Decision Management in Tax Administration

Inland Revenue New Zealand lessons learnt and future developments

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Presentation Outline

» The Goal
» The Stages
» The starting Point: GST
  Results; impact of the results to the next (planned) stages
» Current stage
» Approaches
  The role of decision modelling, simulation and DMN
» Conclusions
The Goal

Paradigm Shift

from

product centric traditional risk management strategies

to

business strategy and (modern) analytical driven decision management approach
The Change

Focus: Capability
Success: Change Management
GST

Success!

✓ Straight through processing and front end risk analysis
✓ Operational efficiency and improved customer satisfaction
✓ IR integrity Protected
✓ IR Policies Supported
✓ Visibility, trail and evidence at any point of the decision process
✓ 360º view of the customer
✓ Continuous Improvement

A tactical environment to integrate and analyse decisions and data

- Nodes: 33.7 mil
- Relationships: 272.9 mil
- Properties: 2.06 bil
- Entity types: 28
- Db Storage: 444 GB
- Index on disk: 246 GB
The Move

Focus: Business Strategy
Success: Decision Management
<table>
<thead>
<tr>
<th>The goal</th>
<th>Building blocks</th>
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<tbody>
<tr>
<td>» Enterprise Decision Management based on the</td>
<td>» Decision management Strategy</td>
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<tr>
<td>» Delivery of hybrid and integrated enterprise solutions, conducted</td>
<td>» Experimental Enterprise</td>
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<td>by the business supported by</td>
<td>» Combination of lean and traditional analytics</td>
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<tr>
<td>» Modern analytical culture</td>
<td>principles</td>
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<tr>
<td>driven by</td>
<td>» Data Science Framework and Carrier focus:</td>
</tr>
<tr>
<td>» Business strategic goals and</td>
<td>continuous business value</td>
</tr>
<tr>
<td>principles</td>
<td>sustainable agility</td>
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<td></td>
<td>success: methodology</td>
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<td></td>
<td>» Definition of a robust and sustainable</td>
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<td></td>
<td>methodological approach</td>
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<td>decision modelling; dmn</td>
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<td></td>
<td>crisp/kads/scrum</td>
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</table>
Rolling up the sleeves

- GST from risk identification and risk measurement to Risk and Customer Profiling
- Other Tax and Social Products
- Business Strategy Principles
- Cross Government Collaboration

- Decision Management Framework
- Decision Modelling
Decision Model for the GST Solution

Adoption of DMN - early results:

- Improved clarity
- Improved understanding, thinking and modelling
- Improved communication and documentation
- Improved agility
Rolling up the sleeves

- GST from risk identification and risk measurement to Risk Costumer Profiling
- Other Tax and Social
- Business Strategy Principles
- Cross Government Collaboration

- Decision Management Framework
- Decision Modelling
- Metrics and KPIs
- Environment for Simulation
- Broadening the engagement with partners
- More and different types of data
Opportunities

» Focus on Analytics and Experimental
  » Advanced Analytic Platform (AAP)

» Data Science carrier and framework

» Decision Management Strategy and Framework

» Decision Modelling Principles and Approach

» Next Stage
The Shift

Focus: Customer
Success: Decision Optimization
Invisibility
Model Design Principles

- Acquisition at any point
- As early as possible
- Validation
- Consistency

- Modelling the decision
- and the implications to the business
- independent of the process
Conclusions

» The paradigm shift on the way to approach the problem and the solutions
  » enables the ability to deal with complexity
  » was a definite step towards bringing the Organization to understand
    » the need for the management of decisions beyond its internal boundaries;
    » the need for an architecture and infrastructure that supports capturing, integration and analyses of decisions and data;
  » experimental, lean and analytical approaches applied across the Organization
Conclusions

» The early adoption of a robust methodology, framework and infrastructure are a paradigm shift enablers and fundamental for a sustainable consolidation and growth
   » Data Science Framework
   » Decision Management Framework
   » Modelling principles

DMN applied across different dimensions of the solution (knowledge engineering principles) following an agile and robust methodology (Crisp) supports:
   » representing and dealing with complexity
   » agility, consistency, communication, collaboration;
   » is a powerful documentation and requirements specification instrument
Conclusions

» Don’t underestimate the change that is required and the impact of the change;
» Cater for more change – including in Exec and sponsorship;
» There are always opportunities if you know what you want to achieve;
» Uncertainty, dynamicity and noise are facts; it pays off not to ignore them;
» Forge solid partnerships;
» Keep true to your team, goals, role and knowledge; the Organization and its customers need your skills and sanity