WHITE PAPER

ARCHITECTING THE FUTURE: SCALABLE PLATFORM TRANSFORMATION FOR TELECOM ENTERPRISE

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This paper describes how Infosys has partnered with a leading US based Telecom service and solutions provider to infuse the power of ODA based integrations with ServiceNow OMT platform built for order management services. It outlines the journey of order management platform migration, methodology and execution framework to build this solution

Insights

This Telecom enterprise was using a Vlocity based ordering / order management platform. Though vlocity provided ability to build out-of-the box solutions to use with Salesforce, this enterprise wanted to transform their Order management platform for superior experience and application resilience in addition to cost optimization.

They wanted to switch to a TM Forum (TMF) Open Digital Architecture (ODA)-based platform that is easier to develop and more efficient by leaving Vlocity ("Vlocity Exit") and using ServiceNow instead. This change will lower platform costs, such as licenses and talent, and speed up implementation time, by offering these benefits:

- Simplifying the stack
- Consolidating skills and focus areas
- Faster delivery and product launch
- Standardized Integrations and Partner experience
- Vlocity Exit

Vlocity license renewal was fast approaching, they wanted to save the cost for renewal which was one of the compelling reasons for this transformation deadline.

Introduction

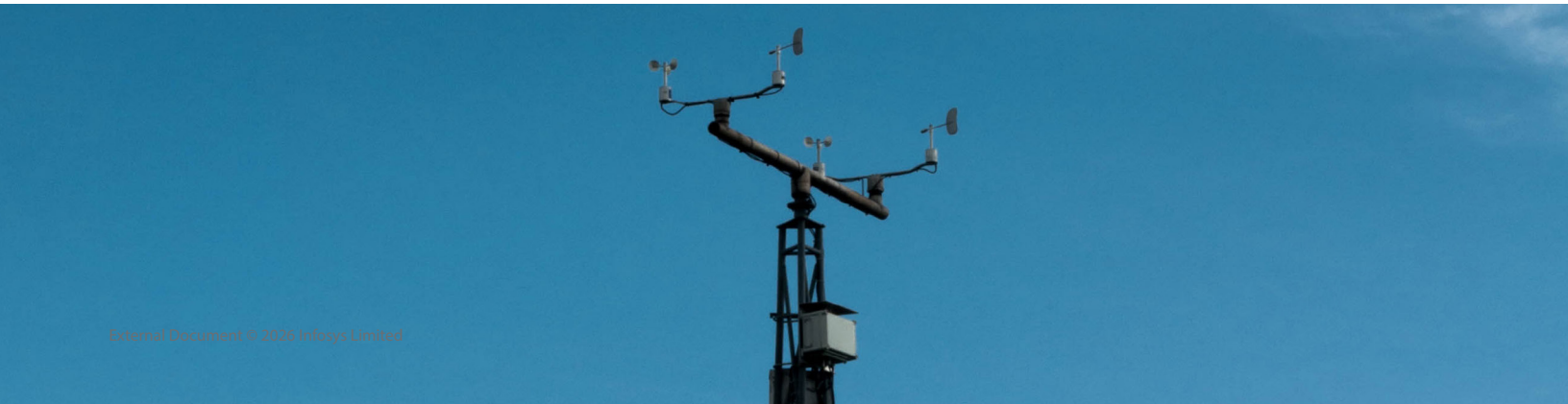
In its journey to switch to TM Forum's ODA based platform for ease of development and be more efficient to help their customers to purchase and order services, one of the leading US based Telecom solutions and service provider planned on leaving its current Vlocity based ordering / order management platform.

Though vlocity provided ability to build out-of-the box solutions to use with Salesforce, this enterprise wanted to transform their Order management platform for superior experience and application resilience in addition to cost optimization.

The goal of exiting vlocity would save approximately 6M/year in OPEX cost alone along with the flexibility of the ServiceNow OMT platform to extend order management functionalities and integrate with Salesforce CRM, customer experience, provisioning, inventory and fulfilment functions.

Infosys partnered with them in E2E lifecycle of discovery, define, develop, validate, implement and migrate to successfully exit the functionalities and consumer services integrations found in Vlocity platform to ServiceNow based framework integrating using ODA based services with its north and south bound functions.

This new platform was developed to cater to all their consumer fiber customer base ordering from multiple channels like digital sales, partner sales, call center sales as well as customer care, repair and service delivery operations.



Challenges

- High Opex: 6M Yearly license cost of Vlocity platform and high billing rate of salesforce resources.
- TMF non-compliance, resulted in tightly coupled integrations with lots of customizations
- Lack of best engineering practices – Manual deployments, Lack of CICD pipeline, Up to 2 days production down window during release weekends.
- Over the years, uncontrolled development resulted in hard coded product variant attributes in code resulted in high time to market for any changes or new product variant launch.
- E2E test automation had lots of manual steps making it human dependent.
- Vlocity license renewal was fast approaching

Key Objectives to transform the Order Management Platform

- **Standardized Integrations and Partner experience**
  - TMF Open API based integrations
  - Microservices based APIs implemented in GCP for partner APIs
  - Decoupled integrations and enhanced security
- **Vlocity Exit**
  - Catalog Federation from Vlocity to ServiceNow product catalog and Salesforce based commercial offers
  - Salesforce based catalog management for partner experience
  - Customer order management to integrate with Service Order Management using ServiceNow OMT platform

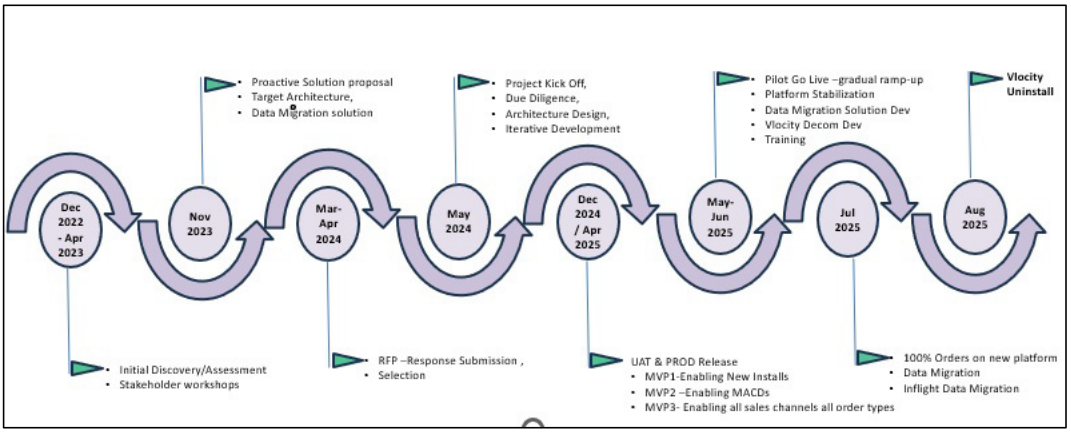
The Journey that Shaped up the Future

This engagement was structured as a multiple phase execution aimed at developing a solution to enhance interoperability and standardization across various domains.

Right from the discovery /assessment workshops, through requirement/architecture/ design, multiple development and validation cycles to enable the new platform gradually ramping up to 100% order base.

This journey was characterized by close collaboration, iterative delivery and a strong alignment with business outcomes

Figure 1. Key Milestones and Timelines



Scope Infosys Delivered

The scope of this program encompassed building the Vlocity order management capabilities on ServiceNow. To achieve this, different components in the order management ecosystem were to be Re-built, Re-write, Re-configure and decommissioned. Key deliverables included in the scope

Vlocity Exit:

- Migrate Vlocity catalog to ServiceNow product catalog
- Migrate Vlocity Order Management to ServiceNow customer order management
- Migrate, rehome or decommission Vlocity components (integration procedures, data raptors, omni procedures, workflows, reports)

Technology enablement:

- Development and deployment of ServiceNow customer order management platform, digital Integration layer for standard TMF ODA based integration with Salesforce CRM and ServiceNow COM platform
- ServiceNow CICD implementation using GitHub
- Transforming Vlocity APIs for partner experience into cloud based Springboot microservices APIs developed for supporting fiber and legacy product ordering.
- GCP environment enablement for partner experience org
- SRE compliant implementation
- Telemetry and logging
- DevSecOps Integration

Data Migration and Reports:

- Customer account / contact, asset/Inventory migration from vlocity to ServiceNow for sold products
- Asset/inventory migration for in-flight orders
- Recreation of reports to replace vlocity references with non vlocity fields

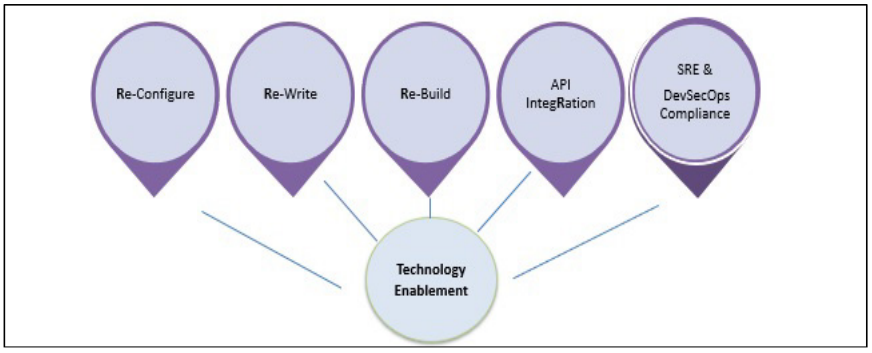
Vlocity Decom:

- Salesforce Data migration
- Vlocity reference removal
- Vlocity package uninstallation in all Salesforce orgs.

Stakeholder engagement:

- Continuous collaboration with cross-functional teams including business operations, other IT initiatives and their development teams impacting business requirements
- Collaborate with release management for ensuring MVP releases of this initiative aligns with release and deployment schedule of other IT initiatives of this customer

Figure 2. Technology Enablement Levers



Road Map, Value Planning & Related Strategies, Monitoring

Infosys executed this engagement as outcome-based model to stick with 2 critical success criteria - fixed timeline to complete Vlocity exit due to license renewal and a defined budget envelope. The project was executed using Agile methodology. This allowed for rapid prototyping and stakeholder engagement while maintaining control over scope, timelines, and budget.

The execution strategy was designed to ensure structured delivery, stakeholder alignment, and timely realization of project objectives. A phased and agile approach was adopted to balance speed with flexibility, enabling iterative development and continuous feedback.

Phased Implementation

The execution was structured across the following key phases:

Initiation & Planning:

- Defined project charter, scope, success criteria, and governance structure.

Requirements & Design:

- Facilitated cross-functional workshops to gather business requirements.
- Developed detailed process maps and solution architecture.

Development & Configuration:

- Iterative build cycles with sprint reviews and demos.
- Ensured alignment with business needs and implementation standards.

Testing & Validation:

- Conducted unit, system, and end to end testing. Additional test cycles for manual validation wherever needed.
- Quick turn around on defect fixes and ensured readiness for UAT and deployment.

Deployment & Transition:

- Executed production rollout in a controlled manner.
- Parallel runs on both retiring platform and new platform by gradually ramping up new customer base, giving enough opportunity for platform stabilization to ensure smooth business continuity.
- Vlocity Exit post 100 % ordering on the new platform and customer migration
- Provided hyper care support and transitioned ownership to customer business/IT teams.

Governance & Oversight:

- A robust governance framework was established, including:
- Weekly updates to client leadership through Program Governance status call.
- Real-time dashboards in JIRA for status tracking
- Biweekly executive program review with client SVP sponsor.
- Regular status reporting and risk tracking

Stakeholder Engagement:

- Proactive communication and engagement were maintained throughout the lifecycle.
- Key stakeholders were involved in design validation, testing, and change management activities to ensure adoption and minimize resistance.

Proactive Risk Management:

- Potential risks were identified early and managed through contingency planning, phased rollouts, and continuous monitoring.
- Dependencies and external constraints were tracked to avoid schedule impacts.

Quantitative program management approach and execution excellence

- Used Microsoft Project plan to manage capabilities, timelines and dependencies.
- Delivered 198 features, 2457 user stories, 1000+ E2E test cases in 1015 Person Months.
- Zero critical defects post go-live.
- < 1% Change Failure Rate
- 600+ End to end scenarios, including 200 new due to functionality addition were identified, automated and continually executed
- 30% Productivity gains in reverse engineering of Vlocity integration procedures and GCP microservices development

Technical Solution that Accelerated the Technology Shift

The technical architecture was designed to support a scalable, secure, and high-performance cloud-based solution aligned with TMF/ODA standards and business requirements. The architecture leveraged a modular design to ensure flexibility, maintainability, and ease of integration with existing systems.

Core Components

Digital Integration Layer:

Developed using Springboot microservices in GCP to orchestrate and transform for northbound integrations

ServiceNow COM Layer:

ServiceNow OMT implementation for product catalog and customer order management integrating with digital integration layer using TMF standard APIs, Salesforce for CRM and ServiceNow Service Order Management

Partner APIs:

Springboot microservices API layer implemented for partner channel ordering for fiber and legacy products

Security & Compliance:

The architecture adhered to enterprise security protocols, including OAuth 2.0 for authentication, audit logging, and data masking for sensitive information.

Deployment Model:

The solution was deployed in a GCP environment for scalability and disaster recovery. Salesforce, commerce cloud and ServiceNow COM solution was deployed on to respective SaaS cloud environment.

CI/CD pipelines were established using Jenkins, Flosum and GitHub actions to enable automated testing, build, and deployment.

Monitoring & Support:

Application performance and health were monitored using Splunk AppDynamics.

Figure 3. Technology Architecture

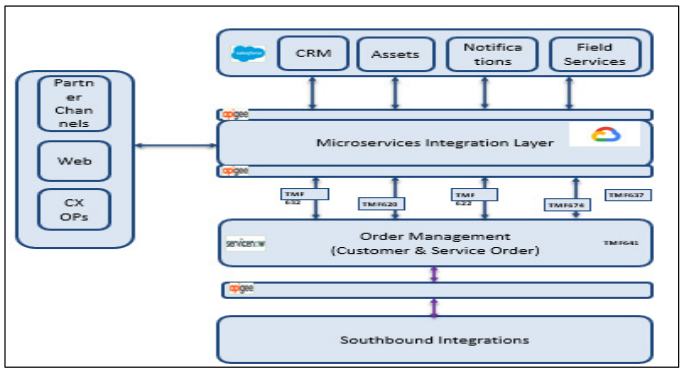
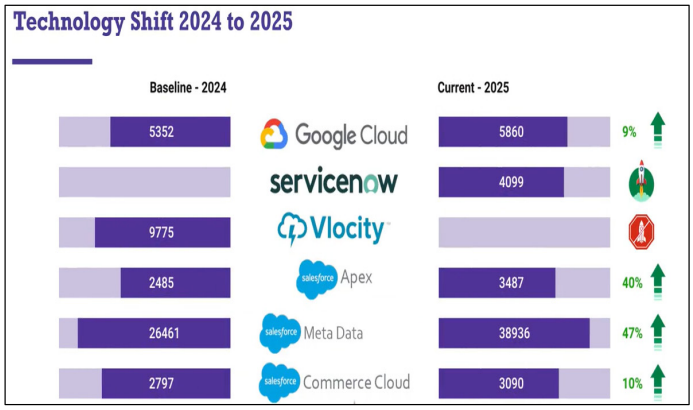


Figure 4. Technology Shift due to this implementation



Challenges during execution and Mitigations

Continued introduction of new functionalities on Vlocity platform causing additional development to accommodate new functionalities and code back merges

- Stood up a separate team to develop additional changes and address code back mergers
- Supported multiple code releases to ensure availability of functionalities on new platform

Design Challenges

Deprecated Billing interfaces

ServiceNow capabilities to handle concurrent multiple orders

Subscription creation differences in source and target

- Solution Billing integrations- designed with new contract definitions and backward compatibility
- Designed custom solution to handle the functionalities in other layers

ServiceNow Platform challenges/Environment inconsistencies- Multiple teams operating in same environment without having change management in place- causing code overrides leading to defects

- Identify temporary work arounds and implement using custom development
- Work with ServiceNow platform development team to help identify and implement permanent fixes
- Set up GitHub repository and implement CICD process

Asset/Inventory Data Migration – Data Quality issues

Inflight orders data migration – Different order types in different orchestration steps while inflight in source system

SFDC/ServiceNow performance constraints to handle high volume of data

- Multiple orders are still in progress status in source way beyond SLAs. A dedicated group of team members worked with customer IT & business groups to identify root causes and fix issues to complete those.
- Solutioning handling of inflight data migration to target platform was done on WAR footing front conducting workshops with IT and business to design new migration orchestration plans for seamless handling of product orders and service orders for New and Resume orders
- Quick redesign of migration solution using Python to address performance limitations of SFDC/ServiceNow platforms to handle large volumes of data

Lack of Vlocity implementation documentation resulted in longer solutioning cycles due to re-engineering efforts

- Vlocity Integration procedures analyzed for re-engineering
- Solution to rebuild those were designed for extensible integration design with microservices /GCP layer
- Parallel solutioning and development cycles to minimize development delays due to longer solutioning cycles due to re-engineering efforts
- Extensive test cycles to ensure no missed requirements /code quality issues cascaded to production env

Lack of fully integrated SIT environment and continuous parallel development on Vlocity platform for other IT initiatives in the same UAT environment resulting in additional test cycles

- To ensure good quality and less rework in absence of fully integrated SIT environment, test teams were ramped up for additional manual validation
- Ensured effective dev & PO validations to identify defects earlier in the development phase

Benefits

Historically the benefits from an integrated platform solution were focused on operational improvements (MTTR, cost reductions via optimized teams etc.). Our refreshed solution elevates the benefits from this plane to that of today's enterprise. These include value candidates like improved alignment to business outcomes, expedited onboarding to cloud environments, uniform extensible integrations with other digital platforms as well as cost benefits via OPEX reduction

All the figures below are client endorsed and published on their Intranet portal						
$6M Savings annually in Vlocity Licenses and Opex	7.1% Increase in monthly Sale volume	50% Reduction in technical/ system Order fallouts	724K Accounts Migrated 3.5M Assets Migrated	100% TMF and open API standards achieved for TMF 620, 622, 641, 679	150+ SRE and monitoring alerts and features delivered	9K Vlocity components decom missioned
30% Productivity Gains Through SDLC.AI practices- Use of GitHub Copilot and Prompts for Vlocity Integration procedure reverse engineering and GCP microservices development and unit testing				Improved ServiceNow Arch. Migrated global ServiceNow application to scoped architecture for CICD enablement - a milestone that the incumbent competitor was unable to achieve		
<10 min deployment time with CI/ CD pipelines for Service Now	70% Improvement in lead time for deployment	< 1% Change Failure rate	600+ E2E scenarios covered. 200+ new scenarios. 10% automation coverage	< 2 sec Response time on 150+ critical services	$25 M Follow-up business signed without a formal RFP	New Logo ~$15 M Added new client with potential business of 15M in next 3 years

Outcomes

Unified Platform Experience

Multichannel support: Enabled **order capture and management across multiple channels**, including digital sales, partner sales, call centers, and customer care, as well as repair and service delivery operations.

Consolidated Skills: Easier architecture and technologies (e.g., GCP microservices with ServiceNow) reduce learning curves and recruitment costs by eliminating dependency on expensive Vlocity resources.

Asset utilization : One ServiceNow instance for COM and SOM implementation.

- ServiceNow Licenses- under Infosys Reseller licensing

Scalability and extensible Integration

Simplified Technology Stack: TMF-standard frameworks and APIs improve adaptability, observability, and support for Open API strategies, while reducing maintenance and enabling closed-loop automation.

Standardized integrations: Enhanced partner experience through TMF Open APIs, GCP-based microservices, and decoupled, secure architectures. Catalog federation from Vlocity to ServiceNow, combined with Salesforce-based commercial offers, ensures seamless customer order management integrated with ServiceNow OMT.

Cost Optimization

Opex savings: This move aimed to improve application resilience, flexibility, and cost optimization. Exiting Vlocity was projected to save approximately **$6M annually in OPEX while** enabling seamless integration with Salesforce CRM, provisioning, inventory, and fulfillment systems.

Accelerated Delivery: Improved catalog management and reduced data variation speed up product launches and minimize operational issues.

Conclusion

This initiative exemplifies innovation and collaboration at scale. By leveraging ServiceNow's extensibility and TM Forum's ODA principles, this enterprise achieved a future-ready architecture that reduces costs, accelerates delivery, and enhances flexibility for evolving business needs. The transformation positions this enterprise to deliver faster, more reliable, and secure services to its customers, reinforcing its leadership in the telecommunications industry.

References

During the development of this whitepaper, data and perspectives were gathered from Program Execution and documentation throughout the lifecycle.

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