APAC
Telecom Radar

Autumn 2024

twimbit

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Twimbit is a research and advisory firm driven by a singular mission: to empower businesses making a difference. We specialise in providing invaluable industry intelligence to executives and teams, catalysing innovation and growth.

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Key Innovations explored

- **Bharti Airtel's Spam Detection**: Real-time, network-integrated AI systems effectively reduce spam, enhance user trust, and set new standards in telecom security, demonstrating the importance of technology-driven solutions in customer protection.

- **CelcomDigi and BoomGrow Precision Farming**: Integrating 5G, AI, and XR in agriculture significantly boosts efficiency and sustainability, proving that telecom partnerships can drive tech-driven transformations in traditional sectors like farming.

- **Indosat's NEXTretail AI Solutions**: All-in-one platforms integrating AI enhance retail operations and customer engagement, showing how comprehensive digital solutions can provide a competitive edge in the rapidly evolving retail landscape.

- **Optus and Westpac's Scam-proof Banking**: Verified, branded in-app calls enhance security and customer trust, highlighting the importance of secure communication channels in financial services to combat scams effectively.

- **Singtel's Quantum-Resilient Security**: Implementing quantum-safe networks secures critical infrastructures against future threats, emphasizing proactive measures and technological investments essential for national cybersecurity resilience.

- **SK Telecom's Revamped AI Assistant**: Multi-LLM integration improves personalized AI interaction, showcasing the potential of advanced AI technology to enhance productivity and user satisfaction in personal digital assistance.

- **Vi One Integrated Services**: Bundling broadband, mobile, and OTT into one plan simplifies user experience and captures market share, illustrating the value of comprehensive service offerings in meeting diverse consumer demands.

1. Bharti Airtel launches AI-powered Spam Detection in India

Executive Summary

Bharti Airtel launched an AI-driven, network-based spam detection system in India, marking a significant stride in offering real-time protection against spam without customer intervention. This innovation aims to enhance user trust by drastically reducing spam communications and fraud across its vast subscriber base.

Market Context and Challenge

- **Industry Challenge:** Increasing spam calls and messages threaten user privacy and network trustworthiness.
- **Market Dynamics:** India, with a vast mobile subscriber base, faces rampant spam which impacts user experience and network reputation.
- **Regulatory Considerations:** Compliance with telecom regulations while ensuring data privacy is critical.
- **Strategic Imperatives:** Maintain subscriber trust and differentiate through enhanced security.

Innovation Overview

- **Solution Architecture:**
  - Technical Framework: Dual-layer AI system at network and IT levels.
  - Core Technologies: AI algorithms analysing 250 parameters within two milliseconds.
  - Integration: Fully integrated into the network for seamless operation.
  - Differentiating Features: Real-time, automatic spam detection without user action.

- **Implementation Approach:**
  - Deployment Methodology: Broad network integration across devices.
  - Timeline: Launched in September 2024.
  - Key Partnerships: Internal development leveraging proprietary technology.
  - Resource Requirements: Significant computational capacity for real-time data analysis.

Exhibit 1: Features of Airtel's AI-powered spam detection tool
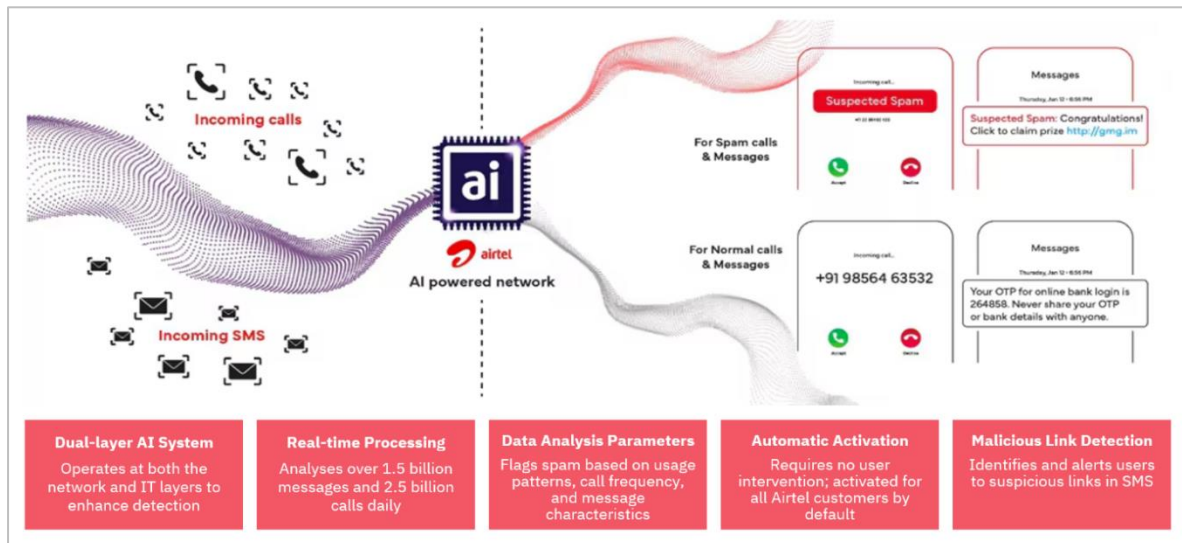
Source: Company website

Value Proposition

- **Target Segment:**
  - Primary User Base: All Airtel mobile subscribers - 387 million users.
  - Market Size: Large existing subscriber base across smartphones and feature phones.
  - User Needs Addressed: Protection from spam without needing additional applications.

- **Competitive Advantage:**
  - Unique Features: Network-level AI integration offering seamless protection.
  - Market Positioning: First mover in AI-based spam protection.
  - Innovation Elements: Proprietary AI for high-speed analysis.
  - Entry Barriers: High due to technological innovation and integration depth.

Exhibit 2: Distinctive aspects of Airtel's AI-Powered spam protection tool
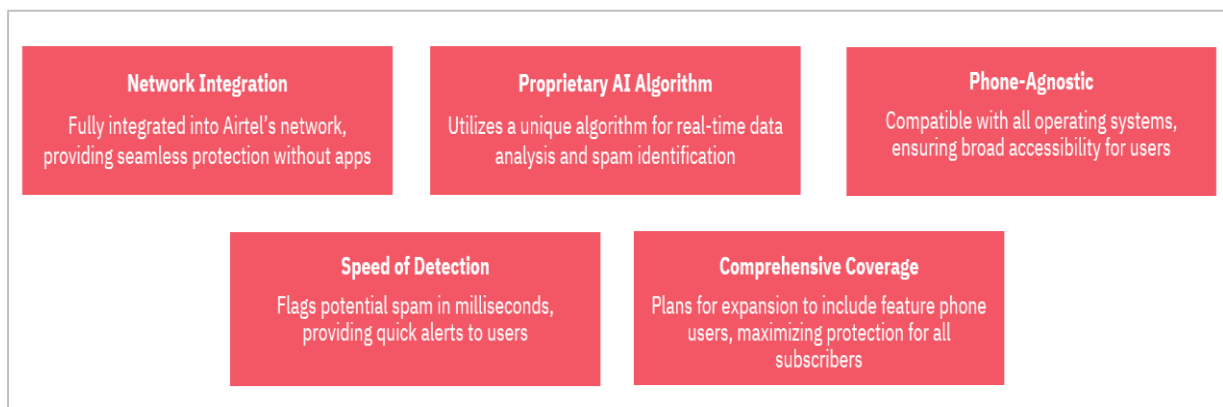
Source: Company website; Twimbit analysis

Impact Analysis

- **Quantitative Metrics:**
  - Key Performance Indicators: Detection of over 115 million spam calls on the launch day.
  - Efficiency Gains: Reduction in spam frequency and user complaints.

- **Qualitative Outcomes:**
  - Customer Experience Improvements: Enhanced security and trust in the network.
  - Brand Perception: Strengthening as a leader in telecom safety.
  - Market Response: Positive reception and regulatory collaboration for broader deployment.

Future Roadmap

- Planned Enhancements: Continuous AI model training for increased detection accuracy.
- Scaling Strategy: Broader device compatibility expansion, including feature phones.
- Market Expansion Plans: Explore regulatory support for international markets.
- Long-term Vision: Establish as a standard for network-level security measures worldwide.

Key Takeaways

- Seamless, network-integrated solutions enhance user experience and security.
- Real-time AI-powered systems can dramatically reduce operational and customer service bottlenecks.
- Strategic innovation in customer protection fosters market leadership and user trust.

2. CelcomDigi and BoomGrow's Precision farming in Malaysia

Executive Summary

In August 2024, CelcomDigi, in partnership with BoomGrow, introduced a pioneering solution for Malaysia's agricultural sector by integrating 5G, AI, and XR technologies. This initiative is set to revolutionize precision farming, enhance crop yield, and advance sustainable agricultural practices.
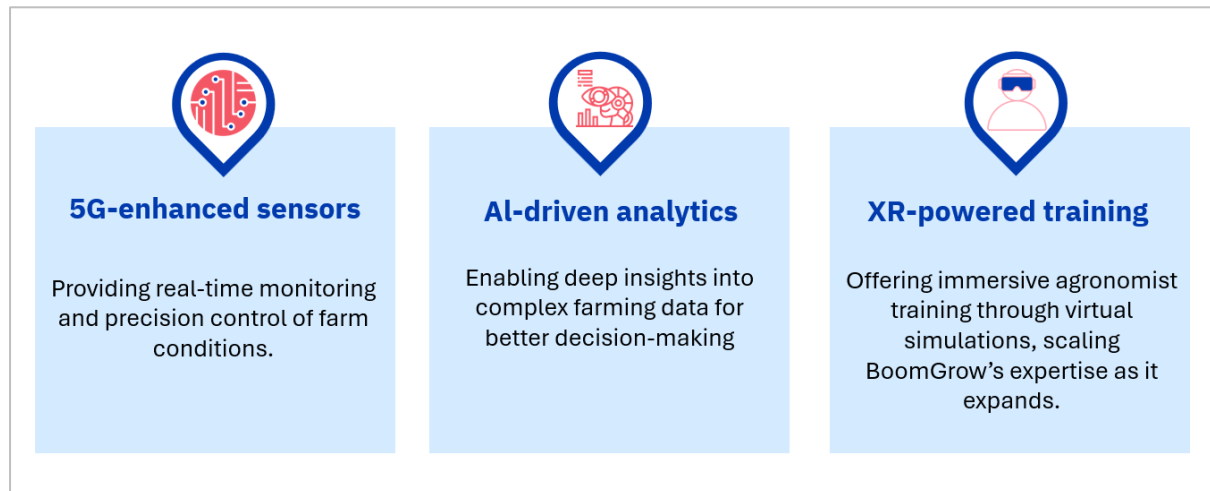
Market Context and Challenge

- Industry Challenge: The need for modernized agriculture to meet food demand and sustainability.
- Market Dynamics: Malaysia's agricultural sector is transitioning towards technology-driven practices for productivity and efficiency.
- Regulatory Considerations: Alignment with national policies on agricultural innovation and sustainability.
- Strategic Imperatives: Leverage technology to boost farm productivity and resource management.

Innovation Overview

- **Solution Architecture:**
  - Technical Framework: 5G-enabled Machine Farms with sensors for real-time data collection.
  - Core Technologies: Integration of AI and XR technologies for enhanced data analytics and training.
  - Integration Aspects: Seamless connectivity using CelcomDigi's robust 5G network.
  - Differentiating Features: AI-driven insights for optimizing farming environments.

- **Implementation Approach:**
  - Deployment Methodology: Phased implementation in BoomGrow's indoor farms.
  - Timeline: Introduced in August 2024 with ongoing deployment phases.
  - Key Partnerships: Collaborative partnership between CelcomDigi and BoomGrow.
  - Resource Requirements: Deployment of advanced sensor technologies and analytics platforms.

Exhibit 3: Key Features of BoomGrow Machine Farms

5G-enhanced sensors

Providing real-time monitoring and precision control of farm conditions.

AI-driven analytics

Enabling deep insights into complex farming data for better decision-making

XR-powered training

Offering immersive agronomist training through virtual simulations, scaling BoomGrow's expertise as it expands.

Source: company website, Twimbit analysis

Value Proposition

- **Target Segment:**
  - Primary User Base: Farmers, agronomists, agritech professionals, and government agencies.
  - Market Size: Significant sector with increasing adoption of technological solutions.
  - User Needs Addressed: Enhanced farm productivity and resource management.

- **Competitive Advantage:**
  - Unique Features: Real-time management using 5G and AI, and remote training with XR.
  - Market Positioning: Leaders in integrating technology in agriculture.
  - Innovation Elements: AI-driven analytics for precision farming.
  - Entry Barriers: High technological integration and infrastructure requirements.

Impact Analysis

- **Quantitative Metrics:**
  - Key Performance Indicators: Increase in crop yields and resource efficiency.
  - Adoption Rates: Growing interest from agriculture stakeholders.
  - Financial Impact: Cost savings from reduced resource use and increased yield.

- **Qualitative Outcomes:**
  - Customer Experience Improvements: Boosted productivity and efficient resource management.
  - Brand Perception Changes: Perception as innovators in sustainable agriculture.
  - Market Response: Positive engagement from stakeholders and government entities.

Future Roadmap

- Planned Enhancements: Expansion to a broader range of crops and environments.
- Scaling Strategy: Increase penetration in regional farms and export models.
- Market Expansion Plans: Explore opportunities in other Southeast Asian markets.
- Long-term Vision: Establish a model for technology-driven agriculture globally.

Key Takeaways

- Partnership between telcos and agri-tech companies can drive agricultural innovation.
- Integration of 5G and AI provides substantial efficiency and productivity improvements.
- The business model can be emulated in other developing regions for tech-led agricultural growth.

## 3. Indosat's NEXTretail AI solutions in Indonesia

Executive Summary

Indosat Ooredoo Hutchison (IOH) launched NEXTretail in August 2024 to transform Indonesia's retail industry using AI and intelligent analytics. This solution provides retailers with data-driven insights and personalized customer experiences, enhancing operational efficiency and consumer engagement.

Market Context and Challenge

- Industry Challenge: Retailers face stiff competition and a need for enhanced customer engagement.
- Market Dynamics: Rapid digitization of retail led to increased demand for personalized consumer experiences.
- Regulatory Considerations: Compliance with data privacy and consumer protection laws.
- Strategic Imperatives: Differentiate through technology and customer experience optimization.

Innovation Overview

- **Solution Architecture:**
  - Technical Framework: AI systems for analytics and personalization.
  - Core Technologies: Smart Digital Ads, AI Chatbot, Smart Cashier, AI CCTV Surveillance.
  - Integration Aspects: Multi-feature platform with seamless interoperability.
  - Differentiating Features: Comprehensive suite integrating customer engagement and security tools.

- **Implementation Approach:**
  - Deployment Methodology: Cloud-based services with modular deployment.
  - Timeline: Launched in August 2024 with ongoing enhancements based on user feedback.
  - Key Partnerships: Collaborations with technology providers for system integration.
  - Resource Requirements: Investment in AI development and data analytics infrastructure.

Exhibit 4: Key Features of NEXTretail's Technology Suite
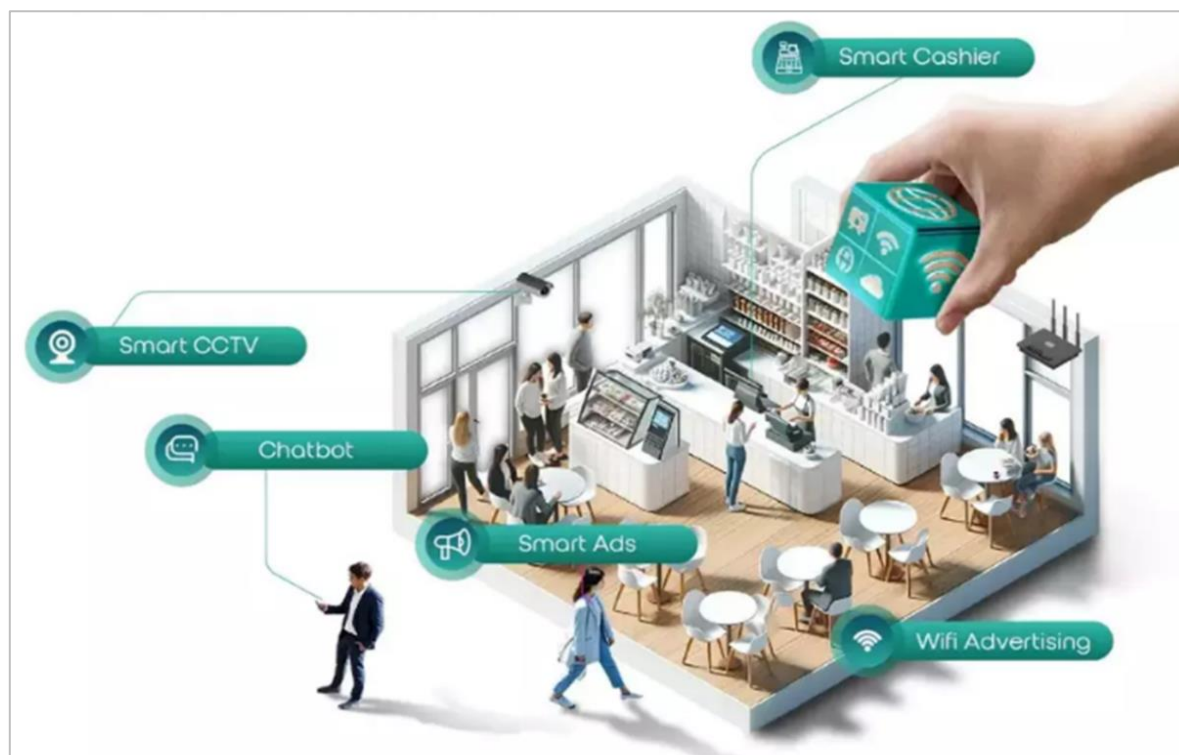
Source: Company website

Value Proposition

- **Target Segment:**
  - Primary User Base: Modern retail businesses keen on digital transformations.
  - Market Size: Extensive market with expanding online and offline retail segments.
  - User Needs Addressed: Increased customer engagement and streamlined operations.

- **Competitive Advantage:**
  - Unique Features: Integrated platform covering advertising, service, and security.
  - Market Positioning: Leader in comprehensive AI-enabled retail solutions.
  - Innovation Elements: Real-time data analytics and AI-driven service solutions.
  - Entry Barriers: High due to complexity of infrastructure and integration.

Impact Analysis

- **Quantitative Metrics:**
  - Key Performance Indicators: 30% increase in customer engagement via digital ads.
  - Efficiency Gains: 50% reduction in response times with AI Chatbot.
  - Financial Impact: Lowered service costs and boosted transaction speeds.

- **Qualitative Outcomes:**
  - Customer Experience Improvements: Enhanced engagement and security perceptions.
  - Brand Perception Changes: Viewed as a tech-forward company in retail solutions.
  - Market Response: Positive adaptation among retailers with strategic alignment.

Future Roadmap

- Planned Enhancements: Incorporation of additional AI features and more localized support.
- Scaling Strategy: Broadened market reach in other Southeast Asian regions.
- Market Expansion Plans: Consider potential export to other retail-heavy markets.
- Long-term Vision: Establish NEXTretail as the go-to platform for AI-driven retail innovation.

Key Takeaways

- AI solutions in retail improve operational efficiency and consumer engagement.
- Comprehensive, all-in-one platforms offer significant competitive advantages.
- Modularity and scalability are key to adapting solutions across diverse markets.

4. Optus and Westpac Scam-proof Banking solution in Australia

Executive Summary

On July 30, 2024, Optus and Westpac launched the Westpac SafeCall feature, aimed at reducing bank impersonation scams and providing enhanced call verification security. This innovation is designed to provide customers with increased confidence during phone interactions with financial institutions.

Market Context and Challenge

- Industry Challenge: Rise of bank impersonation scams undermining customer trust.
- Market Dynamics: Increasing reliance on digital banking services requires robust security measures.
- Regulatory Considerations: Tightened financial regulations and customer data protection mandates.
- Strategic Imperatives: Strengthen trust through secure, verified communication channels.

Innovation Overview

- **Solution Architecture:**
  - Technical Framework: In-app calling feature integrated with digital banking services.
  - Core Technologies: Verification by Optus, branding integration, reason for call display.
  - Integration Aspects: Collaboration with Vonage for seamless app integration.
  - Differentiating Features: Verified, branded calls that communicate secure reasons for contact.

- **Implementation Approach:**
  - Deployment Methodology: App-based solution delivered via software updates.
  - Timeline: Launched on July 30, 2024, as part of the banking app enhancements.
  - Key Partnerships: Partnership between Optus, Westpac, and Vonage for integration.
  - Resource Requirements: Significant investment in application development and security protocols.

Exhibit 5: Westpac SafeCall in-app verified calls

Source: Company website

Value Proposition

- **Target Segment:**
  - Primary User Base: Westpac customers across Australia using digital banking.
  - Market Size: Millions of banking customers engaged with digital platforms.
  - User Needs Addressed: Assurance of call origin and purpose to minimize scam risks.

- **Competitive Advantage:**
  - Unique Features: Combination of branding, verification, and communication integration.
  - Market Positioning: Pioneer in offering comprehensive bank call security.
  - Innovation Elements: Direct in-app calling with verification ensures customer confidence.
  - Entry Barriers: High due to technical complexity and financial sector regulations.

Impact Analysis

- **Quantitative Metrics:**
  - Key Performance Indicators: 69% scam detection rate improvement.
  - Financial Impact: AUD 400 million in prevented scam losses.
- **Qualitative Outcomes:**
  - Customer Experience Improvements: Increased security and trust in bank communications.
  - Brand Perception Changes: Recognition as a leader in banking security innovations.
  - Market Response: Enhanced customer satisfaction and competitive differentiation.

Future Roadmap

- Planned Enhancements: Additional security features and cross-channel integration.
- Scaling Strategy: Expansion to include more financial and service providers.
- Market Expansion Plans: Potential adaptation for other telecommunication sectors.
- Long-term Vision: Establish industry standards for secure digital banking interactions.

Key Takeaways

- Collaboration between telcos and financial institutions significantly enhances security.
- Verified, branded communication channels build customer trust and reduce fraud.
- In-app solutions provide seamless, trustworthy interactions for digital service users.

5. Singtel's Quantum-Resilient security offering in Singapore

Executive Summary

On August 8, 2024, Singtel launched the National Quantum-Safe Network Plus (NQSN+), Southeast Asia's first quantum-resilient network. This initiative enhances enterprise security across crucial sectors, shielding them against emerging quantum computing threats and showcasing Singapore's leadership in digital security.

"Though quantum computing may be in its nascent stages, it's fast gaining velocity across critical information sectors, especially banking, healthcare and government services, and we want to ensure Singapore is ready for it. That's why we specially-curated this programme to equip enterprises with the relevant skills and knowledge so they can take the necessary steps to future-proof their critical networks against potential quantum threats."

Ng Tian Chong,
CEO, Singtel Singapore

Source: Company website; Image reference

Market Context and Challenge

- Industry Challenge: Growing need for digital infrastructure resilience against quantum threats.
- Market Dynamics: As quantum computing evolves, traditional encryption becomes vulnerable.
- Regulatory Considerations: Compliance with stringent cybersecurity norms and national security mandates.
- Strategic Imperatives: Proactively safeguard national infrastructures and enterprise data integrity.

Innovation Overview

- **Solution Architecture:**
  - Technical Framework: Quantum-resistant encryption integrated across national data networks.
  - Core Technologies: Quantum key distribution and quantum-resilient encryption algorithms.
  - Integration Aspects: Collaboration with existing security providers and cloud services.

- Differentiating Features: Nationwide coverage with enterprise-specific customization options.
- **Implementation Approach:**
  - Deployment Methodology: Phased rollout with pilot programs across sectors.
  - Timeline: Launched in August 2024 with structured enterprise trials.
  - Key Partnerships: Collaborations with tech vendors and educational institutions for R&D.
  - Resource Requirements: Investment in quantum technology infrastructure and expertise.

Value Proposition

- **Target Segment:**
  - Primary User Base: Enterprises in banking, healthcare, government, and high-tech industries.
  - Market Size: Comprising significant stakeholders in Singapore's digital ecosystem.
  - User Needs Addressed: Protection against evolving quantum threats.
- **Competitive Advantage:**
  - Unique Features: First-mover advantage in Southeast Asia with an integrated quantum-safe approach.
  - Market Positioning: Pioneer in deploying nationwide quantum security.
  - Innovation Elements: Unique pilot program facilitating sector-specific adaptation.
  - Entry Barriers: High due to complex technology and significant upfront investment.

Impact Analysis

- **Quantitative Metrics:**
  - Key Performance Indicators: Metrics on enhanced data security and reduced vulnerability.
  - Efficiency Gains: Streamlined integration with existing IT systems reducing overhaul costs.
- **Qualitative Outcomes:**
  - Customer Experience Improvements: Enhanced data protection facilitating trust and confidence.
  - Brand Perception Changes: Strengthening Singapore's status as a cybersecurity hub.

- Market Response: Active participation from key sectors in pilot programs.

Future Roadmap

- Planned Enhancements: Expand coverage and refine algorithms based on user feedback.
- Scaling Strategy: Broaden offerings to more mid-sized enterprises and sectors.
- Market Expansion Plans: Explore partnerships for global deployments.
- Long-term Vision: Establish universal quantum-security standards for Southeast Asia.

Key Takeaways

- Proactive quantum security solutions are essential for future-proofing digital infrastructures.
- Partnerships in R&D can accelerate breakthroughs in advanced security technology.
- Government and enterprise collaboration is key to national cybersecurity resilience.

6. SK Telecom's revamps its AI Personal Assistant in South Korea

Executive Summary

In August 2024, SK Telecom revolutionized its AI personal assistant, 'A.' (A-DoT), enhancing user interaction with new features focused on natural language processing and daily management tools. This overhaul leverages multiple large language models (LLMs) to improve functionality and user satisfaction.

Market Context and Challenge

- Industry Challenge: Increasing need for sophisticated AI assistants to manage complex tasks.
- Market Dynamics: Rising user expectations for interaction precision and personalization.
- Regulatory Considerations: Adherence to data privacy norms while offering personalized services.
- Strategic Imperatives: Differentiate through AI innovation and usability enhancements.

Innovation Overview

- **Solution Architecture:**
  - Technical Framework: Use of LLMs to facilitate natural and intuitive conversations.
  - Core Technologies: Advanced AI integrating multiple LLMs for seamless versatility.
  - Integration Aspects: Enhanced connectivity with ecosystem services for maximal utility.
  - Differentiating Features: Multi-LLM setup offering tailored customer experiences.
- **Implementation Approach:**
  - Deployment Methodology: App update via platform distribution channels.
  - Timeline: Rolled out on August 26, 2024.
  - Key Partnerships: Collaborations with AI research labs for cutting-edge tech integration.
  - Resource Requirements: Continuous AI training data collection and processing power.

Value Proposition

- **Target Segment:**
  - Primary User Base: Tech-savvy individuals seeking advanced productivity solutions.
  - Market Size: Expanding market with growing AI ecosystem adoption.
  - User Needs Addressed: Streamlined daily task coordination and personalized assistance.
- **Competitive Advantage:**
  - Unique Features: Integration of multiple LLMs allowing dynamic user interaction.
  - Market Positioning: Leader in AI personal assistant technology.
  - Innovation Elements: Voice command driven task management for enhanced user convenience.
  - Entry Barriers: High due to AI complexity and personalization depth.

Exhibit 6: Salient features of SK Telecom's AI Assistant
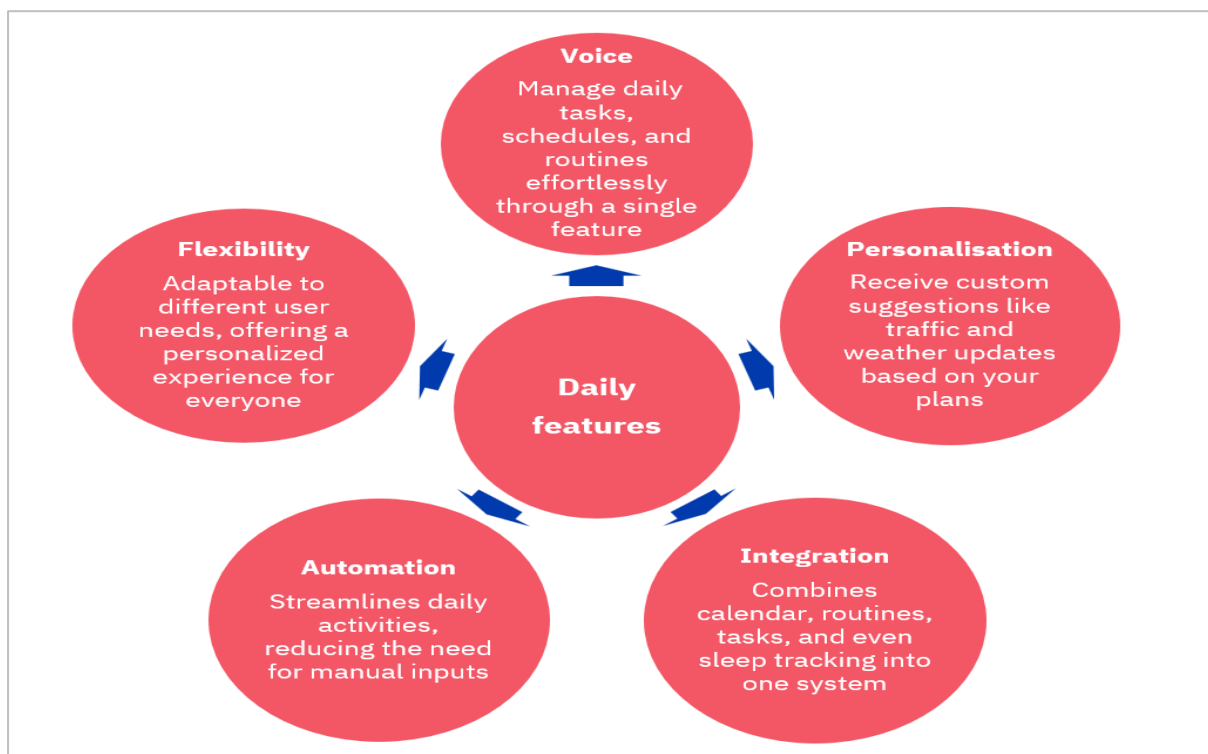
Source: Company website; Twimbit analysis

Impact Analysis

- **Quantitative Metrics:**
  - Key Performance Indicators: Reduction in time spent on daily administrative tasks.
- **Qualitative Outcomes:**
  - Customer Experience Improvements: Increased AI usability and reliability.
  - Brand Perception Changes: Positioned as a frontrunner in emerging AI technologies.
  - Market Response: Accelerated adoption among existing and new user bases.

Future Roadmap

- Planned Enhancements: Broaden language support and feature sets.
- Scaling Strategy: Broaden usage within professional and educational environments.
- Market Expansion Plans: Explore international adaptations with additional language models.
- Long-term Vision: Establish as a ubiquitous tool for personal and professional daily management globally.

Key Takeaways

- Multiple LLMs in a single platform enhance user personalization and interaction.
- Voice-command-based interfaces offer significant usability improvements.
- Continuous innovation in AI expected to redefine digital personal assistant functionalities.

7. Vi One offers integrated Connectivity and Entertainment in India

Executive Summary

In July 2024, Vi (Vodafone Idea) unveiled Vi One, a 3-in-1 bundled service combining fibre broadband, mobile connectivity, and OTT content access in Kerala, India. This offering targets convenience seekers by integrating essential digital services into a single subscription, enhancing user value and market penetration.

Market Context and Challenge

- Industry Challenge: Fragmented service offerings lead to consumer inconvenience and missed cross-selling opportunities.
- Market Dynamics: The rise in digital consumption fuels demand for bundled connectivity and entertainment solutions.
- Regulatory Considerations: Compliance with telecom and broadcasting regulations, ensuring transparency and fair practices.
- Strategic Imperatives: Retain existing customers and capture new segments by offering comprehensive, integrated services.

Innovation Overview

- **Solution Architecture:**
  - Technical Framework: Convergence of fibre broadband, mobile services, and OTT platforms.
  - Core Technologies: High-speed broadband (40 Mbps and 100 Mbps), along with extensive content access through Vi Movies & TV.
  - Integration Aspects: Partnership with Asianet to enhance broadband coverage in Kerala.
  - Differentiating Features: Single subscription for diverse services with additional perks like free night-time data.
- **Implementation Approach:**
  - Deployment Methodology: Collaborative effort with local broadband providers for seamless service delivery.
  - Timeline: Launched in July 2024 with ongoing marketing and service enhancements.
  - Key Partnerships: Strategic alliance with Asianet for broadband infrastructure expansion.
  - Resource Requirements: Investment in network infrastructure and partnership management.

Value Proposition

- **Target Segment:**
  - Primary User Base: Households and individuals in Kerala desiring bundled digital service offerings.
  - Market Size: Significant opportunity in a state with growing broadband and entertainment demand.
  - User Needs Addressed: Simplification through a unified service plan for internet access and entertainment.
- **Competitive Advantage:**
  - Unique Features: First in-industry integration of mobile, broadband, and OTT under one plan.
  - Market Positioning: Leader in offering comprehensive bundled digital services.
  - Innovation Elements: Enhanced coverage and service reliability via local partnerships.
  - Entry Barriers: Low due to replication ability but high initial network investment requirements.

Impact Analysis

- **Quantitative Metrics:**
  - Key Performance Indicators: Expected increase in subscriber base and market share in Kerala.
  - Adoption Rates: High interest from consumers seeking cost-effective, all-in-one plans.
- **Qualitative Outcomes:**
  - Customer Experience Improvements: Streamlined access management and increased satisfaction through value-added services.
  - Brand Perception Changes: Strengthened market presence and competitive edge in the regional market.
  - Market Response: Positive reception, influencing potential expansion to other regions.

Future Roadmap

- Planned Enhancements: Addition of more OTT platform options and tiered pricing models.
- Scaling Strategy: Expand service model beyond Kerala to other Indian states with similar market dynamics.
- Market Expansion Plans: Explore partnerships with additional content providers to enrich service diversity.
- Long-term Vision: Create a national standard for integrated service offerings, positioning Vi as a frontrunner in consumer-centric telecom solutions.

Key Takeaways

- Bundled services simplify user experience and boost provider's market engagement.
- Strategic partnerships can enhance service delivery and coverage capabilities.
- Comprehensive integration meeting multi-faceted consumer needs fosters long-term loyalty.

Research Methodology and Assumptions

- "APAC Telecom Radar – Autumn 2024" delves into notable innovations by telecommunications providers that have disrupted their respective markets, within the Asia-Pacific region during the period July - September 2024.

- The report primarily highlights key advancements and company announcements across various areas, including AI, 5G, IoT, XR, Quantum computing, security, bundled service offerings and customer experience.

- These case studies provide actionable insights and potential pathways for telcos aiming to adapt these innovations to their markets.

- This report also offers insights into companies leading the innovation charge, aimed at assisting business executives and technology leaders in shaping their own innovation strategies and future-focused projects.

- The data presented in this report is based on the most current information available at the time of compilation. As such, it may not reflect subsequent developments. This report is intended for informational purposes only and should not be relied upon as a substitute for independent research.

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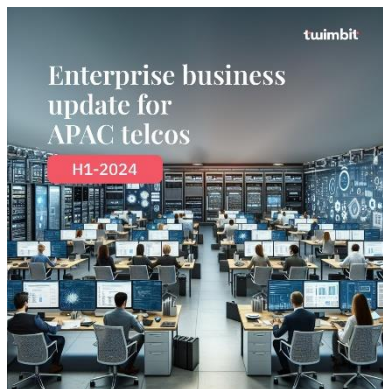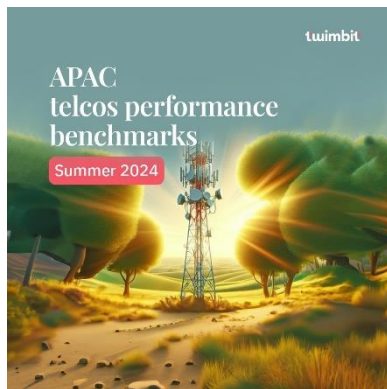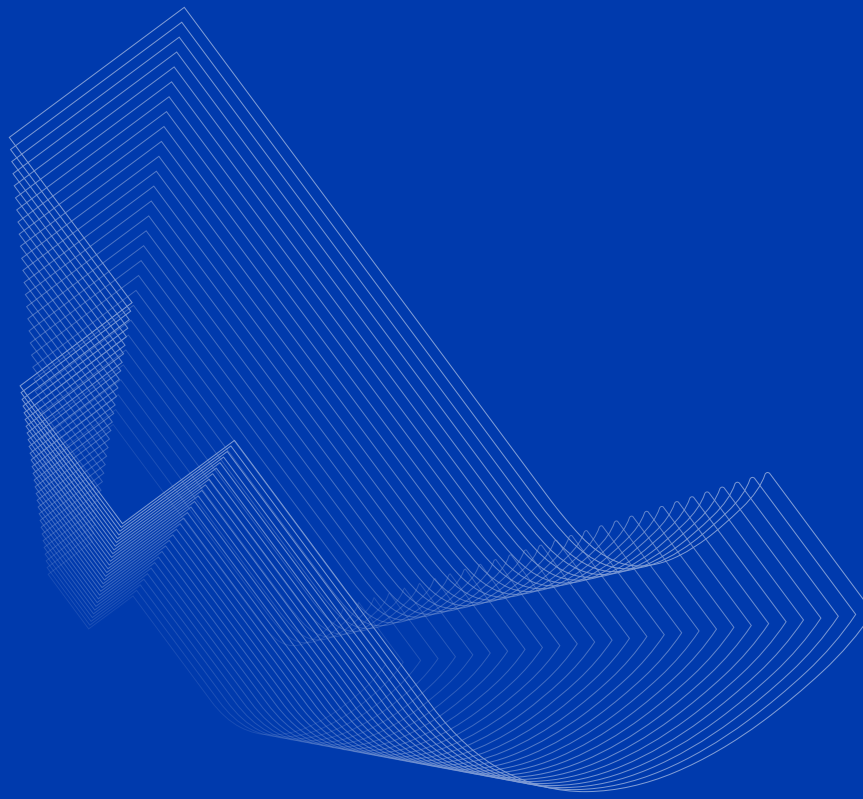
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