

Assurance Scoring: better, faster, lower cost customer service and protection against fraudulent activity

Predictive analytics improves assurance, so low-risk transactions can be automated and resources can focus on high risk customers





Public sector analytics typically focuses on high-risk customers. Assurance Scoring changes the emphasis to the confident identification of customer applications for automatic processing, for better service at lower cost. Staff can be redeployed to focus on high risk investigations of potential problems.

Summary

Many public sector organisations already use analytics to help identify and deal with high-risk customers, but in order to drive a step change in handling risk, reduce costs, and improve customer service, the current approach needs to be turned on its head.

Assurance Scoring uses advanced analytics to recognize customers that are confidently identified as posing negligible risk. Typically this enables over 90% customer applications to be safely automated, so staff only devote detailed attention to activities associated with non-compliance or illegality

Getting Assurance Scoring right can play an important role in helping public sector organisations deliver the daunting challenge of how to cut costs, at the same time as improving customer services and delivering a 2020 vision. The right technological tools and data science techniques, combined with business change to streamline and automate processes, provides a more efficient way to handle workloads, for better, faster customer service and to block most criminal activity before it happens.

Reduce effort assessing low risk customers

Traditionally, most assurance processes are built around the customer journey for non-compliant behavior. But Assurance Scoring changes the emphasis to validate straightforward customer applications and cases. As a result, only exceptions (ex. potential non-compliance) are routed to specialist staff to review and eliminate problems, saving time and unnecessary cost.

This speeds up the process and focuses resources more effectively. Most customers are uncomplicated, and their transactions can be highly automated, as long as potential non-compliance or illegality is identified, analysed and investigated. For example:



Most passport applications are routine, but some applications are from people who are not entitled to a passport



Most freight entering the country is legal, but some consignments contain smuggled goods



Most taxpayers provide honest tax returns, but some don't declare all their income



Most benefit applications are from individuals and families who are entitled to payments, but some are fraudulent.

Assurance Scoring segments customers for automated processing or further checks

To reliably identify routine work so it can be processed in a low-cost and highly automated way, you need to be able to answer the questions: “what is the likelihood of non-compliance or illegality?” and “what is the level of risk?”.

Until recently this has been hard, particularly as world events and changes in people’s behavior are constantly altering the nature and extent of risks. Now, however, Assurance Scoring can apply analytics to historical data and real-time online behavior, and find patterns that could not be detected manually to predict future behavior and events.

The wide range of analytics techniques – including machine learning, statistical anomaly detection, graph transversal and others – ensures computing tools cross check and continually minimise “false negatives”, in order to stop criminals who are masquerading as honest customers. There’s no such thing as “zero risk”, but this approach is very accurate, and determines the level of automation or the type of specialist teams to involve in simple or complex checks, as illustrated in figure 1 below.

There is no such thing as ‘zero risk’, but Assurance Scoring is an effective way to determine which customers can be automatically processed, and which specialist teams to involve when checks are required

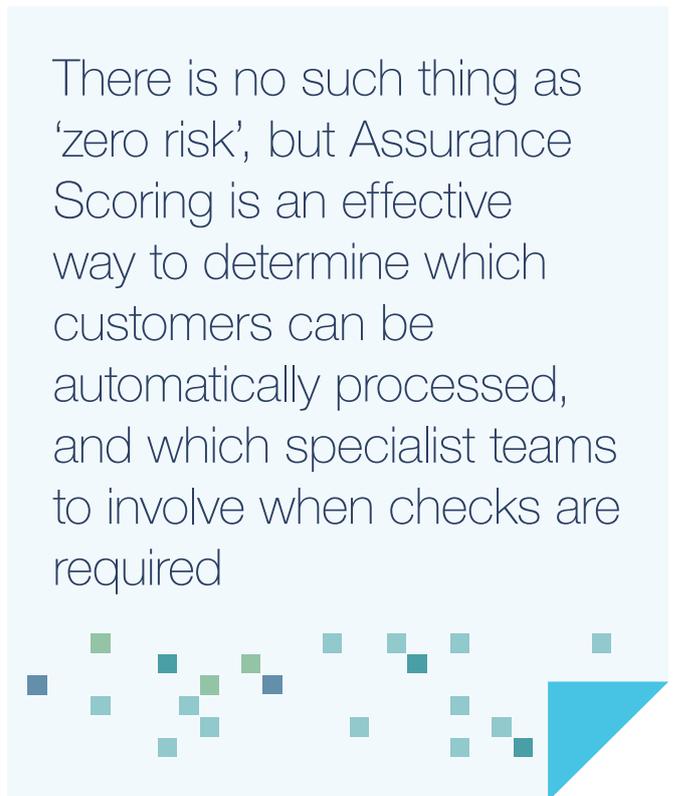
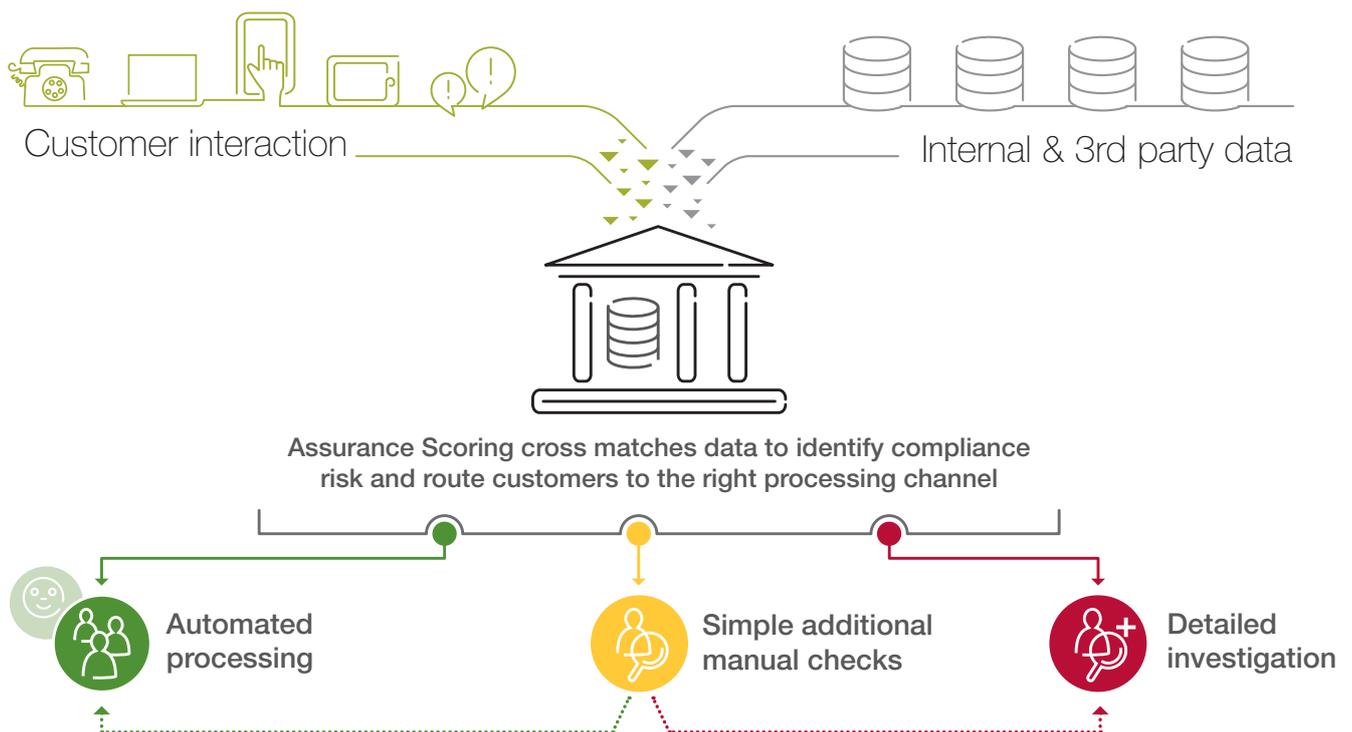


Figure 1: Quicker, better, lower-cost application processing and case working

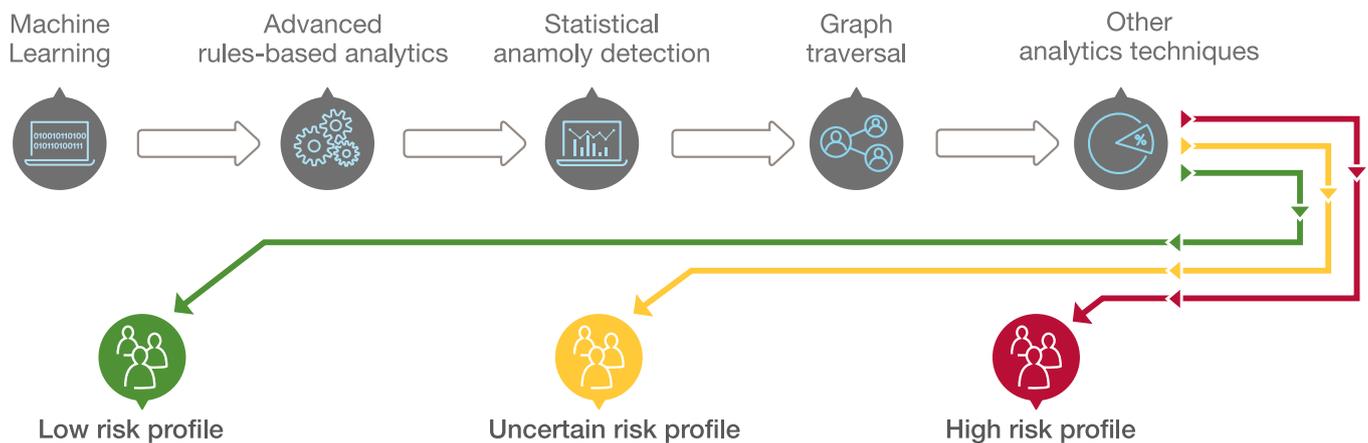


Assurance Scoring uses a combination of advanced analytics techniques

Assurance Scoring can improve the way a range of applications are assessed and processed – from visas, passports and licences, to planning permission and benefit claims. It can also be used to cross-check data to validate declarations – such as income on tax returns and value of freight for duty payments. Assurance Scoring can also be applied to case work – segmenting high-risk and low-risk investigations, identifying debtors most at risk of default from those who are likely to maintain repayments, and so on.

- Better identify potential non-compliance before applications are processed, which reduces the number of future investigations
- Automate processing of straightforward applications, which is quick and efficient
- Allocate resource for manual checks when potential error or criminal activity is identified
- Help tailor online and offline interactions, such as “nudge” techniques to encourage compliance, or additional questions in an application process to check queries in real time.

Figure 2: Combining analytics techniques is highly effective at detecting levels of risk



In all these situations, Assurance Scoring can help to identify the vast majority of customers that can be handled in a routine and highly automated way. Only the compliance queries – usually under 10% of applications or cases – are routed to simple routine manual checks or passed to specialist staff for detailed investigation.

Assurance Scoring involves combining different data sources using advanced data-matching technologies, and then applying various analytics techniques to derive insights. Usually it makes sense to begin the analytics with machine learning and advanced statistics, and then introduce other techniques to increase the power of the insights and the accuracy of the risk assessment, as illustrated in Figure 2.

As a result, Assurance Scoring helps improve service for the majority of customers, and deploys specialist staff more effectively, because it can:

- Provide better assurance, faster, in a way that is simply not possible with older technologies

Secure, scalable technology platform to ingest and organize data

A technology platform that caters for exploratory data science and secure services is a key component. However, identifying enterprise solutions that take advantage of open source technology can be a minefield, especially given today's rapid rate of change. Open source tools for data management and analysis, such as Hadoop and Cassandra, offer large gains in flexibility and cost reduction, but are not always mature enough to create a stable platform for the enterprise, and there can also be question marks over security and support.

Capgemini has experience of designing technology platforms for some of the world's largest private sector organizations and government departments, and we are well-placed to help. We can offer expert advice to help select the best mix of tools for your organization, considering the pros and cons of both open source and commercial providers. If you want to get up and running quickly, Capgemini also has an Assurance Scoring platform that can be tailored to manage data flows for a myriad of different requirements.

The Assurance Scoring platform enables clients to ingest and organize data and ensure that any personally identifiable information used for scoring analytics remains secure.

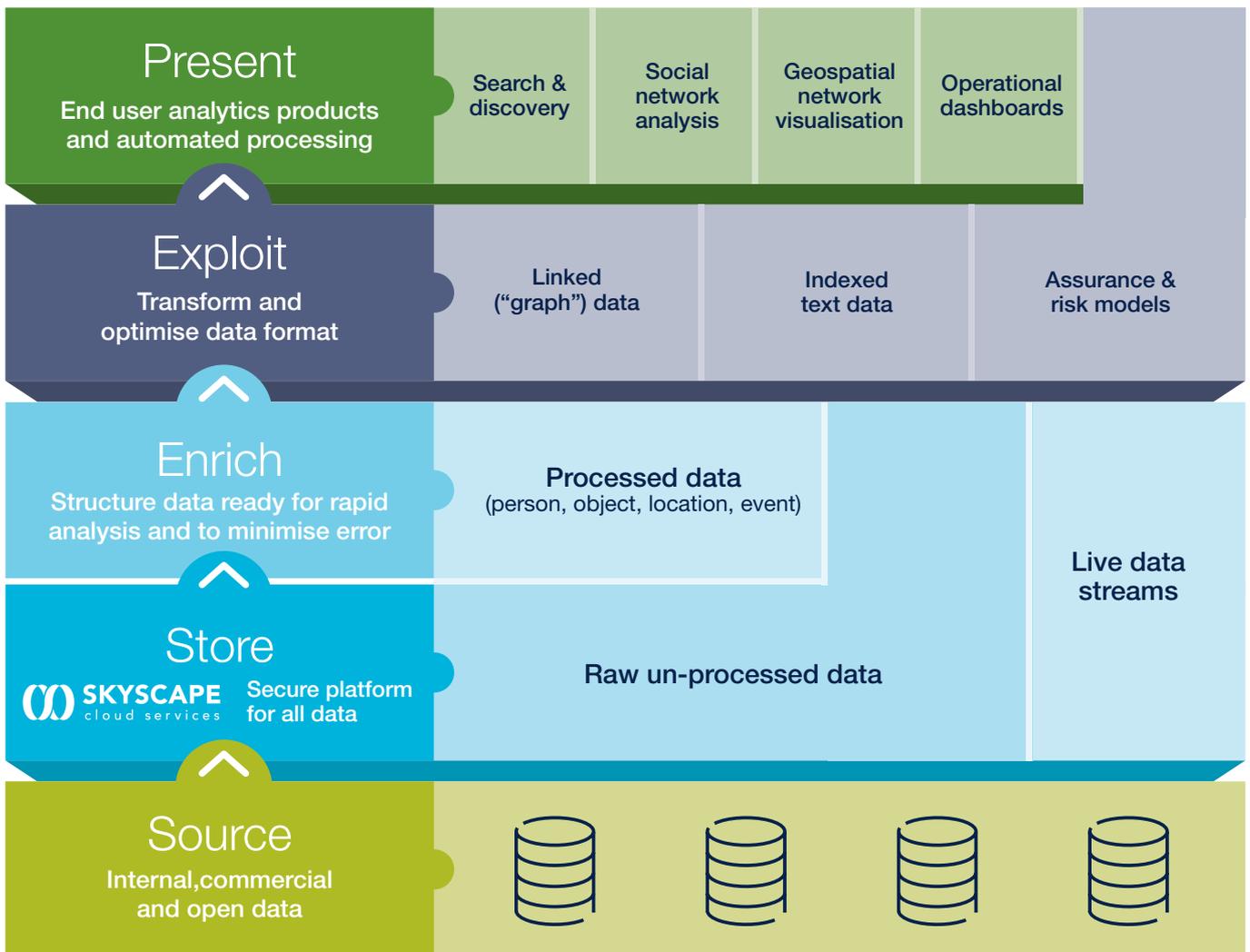
- Data is ingested into the single storage, processing, and analytics platform using common set of user interfaces
- Assured cloud infrastructure that is suitable for all OFFICIAL data, including OFFICIAL-SENSITIVE
- Hadoop centric distributed and scalable storage, fully configurable and customisable
- Integrated platform management providing health and usage diagnostics, load balancing (scalable to manage surge usage) as well as triggering or scheduling automated activities

The technology is available as a pay-as-you-go managed service that uses assured cloud infrastructure provided by Skyscape Cloud Services, as illustrated in figure 3.

Iterate and embed Assurance Scoring in business change

A prototype is a great way to experiment with how you could use Assurance Scoring to process customer applications and non-compliance casework. Choosing a focus area and using a discrete data set is a low-cost way of testing what decisions you can make using data science and technology tools. The insights can help inform the design of digital by default services, processing and resourcing requirements for investigations of potentially non-compliant customers. In this way, Assurance Scoring can underpin changes to core operational processes and customer interactions, so you maximise the strategic benefits of analytical insights.

Figure 3: Assurance Scoring technology platform





Find out more

We are working with government departments to help them use Assurance Scoring for better, faster, lower cost customer service and to protect against fraudulent activity. To find out how our expertise in analytics-led business change and technology accelerators can help you establish an effective in-house self service Assurance Scoring capability, get a pilot off the ground quickly, or get existing projects on track, please contact us direct¹.

1 • Lot 2 Insights in a Box
• Lot 4 Risk and Assurance Engine

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