Next Gen Fraud Analytics in Insurance

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CSC South & West Europe
Agenda

1. CSC as World Leading Provider of Insurance Services & Technology

2. Claims Fraud: Key Patterns, Questions, Drivers & Solutions

Next Generation Fraud Analytics Framework

- Overview
- 720° Client View
- Data Science
- Maturity Levels
- Project Start-Up

DISCOVER HOW THE DICE WILL FALL
Banking & Insurance Day 2014
CSC is the World’s Leading Provider of Insurance Services

<table>
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<tr>
<th>Category</th>
<th>Description</th>
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<tr>
<td><strong>Deep Industry Experience</strong></td>
<td>10,000+ employees averaging 12+ years tenure, diverse and experienced insurance technology workforce; serving insurance industry for 40+ years</td>
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<td><strong>Staying Power</strong></td>
<td>800+ active clients, CSC’s largest and most collaborative software client community</td>
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<td><strong>Most Implementation Successes</strong></td>
<td>CSC’s Core administration platforms support 500,000,000+ insurance policies</td>
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<td><strong>Enabling Global Growth</strong></td>
<td>40+ market-ready, global insurance software offerings and processes enabling multinational insurers to grow and expand quickly</td>
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<td><strong>Leading the Market</strong></td>
<td>Industry analysts recognize CSC as #1 core platform provider in U.S., Asia and Europe</td>
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CSC’s Big Data & Analytics Incubator: 800 specialists

- Retained insurance customers
- Refined Suspicious cases In claim mgmt
- Efficient Predictive Operations
- Underwriting risk based on climate predictions

FUNCTIONAL INTELLIGENCE & ANALYTICS
Customer | Finance | Marketing | Operations | Supply Chain

REPEATABLE BD&A CORE PLATFORM
INFRASTRUCTURE SERVICES
(Bare Metal, AWS IaaS, CSC Cloud, Open Stack, Vsphere)

Data Science Consulting
Big Data Business Consulting
Big Data Platform Consulting
Fraud Prevention & Detection: a main insurance topic in enhancing claims management process

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<td>• Claims management is the <strong>biggest cost driver</strong> of insurance companies</td>
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<td>• <strong>Multi billions</strong> claim payments are processed per year</td>
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<td>• Every 10(^{th}) claim (10%) is related to fraud</td>
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<td>• In phases of <strong>global downturn</strong>, fraud/claims ratio increases 10% → 14%</td>
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<td>• Only 1/5 fraudulent claim is actually identified and undisbursed</td>
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And to make matters worse:
- Cost pressure ➔ **increase their automation** of claims handling ➔
- Automation ➔ **the sensitivity to fraud** of the claims handler ➔
- Fraudsters: target the **less effective Fraud Prevention barriers** ?
- Fraudsters: knows exactly **what happened** before/during/after the claim
Traditional Approach & Gaps to Effective Fraud Detection

1. new claim
2. Identify risk indicators, rule engine
3. suspect?
4. Analyze statistics, known cases
5. YES
6. Recommend claim not paid
7. NO
8. claim paid
Key Drivers

Knowledge
✓ Insurance Claim Management and Underwriting, Processes & Data
✓ Insurance Anti-Fraud Strategies
✓ Advanced Analytics of Known and Unknown Types of Fraud

Solution(s)
✓ End to End Approach: People, Process, Data, Tools
✓ «Quick Answers»: Exploratory Analysis, Fraud Modelling, Evaluation
✓ Enterprise Solution: Process Analysis, Data Management, Architecture
Next Gen Fraud Analytics Framework

Syndication Layer of Information

Functional Intelligence

Data Science

Claims Policies Clients
Legacy systems
Datawarehouse Data Marts
Geographics Subsidiaries
Public Open data
Unstructured data Social networks

CSC
Next Gen Fraud Analytics Framework & 720° View of Client

Data Refinery
- Internal and External
- Gaps
- Sourcing and Integration
- Rules Configuration

Business Processes
- Fraud Case Management
- Claim Operations
- Focus on Problems
- Communication

Analytic Models
- Exploratory Data Analysis
- Model Execution
- Model Validation
- Model Maintenance

Results
- Dashboards
- Results Exports
- Test and Validation
- Refinements

SAS Visual Scenario Design
SAS Social Network Analysis
SAS Enterprise Miner
SAS Case Management
SAS Visual Analytics
Next Gen Fraud Analytics Framework & Maturity Levels

Standard

- Manual detection
- Random investigations
- Struggle with team capacity
- Limited performance measurement
- No loop back (old cases)
Next Gen Fraud Analytics Framework & Maturity Levels

Pervasive

- Data Quality Programme
- Online scoring
- Fraud Network Analysis
- Text Mining
- Preventive investigations
- Loopback of case management
- Embedded in Claim Mgmt system
### Enterprise Wide Anti Fraud Management Framework

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<td>Integration of existing and new anti fraud processes into the enterprise risk management</td>
<td>Establish an organization structure to handle fraud protection and its overall coordination</td>
<td>Integration of new anti fraud systems into the enterprise IT architecture</td>
<td>Transformation of anti fraud measures and supporting project activities</td>
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4 main drivers – work streams – are identified to establish an anti fraud management framework within an enterprise
Next Gen Fraud Analytics Framework & Project Start Up

**Shape**

- Fraud Analytics Strategy Engagement
  - Understand company’s current anti-fraud approaches and end-state detection goals
  - Assess important insurance fraud data: claims, policy, product, customer, demographics
  - Architecture Evaluation
  - Processes and People
  - Identify value proposition and business case

**Transform**

- Fraud Analytics Implementation
  - Implement analytics to deliver company’s fraud detection goals and strategy
  - Source, prepare, and integrate important insurance fraud data
  - Tailor CSC insurance model accelerators — Predictive Models, SNA, Risk indicators
  - Tailor CSC fraud idetection nsight visualizations and results export

**Manage / As a Service**

- Fraud Analytics As a Service
  - Ongoing delivery of anti-fraud insight
  - Ongoing optimization and tuning of fraud detection analytics models
  - Ongoing data refresh
  - Enhancement of models/results through addition of further external datasets
  - Enhancement of visualization and dashboards for fraud detection insights

**To Envision the path to the Fraud Detection Target Goals**

**Transform Anti Fraud Detection Framework**

**To Optimize Fraud Analytics and Insights**
Next Gen Fraud Analytics for Insurance

THANK YOU!

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