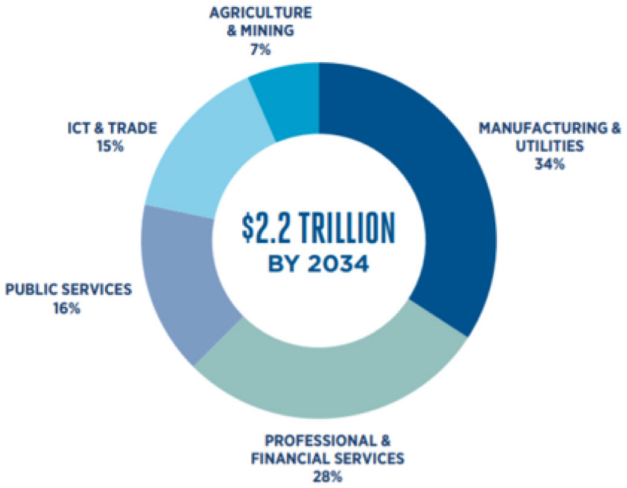
NEWNET SECURE TRANSACTIONS WHITE PAPER

5G Mobile, IoT Payments in Edge, Cloud

NewNet
SECURE PAYMENT TRANSACTIONS

The payment revolution **is here with 5G**

5G promises a whole new world of infinite possibilities and rewriting the world as we know, with assurances for an unprecedented level of connectedness among humans, machines, devices, and networks. With latency as low as 1ms, data rates as high as 20Gbps and ultra-extended bandwidths allowing to connect over 50 billion devices, 5G is elevating the computing in the cloud and network and further into the edge and the mobile devices. All industrial and business segments are expected to benefit from the 5G advancements in the decade ahead. GSMA projects 5G to add $2.2 trillion to global economy by 2034.

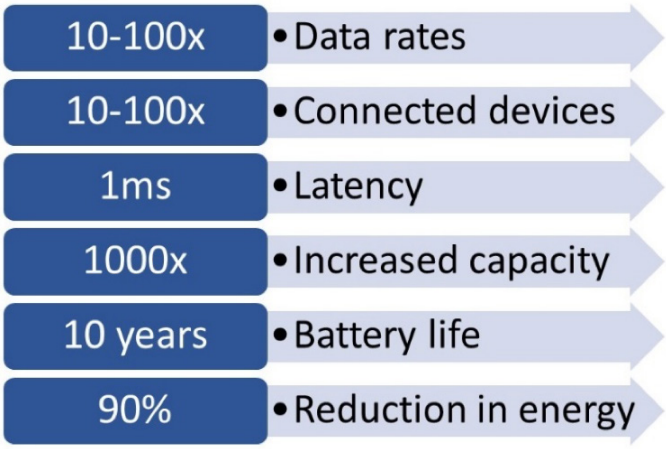


5G is expected to transform the world with the realization of exciting futuristic concepts including connected smart cities, self-driving cars, remote medical surgery, AI robots, AR/VR for shoppers, intelligent industries, guided drone deliveries. By building on the key blocks of enhanced Mobile Broadband (eMBB) for larger bandwidth leveraging 5G New Radio, Ultra Reliable Low Latency Communications (URLLC) for faster operations, and massive Machine Type Communications (mMTC) for higher connection density, 5G offers a completely new paradigm of a faster, bigger, better, and more cost efficient world.

Payments & 5G Networks

Mobile infrastructure and cloud enhancements together with the advent of edge computing that 5G standardizes, projects mobile payments to gain significantly in terms of speed, security, authentication, and user experience. IoT Payments from the fast emerging connected devices, wearables and smart equipment will generate payment volumes that could soon replicate or exceed the volumes from the current payment types on mobile, web or in store purchases. Mobile commerce is projected to explode with major advancements in Virtual Reality and Augmented Reality that the 5G can offer given the bandwidth and data rates. 5G will impact payments in a massive ways accelerating high speed payments, faster security procedures, direct consumer engagements, and big ticket purchases being simplified as normal transactions.

Virtualization, network slicing, and dedicated service models for technology solutions like Blockchain, further lays emphasis to 5G's influence on consumer and business payments as increasingly more payment acquirers and processors are making strong investments with blockchain for payment authorization, settlement, and reconciliation.



MNO's Payment Roles in 5G

5G brings with it the promise of super-fast data rates for uploads and downloads, ultra-low latency in transactions and better connectivity to the cloud, and faster computing in the edge. Real-time transactions are the biggest beneficiary of this technological advancement, as high speed data and faster computing offers significant aid to limit fraud by enabling suitable multi factor live authentication schemes. Further, this also helps to deliver new and innovative ways to provide consumer friendly mobile payment services. NewNet's payment transport, security, and access solutions in the edge and the cloud in 5G infrastructure leverages these capabilities to empower the 5G network providers with whole new services.

> **5G Ultra Wideband will eventually allow even more technology to connect, enabling the Internet of Things (IoT) on a truly massive scale. Today, there are some 14.2 billion connected 'things' in use, and that number is expected to grow to more than 55 billion by 2025.**
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> -- *Verizon reports*

With 5G creating ubiquitous network of networks, MNOs can recapture the role played by the Telcos in the past with payment transaction network infrastructure, and ramp up capability for securely routing and switching mobile, internet transactions as a premium service. NewNet is pioneering for over 3 decades in offering industry leading payment solutions for Telcos/MNOs for payment network services and transaction network services. NewNet's solutions leverage 5G's distributed computing models with the STC application for Mobile payment routing, transport and secure network access, empowerment of connected devices for IoT Payments, and offering cloud native solutions for both edge and core cloud compute segments. These solutions hold immense capability to enable the Mobile Network Operators and Mobile Service Providers to carve out expanded payment network service roles and direct payment acquiring, processing roles.

About NewNet Communication Technologies and NewNet's Secure Transaction Cloud (STC)

NewNet Communication Technologies is a leading provider of innovative payment and communication solutions. NewNet's Secure Payment Transactions BU offers secure payment solutions for global acquirers, processors, payment service providers, Mobile Network Operators, Telcos, FinTechs, ISOs, banks, and financial institutions. NewNet's secure payment systems facilitate payment transaction routing, secure network access and payment data security for the broader payment entities. NewNet systems deployed with our customers transport 1-in-4 transactions worldwide annually.

NewNet's Secure Transaction Cloud (STC) solutions offer NFV based virtualized secure payment applications for transaction transport, routing, and switching with specific Virtual Network Functions (VNF) for security (TLS, IPSec, SSH, HTTPS), transaction protocols (ISO20022, ISO8583, TPDU, VISA, XML), Tokenization, Host Interfaces, Load Balancing, etc. The virtualized capabilities allow the solution to support a wide range of payment types including Internet payments, mobile payments, IoT payments, POS based transactions which are IP/Mobile access based and all forms of eCommerce, mCommerce payments with PCI standards compliant security utilizing HSMs. **For enquiries, contact us at Traxcominfo@newnet.com**

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