INTELLIGENT DECISIONING IN GOVERNMENT

TRANSFORMATIONAL DECISION?

Know your decisions will drive operational efficiency, support fairness, and improve citizen outcomes.

Enjoy certainty. SAS Intelligent Decisioning.

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GOVERNMENT OF THE FUTURE

The UK Government makes millions of vital decisions each day. Everything from deciding how to fund the prevention of coastal erosion, or evaluating immediate responses to economic crime, national security and military threats, and assessing citizens' eligibility for benefit and welfare payments.

As the sheer volume, complexity and velocity of decisions rises across government in today's challenging environment, all departments must seek more effective and efficient means to improve the throughput, the accuracy, fairness and speed of those decisions. Now is the ideal time to take a different approach to decision-making in government. One that augments human decision-making and helps to build trust in automated decisions while assuring each department enjoys optimal outcomes. One that uses data and analytics to drive fast, accurate decision-making.

This paper will show how government can incorporate AI-driven decisioning into existing business processes. This will help them overcome the barriers to digital transformation – i.e. certain inefficient manual processes, time-to-insight, and the inability to act fast – to innovate service delivery, drive efficiency and help build a better Britain for the future.

> " AI and machine learning technologies will help the government be smarter with resources, drive innovation and transform efficiency – but only if they can access insights quickly and deploy them as decisions. "
>
> **Steve Burgess, Digital & Analytics Lead – SAS UK & Ireland Public Sector**

WHAT DO CITIZENS AND UK ORGANISATIONS WANT?

Like any business they deal with, citizens and organisations have high expectations of their interactions with government, centred around three key experience requirements:

SIMPLICITY

Whether it's enquiring about their pension or applying for Universal Credit at the DWP, registering a new car at the DVLA, or brokering a payment plan with HMRC, citizens want the process to be painless and seamless – just as they receive from any digitally advanced business. However, the elderly and vulnerable also need to be considered, so government must strike a balance between keeping traditional interaction channels open and also providing the joined up, personalised customer experiences that digital natives expect.

TRUST

Both as citizens and consumers, people need to feel trust in the decisions that are made about them or affect them – and therefore the way their personal data is used. While the volume of decisions and the expectation of faster outcomes increases, rapidly made decisions, especially automated real-time decisions, must be auditable so that they can be shown to meet with internal data privacy mandates and legal regulations.

This kind of transparency is the way for government bodies to show they are concerned with ethics, accountability and treating citizens fairly and building trust as they move to modern decisioning techniques. However, trust and transparency also come into play in non-citizen centric or transactional decisions, such as crime prevention, planning, energy infrastructure, housing, transport, the environment and logistics. The how's and why's must also be robust, explainable and made with due attention to ethics.

SPEED

Quite simply, citizens and businesses want their interactions and transactions with government to be swift. They want to know whether they are eligible for benefits and be able to access them quickly. They want to pay their taxes with minimal effort, and where disputes occur, they want fast and accurate conclusions.

With AI supporting or driving many different kinds of decisions, there is an important opportunity for government departments to use decision outcome learnings over and over again. This repeatability, will help accelerate speed-to-outcome, highlighting anomalies, for example, cyber threats, fraudulent claims, tax evasion, sham marriages, identity theft, customs violations at our borders to name a few, that can be handed off to experienced analysts, investigators or case workers. This approach will deliver the speed citizens want, while making better use of experienced staff.

WHY TAKE A NEW APPROACH TO DECISION-MAKING?

We know that making decisions, or the process of decisioning, sits at the heart of every government department. With significant pressure to make better use of resources, certainly in the post Coronavirus era, it will become especially important to improve the efficacy and efficiency of decision-making in ways that ensure the right services are delivered in a timely fashion, and also drive revenue, control cost and reduce risk.

Achieving this requires less reliance on manual processes and the ability to capitalise on the data generated from a growing number of government touchpoints, from service apps to IoT devices.

Making sense of this data, gaining insights from it and deploying those insights to generate decisions faster, using analytics and AI is precisely how government departments will derive the necessary efficiencies and quality outcomes, while making decisioning increasingly digitalised.

THE AI ETHICS CONUNDRUM

The debate around ethical AI is growing – particularly in automated decisions – grounded in concerns about introducing bias, protecting privacy or reinforcing systemic inequalities alongside maintaining the right to recourse.

We appreciate this concern and understand that government departments will want to deliver ethically sound decisions. We work with our customers in helping them address these issues in many ways, most notably through a set of guardrail principles known as FATE, meaning fairness, accountability, transparency and ethics. In addition, our decisioning solutions are not closed, black-box solutions, they are auditable and adaptable. This will be especially important for organisations, such as those in national security, public safety and military intelligence, where governance of the decisioning process will be critical, and must be auditable and transparent for full accountability. But how can you keep citizens' information safe? By anonymising data, citizens can feel confident that personal information will be kept private and departments can meet regulatory requirements.

SUPPORTING ACCOUNTABILITY

Because accountability is so vital within government, the analytical processes, models and data that either support decisions or embed into workflows to make automated real-time decisions possible, should be governed by best practices. This helps your analytics teams to develop, adapt and deploy many models for decisioning and get them working with your department far faster and with governance built into the process.

WHAT DOES IT MEAN TO BE INTELLIGENT WITH DECISIONING?

Delivering smart government services in the digital age is so much more than the automation of internal processes that result in greater efficiencies. Becoming an intelligent organisation requires much broader thinking: it's about uniting different areas of your department under a shared vision of continuous improvement, enabled by analytically derived decisions.

Intelligent decisioning is by far the most effective way of evolving into a truly data-driven organisation. Most government organisations have a rich eco system of applications and systems that hold all kinds of citizen information and data. Traditionally, these are deployed in service silos with little interchange between departments. By democratising data, and in turn democratising analytics performed on that data, decisions can be made holistically about citizens and businesses. Those insights can also be used to help departments improve every aspect of their organisation from risk analysis and fraud prevention to customer service.

One of the major benefits of intelligent decisioning is that it enables organisations to integrate real-time insights into their systems of action – for example, their web and mobile apps and their customer service systems. This helps to reduce the delay between identifying an opportunity or risk and acting on it – enabling more responsive services that put citizens at the heart of operations.

> " If the UK Government is to take the next step to be smart, data-driven, and digitally transformed - AI and machine learning deployed into decisioning at all levels is the most direct path to that goal. "
>
> **Roderick Crawford, Director for Public Sector – SAS UK & Ireland**

DRIVE TRANSFORMATION, DELIVER VALUE

The scope for transforming decision-making across government is immense. Whether we're talking about automating decisions in real time or augmenting many operational and management decisions, the possibilities are almost endless, which in turn will deliver incredible ROI. Here is a taster of what's possible today.

AUGMENT YOUR PEOPLE'S DECISIONS

PRIORITISE INVESTIGATIONS FOR THE NATIONAL ECONOMIC CRIME CENTRE

Economic crime has a major impact on British citizens, UK industry and financial services in particular. With our support, the organisation could identify and prioritise the most appropriate type of investigations, whether criminal, civil or regulatory, which is important for ensuring maximum impact. How? By performing risk scoring automated alerting, and triage management of the investigation process through to conclusion.

ACCELERATE TIME-TO-DECISION AT THE HOME OFFICE

A small team manages thousands of active cases at any one time – such as immigration enforcement and sham marriages. Using intelligent decisioning and a central rules repository, teams can collaborate, develop and deploy automated governed rules to drive decisions that would deliver an efficiency saving of some 1500% per rule change. What's more, intelligent decisioning can scale to meet expanding requirements and integrate with other intelligent systems through APIs.

RAPID BED MANAGEMENT IN RESPONSE TO COVID-19 FOR THE NHS

The COVID-19 pandemic created intense pressure on the NHS to ensure hospital beds were available for fast-growing numbers of infected patients. Analytics helps to provide reliable and timely insight to support effective primary case preparedness and planning, so that stakeholders can maximize resources to ensure availability of hospital beds where they are most urgently needed.

REDUCE REOFFENDING RATES AT THE MINISTRY OF JUSTICE

The department's ambition is to reduce reoffending rates by getting to the heart of why someone has committed a crime. Using data from a range of categories such as age, gender, offending history, intelligent decisioning can gather behavioural insights that help to evaluate the likelihood of reoffending.

# AUTOMATE YOUR REAL-TIME, TRANSACTIONAL DECISIONS

PROTECT REVENUE AND EXPENDITURE AT HMRC & DWP

With millions of people eligible to pay tax and receive benefits, fraud is a major challenge for the DWP and HMRC. Intelligent decisioning provides the agencies jointly with an opportunity to build risk rules and combine them with analytical models, deploying them into workflows for automated execution. This would allow the departments to move more sophisticated risk modelling to the front-end application increasing productivity and improving response times for applicants.

MANAGE SMART ENERGY CONSUMPTION ACROSS ALL UK GOVERNMENT DEPARTMENTS

Buildings are responsible for around **40%** of energy consumption and some **36%** of CO_2 emissions across the EU.[1] Digital transformation allows us to create smart, connected spaces that can be constantly monitored, so government can more easily tackle the challenge of reducing energy consumption. SAS Intelligent Decisioning provides the opportunity to put AI to work with embedded control systems that connect with predictive models to forecast energy loads and consumption. By comparing these predictions with real-time energy loads building managers will receive suggestions for corrective action to reduce energy consumption.
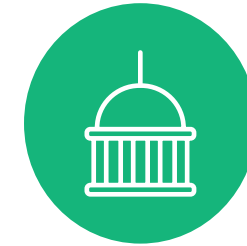
ACCELERATE THE INTELLIGENCE ANALYSIS-TO-OPERATIONAL DECISION PROCESS AT THE MOD

In order to make optimal operational decisions, information superiority is crucial. Yet when operators are flooded with sensor data from the field it can be difficult to spot imminent risk and threat. SAS Intelligent Decisioning makes rapid decision-making possible by combining streaming data sources with analytical models and processing rules so that only the most important intelligence is acted upon.

DETECT INSIDER THREATS FOR DEFENCE AND NATIONAL SECURITY ORGANISATIONS

Insider threats pose an insidious risk, often revealing proprietary information to competitors, even introducing malware into IT systems to sabotage an organisation's future success. Intelligent decisioning can process huge volumes of data from many disconnected systems and use both analytical models and organisational rules to detect and alert you to potential threats, so that significant and hidden risks are not missed.

1. Smart Buildings: Making Buildings Smarter, Greener, and More Energy-Efficient, EE Times Europe, 13 April 2020

WHAT COULD A SINGLE DECISIONING BRAIN ACHIEVE FOR YOU?

A central intelligent decisioning capability stands apart from the type of analytics that government departments have deployed in the past. The key difference is that it is able to ingest many different types of data from disparate sources on every aspect of your operations – connecting online with offline transactions – and analyse all this data in almost real time.

Intelligent decisioning is "always on": it is continuously looking for new trends and patterns in citizen data and, with minimal human assistance, automatically spots patterns, trends, risks, anomalies etc. This effectively increases the number of decisions made, with fewer staff left drowning in data.

As the technology evolves, opportunities to incorporate AI and machine learning into other areas of your department's core operations abound too.

For instance, voice and facial recognition capabilities could be used into protect against fraud, especially when demand for services, such as citizen welfare, health and wellbeing intensifies, reducing the capacity for manual identity checks.

TRANSFORMATIONAL OUTCOMES

Because intelligent decisioning is so flexible there are many activities it can transform. As food for thought, here are some of the most compelling and value generating.
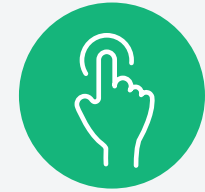
CUT COSTS
by automating time-consuming, manual decisioning tasks. This drives productivity and speeds up response times for citizens.

IMPROVE RELEVANCY
of the services offered to citizens. Make intelligent, real-time decisions regarding applications and eligibility.

SPEED UP TIME-TO-SUPPORT
by enabling risk models to become more predictive through AI and machine learning. This streamlines processes, meaning citizens are approved for services and/or benefits faster.

BOOST EMPLOYEE SATISFACTION
by reassigning staff to more creative, rewarding roles which add greater value to your department or to citizens.

DRIVE REVENUE YIELDS AND PROTECT RESOURCES
by flagging tax evasion to investigation teams, or potentially fraudulent benefit claims.

AUGMENT EXISTING CYBER SECURITY EFFORTS
embedding within existing threat protection solutions to detect and deny advanced persistent threat and respond to anomalous behaviour in real time.

GAIN AN EARLY INDICATION OF RISK
by automating sensor information processing, especially in combat and high-risk zones and the protection of critical national infrastructure.

PROVIDE A STEP CHANGE IN NATIONAL SECURITY
providing a framework and approach to introducing natural language processing, sentiment analysis, audio-visual analysis and the filtering and triaging of data.

DEPRESSURISE CRITICAL SERVICES
for instance, make decisions to help prevent reoffending, thereby reducing the pressure on an overburdened prison system.
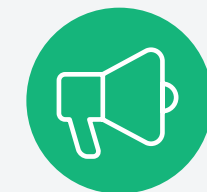
IMPROVE COMMUNICATIONS
channelling communications appropriately drives up citizen satisfaction and uses limited 'people' resources more effectively.

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