inCode Consulting Announces Top 10 Industry Predictions for 2020

inCode Consulting, a division of Ericsson, Inc., today announces its Top 10 predictions for events that will shape the Telecom, Media, and Technology industry in 2020. The predictions cover the evolution of fixed and wireless broadband, the evolution of 5G, connected devices, privacy regulations, virtualized infrastructure, and more. The predictions, which provide a window into the future, help Telecom, Media, and Technology players, partners, and customers plan for 2020 and beyond.

Since 2003, inCode Consulting, a leading business strategy and technology consulting firm, has been releasing its annual Top 10 predictions correctly predicting events occurring within the year with over 70% accuracy.

1	I Feel Pretty and Witty and Light

Cableco MVNOs are gaining a large portion of net postpaid adds in the wireless industry, but reliance on host operator is limiting profitability. Growth in subscribers creates the economies of scale necessary to build RAN networks and create new offload partnerships. Additionally, private network operators are growing core network builds and evaluating RAN network extensions. Aided by new opportunities with CBRS, MVNOs will continue to offload MNO traffic through own wireless builds. **In 2020, at least one major MVNO offloads 33% of its MNO traffic.**

2	CBRS Innovation Band Spurs New Use Cases

CBRS mid-band spectrum can enable a range of use cases and business models with standards, equipment, and spectrum ready for next year. Many players are already gearing up for this spectrum band. CBRS spectrum is in the mid-band range, which is a sweet spot between capacity and coverage benefits. CBRS deployment is ready next year, driving innovation in eMBB, FWA, private networks, and neutral host. A range of players, such as Federated

Wireless and the PGA are already investments and receiving investments for development. **In 2020, one or more dedicated capital funds created to develop new CBRS use cases.**

3	**The Smart City Integrates IoT**

Cities need to create comprehensive plans to understand synergies between projects and maximize the value of their investments to gain the full benefits of Smart City investments. Cities are currently issuing RFPs on many Smart City projects, prominently in traffic management and public safety. Several cities, most prominently Chicago, are creating data hubs to integrate projects together. To achieve maximum benefits from Smart City investments, cities must leverage projects together to create synergies. **In 2020, the Top 10 MSAs all embrace Smart Cities by releasing comprehensive Smart City roadmaps.**

4	**Trickle-down Digital Transformation: Multi-cloud**

Multi-cloud benefits are driving more enterprise adoption including Tier-2 and Tier-3 CSPs. New industry offerings and Tier-1 critical-mass are driving adoption. Other industries have already moved to multi-cloud environments, with 72% of enterprises using at least two providers. Multiple providers allow companies to access the specialized capabilities of different providers. AT&T has led the way in the telecom industry and new start-ups and established providers are helping to orchestrate the environments. Tier-2 and Tier-3 CSPs will use this opportunity to leverage the additional applications and split their cloud usage. **In 2020, Two or more Tier-2 and Tier-3 CSPs will announce major multi-cloud deals as critical mass is reached and generates a trickle-down opportunity.**

5 | Virtualization is Contagious

Virtualization is expanding from core to RAN with vRAN poised to take off this year. Cost savings and successful trials of early deployments are driving the growth. The virtualization market is expected to hit $1B by 2023, driven mainly by opex savings. Rakuten has launched a trial with 5k users in California and other major operators are investing and testing vRAN solutions. **In 2020, A major mobile operator will deploy at least 50% of their traffic over vRAN in 10 markets.**

6 | Every Whole Foods a Data Center

Fiber densification and smaller data centers will move processing closer to the end user. Key use case growth demands intelligence closer to the end user. High bandwidth and low latency provided by edge data centers will unlock the capabilities of 5G networks, enabling next gen use cases including industrial automation and remote medicine. Tower companies and other real estate owners are positioning themselves to deploy edge data centers and new start-ups are expecting to roll-out sites across the US. **In 2020, the number of edge data centers will grow by 5x.**

7 | 5G: Catch Me If You Can

Increased risks associated with connected business activities will result in regulations governing cyber privacy and security. Data breaches are occurring with increasing regularity and the only way to protect the privacy of consumers is to protect their data. Cloud-based

storage allows for additional entry points for potential hackers. Other countries and states like California have passed data privacy and security laws. The increased audits of company security will lead to new regulations on security management. **In 2020, the US government issues and enforces regulations to increase security and privacy across the 5G network.**

8   Solving the Last Mile

FWA enabled by 5G is showing competitive performance compared to traditional broadband and will be deployed to fill gaps in underserved areas. FWA speeds can now rival commercially available fiber speeds in many areas and offer a capable 100Mbps service suitable for today's data demands. Millions of ex-urban and rural households are underserved by broadband providers and new FCC-led funding will accelerate FWA deployment. Many major wireless companies have or will release FWA products by next year. **In 2020, Fixed Wireless Access providers will have 2M subscribers receiving capable broadband services.**

9   Astronomers Despair: The Milky Way Gets Crowded

2019 saw the first launches from SpaceX and OneWeb mega-constellations. 2020 will show them beginning service and defining their business model. The traditional satellite business model is shrinking as more people cut the cord. There are many geographies not covered by current wireless networks and the price to deploy satellite networks is decreasing quickly. The launch of new mega-constellations next year and in 2021 will provide opportunities for new and existing satellite companies to define their new business models. **In 2020, satellite companies will sell both direct-to-consumer and backhaul services through partners.**

| 10 | **Long Tail Overtakes the Head** |

As more streaming video content becomes available, viewers consume content from a variety of sources, chipping away at lead OTT incumbents. Consumers view varied video content formats online and subscribe to multiple subscription services. The proliferation of new video content online has caused incumbents to lose market share, even as they grow overall. The growth of new services and video content will push past streaming SVOD services in 2020, as they pushed past Netflix alone in 2019. **In 2020, HTTP streaming overtakes top streaming platforms Netflix, Amazon, and Hulu in cumulative data usage.**

| 🎁 | **5G Sparks Joy!** |

Early 5G pricing approaches vary widely. As broad coverage becomes more widespread in 2020, operators will be able to deliver the expected consumer experience and justify premium pricing. Globally, operators have utilized multiple models to monetize 5G, including: Data tiers, incremental fees, and experiential pricing. Most of these plans increase prices by at least 20% over LTE. Broader coverage launches will make US consumers willing to pay this premium, if their expectations for experience are met. **In 2020, consumers get 5G value and operators coalesce around a pricing premium of 20% over 4G.**

About inCode Consulting

Founded in 1998, inCode Consulting, a division of Ericsson, Inc., is a respected business strategy and technology consulting firm with unique expertise within the telecom, media, and technology (TMT) industries. inCode distinguishes itself with its combination of deep technological expertise and exceptional strategic vision. Our industry focus allows us to integrate business insight with technology foresight, delivering tangible impact and sustainable value to our clients. From private equity firms to multi-billion-dollar companies, decision-makers have trusted inCode's unique approach to tackling unprecedented business challenges.

Please visit our website to learn more and read our past Top 10 Predictions – www.incodeconsulting.com Contact Koustuv Ghoshal – kghoshal@incodeconsulting.com with inquiries.