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Telecom & Broadband Transformation:

Streamlining Operations to Maximize Recurring Revenue.

The telecom and broadband landscape beyond 2025 is defined by relentless connectivity demand and evolving customer expectations. 5G Stand-Alone rollouts, IoT proliferation, and new B2B services are driving data-hungry networks, while consumers become increasingly demanding with subscription models and digital-first experiences. This creates enormous opportunity – but also unprecedented complexity. Leading operators must deliver fast, reliable services and manage increasingly intricate billing, contracts, and infrastructure. Fragmented legacy systems and siloed processes cannot keep pace.

A unified, intelligent operations platform is the only way forward to future-proof operators for Sustainable Revenue and Scalability.

By converging network management, finance, operations and CRM on an integrated backbone – and by harnessing AI-powered automation – telcos and broadband operators can achieve superior efficiency, agility, and recurring revenue growth. In this eBook, we present a blueprint for that unified vision, illustrating how seamless integration and cutting-edge AI use cases optimize every step from service delivery to invoicing to sustainability reporting.

We also explore how Microsoft Dynamics 365 Finance & Supply Chain Management (FSCM), supercharged by Bluefort's complete Recurring Revenue ERP enablement solution LISA Enterprise, provides the intelligent enterprise backbone to realize this vision in practice.

Speak to us today for an $18,000 Microsoft Funded ERP Vision & Value Report, delivered by a Microsoft Solutions Partner.

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The Challenges of Fragmented Operations

Today's telecom operators often juggle a patchwork of specialized systems – from VoIP billing engines and customer portals to network inventory tools and payment gateways – typically with minimal integration between them, or support heavy maintenance. This fragmented environment, often also a result of Mergers and Acquisitions, leads to high cost of ownership, delays and errors. Provisioning requests can fall through the cracks between ordering and billing systems. Finance teams struggle to reconcile invoices sourced from multiple platforms. Support agents lack a single view of the customer across services. Meanwhile, rapid service expansions like 5G SA or fibre broadband demand coordinated updates across OSS/BSS and infrastructure platforms. The result is operational friction: manual hand-offs, siloed data, and missed revenue opportunities. Without unifying operations, costs and risks multiply – from customer churn due to billing disputes, to poor capacity planning that hurts network quality and profitability.

Fragmentation at Every Layer

Multiple disjointed systems create fragmentation at every layer of the business:

Billing and CRM Silos: B2B and consumer billing often run on distinct systems (for example, separate VoIP billing platforms for enterprise telephony vs. B2C broadband). If the billing engine isn't tightly integrated with CRM and order management, revenue leaks occur. Modern convergent billing platforms promise "unified bills" for all services, but only if they plug into every product catalogue and usage feed in real time.

Infrastructure Management: Telecom infrastructure typically relies on specialized tools OSS/ BSS tools like FNT Command for network inventory and asset management. Without integration to finance and operations, capacity and maintenance data remain isolated. For example, FNT's solution emphasizes "end-to-end network management based on quality documentation of all network components," but this value is only realized when network inventory feeds directly into capacity planning and cost accounting systems.

Payments and Gateways: Payments and Gateways: Recurring payments must flow through credit card processors or direct-debit networks such as SEPA in Europe. If the billing system is not tightly connected to payment gateways, organizations lose automation in collections. Modern telecom payment solutions must provide API-first connectivity offering seamless integration with core financial and credit collection processes, accelerating recurring collections and all subsequent automated back end processes, eliminating time wastage on unproductive efforts.

An integrated operations platform – one that bridges Billing and Financial systems, Network and CRM with seamless data flow – is essential for agility, control, and scalability in a modern telecom business.
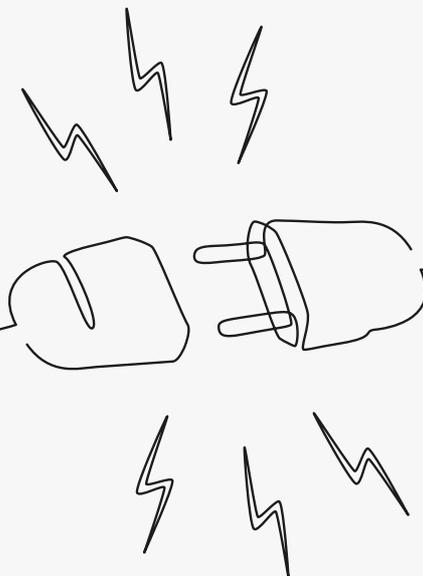
Unified Operations:
Breaking Down Silos

A unified operations framework brings all telecom support and business systems onto a common platform or tightly linked ecosystem. In practice, this means customer orders, network provisioning, and financial billing share the same data and workflows:

Single Customer View: Sales, support, and finance all see the same up-to-date account information and subscription status, including payment failures with related reasons and customer ageing scores. A change made in one channel (e.g. an online order or support ticket) is immediately visible to all departments.

Convergent Billing: All services (voice, data, IoT, value-added services) appear on one invoice, calculated by a real-time rating engine. Usage from diverse services rolls into a unified bill. This ensures customers receive one coherent invoice instead of multiple, reducing confusion and billing disputes.

Automated Revenue Management: Orders automatically trigger service setup and billing without manual handoffs. A new broadband or VoIP sale flows seamlessly from order capture to network provisioning to invoice generation. Every change (upgrades, downgrades, pauses) propagates through the system, eliminating revenue leakage from missed updates.

Integrated Network Inventory: Capacity and asset data tracked in OSS/BSS systems feed directly into change management and financial planning. For instance, adding a new fibre segment in the network inventory system can automatically update capacity planning modules and even adjust depreciation schedules in the ERP finance module.

Unified operations also unify insights. Management gains a consolidated view of key KPIs across the business – customer churn, ARPU, network utilization, cash flow, and more – all in one dashboard. A single converged OSS/BSS solution provides accurate, thorough data in a well-organized format giving leadership the visibility to make informed decisions. Importantly, integrated operations reduce errors and response times; a service activation in the network simultaneously updates the billing and CRM systems, so nothing falls through the cracks.

Recurring Revenue Excellence:
Managing the Subscription Lifecycle

Telecom & Broadband is inherently a subscription-driven business – whether monthly broadband plans, multi-year enterprise connectivity contracts, or emerging "connectivity as a service" models. **Excelling at recurring revenue means optimizing the entire subscription lifecycle: from initial lead and onboarding, through order fulfilment and billing, to ongoing service enhancements, renewals and retention.**

In practice, our unified platform vision encompasses every stage of this lifecycle:

Subscription Design & Ordering: Sales teams configure complex quotes with approved ultra flexible pricing plans, bundling services (e.g. mobile, broadband, IPTV) in one offer with easy discount and promotions management. The unified system automatically transitions a quote from Draft to Active upon approval, triggering downstream service activation without delay.

Automated Provisioning: When a new service is sold, the back-end OSS (integrated with network orchestration tools) provisions the circuits or network slices automatically. Simultaneously, the system updates billing rules and entitlements. This eliminates manual provisioning delays and ensures the billable service inventory is always up-to-date.

Flexible Billing & Pricing: Each subscription is billed on its appropriate schedule (monthly, quarterly, usage-based, milestone, etc.) using dynamic, usage-aware and ultra-flexible uplift pricing models. Because billing is unified, proration for mid-cycle changes or tiered usage charges flow through without finance needing to intervene. Late payments can trigger automatic dunning workflows and retry logic via the integrated payment gateway services.

Customer Self-Service: Subscribers are empowered to manage their plans through a self-service portal or mobile app that connects in real time to the core CRM and billing engine. Customers can add or remove services, view invoices, update payment methods, pause or resume subscriptions, and even run service diagnostics or contact AI enabled and human support. Customer satisfaction is improved with reductions in operational workload with deflected routine inquiries.

Table 1 – Subscription Lifecycle: Traditional vs. Unified Approach

Feature	Traditional Telco Model	Unified Subscription Platform
Billing cadence	Separate systems for different services (voice, data, etc.) require manual invoice consolidation.	A central subscription ledger supports automated billing across all service types—monthly, annual, usage-based, milestone-driven, or hybrid. It manages standard and complex billing intervals, including pro-rated and multi-schedule setups, while enabling flexible price adjustments, discounts, and promotions, with accurate invoicing and scalable revenue recognition.
Plan changes	Complex change orders with manual adjustments; updates often require lengthy processes.	Real-time plan changes can be made seamlessly via self-service portals or back-office workflows. Unified data across sales, finance, and support ensures a single source of truth, eliminating silos and errors. Embedded AI provides predictive insights at the point of change, guiding optimal pricing, upsell opportunities, or contract adjustments.
Revenue recognition	Offline spreadsheets or siloed ERP modules handle revenue recognition separately.	Revenue recognition is automated in real time, aligned with each subscription's activity and fully compliant with IFRS and GAAP standards. Revenue events are recorded with complete audit trails, eliminating spreadsheet work and ensuring transparency, accuracy, & financial integrity.
Churn management	Difficult to detect churn risk until after customers leave (often only noticed at contract end or when invoices go unpaid).	Proactive churn prevention is enabled by detecting risk signals early – such as usage downgrades, service cancellations, pauses or missed renewals. Automated workflows can trigger retention offers or win-back campaigns, intervening before the customer is lost.
Customer insight	Data is fragmented across billing, CRM, network management, etc., making it hard to get a 360° view.	All customer, billing, usage, and support data is consolidated into a single intelligent view: 360° insight which enables real-time analytics for personalized offers, dynamic pricing, targeted upsells, and data-driven decisions that improve customer lifetime value.

A unified subscription ERP enablement solution platform empowers operators to treat recurring revenue as a strategic asset. By automating lead-to-cash processes, providers eliminate billing errors, accelerate collections, and gain the agility to launch new bundles or pricing models rapidly. For example, adding a new 5G SA add-on to an existing plan can be configured in minutes. Up-selling and cross-selling opportunities are easier to execute when all customer data and product catalogues are connected in one place. In aggregate, unified platforms drive double-digit improvements in revenue growth by reducing leakage and enabling innovative pricing strategies. Analytics-driven retention programs will reduced churn by up to 15% for telecom operators, underscoring the revenue upside of a proactive, data-driven approach within a unified subscription platform.

AI and Automation

Once operations and billing are unified on a modern platform, AI becomes the turbocharger. Emerging AI/ML technologies can be woven into every aspect of telecom operations, enabling proactive and intelligent processes that were previously impossible:

AI-Powered Contract Compliance:

Machine learning can continuously monitor service agreements and network performance to flag compliance issues. If a corporate contract guarantees 99.9% uptime, an AI engine will watch network KPIs and alert managers to any SLA breach before penalties are incurred. Similarly, AI can detect revenue leakage from subtle contract terms (like unbilled overages) and suggest corrective actions. These tools ensure that negotiated contract value is fully realized, and that potential penalties or missed charges are caught in advance.
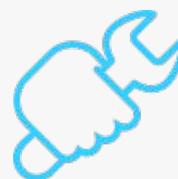
Predictive Maintenance:

AI monitors network equipment and sensor data to predict failures before they occur. Models trained on historical fault logs can anticipate when fibre lines, routers, or radio units are likely to degrade. This enables planned maintenance to replace components before outages happen, dramatically reducing unplanned downtime. AI-driven operations and predictive maintenance lead to increased efficiency in network planning and fewer costly outages. Fixing issues only when needed instead of on fixed schedules significantly reduces maintenance costs.

Dynamic, AI-Based Pricing: Instead of rigid, fixed tariffs, AI-powered engines analyse historical customer usage patterns, subscription lifecycle data, and broader market trends to suggest optimal personalized offers and plans proactively. For example, AI might detect that certain subscribers regularly approach their monthly data limits and automatically recommend tailored plan upgrades or relevant promotional bundles well before any network congestion occurs. By proactively personalizing plans based on customer behaviour rather than real-time network conditions, telecom providers maximize both customer satisfaction and revenue—fully respecting regulatory guidelines and transparency obligations.

Network-Aware Billing Optimization: By correlating network analytics with billing data, AI can suggest smarter plan structures. For example, if certain cell towers experience routine congestion at peak hours, the system might recommend off-peak discounts or usage-based tiers to smooth out traffic. By tailoring plans and adjusting prices based on customer behaviour, the operator can maintain competitiveness whilst improving resource efficiency.
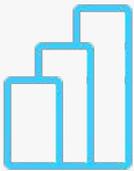
Sustainability and ESG Reporting: Operators are under pressure to track and reduce their carbon footprint. AI and analytics tools can automate ESG reporting by aggregating data from power systems, data centres, vehicle fleets, and supply chains. AI can extract and reconcile metrics like energy consumption per cell site and map them to reporting frameworks. Industry research finds that AI-driven automation can cut the time spent on ESG data processing by over 40%, while achieving data accuracy rates above 90%. In practice, this means generating comprehensive, audit-ready sustainability reports with far less manual effort – helping operators meet regulatory requirements and corporate responsibility goals more effectively.

Read our article:

*"AI and Automation:
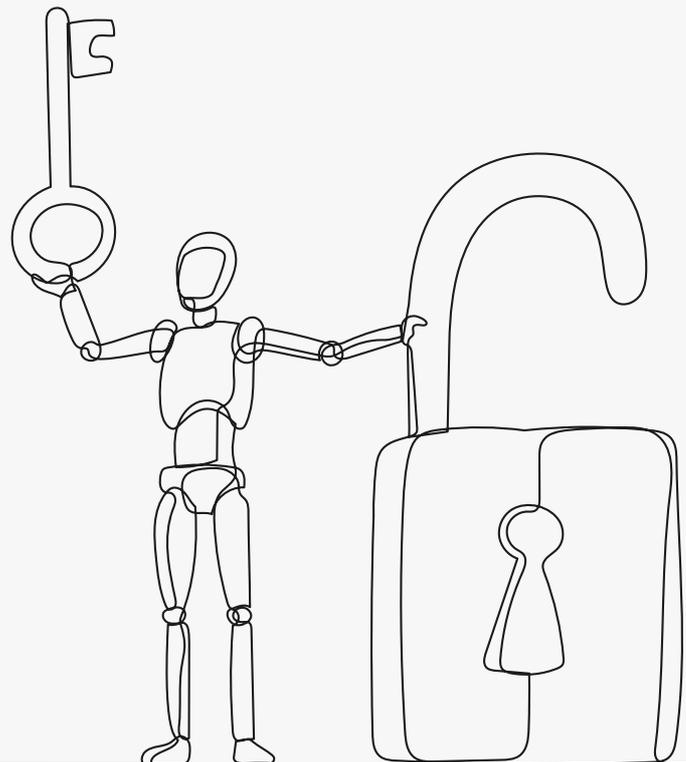The Future of Telecom Finance
Operations"*

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Table 2 – Advanced AI/ML Use Cases in Telecom

AI-Driven Capability	Application in Telecom	Key Benefits
Dynamic Pricing & Planning	Real-time adjustment of service prices and plan offerings based on usage patterns, demand, or network load.	Maximizes revenue and customer satisfaction through personalized, market-responsive pricing. Helps balance network utilization by incentivizing off-peak usage.
Contract Compliance Monitoring	AI analysis of service contracts vs. actual delivery (uptime, usage, etc.), with automated alerts for SLA breaches or unbilled overuse.	Prevents revenue leakage from missed SLAs or overages. Enables proactive remediation before customers notice issues or fines. Builds trust through consistent service quality.
Network-Aware Billing	Linking network performance data with billing (e.g. congestion-based pricing or quality-of-service linked charges).	Optimizes resource usage and cost efficiency. Aligns pricing with actual network load, improving fairness while reducing peak congestion.
Predictive Maintenance	Predicting failures in network infrastructure (fibre cuts, equipment faults) before they happen, using sensor and performance data.	Minimizes downtime with pre-emptive repairs. Reduces maintenance costs by shifting from routine schedules to condition-based maintenance. Enhances network reliability and customer experience with fewer outages.
ESG Data Analytics	Automated collection and analysis of data on energy use, emissions, and other sustainability metrics across operations.	Simplifies compliance with ESG regulations and reporting standards. Ensures timely, accurate sustainability reporting and identifies opportunities to reduce energy or fuel costs.

By embedding these AI capabilities into a unified platform, operators can move from reactive to truly proactive operations. For example, an AI agent could dynamically suggest a new promotion when usage spikes in a region, while simultaneously scheduling maintenance crews to sites predicted to have equipment issues – all coordinated within the same system. The combined effect is a smarter, more resilient business: higher ARPU from dynamic pricing and personalized retention offers, lower churn through predictive care, and reduced operational risk thanks to continuous monitoring. AI-powered billing also yields more accurate invoices (minimizing manual corrections), stronger fraud detection, and even 24/7 customer service via AI chatbots. As networks evolve (5G Stand-Alone, IoT, edge computing), these tools will help monetize new services faster – transforming billing and operations from back-office chores into strategic advantages.

Building the Unified Platform
Architecture and Integration

Turning this vision into reality requires a modern, flexible architecture: cloud-native, API-driven, and modular by design. Critical components include a central data hub, a subscription ledger system of record, and workflow engines for service orchestration. By adopting an open architecture, telcos can plug in best-of-breed modules as needed – any VoIP billing engine, any network management tool like FNT Command, any payment provider can coexist as microservices in the ecosystem. Standardized APIs and events ensure that a change in one domain is immediately propagated to others. For example, if a new fibre link is added in the network inventory system, it automatically updates route capacity in planning tools and triggers asset records to update in the finance system.

Key design principles for a unified Telco architecture:

To accelerate digital transformation and deliver differentiated customer experiences, modern telecommunications platforms must embrace a unified architecture that is cloud-native, agile, and intelligence-driven. The following core design principles underpin this transformation.

1

Elastic Scalability & Operational Resilience for OSS and BSS

Next-gen telco platforms must dynamically scale to support millions of concurrent customer interactions, transactions, and device connections. Built on hyperscale cloud infrastructure, they provide the elasticity to manage unpredictable demand spikes while ensuring continuous availability and performance.

2

Unified, Intelligent Data Fabric for OSS and BSS

A shared, standardized data model unifies customer, service, product, network, and usage data across all domains. This eliminates fragmentation and manual reconciliation, empowering operators with a holistic view of business operations. Unified data is the bedrock for AI-driven decision-making, real-time insights, and hyper-personalized experiences.

3

Built-In Trust, Security & Compliance for OSS & BSS

Consolidating OSS and BSS on a common, modular platform reduces integration complexity and minimizes attack surfaces. Security, data privacy, and compliance controls are embedded by design and consistently enforced across all services. This is critical in regulated environments where end-to-end traceability and auditability are essential.

4

Real-Time, Event-Driven Interoperability between OSS and BSS

An event-driven integration layer ensures instant propagation of key business events (e.g., service activation, billing triggers, network status changes) between OSS and BSS such as an E-Commerce portal, CRM, billing, inventory, service orchestration and service assurance domains. This enables true zero-touch operations and SLA adherence.

5

Batch-driven Background Automation for BSS

Recurring operations like billing, collections, settlements, ledger updates, revenue recognition, and customer notifications run automatically in the background and can be scheduled during low system usage. This allows finance teams to focus on strategy, reporting, and managing exceptions instead of constantly ensuring systems are up to date.

6

Agentic AI for BSS tapping into OSS

With Agentic AI capabilities, Telcos can streamline BSS operations by deploying agents that handle routine customer questions and requests, improving efficiency and reducing human error. These agents integrate seamlessly with the proposed API architecture, elevating their role from simply answering queries to performing value-driven tasks. For example, an agent can generate a contract for a new product upsell, trigger an OSS platform operation, and update contract data in the BSS for billing, payments, ledger posting, and revenue recognition. This entire process is orchestrated securely within the Microsoft AI stack, where each AI agent adheres to the same authentication, authorization, and encryption standards as human users. The result is faster, more reliable service delivery and a scalable customer support solution that aligns with Telco's digital transformation goals.

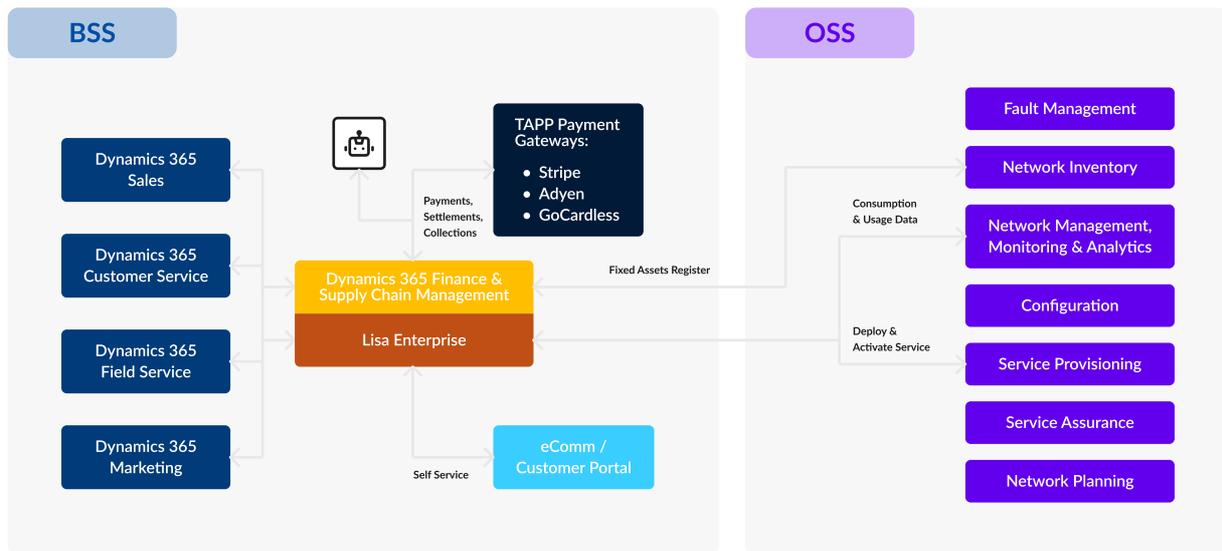Architecturally, a unified telecom operations platform can be visualized as follows:

Figure 1: A unified API-based architecture diagram showing Dynamics 365 FSCM with LISA at the core, connected to industry-specific OSS systems via a common data platform and integration services. AI and analytics consume data from across the enterprise and feeding insights back into operational workflows.

At the core of this architecture is Microsoft Dynamics 365 Finance & Supply Chain Management (FSCM), supercharged by Bluefort's complete Recurring Revenue solution LISA Enterprise . This serves as the intelligent backbone purpose-built for recurring revenue enterprises.

Around this core, the telco's industry systems are tightly integrated: the OSS suite the BSS stack (CRM, customer portals, call centre platforms), and any specialized billing or mediation engines (for real-time usage rating, content services, etc.). All these systems communicate through the common data model and real-time integration bus.

Cloud-based AI and analytics services then consume this unified data to produce predictions, anomaly detection, and recommendations – feeding those insights directly back into Dynamics 365 and LISA workflows as automated actions.

For C-level executives, the outcome is true end-to-end operational control: one clear view for decision-making, a single source of truth for financial and performance reporting, and the agility to respond to market changes or scalability demands with confidence.

Enabling the Vision with
Microsoft Dynamics 365 FSCM & LISA Enterprise

Operators need a platform that embeds these capabilities today. Built natively in D365 LISA Enterprise extends standard Finance & Supply Chain Management with hundreds of subscription-specific features, creating a unified, intelligent ERP backbone purpose-built for recurring revenue businesses. This integrated architecture empowers enterprises to manage the entire subscription lifecycle—from contract creation and automated invoicing to revenue recognition and renewals—while orchestrating finance, supply chain, and customer order operations within a single, cohesive system.

The result is a scalable, compliant, insight-driven platform that accelerates cash flow, improves forecasting, and supports strategic business growth with greater agility.

It integrates seamlessly with telecom environments — from VoIP billing engines and OSS tools to payment gateways like SEPA — and brings advanced AI into finance and operations. As a native Microsoft extension, LISA avoids costly integration projects and the ongoing maintenance burdens of attaching specialized billing systems to an ERP solution.

It is simply more powerful and complete, offers seamless and easy scalability when needed and embodies the telecom blueprint we've outlined:

End-to-End Subscription Management:

All recurring revenue processes – from customer quote and order, through automated provisioning, billing, and renewals – are managed within Dynamics 365 as one continuous flow. Changes made in the network or in a customer self-service portal update the financial records instantly (and vice versa), ensuring alignment across all departments.

Payment Fulfilment:

LISA Enterprise is designed for seamless and complete payment fulfilment through its free sister product TAPP which includes pre-built payment gateway integrations with Stripe, Adyen and Go Cardless for credit card and ACH/SEPA direct debit. TAPP enables the elimination of manual financial, journal creation and settlement processes, and accelerates recurring revenue collections, empowering finance teams to stay focused on strategy instead of chasing failed payments or manual updates.

Built-In Analytics & AI:

LISA enriches Dynamics 365 with role-based dashboards and analytics for telecom KPIs – Churn, MRR/ARR, ARPU, SLA compliance, ESG metrics, and more. It lays the groundwork for predictive forecasting and AI-driven automation by leveraging the unified data in Microsoft's Dataverse. Executives get real-time insights (via Power BI embedded in Dynamics) and even AI-suggested alerts and actions (using Microsoft Azure AI services) directly within their familiar ERP workspace.

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High Pricing & Promotion Flexibility:

LISA enables operators to control the price uplift calculation, the frequency of an uplift and whether to apply it on the next billing cycle or on the next contract term renewal. Price uplifts automatically infuse themselves in billing and Revenue Recognition processes and automatic price change notifications to customers can also be configured. Promotional capabilities include having pre-configured discounts, time-based discounts and discounts applied manually during new sale or an upgrade. Promotion campaigns (e.g. 3 months free TV add-on for new customers) can be configured as separate billing line items. There is high flexibility on how discounts and promotions can be configured to post into the company's general ledger and hence the management accounts which allows decision making executives to track the effectiveness of discounts and promotional campaigns.

An Adaptive Integration Framework:

LISA seamlessly interfaces with telecom OSS/BSS platforms (for example, syncing network inventory from FNT or usage records from VoIP switches into the ERP). This ensures every system in the stack "speaks" the same language without costly custom development.

Scalability for Growth:

Built on Microsoft's Azure cloud, LISA Enterprise inherits the robust scalability and security of Dynamics 365. It is proven to handle telecom-scale workloads – thousands of users, millions of subscriptions and invoices – with high performance. As your subscriber base grows, your product line increases or you expand into new markets, the system scales effortlessly without re-architecture, ensuring operations can support growth without bottlenecks.

Bluefort's LISA Enterprise supercharges Dynamics 365 FSCM into a telecom-ready platform with more than double the subscription management capabilities of the out-of-box system, giving telecom CEOs, CFOs, and COOs a powerful vehicle to transform their operations into a cohesive, AI-enhanced machine.