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## Summary

Nokia held an online forum for industry analysts last week. Over four days of presentations, the company presented a compelling case for why it will remain a top tier supplier to telcos as they evolve networks and business models over the next 5-10 years. The company also highlighted strong positioning for new opportunities related to webscale/cloud and private (enterprise) networks. In the telco network infrastructure (telco NI) market, Nokia is #3 behind Huawei and Ericsson, but #2 (behind only Huawei) if you exclude services. It has a comprehensive offering across mobile, fixed broadband, optical, IP, subsea, and software, and has strong R&D chops. In the webscale/cloud world, Nokia is a relative newcomer but was among the earliest big telco-focused vendors to launch deep collaborations with the three main cloud players. Further, it has reorganized the company to go after “cloud and network services” opportunities. The company is credible when it talks about the importance of sustainability, which deserves far more attention than it gets, and which Nokia’s customers will care more about every year as energy bills rise and climate change worsens. While Nokia has plenty of competition in both its core telco and cloud/enterprise markets, the weakening of Huawei in the last 3 years is another boost for the company. The future looks good for Nokia.

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## Nokia's current market position

Finland-based Nokia recorded \$26.7B in corporate revenues in the 12 months through Sept. 2021, roughly 81% of which came from the telco market. This ratio has been falling over the last few years, from over 90% in 1Q17 just after closing its acquisition of Alcatel-Lucent, to 80.8% in 3Q21. This diversification is a long-term positive, even if expanding its non-telco position carries short-term costs.

In Nokia's financial reporting, the company presents results for four segments: Mobile Networks (RAN and microwave), Network Infrastructure (fixed broadband, optical, subsea, and IP), Cloud and Network Services (cloud native software and consulting, as-a-service delivery models, and private wireless), and Nokia Technologies (technology licensing). For the first three quarters of 2021 (YTD21), Nokia Technologies was just 7% of revenues but contributed the most to operating profit, 48% of total. Clearly, Nokia's portfolio of IP should not be overlooked. The wireline-focused Network Infrastructure group was the second most profitable, accounting for 34% of YTD21 revenues and 29% of operating profits. Mobile Networks added 44% of YTD21 revenues but just 27% of operating profits, a bit behind NI.

Finally, Nokia's growth segment, CNS, made up just 13% of YTD21 revenues and accounted for just 1% of YTD21 operating profits. Nokia is investing heavily in the CNS group in hope of future returns. That includes “quite a bit of co-creation with the hyperscalers”, per Jitin Bhandari, CNS' CTO. It also includes development of network as a service (NaaS) functions and business models, and cultivation of a growing list of private wireless customers: it added 101 in 3Q21, bringing its total to 380.

Figure 1 illustrates Nokia's market position in overall telco network infrastructure, or telco NI. The telco NI market here is broadly defined to include all hardware, software and services sold to telcos. This is much more expansive than the scope of Nokia's similarly named “network infrastructure” group.