

Swiss Re AI Transformation

Deep Dive, Architecture & Strategic Roadmap

Comprehensive analysis of Swiss Re's AI capabilities, technology architecture, competitive positioning, and phase-based transformation roadmap for P&C Reinsurance AI productization.

Current AI Initiatives: Foundation & Early Wins

Initiative	Business Line	Description & Technology	Status & Impact
Magnum	L&H Re	Automated life underwriting system using ML models to assess risk and accelerate decision-making. Processes medical records and applicant data to provide underwriting recommendations.	PRODUCTION Decade+ in operation, proven value in L&H
Life Guide Scout	L&H Re	GenAI-powered underwriting assistant that helps underwriters analyze submissions, summarize medical information, and identify risk factors using Large Language Models.	PRODUCTION Active in L&H division, demonstrates GenAI capability
Underwriting Ease	L&H Re	AI-powered tool to streamline underwriting workflows, automate routine tasks, and provide decision support for L&H underwriters.	PRODUCTION Enhances L&H underwriting efficiency
ClaimsGenAI	Corporate Solutions	GenAI-driven claims triage and recovery tool that analyzes loss alerts, identifies recovery opportunities, and prioritizes claims for investigation. Uses NLP to process unstructured claims data.	PRODUCTION Flagged thousands of loss alerts, saved millions
Parametric Flight Delay	P&C Re	ML-powered parametric insurance product that automatically triggers payouts based on flight delay data. Demonstrates AI-enabled product innovation.	PRODUCTION Innovative product offering in P&C
Palantir Foundry Platform	Enterprise-wide	Unified global data platform managing petabytes of data across 24+ business domains. Provides data pipelines, integration, and analytics foundation for AI initiatives. 8-year strategic partnership.	PRODUCTION Critical infrastructure enabling AI at scale

⚠️ Key Observation: Swiss Re demonstrates **strong AI capability in L&H division** (Magnum, Life Guide Scout, Underwriting Ease) and successful GenAI deployment in Corporate Solutions (ClaimsGenAI). However, **P&C-specific AI products remain less visible** compared to competitors. The parametric flight delay product shows P&C innovation potential, but the division lacks scaled GenAI underwriting assistants or claims automation tools comparable to Munich Re's REALYTIX ZERO CoPilot or SCOR's AI Assistant. The Palantir Foundry platform provides a solid data foundation, but **the gap is in productization and scaling** of P&C AI solutions - precisely what the AI Product Delivery Lead and AI Product Strategist roles are designed to address.

Technology Architecture: Current State & Target State

Current State Architecture

DATA LAYER

- ✓ Palantir Foundry (8-year partnership, petabytes across 24+ domains)
- ✓ Microsoft Azure cloud infrastructure
- ✓ Data pipelines for structured and unstructured data
- △ P&C-specific data ingestion challenges remain

ML/AI DEVELOPMENT LAYER

- ✓ Python, PySpark for model development
- ✓ Azure ML services for training and deployment
- △ Limited MLOps automation for P&C
- △ GenAI tooling primarily in L&H division

APPLICATION LAYER

- ✓ L&H: Magnum, Life Guide Scout, Underwriting Ease
- ✓ Corporate Solutions: ClaimsGenAI
- △ P&C: Limited scaled AI products (parametric flight delay)
- △ No P&C GenAI underwriting assistant

GOVERNANCE LAYER

- ✓ GenAI CoE established (2024, led by Vagnoli)
- ✓ Model validation function (actuarial/ML expertise)
- ✓ Responsible AI framework and red-teaming capability
- △ P&C-specific governance workflows need formalization

Target State Architecture

DATA LAYER

- Maintain Palantir Foundry foundation
- Automated P&C submission data ingestion pipelines
- Unstructured data transformation (PDFs, emails, legal docs)
- Real-time data quality monitoring and validation

ML/AI DEVELOPMENT LAYER


- Full MLOps pipeline (CI/CD for models, automated testing)
- GenAI development toolkit integrated with Azure OpenAI
- Model registry and versioning for P&C models
- Automated retraining and drift detection

APPLICATION LAYER

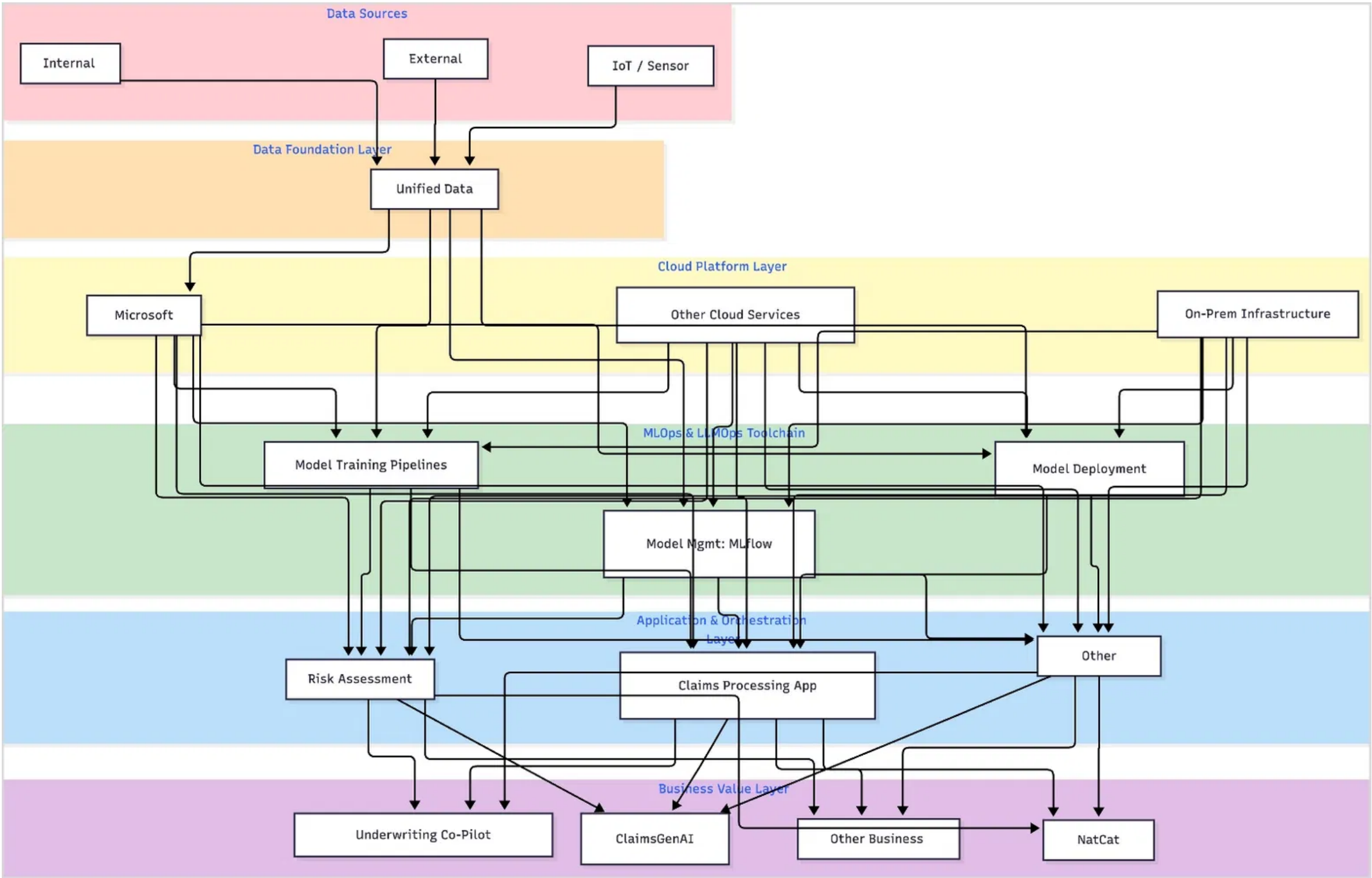
- P&C GenAI Underwriting Assistant (submission analysis, risk flagging)
- P&C Claims Automation (triage, fraud detection, recovery)
- Portfolio of scaled AI products across Forensic & Predictive engines
- User-centric interfaces for underwriters and claims adjusters

GOVERNANCE LAYER

- Integrated GenAI CoE workflows for P&C AI initiatives
- Automated red-teaming for all P&C GenAI models
- KPI tracking and business value measurement framework
- Continuous compliance monitoring and audit trails

 **Gap Analysis:** Swiss Re possesses a **world-class data foundation** (Palantir Foundry, Azure) and **proven AI governance** (GenAI CoE, Responsible AI framework). The primary gaps are in the **ML/AI Development Layer** (need MLOps automation, GenAI tooling for P&C) and **Application Layer** (need scaled P&C AI products). Closing these gaps requires the AI Product Delivery Lead to orchestrate infrastructure buildout and the AI Product Strategist to translate P&C business needs into technical specifications. Target state achievable within 12-18 months with focused execution.

Technology Architecture – Target State (Concept Overview)



Illustrative target architecture connecting data sources, unified data foundation, MLOps/LLMOps, and business-value layers across Microsoft, other cloud, and on-prem.





Includes model registry (MLflow), training pipelines, and deployment paths to underwriting, claims, and NatCat apps.

Designed to scale P&C AI products in governed environments.

GenAI Center of Excellence: Governance & Red-Teaming

 Leadership: Dr. Matteo Vagnoli | Established: Late 2024 | Mission: Enable safe, scalable GenAI deployment across Swiss Re

Core Functions

 <h3>Standards & Guidance</h3> <p>LLM evaluation frameworks, prompt engineering best practices, vendor assessments, reusable patterns</p>	 <h3>Automated Red-Teaming</h3> <p>Proactive testing of AI models for vulnerabilities, bias, prompt injection risks (IEEE CAI 2025 publication)</p>	 <h3>Model Validation</h3> <p>Review and approval of AI models before production deployment, ensuring accuracy and compliance</p>	 <h3>Compliance & Ethics</h3> <p>Responsible AI principles, regulatory alignment, risk controls, transparency requirements</p>
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AI Governance Workflow

- ### 1 Project Inception & Risk Assessment

AI Product Strategist/Delivery Lead initiates project → GenAI CoE conducts risk assessment (data sensitivity, model type, use case criticality)
- ### 2 Development & Red-Teaming

Solution built with CoE guidance → Automated red-team tests run on models to identify vulnerabilities, bias, prompt injection risks
- ### 3 Model Validation & Approval

Model Validation function (where Schelldorfer has actuarial/ML expertise) reviews model performance, accuracy, and compliance → Approval for production
- ### 4 Production Deployment & Monitoring

AI solution deployed with MLOps monitoring → Ongoing performance tracking, drift detection, periodic re-validation

★ **Strategic Value:** The GenAI CoE provides the **governance infrastructure** that enables the AI Product Delivery Lead and Strategist to scale AI safely. By establishing standards, conducting automated red-teaming, and managing compliance, the CoE **removes blockers** and ensures AI innovations are not only cutting-edge but also **safe, transparent, and trustworthy**. This framework reinforces Swiss Re's brand promise of resilience and positions the company as a leader in Responsible AI deployment. The CoE's evolution toward **agentic AI workflows** (autonomous systems completing complex tasks) signals Swiss Re's ambition to move beyond simple GenAI applications to sophisticated AI-driven operations.

Competitive AI Product Benchmarking

Company	Product Name	Functionality & Technology	Key Metrics & Impact
Munich Re	REALYTIX ZERO CoPilot	Cloud underwriting platform with GenAI CoPilot powered by GPT. Assists underwriters in product design, risk assessment, and submission analysis with real-time insights.	Production deployment across underwriting teams. Demonstrates Munich Re's GenAI-native underwriting leadership.
Munich Re	aiSure™	Performance guarantee insurance for third-party AI solutions. Covers financial losses if AI systems fail to meet specified performance thresholds.	Market-leading AI risk insurance product. Shows Munich Re's AI expertise extends to insuring AI itself.
Munich Re	Kalepa Copilot	AI-powered risk analysis and submission management tool. Automates data extraction, performs risk scoring, and provides underwriting recommendations.	Integrated into underwriting workflows. Part of Munich Re's focused patent portfolio tied to commercial products.
SCOR	AI Assistant	GenAI-powered document analysis and summarization tool. Processes unstructured documents (submissions, medical records, legal documents) to extract key information.	~1 million pages processed per month with ~90% accuracy . Significant scale achievement in production.
SCOR	Velogica	Automated underwriting platform streamlining submission processing, risk assessment, and pricing. Modular solution integrated with SCOR's digital platform strategy.	Production deployment supporting SCOR's data-first approach. Part of coherent digital platform ecosystem.
SCOR	VClaims	Digital claims processing platform with AI-powered automation for claims intake, triage, and settlement. Reduces manual processing time and improves accuracy.	Operational in claims workflows. Demonstrates SCOR's end-to-end AI integration across underwriting and claims.
Zurich Insurance	AI Portfolio (160+ use cases)	Comprehensive AI deployment across business lines including fraud detection, claims automation, underwriting assistance, and customer service. Governed by AI Assurance Framework since 2022.	160+ AI use cases in production . Demonstrates scale and governance maturity. AI Assurance Framework ensures responsible deployment.

Swiss Re's Competitive Gap: While Swiss Re has strong AI foundations and successful L&H products, **P&C Re lacks visible, scaled GenAI products** comparable to Munich Re's REALYTIX ZERO CoPilot or SCOR's AI Assistant processing 1M pages monthly. The key differentiator is **productization and scale** - competitors have moved from pilots to production-grade, measurable-impact AI tools. Swiss Re's challenge is not technical capability (Palantir platform, Azure partnership, GenAI CoE) but **execution velocity in shipping P&C AI products**. The AI Product Delivery Lead and AI Product Strategist roles directly address this gap by establishing disciplined delivery cadence and portfolio management to accelerate P&C AI productization.

P&C AI Opportunity Analysis:

Use Cases & Value Drivers

GenAI Underwriting Assistant

GenAI co-pilot to analyze submissions, extract key risk factors from unstructured documents, summarize complex treaties, and provide consistent underwriting guidelines.

Technology Approach:

LLMs (GPT-4, Claude), RAG architecture, Palantir Foundry integration, Azure OpenAI

Value Drivers:

- Underwriting efficiency: **+36% improvement** (industry benchmark)
- Loss ratio improvement: **3-6 pp** via better risk selection
- Faster time-to-quote, improved client satisfaction

HIGH PRIORITY

Automated Data Ingestion

AI-powered pipeline to transform unstructured submission data (PDFs, emails, spreadsheets) into structured, analysis-ready format for underwriting and pricing models.

Technology Approach:

Computer vision, NLP, document parsing, ML classification, data validation workflows

Value Drivers:

- Manual processing time: **-50% reduction**
- Data quality improvement enabling better pricing
- Scalability for high-volume facultative business

HIGH PRIORITY

AI Claims Triage & Fraud Detection

Automated claims intake, priority scoring, fraud pattern detection, and recovery opportunity identification using ML and GenAI (building on ClaimsGenAI success).

Technology Approach:

Anomaly detection, network analysis, GenAI for claims summarization, computer vision for damage assessment

Value Drivers:

- Claims assessment time: **-23 days** (Aviva benchmark)
- Fraud savings and recovery identification
- Loss Adjustment Expense (LAE) reduction

HIGH PRIORITY

Advanced Risk Modeling

ML models incorporating alternative data sources (satellite imagery, IoT sensors, social media) to enhance catastrophe modeling and emerging risk prediction.

Technology Approach:

Deep learning, geospatial analytics, time-series forecasting, ensemble models

Value Drivers:

- Improved catastrophe loss predictions
- Better portfolio diversification insights
- Competitive advantage in emerging risk assessment

MEDIUM PRIORITY

💡 Strategic Focus: The three high-priority opportunities (GenAI Underwriting Assistant, Automated Data Ingestion, AI Claims Triage) directly address Swiss Re's P&C execution gap and align with proven industry benchmarks. These use cases target the dual-engine framework (Forensic & Predictive) and map to measurable business outcomes: **combined ratio improvement, operational efficiency gains, and enhanced client service**. The AI Product Delivery Lead and AI Product Strategist should prioritize these initiatives in the 30-90-365 day roadmap to demonstrate rapid value realization.

Transformation Roadmap: 30-90-365 Day Plan

First 30 Days Foundation & Discovery


- ONBOARDING & ALIGNMENT**
 - Deep dive into Swiss Re's P&C operations, data architecture, and existing AI initiatives
 - Establish working relationships with Vagnoli (GenAI CoE) and Schelldorfer (P&C AI Lead)
 - Map stakeholder landscape across underwriting, claims, Digital & Tech, and risk management
- PORTFOLIO ASSESSMENT**
 - Inventory existing AI projects and pilots in P&C Re
 - Assess technology stack maturity (Palantir, Azure, MLOps capabilities)
 - Identify quick-win opportunities and blockers
- STRATEGIC PLANNING**
 - Validate use case prioritization with business stakeholders
 - Define success metrics and KPI framework
 - Establish governance routines with GenAI CoE
- KEY DELIVERABLES**
 - Stakeholder map and engagement plan
 - AI portfolio assessment report
 - 90-day execution roadmap with prioritized initiatives

90 Days Quick Wins & Execution

- PILOT INITIATIVES**
 - Launch GenAI Underwriting Assistant prototype (submission summarization, risk extraction)
 - Deploy Automated Data Ingestion pilot for facultative submissions
 - Demonstrate measurable value with at least one production-ready AI solution
- DELIVERY INFRASTRUCTURE**
 - Establish agile delivery rituals (sprint planning, retrospectives, demos)
 - Set up MLOps pipeline for model deployment and monitoring
 - Integrate with GenAI CoE red-teaming and validation workflows
- GOVERNANCE & STANDARDS**
 - Formalize AI risk assessment process for P&C initiatives
 - Establish model validation checkpoints with Schelldorfer's team
 - Define GenAI usage policies and prompt risk controls
- KEY DELIVERABLES**
 - Working prototype of GenAI Underwriting Assistant
 - MLOps infrastructure operational
 - Governance framework documented and approved

1 Year Scale & Impact

- PRODUCTION DEPLOYMENT**
 - Deploy multiple AI solutions at scale across P&C Re (underwriting, data ingestion, claims)
 - Achieve user adoption targets with underwriters and claims adjusters
 - Expand AI product portfolio to cover 3-5 high-priority use cases
- MEASURABLE IMPACT**
 - **-30% reduction** in manual processing time for submissions
 - **3-6 pp improvement** in loss ratio via enhanced risk selection
 - **Faster time-to-quote** improving client satisfaction scores
- INSTITUTIONALIZATION**
 - Establish AI product pipeline with continuous delivery cadence
 - Implement automated model monitoring, drift detection, and retraining
 - Build internal AI capability through training and knowledge sharing
- KEY DELIVERABLES**
 - Portfolio of scaled AI products in production
 - Business value realization report with ROI metrics
 - Roadmap for Year 2 expansion and capability building

 **Success Criteria:** This roadmap balances **speed (30-day foundation, 90-day pilots)** with **sustainability (1-year institutionalization)**. The AI Product Delivery Lead orchestrates portfolio-level execution while the AI Product Strategist translates business needs into technical specifications. Together, they accelerate Swiss Re's P&C AI productization, close the execution gap versus competitors, and deliver measurable business impact within the first year.

Source: Own analysis, industry best practices

Role Cooperation Model: Delivery Lead & Strategist Synergy

Dr. Matteo Vagnoli

GenAI Center of Excellence Lead

→ Sets enterprise-wide GenAI standards and governance frameworks

→ Conducts automated red-teaming and responsible AI risk assessment

→ Likely reports to: AI Product Delivery Lead

AI Product Delivery Lead

Portfolio Orchestrator & Strategic Leader

→ Manages AI initiative portfolio and makes go/no-go decisions

→ Removes blockers and ensures measurable business value realization

→ Accountable for KPI delivery and ROI demonstration to leadership

Dr. Jürg Schelldorfer

Team Lead Data Analytics & AI P&C Facultative

→ Owns P&C AI portfolio, domain expertise, and model validation

→ Bridges AI solutions with underwriting and claims operational teams

→ Likely reports to: AI Product Strategist/Product Owner

AI Product Strategist/Product Owner

Hands-On Technical Delivery & Product Ownership

→ Translates business needs into technical specifications and user stories

→ Owns product backlog, delivery quality, and hands-on coding

→ Ensures integration with P&C workflows and data pipelines

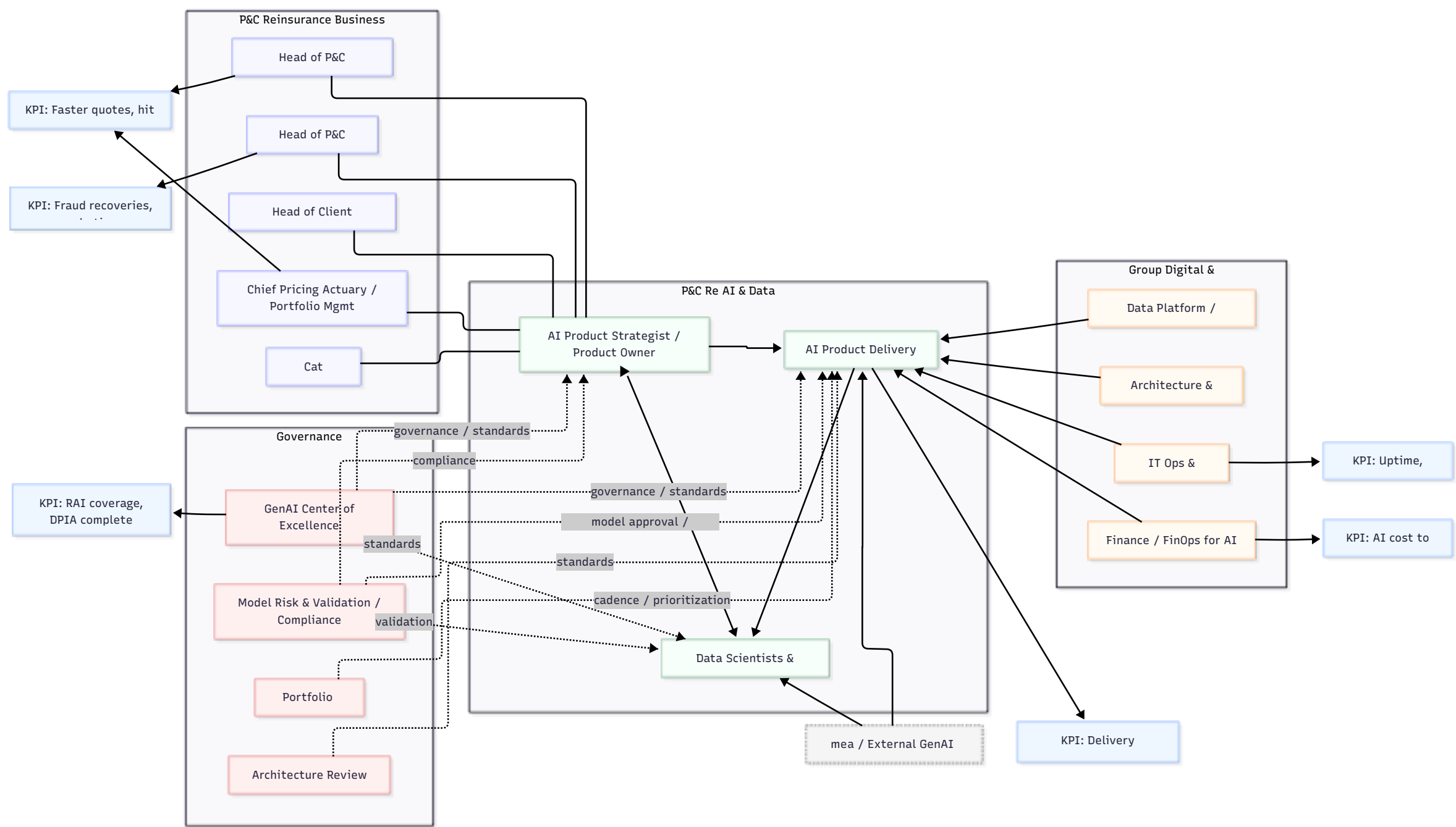
Collaboration Workflow & Decision Framework

Activity	Delivery Lead Role	Strategist/PO Role	Vagnoli/Schelldorfer Involvement
Prioritization & Design	Decision-maker: Evaluates business value, resource allocation, strategic alignment, and reviews architecture for scalability	Owner: Provides technical feasibility assessment, designs solution, defines data pipelines, selects ML/GenAI approach	Vagnoli: GenAI CoE standards and strategic input. Schelldorfer: P&C priorities and domain expertise
Risk & Validation	Escalates high-risk decisions, ensures validation checkpoints are met before go-live	Documents model assumptions, data lineage, technical risks, and prepares validation documentation	Vagnoli: Red-teaming and RAI assessment. Schelldorfer: Actuarial/ML model validation
Production Deployment	Go/No-Go Decision: Final approval based on validation, risk assessment, and business readiness	Executes deployment, monitors performance, manages MLOps pipeline and production operations	Vagnoli: Compliance sign-off. Schelldorfer: Business user acceptance and operational readiness
Value Measurement	Accountable: Tracks KPIs, reports business impact, demonstrates ROI to leadership and stakeholders	Instruments telemetry, collects usage metrics, identifies optimization opportunities for continuous improvement	Schelldorfer: Validates business metrics including loss ratio improvements and efficiency gains

Tandem Model Success: The Delivery Lead and Strategist operate as a complementary tandem - the Delivery Lead sets strategic direction and removes blockers (the "When and Why"), while the Strategist translates business needs and builds solutions (the "What and How"). Together, they bridge Vagnoli's enterprise-wide governance vision (GenAI CoE standards, agentic workflows) with Schelldorfer's P&C execution needs (domain expertise, model validation). This four-way collaboration ensures AI solutions are strategically aligned, technically sound, safely governed, and deliver measurable P&C business value.

Role Cooperation Model:

AI Product Delivery Lead & AI Product Strategist/Product Owner



Defines who owns what across product value and delivery execution.

Delivery Lead owns portfolio cadence, dependencies, and reliable release to production.

Product Owner owns problem framing, backlog, and user value.

Governance, validation, and security remain first class through GenAI CoE, Model Risk, and Architecture Review.

KPI Framework: Linking AI Initiatives to Business Outcomes

Tier 1: P&C Business Objectives

The diagram consists of four light blue rectangular boxes arranged horizontally. Each box contains a bold title, a descriptive sentence, and a target value in orange text.

- Combined Ratio**
Total claims and expenses as % of premiums
Target: <95%
- Loss Ratio**
Claims costs as % of premiums earned
Target: 3-6 pp improvement
- Underwriting Efficiency**
Time and cost to process submissions
Target: -30% processing time
- Client Satisfaction**
Time-to-quote and service quality
Target: NPS +15 points

↓ Business objectives are achieved through operational improvements driven by AI

Tier 2: Operational KPIs

Risk Selection Accuracy % of profitable underwriting decisions Target: +10% accuracy	Submission Processing Time Hours to analyze and quote Target: -50% time reduction	Claims Cycle Time Days from FNOL to settlement Target: -23 days (Aviva benchmark)	Data Quality Score % of structured, validated data Target: 95% quality
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↓ Operational improvements are enabled by AI system performance metrics

📈 Tier 3: AI System Metrics

Model Accuracy	Automation Rate	Document Processing Speed	Fraud Detection Rate
Precision, recall, F1 score for ML models Target: >90% accuracy	% of tasks completed without human intervention Target: 60-80% automation	Pages processed per hour by GenAI Target: 1M pages/month (SCOR benchmark)	% of fraudulent claims identified Target: 85% detection

💡 **Example KPI Chain:** The GenAI Underwriting Assistant achieves **90% model accuracy** (Tier 3) in extracting risk factors from submissions, which enables **50% faster submission processing** (Tier 2) and **10% better risk selection accuracy** (Tier 2), ultimately contributing to **3-6 pp loss ratio improvement** (Tier 1) and **combined ratio optimization** (Tier 1). This hierarchical framework ensures every AI initiative is directly tied to measurable business value, enabling the AI Product Delivery Lead to demonstrate ROI and prioritize investments based on business impact.

Strategic Recommendations & Next Steps



Key Findings

- ▶ **Execution Gap, Not Capability Gap:** Swiss Re possesses world-class data infrastructure (Palantir Foundry, Azure), proven AI governance (GenAI CoE, Responsible AI framework), and successful AI deployments in L&H. The challenge is accelerating P&C AI productization to match competitors' scaled solutions.
- ▶ **Competitive Pressure Intensifying:** Munich Re's REALYTIX ZERO CoPilot, SCOR's AI Assistant (1M pages/month), and Zurich's 160+ AI use cases demonstrate the industry's shift from pilots to production-grade AI products. Swiss Re must close this productization gap to maintain competitive positioning.
- ▶ **Clear Value Opportunities:** Three high-priority use cases (GenAI Underwriting Assistant, Automated Data Ingestion, AI Claims Triage) offer measurable impact: 30% processing time reduction, 3-6 pp loss ratio improvement, and enhanced client satisfaction.
- ▶ **Dual Fluency Required:** Success demands bridging Vagnoli's enterprise AI governance vision with Schelldorfer's P&C domain execution needs - speaking the language of both agentic AI workflows and loss ratio optimization.

Strategic Recommendations

- **Prioritize Quick Wins:** Launch GenAI Underwriting Assistant and Automated Data Ingestion pilots within 90 days to demonstrate rapid value realization and build organizational momentum.
- **Establish Disciplined Delivery Cadence:** Implement agile rituals, MLOps infrastructure, and integrated GenAI CoE governance workflows to institutionalize AI product pipeline and move from one-off projects to continuous delivery.
- **Measure and Communicate Impact:** Define clear KPIs linking AI initiatives to P&C business outcomes (combined ratio, loss ratio, efficiency gains) and track progress transparently to secure ongoing stakeholder support.
- **Build Internal Capability:** Invest in training, knowledge sharing, and partnership with underwriters and actuaries to ensure AI solutions enhance (not replace) expert judgment and achieve sustainable adoption.

Immediate Next Steps

 AI Product Delivery Lead	 AI Product Strategist / Product Owner
<ul style="list-style-type: none">✓ Conduct stakeholder mapping and engagement plan (Vagnoli, Schelldorfer, P&C business leaders)✓ Assess AI portfolio maturity and identify blockers to scaling✓ Define KPI framework linking AI initiatives to business objectives✓ Establish governance routines with GenAI CoE and Model Validation✓ Orchestrate 90-day pilot roadmap with prioritized use cases	<ul style="list-style-type: none">✓ Deep dive into P&C underwriting and claims workflows to identify pain points✓ Partner with underwriters to validate GenAI Underwriting Assistant requirements✓ Translate business needs into technical specifications and user stories✓ Collaborate with Data & Tech teams to assess Palantir/Azure integration readiness✓ Define product backlog and acceptance criteria for initial pilots



Pre-Onboarding Value Demonstrated

These two comprehensive decks showcase deep understanding of Swiss Re's competitive context, AI capabilities, stakeholder landscape, and execution roadmap. **Ready to accelerate P&C AI productization from day one.**