A Tale of Two Systems: Keeping Rules Consistent in Transformation

Patrick Devine – pdevine@deloitte.ca
About me

- Home is Vancouver, British Columbia
- Background in biomedical engineering
- Consultant at Deloitte since 2008
- Business rule specialist since 2011
- OPA implementation specialist
What best reflects an organization’s purpose?

- Assets and liabilities
- Products and services
- Employees
- Processes
- Strategy
- Rules
  - Metaphorical “nervous system”, controlling actions and decisions¹

¹Business Rule Concepts (Ronald G. Ross)
Like memory, the “why” for rules can fade with time

- Until 2010 the law guaranteed a minimum of $75 for rent:

  Regulation Excerpt:

  Section 4(14) … the minimum monthly rent allowance for an applicant with disabilities is $75, regardless of actual costs.

- Reason was traced back decades: $75 was scaled to rent in the 1970s

- Rule was now seen as obsolete and repealed
Chapters

Problem
Rule inconsistencies undermine the organization’s purpose.

Solution
Rule council and resolution process are created.

Epilogue
Rule council supports the project in other ways.
Improving social services through rule automation

- Case management system with 5,000+ users
- Income Assistance: $1 billion per year
- Monthly payments to 175,000 clients
- Retirement or integration of legacy systems
- Rules automated for eligibility decisions

<table>
<thead>
<tr>
<th>Eligibility Rule Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Assistance</td>
</tr>
<tr>
<td>Job Programs</td>
</tr>
<tr>
<td>Daycare Subsidies</td>
</tr>
<tr>
<td>Medical Benefits</td>
</tr>
<tr>
<td>Senior’s Benefits</td>
</tr>
<tr>
<td>Autism Treatment</td>
</tr>
<tr>
<td>Transit Passes</td>
</tr>
</tbody>
</table>

BBC 2014 - Patrick Devine - A Tale of Two Systems
Testing compared the new system with the legacy benchmark

• Legacy system used for 30 years

• New system used fresh interpretation of source legislation and policy

• Compared with legacy benchmark, discrepancies in:
  – Eligibility
  – Amounts
  – Duration
Even subtle differences accumulate over time

Legislation Interpretation Differences (LIDs)

Differences in the way policies and regulations are implemented (in systems or business practices), caused by accumulated decisions and varying perspectives.

• Differences between system rules affecting eligibility outcomes
Social services are especially sensitive to rule discrepancies

- Resolution requires tradeoffs between:
  - Consistency
  - Fairness
  - Resources

- Changes to eligibility must be:
  - Avoided, or
  - Understood and carefully managed

- **Rule council** created, with broad range of stakeholders
Council’s role: recommend solutions based on broad stakeholder engagement and analysis
A three-step process was developed to resolve LIDs

<table>
<thead>
<tr>
<th>Identify</th>
<th>Decide</th>
<th>Resolve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legacy provides an income exemption for training.</td>
<td>Should new system implement the exemption?</td>
<td>Update rules, test cases, and plans to reflect change.</td>
</tr>
</tbody>
</table>

**Details:**
- Exempts $50 or $100 for income code 07
- Legislation and policy seem to be silent regarding these exemption amounts

**Ticket Reference:**
- #293730

**Impacts:**
- Quantitative impacts:
  - 50 clients
  - $100 per client
- Qualitative impacts:
  - Perceptions of removing a training-related exemption

**Actions:**
- Incorporate into change management plan
- Add to training plan
- Add to detailed communications plan
- Update test cases
- Determine deployment timing

**Decision:**
Income code 07 should not have an automatic exemption.
Our tracking spreadsheet helped preserve the “why”

<table>
<thead>
<tr>
<th>Column Headings</th>
<th>Tips</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Helpful for tracking</td>
</tr>
<tr>
<td>Name</td>
<td>Keep it simple</td>
</tr>
<tr>
<td>Description</td>
<td>Keep it detailed: assume you will forget</td>
</tr>
<tr>
<td>Status</td>
<td>New, Discussed, Pending Action, Escalate, Decided, Actioned</td>
</tr>
<tr>
<td>Data</td>
<td>Research or findings to influence a decision</td>
</tr>
<tr>
<td>Recommendation</td>
<td>Proposal to directors or executives</td>
</tr>
<tr>
<td>Decision</td>
<td>Confirmed recommendation; written at a high level</td>
</tr>
<tr>
<td>Rationale</td>
<td>The “why?” of the decision: be as detailed as possible</td>
</tr>
<tr>
<td>Rule Specification</td>
<td>Data-level impacts of the decision, needed for implementation</td>
</tr>
<tr>
<td>Next Steps</td>
<td>Action items resulting from the decision</td>
</tr>
</tbody>
</table>
Example 1: Is an income exemption valid?

Identify
The legacy system exempts some income related to training scholarships, but this does not seem to have a basis in legislation. Some clients may be receiving too much.

Decide
- Legacy system provides income exemption limits of $50 and $100 to singles and families, respectively, but not for other categories
- Regulation mentions an exemption for training income, but no specific amount is provided
- Policy department has analyzed and believes it was added to a table in error

Rule Council recommendation is to remove the exemption.

Resolve
Communication planning is identified as a key component.
Example 2: How is age calculated?

Identify

Legacy system has a special way of calculating age, relative to cheque issue date instead of today’s date. Should the new system continue that approach?

Decide

- Analysis of the rule indicates that it only affects eligibility at milestone ages (18, 19, 65+)
- Clients with birthdays near the end of the month would gain extra benefits before their milestone
- Legal opinion is that there is regulatory support to continue current approach

Rule Council recommendation is to continue the legacy approach.

Resolve

New systems should continue calculating age as relative to the cheque issue.
Example 3: Do supplements count against income?

Identify

Discrepancy between regulation and legacy system:
- Regulation: If core benefits < income then ineligible
- Legacy system: If core benefits + supplements < income then ineligible

For many clients, this would be the difference between receiving a cheque or not.

Decide

- Analysis shows that legacy system is aligned with regulation for clients 65+
- Data shows that average amount exceeded is $57, and average cheque amount is $140
- Many of those affected could be especially vulnerable (receiving nutritional supplements)

Rule Council defers to Director level due to sensitivity.

Resolve

The item has been escalated for Director-level decisions.
Changes to the project plan required adaptation

Initial Focus

Legislation Interpretation Differences (LIDs)
Differences in the way policies and regulations are implemented (in systems or business practices), caused by accumulated decisions and varying perspectives.

New Focus

Project Improvement Decisions (PIDs)
Broad decisions on system design, policy interpretation, or processes.
The council became useful for broader decisions

**Initial Focus**
- Differences between system rules affecting eligibility outcomes

**30 years**

**Legislation and Policy**

**New Focus**

**Interpretations**
- Assess new policies for system impacts

**5 years**

**Systems**
- Review design for usability

**New**

**Practices**
- Address inconsistent practices and use of workarounds
More lessons learned

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing demands</td>
<td>→ Stick to action items with realistic deadlines</td>
</tr>
<tr>
<td>Meeting “momentum”</td>
<td>→ Keep detailed documentation; avoid cancelling</td>
</tr>
<tr>
<td>Rule specification</td>
<td>→ Enlist strong business analyst to interpret decisions</td>
</tr>
</tbody>
</table>

Motivators

- Deep knowledge sharing between business, systems
- Great for organizational history buffs
- Feels like “special teams”
Thank you

Patrick Devine
pdevine@deloitte.ca