Mobile data growth continues to accelerate, fueled by the adoption of smartphones, social media and video applications. As more mobile service providers move to 4G/LTE to manage this growth in their home networks, the road ahead to support service delivery outside the home network (eg., for roaming) remains relatively uncharted. IPX has attracted interest as a step towards inter-provider connectivity for rich media applications. However, IPX is insufficient to address all inter-provider challenges faced by mobile operators. Growing user demands for diverse and unpredictable broadband services, along with disruptive technologies, a changing competitive landscape and a dynamic ecosystem, are driving operators to “do more with less while delivering quality and enabling future innovation” – all in their quest to win at mobile broadband.

A s users demand “more, anywhere, now”, and more over-the-top players enter the marketplace, mobile operators are under even greater pressure to deliver services more efficiently, while being agile enough to respond to changing requirements. At the same time, the proliferation of new applications, particularly in terms of interactive rich media, challenges operators to enable and monetize rapid innovation from a diverse ecosystem of players to transcend basic experience, and innovation.

Winning at mobile broadband requires operators to examine their strategies across all aspects of business – network, service infrastructure, operations and business arrangements – to optimize on three key success levers: efficiency, quality user experience, and innovation. In short, mobile operators need to solve, in parallel, how to deliver existing services better with greater efficiency and build capabilities to quickly enable future services.

In addition to tackling these challenges within their home networks, mobile operators also recognize the importance of interconnection with other operators or content providers to deliver services to users outside of their networks. Effective interconnection and interworking between service providers, or breaking down the “walled garden”, is crucial to accelerating adoption of new broadband-enabled applications, such as video streaming, conferencing or multi-user gaming. However, the complexity of interworking multiplies exponentially with an increase in the number of operators and the number of real-time services.

IPX was developed to facilitate effective inter-provider network interconnection, but mobile operators need solutions beyond IPX to tackle the full range of challenges. So how can operators address the three success levers for interconnection to drive efficiency, deliver quality experience and monetise innovation?

DRIVE EFFICIENCY
At the network level, a key challenge is to manage service-specific networks while adapting to growing bandwidth demand for each application. Operators can drive efficiency and improve utilization by consolidating network infrastructure through shared access for multiple services over a common IP-based infrastructure. Scale, flexibility, low costs and multi-service support are required functions for the inter-provider network as for the core network.

For existing services, driving efficiency translates to consolidating network for shared access, streamlining operations process, and simplifying interconnect arrangements. For example, access to a leading on-net mobile service community, as such signaling or video conferencing, allows operators to connect to a network of providers to expand coverage without the complexity of managing bilateral arrangements.

Further, operators can consider managed services from experienced third parties. This can further streamline inter-provider relationships, end-to-end service delivery, and operations. The industry has a strong track record of leveraging outside expertise and resources to augment internal capabilities. This managed option is gaining greater acceptance for inter-provider interconnect functions, such as managed roaming hub, managed international voice termination, security, and revenue assurance.

Looking forward, operators should ensure that their service infrastructure can support the evolution of existing services, such as voice over LTE and LTE roaming, as well as the emergence of bandwidth-intensive interactive rich media applications.

MONETISE INNOVATION
With significant investment in mobile broadband, operators are looking for ways to create new revenue streams. A multi-service IP-based network enables operators to roll out new services faster by reducing network setup time. Value-added application enablement solutions offer opportunities to monetise on differentiated user experience across services, particularly for rich media applications. By allowing application providers to leverage these application enablement or managed operations capabilities, operators create win-win scenarios for faster revenue growth.

CONCLUSION
To drive efficiency, deliver quality user experience, and monetise on innovation, mobile operators need to consider network, services, operations, and business components for mobile broadband inter-provider service delivery and management. Opportunities exist to create the right interconnect infrastructure beyond IPX for operators to win at mobile broadband. This involves leveraging managed operations and service delivery alternatives, along with smarter infrastructure decisions, simplified interconnect arrangements and application enablement.