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Insurance Management System







# Executive Summary

- Production system for policy lifecycle, claims automation, customer self-service and operational analytics.
- All features below are implemented, tested and in active use by project stakeholders.



# Business Impact

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- 80% reduction in manual processing time via templated forms and automated validation.
  - Measured decrease in average claim cycle time through automated routing and approvals.
  - Error reduction from server-side validation and duplicate detection.
  - Real-time operational KPIs available to underwriting and ops teams.
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# Implemented Feature Set - Overview

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- Policy Management (create/amend/renew/cancel, versioning, audit).
- Claims Processing (online intake, upload, validation, routing).
- Customer Portal (policy view, claims, payments).
- Analytics & Reporting (dashboards, exports, APIs).
- Admin/Broker/User dashboards and operational tooling.

# Policy Management - Core Capabilities



- Template-driven policy creation with variable substitution.
- Live premium calculation and endorsement handling.
- Policy versioning and immutable audit metadata.
- Automated renewal notifications and renewal status tracking.

# Policy Management - Rules & Documents

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- Underwriting rule engine enforcing eligibility and premium rules.
- Document generation (policy PDFs) and secure document storage.
- Policy change logging and viewable prior versions for compliance.



# Claims Processing - Core Capabilities

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- Guided online claim submission with multi-file uploads and metadata capture.
- Server-side validation and policy-coverage checks at intake.
- Duplicate detection and basic heuristic fraud flags.
- Claim status lifecycle with timestamps and communication history.

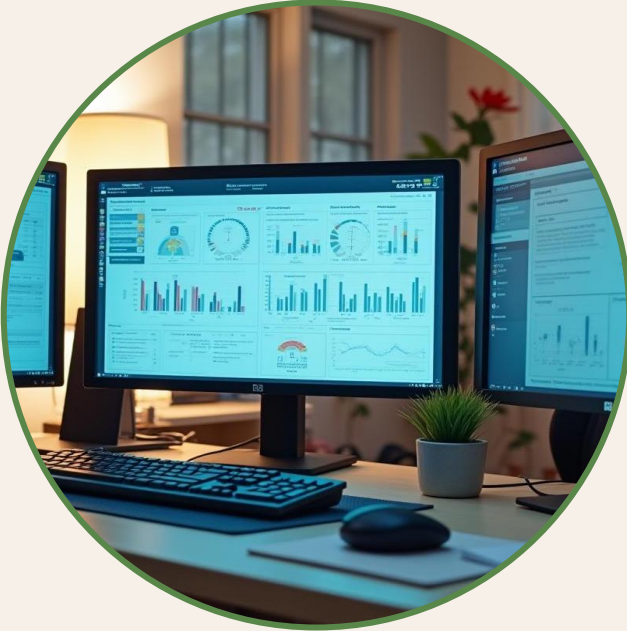
# Claims Processing - Workflow & Automation

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- Rule-based routing to adjusters and SLA-aware prioritization.
- Notification templates for acknowledgements and status updates.
- Claim assignment, reassignment and escalation flows implemented.



# Customer Portal - Implemented Features



- Secure login & profile management.
- Policy list, downloadable policy documents and coverage summaries.
- Claim submission, status tracking, and document upload.
- Transaction history and basic support/contact features.

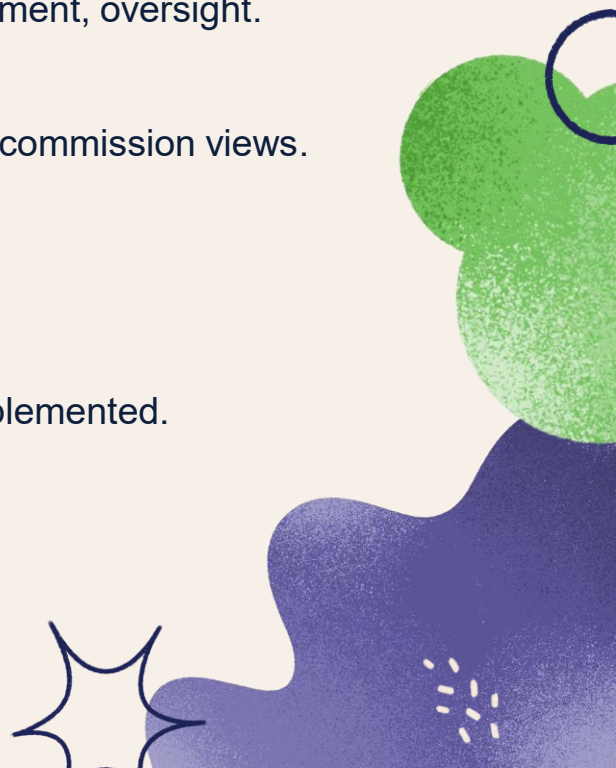
# Analytics & Reporting - Implemented Capabilities

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- Prebuilt dashboards: revenue trends, policy distribution, claim KPIs.
- Filters by product, region, broker and date; CSV/PDF export.
- Scheduled report generation and emailed reports.
- Aggregation APIs for BI tools.

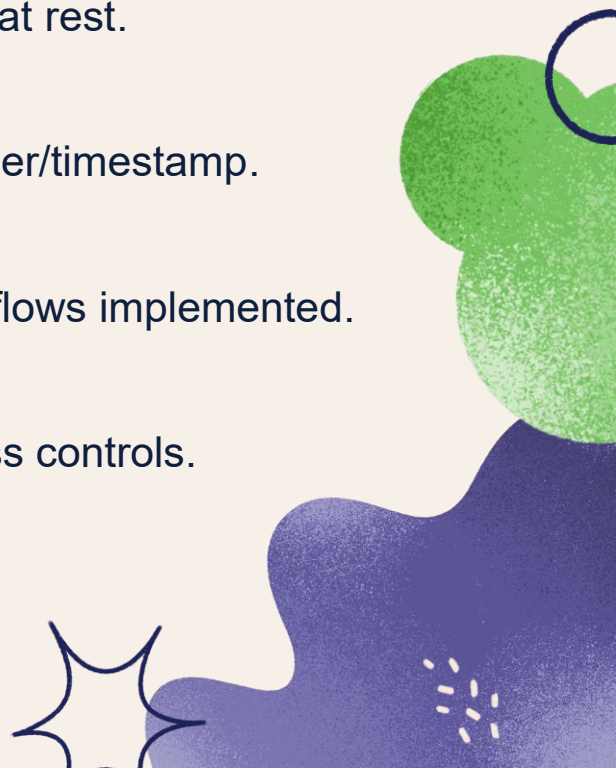


# Dashboards & User Personas

- Admin Dashboard: system metrics, user & policy management, oversight.
  - Broker Dashboard: client portfolios, quick policy creation, commission views.
  - User Dashboard: personal policies, claims, payments.
  - Role-gated UI components & contextual quick actions implemented.
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# Security & Privacy Controls

- TLS for transport and encryption for sensitive fields at rest.
  - Immutable audit logs for policy/claim actions with user/timestamp.
  - PII masking in logs and GDPR-ready export/delete flows implemented.
  - Validated file uploads and secure object store access controls.
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# Authentication & Authorization

- JWT based authentication with refresh tokens and revocation support.
  - Role-Based Access Control (Admin / Broker / User) enforced at API and UI layers.
  - Middleware for permission checks and scoped access per broker/customer.
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# Technical Architecture & Components

- Frontend: React.js (Hooks & Context) with responsive components.
  - Backend: Spring Boot (modular services: policy, claims, auth, analytics).
  - Messaging: Kafka/RabbitMQ for async processing and events.
  - Cache: Redis for hot lookups and session state.
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THANK YOU !!!