Is Oracle Intelligent Advisor a Good Fit for My Business?

How to decide when to use Oracle Intelligent Advisor

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Introduction

Determining whether Oracle Intelligent Advisor 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.

Intelligent Advisor is designed as a specialized decision-making platform. While it provides the benefits of a traditional technical rules platform, it is optimized to implement complex policy logic that drives decision making and calculations.

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

From a general perspective, Intelligent Advisor 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.

Intelligent Advisor is likely to be a good fit where there are clear determinations to be made, based on pre-determined rules. If the key goals can be expressed in the following ways, then Intelligent Advisor 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 free shipping? Is the person entitled to receive medical benefits? Is the person liable for tax? Is the person required to obtain a visa or permit? Is the person’s grievance covered by warranty?
  » 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’, ‘the invoice’, etc. It could be anything about which a determination needs to be made.

» What is the amount of benefit, compensation, tax, payment, discount…?
  » 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? What is the person’s loyalty discount based on previous purchases? What is the person’s co-payment amount?

» How do I report/claim/return/file/onboard…?

» Which is the best product for the person?
  » Examples: Which student services are applicable to me? Which licenses do I need to run my business? What pay and conditions apply to my job? Which phone plan best suits my needs? Which vaccinations are required?

Where can Intelligent Advisor help?

This section describes some business problems and challenges which may indicate a good fit for Intelligent Advisor.

Inconsistent and expensive interactions with customers

» 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.

Problems with compliance

Compliance with complex regulations or intricate company policies is a substantial challenge for many organizations – in both the private and public sectors. Intelligent Advisor plays an important role in driving compliance with these rules.

Prevention is better than cure, and Intelligent Advisor is an excellent choice to drive upfront compliance. Because Intelligent Advisor can be implemented quickly to apply even very complex policies, it is a powerful tool to ensure that compliance requirements are enforced before errors are made. For example, Intelligent Advisor can ensure that people are only sold products for which they are eligible; that the pricing they receive has been calculated correctly; or that a supplier has met all of the requirements for its invoice to be paid by the recipient. This is important because many traditional compliance approaches focus on identifying errors or fraud after they have occurred. By contrast, Intelligent Advisor focuses on preventing errors or fraud from occurring in the first place.

Intelligent Advisor can also assist with rule-based risk assessment in complex domains. For example, it can be used for risk-scoring calculators that rank insurance claims or other transactions based on multiple criteria, with the goal of identifying high-risk cases that warrant human investigation.

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.

The organization needs to be more agile and respond more quickly when policies change.

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.

Lack of business/policy stakeholder involvement

The organization wants business analysts and subject matter experts to manage the logic rather than programmers embedding the logic in code, and they are looking for a better method to understand the relationship between statutes, regulations or policy documents and the way rules are implemented in operational systems. (Note that many Intelligent Advisor 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. Intelligent Advisor 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. Intelligent Advisor 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 Intelligent Advisor and returned to PeopleSoft; or a complex social services benefit could be determined by Intelligent Advisor with the results returned to Siebel. In these situations, Intelligent Advisor 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

Intelligent Advisor 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 Intelligent Advisor 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 or policy and needs to verify that it does not have any logical flaws or unexpected consequences before it is passed into law or put into practice. A model of the legislation built in Intelligent Advisor 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. Intelligent Advisor 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 Intelligent Advisor, 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.

Examples

Intelligent Advisor 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 Intelligent Advisor is currently deployed.

Financial Services

» Ensuring proper processes are followed when on-boarding new customers, e.g. Financial Services Onboarding demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/KnowYourCustomer

» Determination of eligibility and pro-active recommendation of suitable financial services products

» Assessment of risk and reporting of unusual transactions in line with domestic and international regulatory obligations.

» Calculator tools, e.g. Loan Calculator demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/LoanAdvisor

Insurance

» Ensuring proper processes are followed when on-boarding new customers

» Determination of eligibility and exact entitlement with full decision reasoning, avoiding overpayments and reducing reassessments

» Calculation of payments that change over time or are heavily reliant on temporal considerations (for example, where the amount of assistance required within a rolling period affects entitlements).


» Mobile interviews for on-site assessment of damage, safety inspections, customer home-visits, e.g. Hazard Management demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-

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 and services based on their circumstances, e.g. PathFinder demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/PathFinder

Healthcare

» Determination of eligibility for different healthcare services

» Interactive guidance for contact center staff to triage patients, generation of treatment plans and follow-up steps, e.g. KP On-Call: https://www.oracle.com/us/assets/d4005-4396-policy-automation-2529014.pdf

» Calculation of premiums, co-payment amounts and health incentive payments


» Health insurance advice tools, e.g. Insurance Picker demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/InsurancePicker

Transportation

» Determine eligibility for compensation, and calculate amount of compensation, for travel delays, e.g. Travel Compensation demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/Travel+Compensation

» Complex shipping calculations and comparisons

Utilities

» Health and safety inspections, including guided field servicing, maintenance and repairs.

» Customer on-boarding, product comparison and advice.

» On-line customer self-service for directing customers to the right advice and logging issues, e.g. Northern Power Grid: https://northernpowergrid.custhelp.com/
Human Resources and ERP

» Employee self-service tools, determining eligibility for maternity leave, study leave, other types of leave, management of transfers, relocation, higher duties assignment, etc., e.g. Parental Leave Calculator demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/Parental+Leave+Calculator

» Calculation of entitlements and allowances, e.g. relocation allowance, higher duties allowance, remote worker allowance, dangerous location allowance, etc.

» Applying correct procedures for employee on-boarding and end of tenure.

» Connected and disconnected mobile interviews for audits and on-site service

» Note that if the organization already has an ERP solution, it may already do the things listed above. If this is the case, then Intelligent Advisor 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.

» Intelligent Advisor can also be used to implement an anonymous online advice tool, e.g.


Public Sector

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.

  » Intelligent Advisor can be used for full eligibility determinations, as well as for benefit screening tools, e.g. myBenefits demonstration: https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/myBenefits

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](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 tax estimator

> Guidance on tax resident status

> Advice tool on determining whether a person is employed or self-employed for the purpose of tax


> Calculating debt repayments

**Licensing, Permitting and Inspections**

> Eligibility for a license/permit. These may be business licenses (e.g. licenses 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, e.g. Business License Wizard demonstration: [https://opalive-opa.custhelp.com/web-determinations/startsession/BusinessLicenseWizard](https://opalive-opa.custhelp.com/web-determinations/startsession/BusinessLicenseWizard)

> Determination of requirements and calculation of fees for building permits, e.g. fees for re-zoning buildings and land, fees for construction/addition/alteration/demolition of structures, 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.

> Mobile tools (connected or disconnected) to assist field officers with inspections, e.g. safety inspections of buildings, factories, houses; compliance inspections of food labels, storage, signage, documentation, e.g. Safety Inspection demonstration: [https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/Safety+Inspection](https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/Safety+Inspection)

**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. Example: DMV Document Guide demonstration: [https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/DMVDocGuide](https://opalive-opa.custhelp.com/opalive_opa/web-determinations/startsession/DMVDocGuide)

> Eligibility or requirements for other types of registration, e.g. heavy vehicle permits.
Immigration
» Determining eligibility and fees for particular visas.
» Determining which visas are relevant to a person’s situation
» Online advice about applying for citizenship, e.g. the Australian Citizenship Wizard:

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:

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.
» Rapid interview development and deployment to support mobile and online disaster relief payments

Child Support
» Calculation of child support amount. Note that there is broader scope for Intelligent Advisor 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
» Online guidance about identifying child abuse and reporting responsibilities

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

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

When is Intelligent Advisor Not a Good Fit?

While there are many areas where Intelligent Advisor 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 Intelligent Advisor is not a great fit.

From a product perspective, Intelligent Advisor 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, Intelligent Advisor is not. However, Intelligent Advisor is a good complement to workflow and BPM solutions as Intelligent Advisor 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 Intelligent Advisor 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. Intelligent Advisor 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 Intelligent Advisor. At the same time, Intelligent Advisor 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 Intelligent Advisor 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 Intelligent Advisor.

From a business perspective, Intelligent Advisor may not be appropriate where:

» Other products that are core to the solution offer sufficient capability. Look for where Intelligent Advisor 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 Intelligent Advisor, even if Intelligent Advisor 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 Intelligent Advisor 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 Intelligent Advisor 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. (Intelligent Advisor can dynamically generate a path through the questionnaire for each user, based on the rules in Intelligent Advisor 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. (Intelligent Advisor 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 Intelligent Advisor 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 Intelligent Advisor 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 Intelligent Advisor to replicate without having full access to the Siebel database.

» Complex assignment logic requires optimization logic, and Intelligent Advisor is not a good fit for optimization problems.

» Using Intelligent Advisor 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 Intelligent Advisor should be less of a priority.

Conclusion

While Oracle Intelligent Advisor is an excellent fit for a wide range of business problems in many different areas, Intelligent Advisor 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 Intelligent Advisor, some of which will not. So when considering whether Intelligent Advisor 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 Intelligent Advisor is the best answer.

The key factors which drive a strong fit for Intelligent Advisor 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 Intelligent Advisor.
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