet
Overview of XAI methods and their link to data, ML, and MR.