Is Oracle Policy Automation a Good Fit for My Business?

How to decide when to use Oracle Policy Automation

ORACLE WHITE PAPER | AUGUST 2015
## Table of Contents

**Introduction** 1  
**When should Oracle Policy Automation be considered?** 2  
**Where can Oracle Policy Automation help?** 2  
  - Modernization of existing IT systems 2  
  - Difficulty implementing policy 3  
  - Inconsistent and expensive interactions with constituents 3  
  - Lack of business/policy stakeholder involvement 3  
  - High cost of solution customization 3  
  - Lack of rapid and incremental return-on-investment 4  
  - Poorly designed legislation or policy 4  

**Public Sector Examples** 4  
  - Social Services 4  
  - Unemployment Insurance 5  
  - Tax 5  
  - Healthcare 5  
  - Licensing, Permitting and Inspections 5  
  - Departments of Motor Vehicles 6  
  - Immigration 6  
  - Higher Education 6  
  - Veterans’ Benefits 6  
  - Grants 6  
  - Compensation 7
Child Support 7
Child Welfare 7
Pensions 7
Human Resources and Employee Entitlements 7
Small Business Advice 8
Transportation 8
Prisons 8
Risk Assessment/Fraud Detection/Insurance 8
When is Oracle Policy Automation Not a Good Fit? 8
Conclusion 10
Introduction

Determining whether Oracle Policy Automation (OPA) is a good fit is always a case by case assessment. This document provides information and advice on what to consider when making that assessment.

Oracle Policy Automation is designed as a specialized rules platform. While it provides the benefits of a traditional technical rules platform, it is optimized to implement complex policy logic that drives substantive determinations. Oracle Policy Automation also includes specific functionality and pre-built application functionality targeted at Public Sector policy applications.

The key factors which indicate a strong business fit for Oracle Policy Automation are identified in the pages which follow, along with numerous examples.
When should Oracle Policy Automation be considered?

From a general perspective, Oracle Policy Automation is well-suited to:

» Complex determinations, decisions, recommendations and calculations, especially if the source material includes legislation, regulations or policy.

» Online advice and guidance tools, where an organization wants to deploy advice-giving questionnaires very rapidly, and where different users should see different questions based on their circumstances.

Oracle Policy Automation is likely to be a good fit where there are clear determinations to be made, based on predetermined rules. If the key goals can be expressed in the following ways, then Oracle Policy Automation is likely to be an excellent fit:

» Is the person eligible for, entitled to, liable for, required to…?

  » Examples: Is the person eligible for income assistance? Is the person entitled to receive medical benefits? Is the person liable for tax? Is the person required to obtain a visa or permit?

  » Note that the subject does not have to be ‘the person’; it could be ‘the applicant’, ‘the taxpayer’, ‘the veteran’, ‘the company’, ‘the asset’, ‘the pet’, ‘the vehicle’, etc. It could be anything about which a determination needs to be made.

» What is the amount of benefit, compensation, tax, payment…?

  » Examples: What is the person's income assistance amount? What is the person’s workers’ compensation amount? How much tax does the person owe? What is the fee the person is required to pay?

Where can Oracle Policy Automation help?

This section describes some business problems and challenges which may indicate a fit for Oracle Policy Automation.

Modernization of existing IT systems

» The organization wants to be more responsive to changing legislation or policy. In these situations, an organization often finds it difficult to translate complex legislation and policy into an operational system, and to make updates in a timely fashion.

» The organization is looking for a common rule platform for multi-channel service-delivery. The organization wants to use the same rules externally on their website, as well as internally for processing, and maybe for other service-delivery channels, e.g. mobile, call center, kiosk, or integrated with a legacy or mainframe system.

» The organization is looking to achieve a staged modernization, with incremental return on investment. This approach could include quick-win deployments such as interactive web self-service, based on the same rules platform, and using the same rules content, that will also drive future stages of a modernization project.

» The organization has a new program or programs it needs to implement, and wants to use modern technology and products to achieve this goal.

» The organization wants to externalize its policy logic so that updating the policy rules does not require recompiling, rebuilding, and retesting the entire system.

» The organization has business logic hard-coded in applications which makes them difficult to maintain and upgrade; disparate applications may have contradicting logic.
The organization is looking to use Commercial Off The Shelf (COTS) software, but is looking for a rapid means to close the gap between the best practices contained in the COTS product and the organization's own unique requirements based on complex statutes, regulations, policies and operating procedures.

**Difficulty implementing policy**

» The organization is having trouble providing consistent decision-making, e.g. different customers in the same situation are receiving different answers depending on which call center/walk-in center they contact – or different systems within an organization deliver inconsistent outcomes.

» The organization is having trouble explaining its decisions, e.g. explaining why an applicant was denied benefits, or how a calculation was made.

» The organization is having trouble understanding how its policy works, especially in complex or unusual scenarios.

**Inconsistent and expensive interactions with constituents**

» The organization wants to make more information available online through interactive online advice tools – and to explain the dynamic advice which it generates.

» The organization wants to replace paper application forms with online forms to reduce its manual workload (and associated potential for error) in processing applications.

» The organization wants to improve the end-user’s experience, regardless of the channel.

» The organization’s call center is having difficulty managing the volume of calls, especially when demand spikes (e.g. before an application deadline or just before tax returns are due), and it would like to encourage more people to use web-based service delivery options.

» The organization wants to provide its online advice tools in a choice of languages for the end-user.

**Lack of business/policy stakeholder involvement**

» The organization wants natural language rule authoring, rather than having the rule logic embedded in code, and is looking for a better method to understand the relationship between statutes, regulations or policy documents and the way rules are implemented in operational systems.

» The organization wants business analysts and subject matter experts, rather than programmers to write the rules. (Note that many Oracle Policy Automation users have internal business user teams who manage their rules.)

» The organization wants the rules to be developed in a business-user friendly environment, such as Microsoft Office Word and Microsoft Office Excel.

» The organization wants integrated testing tools in the rule authoring environment which the business analysts can use to test their rules, without transferring the burden to IT – and even to analyze the potential impact of rule changes on a citizen or customer demographic.

» The organization wants natural language rule authoring in its own language, which may not be English. Oracle Policy Automation offers natural language rule authoring for over 20 languages out of the-box. Rule authoring for languages not available out of the-box can be implemented with the Rapid Language Support Tool, which effectively means rules can be written in any language.

**High cost of solution customization**

» The organization’s complex policy logic is beyond the standard capability of either a COTS solution or a custom or legacy system. The organization is looking for a path to close the gap between system capabilities and
organization-specific requirements, without writing custom procedural code which will impede future system maintenance. This scenario can apply to COTS software, including Siebel, PeopleSoft, E-Business Suite or SAP, as well as a custom solution, a mainframe, etc. Oracle Policy Automation could be used to handle the complex determinations and feed the results back to the core system. For example, a complex pension calculation could be determined using OPA and returned to PeopleSoft; or a complex social services benefit could be determined by OPA with the results returned to Siebel. In these situations, OPA can receive data from the host system which holds the data, and it can be called as a web service.

Lack of rapid and incremental return-on-investment

» Oracle Policy Automation in its standalone mode (e.g. for an anonymous online advice tool) can typically be implemented much more quickly than a full CRM, ERP or custom solution. The full solution may be a multi-year implementation, but the organization could deploy an online advice tool relatively quickly in the first phase before the full system is ready to deploy.

» New application implementations can go live more quickly as Oracle Policy Automation allows the business and policy logic to be developed in parallel to the larger application deployment, using a common platform and with the ability for the same rules to be used in multiple application scenarios.

Poorly designed legislation or policy

» The organization is developing new legislation and needs to verify that it does not have any logical flaws or unexpected consequences before it is passed into law. A model of the legislation built in Oracle Policy Automation can be analyzed using built-in tools such as test case execution to confirm that the legislation delivers the intended policy outcomes across a wide range of scenarios, coverage reporting, and batch processing. OPA can also check for common logical errors, e.g. ambiguities, loop holes and overlapping rules.

» The organization is considering a policy change, and wants to see how that change will affect business outcomes. After modeling the old and new (or proposed) policies in Oracle Policy Automation, what-if analysis and batch processing tools can be used to generate outcomes across a wide range of scenarios, and to compare operational and financial impacts of policy changes.

Public Sector Examples

Oracle Policy Automation can be useful in a very broad range of areas. This section includes sample subject areas, as well as some links to publicly accessible websites where Oracle Policy Automation is currently deployed.

Social Services

» Eligibility determinations and benefit calculations for programs

  » Income assistance, medical benefits assistance, food and nutrition program assistance, disability payments assistance, rent assistance and energy assistance.

  » US examples include Medicaid eligibility, Health Insurance Exchange eligibility, Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), Low Income Home Energy Assistance Program (LIHEAP), Women Infants and Children (WIC), Housing Assistance, and many others.

  » UK examples include Housing Benefit and Council Tax Benefit, e.g.
  
  https://selfserveclaims.birmingham.gov.uk/
Unemployment Insurance

» Monetary determinations: determining eligibility and amount, including calculating base periods, alternative base periods, high quarters, etc.

» Non-monetary determinations, e.g. weekly certifications, determining the eligibility exclusion period after being dismissed for misconduct.

Tax

» Eligibility for tax credits, tax rebates, etc.

» Tax calculations.

» Interactive tax guidance, e.g. the Interactive Tax Assistant on the IRS website: http://www.irs.gov/ita ITA helps taxpayers with questions such as: Do I need to file a tax return? Who can I claim as a dependent? What is my filing status? How much is my standard deduction?

» Income estimator, e.g. HM Revenue & Custom's Tax Calculator: http://tools.hmrc.gov.uk/hmrclexcalulator

» Guidance on tax resident status, e.g. HM Revenue & Custom's Tax Resident Indicator: http://tools.hmrc.gov.uk/rift

» Advice tool on determining whether a person is employed or self-employed for the purpose of tax, e.g. HM Revenue & Custom's Employment Status Indicator: http://www.hmrc.gov.uk/calcs/esi.htm


» Calculating debt repayments, e.g. New Zealand Inland Revenue's Student Loan Repayment Calculator: http://www.ird.govt.nz/calculators/keyword/studentloans/calculator-sl-repayments.html

» Identifying potential tax fraud, e.g. if rules for screening potential tax fraud have been documented, one could write a policy model to run cases through and identify the ones which meet the criteria in a high-volume batch process.

Healthcare

» Determination of eligibility for different healthcare services

» Interactive guidance for contact centre staff to triage patients


Licensing, Permitting and Inspections

» Eligibility for a license/permit. These may be business licenses (e.g. a license to sell alcohol, dispense pharmaceuticals, collect sales tax, etc.), recreational licenses (e.g. hunting and fishing licenses) or drivers’ licenses.

» Calculation of fees for licenses/permits.

» Guidance on which license/permit is relevant or required based on the applicant’s situation
Determination of requirements and calculation of fees for building permits, e.g. fees for construction/addition/alteration/demolition of structures, fees for re-zoning buildings and land, fees for erecting signs/placards/billboards, fees for changing the occupancy of a structure.

Determination of requirements for field audits of licenses and permits (e.g. checking that businesses have the required licenses and permits; checking that the conditions of the licenses or permits are being adhered to; calculating penalties or determining sanctions for non-compliance).

Online tools to assist field officers with inspections, e.g. safety inspections of buildings, factories, houses; compliance inspections of food labels, storage, signage, documentation.

**Departments of Motor Vehicles**

» Eligibility for different types of DMV licenses, e.g. new licenses, transfer of out-of-State or international licenses, or other licensing requirements.

» Online tool for determining identification and other documentation requirements for the end-user customer. The purpose would be to reduce the number of in-person interactions the end-user needs to have with the DMV, i.e. avoid the situation where the person spends hours lining up at the DMV only to find they are missing some paperwork, and have to try again another day.

» Eligibility or requirements for other types of registration, e.g. heavy vehicle permits.

**Immigration**

» Determining eligibility for particular visas.

» Determining which visas are relevant to a person’s situation, e.g. the UK Border Agency: http://apply.ukba.homeoffice.gov.uk/

» Online advice about applying for citizenship, e.g. the Australian Citizenship Wizard: http://www.border.gov.au/Trav/Citi/Apply/Citizenship-wizard

**Higher Education**

» Determining eligibility for courses based on admission criteria such as test scores, previous education, language skills, and documentation requirements.

» Determining eligibility for scholarships, student loans and subsidized student housing based on criteria such as the student's academic background, financial circumstances and student status.

» Calculating course credit transfers.

» Online guided questionnaires to assist students in selecting courses based on their circumstances

**Veterans’ Benefits**

» Eligibility determinations and benefit calculations for veterans' entitlements, e.g. military compensation, incapacity payments, permanent impairment payments, widows' benefits.

» Interactive online advice tools, e.g. the Australian Department of Veterans Affairs' Entitlement Self Assessment: http://www.dva.gov.au/esa/

**Grants**

» Guidance on which grants may be applicable to the applicant’s circumstances.
» Determining eligibility for different grants.
» Calculating the grant amount.

**Compensation**

» Eligibility for compensation. This may be workers’ compensation, veterans’ compensation, or some other type of compensation.
» Calculation of compensation amount.

**Child Support**

» Calculation of child support amount. Note that there is broader scope for Oracle Policy Automation in the area of child support in countries where the government agency is responsible for calculating the child support amount as opposed to jurisdictions where the court order specifies the support amount and the government agency does the collection.
» Assistance with complex calculations to allocate payments that have been received to different potential child support recipients in complex family situations.
» Determinations about enforcement actions against delinquent payers.

**Child Welfare**


**Pensions**

» Eligibility for pensions, and complex pension calculations. These determinations and calculations may span months, years, or even decades of earnings data.

**Human Resources and Employee Entitlements**

» Eligibility for maternity leave, study leave, and other types of leave.
» Calculation of eligible weeks of leave.
» Eligibility for promotion, transfers, relocation, higher duties assignment.
» Calculation of allowances, e.g. relocation allowance, higher duties allowance, remote worker allowance, dangerous location allowance, etc.
» Note that if the organization already has an ERP solution, it may already do the things listed above. If this is the case, then OPA may still be of benefit if the policy determinations are so complex that their ERP solution requires customization (as opposed to configuration) to implement the policy – or if it requires employees to make error-prone manual calculations.
» Oracle Policy Automation can also be used to implement an anonymous online advice tool, e.g.
Small Business Advice

» Interactive online advice tools for business, e.g. starting a business, workplace health and safety, environmental compliance.

Transportation

» Determine eligibility for compensation, and calculate amount of compensation, for travel delays, e.g. Swedish Rail's Travel Time Guarantee: [https://www.sj.se/support/contactrtg.form](https://www.sj.se/support/contactrtg.form)

Prisons

» Calculation of probable discharge dates, jail time credit and good time credit.

Risk Assessment/Fraud Detection/Insurance

» Any organization, whether public sector or commercial, who offers insurance is interested in assessing risk and identifying potential fraud.

» Fraud is also a significant issue in taxation and government disbursements (e.g. health and human services and unemployment compensation).

» If the characteristics which indicate fraud are known, a policy model could be written to implement the logic. There may be a 'fraud scoring' solution where different aspects of a person’s application/claim equate to different subsets of fraud points, which may be summed up to give a total fraud score. Depending on the total score, the application/claim may be determined as green (low risk), yellow (medium risk) or red (high risk). An agency with limited resources could use the fraud scoring to prioritize which applications/claims they investigate more thoroughly.

When is Oracle Policy Automation Not a Good Fit?

While there are many areas where Oracle Policy Automation is a great fit, there are also areas where it is not. Below are some examples of the types of logic, and the types of business situations where Oracle Policy Automation is not a great fit.

From a product perspective, Oracle Policy Automation is not a great fit for:

» Workflow logic. For example, if the rules are of this type: trigger this alert, then re-route the incident to a team leader, then trigger an email to be sent, then escalate the issue to the supervisor, etc. Customer Relationship Management (CRM) solutions such as Siebel and Oracle Service Cloud, and business process management tools such as Oracle BPM Suite are well suited to implementing workflow logic, Oracle Policy Automation is not. However, OPA is a good complement to workflow and BPM solutions as OPA can deliver sophisticated decision making where such decisions are required by a node in a workflow or process.

» Optimization problems. For example, there are 100 unique widgets and 1,000 people; each person may share a widget, or number of widgets, according to certain criteria about each person’s priority level; and you need to determine the best way to distribute the widgets across the maximum number of people in the group. This is an optimization problem and not a good fit for Oracle Policy Automation because of the non-determined nature of the allocation of widgets to people. Note that this is different to the problem where you have complex rules for determining eligibility for a particular type of widget, and you need to determine whether or not someone is entitled to a widget. Oracle Policy Automation is a good fit for this latter logic problem.
Scheduling logic. There are other products on the market specifically designed for scheduling which will handle it better than Oracle Policy Automation. At the same time, Oracle Policy Automation can be used to supplement these products in cases where individual or shift compliance (e.g. skill sets for shift personnel or environment exposure limitations for an individual) needs to be validated before the schedule is finalized.

Self-learning predictive models. The Oracle Policy Automation engine will only make determinations according to the rules provided; it does not ‘learn’ new logic or rules on its own. If the rule logic needs to be amended, then it requires the rule author to write that new logic into the rules. Other products, such as Oracle Real-Time Decisions, have self-learning predictive analytics and work well in tandem with Oracle Policy Automation.

From a business perspective, Oracle Policy Automation may not be appropriate where:

Other products that are core to the solution offer sufficient capability. Look for where Oracle Policy Automation can add value to what the organization already has. If all the organization's requirements (e.g. simple rules) can be met with their existing products, and the organization is happy with the existing solution, it will be difficult to justify the time and expense to implement Oracle Policy Automation, even if Oracle Policy Automation is technically capable of meeting the requirements.

It is worth thinking broadly on this point as the organization may not realize the additional value that Oracle Policy Automation offers. For example, imagine an organization has used custom code to build an online benefit screening tool, and the screening tool is functioning fine. If you dig deeper, you may uncover the following problems, all of which make Oracle Policy Automation a good solution to consider:

- The rules are difficult to maintain and update.
- The rules take a long time to update.
- The organization cannot implement the solution it wants due to technical constraints of the existing approach.
- There is a heavy reliance on programmers, and the business side would like to have more control, and perhaps also write the rules themselves.
- The business side cannot test the rule logic by itself but has to wait until the programmers have built an application in which to run the rules. The business side would like user-friendly testing tools which it can use to test the rules as they are being developed.
- Every screen is custom-developed, rather than configured, which makes it time consuming to add new screens and to update existing screens.
- Different paths through the questions for different types of user need to be manually coded and are difficult to maintain. (Oracle Policy Automation can dynamically generate a path through the questionnaire for each user, based on the rules in OPA and information the user provides on each question screen.)
- The organization would like to improve the end-user experience and customer satisfaction levels by offering an online questionnaire or interactive guided advice tool in a choice of languages. While the organization has a translation team to provide the translation text, the custom-coded solution requires a great deal of difficult-to-maintain screen customization to support other languages. (Oracle Policy Automation has functionality which allows the business side, i.e. business analyst rule authors and translation teams, to incorporate ‘translation layer’ text into an online questionnaire without the need for coding or custom screen development.)
Another product or component in the solution is more appropriate to use. For example, Oracle Service Cloud has some basic interactive guidance functionality called Guided Assistance. If the question flow is primarily procedural (rather than about making determinations), has minimal branching and simple logic (as opposed to complex determinations and calculations) and the purpose is purely to direct the end-user to articles in the Oracle Service Cloud knowledge base, then Oracle Service Cloud Guided Assistance may be more appropriate.

Another example is where the organization has Siebel and needs to implement rules to determine which cases can be assigned to different caseworkers, e.g. if the applicant has indicated they wish to communicate in Spanish, then assign their case to a caseworker with Spanish language skills. These assignment rules should be addressed by the Assignment Manager component in Siebel, rather than by Oracle Policy Automation rules. To expand on this particular example, there are several reasons why:

- Assignment Manager has been optimized for assigning items based on Siebel data. Doing this with Oracle Policy Automation would require additional work with little or no additional benefit.
- Assignment Manager has things such as load balancing, multiple assignments, and other functionality which would be difficult for Oracle Policy Automation to replicate without having full access to the Siebel database.
- Complex assignment logic requires optimization logic, and Oracle Policy Automation is not a good fit for optimization problems.

Using OPA is excessive and unnecessary. For example, field level validation in an external application such as Siebel. Simple field level validation of Siebel fields is easily implemented directly in Siebel (this is likely to be the case for other applications as well).

Logic is static and already implemented elsewhere in the system. For example, if the logic is already in script in Siebel, and the logic does not change and there is no requirement for business ownership, then migration of that logic to OPA should be less of a priority.

**Conclusion**

While Oracle Policy Automation is an excellent fit for a wide range of business problems in many different areas, Oracle Policy Automation is not the answer to everything. The terms “rules” and “business rules” may be used by organizations to refer to many different artifacts, some of which will be a perfect fit for Oracle Policy Automation, some of which will not. So when considering whether Oracle Policy Automation is a good fit for a particular situation, it is worthwhile keeping in mind that the fact that the terms “rules” or “business rules” may be mentioned does not always indicate that Oracle Policy Automation is the best answer.

The key factors which drive a strong fit for Oracle Policy Automation are a combination of:

- Rules based on business documentation, particularly legislation, regulations and policy
- Rules which need to be written once but used in multiple business scenarios or across multiple systems
- Requirement for the business side to have greater involvement in, and ownership of, the rules
- Complexity of the rules
- Volume of the rules
- Volatility of the rules.

High complexity, volume or volatility in rules that are based on documentation – or which need to be documented – will tend to indicate a good fit for Oracle Policy Automation.
Is Oracle Policy Automation a Good Fit for My Business? How to decide when to use Oracle Policy Automation

August 2015

Author: Jasmine Lee