

Data, Insight and Information Strategy



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Introduction

This strategy sets out an initial two-year pathway for the council to build the foundations, develop the capabilities and fully explore the possibilities around our journey to become a Data Driven organisation. It recognises that the world of technology and digital innovation is ever changing and within the time span of this strategy it will evolve still further. It sits alongside and in support of the council's Digital Strategy and describes an improved approach to analysis and reporting which enables accurate forecasting and robust decision making, supporting more effective and efficient service to members, citizens and employees.

Data is the currency of digital innovation and improvement. It is what is created, stored, merged, analysed, controlled, protected and shared through the digital processes and systems the council implements.

Being data-driven means ensuring data of ever-increasing quality, relevance and value runs through all the important things the council does or enables. The ethical, lawful and proportionate use of this data to inform service delivery, make us more efficient and ultimately improve outcomes for the citizens of Bristol, underpins this strategy.

Information comes in many forms and is held in a variety of printed and electronic formats. Across the council we use this information in our daily working lives as we work to achieve our objectives whether it be delivering services, formulating policy, managing multi-million pound projects, holding meetings or managing staff. Many services are now delivered in partnership or are commissioned from third parties. This requires additional safeguards when managing our information. We need to ensure that information ownership is clear, the right people have appropriate access to the right information and it is handled correctly throughout its lifecycle.

The council is transforming the way we do business and increasing the provision of digital services. Improved digital options enable people to do more online, for example through increased self-service and digital transactions, more mobile working, automated workflow and virtual contact by staff. Good information management is an essential part of this.

Evidence-based decision making requires good quality, relevant and timely information and data interrogation and visualisation tools to support service delivery, the planning of future services, performance monitoring and nationally required returns. We need flexible, agile and resilient teams across the organisation where those working in data management and analytics operate as a community of professional practice bringing more rigour and consistency to how we use data.

Throughout this strategy the terms ‘information’, ‘data’, ‘insights’ and ‘analytics’ are used regularly, this is how we define them:

Data: A range of facts, numbers and statistics collected to be examined, considered and used to inform decision making and from which information is derived. In this context we refer to data that exists in an electronic format that can be stored and used by people or a computer.

Information: When data is processed, organised, structured or presented in a given context so as to make it useful, it is called information.

Insight: Provided by modelling data and using visualisations to tell a story about why something has happened. The past, present and future are incorporated into the analysing of data to produce insight. Insight includes the ability for users to filter data, allowing exploration of possible scenarios.

Analytics: insight resulting from the analysis of data or statistics.

Strategic direction and objectives

The council is building on learning to implement a true enterprise level data capability that can support all of our strategic and operational priorities. We recognise that technology is a key enabler that is driven by and responds to, business need.

When implementing this Data, Insight and Information Strategy, the council will focus on providing a dynamic data platform to enable us to become truly data driven. 'Data driven' means optimising the use of data, using analytical techniques to develop insight for decision making at all levels of the organisation, whether strategic or operational insight, performance management, advanced analytics (such as predictive and AI) or streaming sensor data. Being data driven enables the efficient production of up to date, interactive and easy to use insights, available to the right people at the right time.

We further recognise that our development and maturity in this space is part a complex journey. The council has engaged an external partner, itelligent-i, to work alongside us on that journey with the aim that we will be self sufficient within the lifetime of this two-year strategy.

The council's senior leaders must be able to visualise the performance of the business, see details relating to each service and its activity and when the need arises further analyse with managers, the processes, impact and costs involved.

Our staff need secure access to the information they need, at any time, from anywhere. To embed a truly data driven ethos and reduce the risk of silo working, information must be regarded as corporate rather than personal assets. This means a change of culture from relying on information held by individuals in personal drives and spreadsheets to a single corporate data environment with secure effective governance, monitoring, audit and quality assurance.

In addition, there is now more external scrutiny of how councils manage their information, through enhanced data protection legislation, and a move towards greater openness and transparency around the information that we hold. To maximise the potential benefit from our information, we need to manage it effectively, re-use it where we can, share it appropriately and ensure that it is fully protected. The council has commissioned support from the Centre for Data Ethics & Innovation and will seek to embed our emerging learning in our data practice to maintain the trust and confidence of our citizens.

All of this is done with the aim of using our data responsibly and ethically to improve services to and outcomes for the citizens of Bristol.

To achieve this we will:

- build and embed an enterprise data management approach
- create and populate a Data & Analytics platform containing sufficient Council held data to meet our insight requirements
- develop a single centralised analytics team to provide consistency, resilience and quality assured insight
- build a data asset of increasing value to the council and our key partners
- ensure corporate data and insight activity is always requirement led and investment aligned to Council priorities
- review and refresh our approach to performance management moving away from a focus on reporting numerical information

Our underpinning principles are:

- creating and working within a single corporate data environment
- making our data open and accessible where appropriate
- ensuring that decisions that directly effect people are always made by people who are informed by data and insights, not replaced by data and insights
- ensuring our sensitive data is secure and protected
- a cycle of citizen engagement in ethical data driven activity

To this end, our Data Insight and Information Strategy has five objectives:

Objective 1: Create the right culture and environment for great collaboration amongst teams and partners

Objective 2: Become an insight-rich, data driven organisation to improve performance

Objective 3: Manage our information safely, securely and appropriately

Objective 4: Create a more efficient and effective approach to the use of data

Objective 5: Establish the supply and use of data as a key enabler of a more connected, 'smarter' city

Objective 1: Create the right culture and environment for great collaboration amongst teams and partners

Why it matters

For too long the council has operated in silos, the technological solutions available preventing a cross organisational view from being taken and inhibiting joined up working and thinking. Differing standards and approaches have evolved, leading to inconsistency. The creation of a structure that enables effective collaboration across internal teams is essential for the delivery of insight by taking a holistic, cross service view of the data we hold that services across the council can access and use to improve outcomes for the citizens of Bristol. Affordable Cloud Based technology offers opportunities to remove technical and cost barriers, but the commitment to change the people and process elements that will otherwise maintain the silo status quo must also follow.

The creation of centralised corporate data and analytics functions will professionalise our practice and offer enhanced levels of resilience, flexibility and consistency using data that is up to date and accurate. It will facilitate the safe, lawful and proportionate sharing of data between ourselves, our partners and the public in a transparent ethical framework. There is a clear statutory expectation on the council and its partners that they should share insight based on data to keep vulnerable people safe and promote equal access to services and opportunities.

High level actions

1. Establish a governance and assurance process that aligns to the wider Digital Transformation Programme to oversee the initiation, development and implementation of data driven projects.
2. Create a new centralised community of professional practice operating model incorporating data management; research; analytics and performance management.
3. Develop an ethical governance framework that embeds recommendations from the Centre for Data Ethics & Innovation (CDEI).

Measures

- CDEI recommendations incorporated into an action plan with milestones, owners and outcomes assigned to each.
- Baseline set for percentage of citizens engaged in Council data projects.

- Ethics issues in data projects considered by the Data, Insight & Analytics Board (DIAB) by the start of 2022, with 100% of new data driven projects routed through it for consideration.
- Centralised insight & analytics team up and running with initial staffing by October 2021 and complete operating model staffed by April 2022.
- Programme of data driven projects approved through internal governance and assurance process.

[Read about Objective 1 in more detail in Appendix B](#)

Objective 2: Become an insight-rich, data driven organisation to improve performance

Why it matters

Organisational performance and improvement has too often been reliant upon inconsistent metrics, professional but subjective opinions and anecdote. A corporate business intelligence review conducted in 2019 identified an increased appetite for accurate, timely and useable insight.

Individual service areas, officers, customers and members need to access insight to inform their decisions or keep them effectively engaged. All of this is based on an increasingly valuable corporate data-asset which enables a secure, robust and affordable single view of the truth.

There is a real need and drive to move from reactive to proactive decision making and higher quality performance reporting using operational analytics that draw from the same data sources. This must inform a more holistic view of performance, removing silos in reporting that currently exist between different constituent factors such as risk, audit, finance, key performance indicators and more.

High level actions

- 1.** Continue the programme of work with our strategic partner itelligent-i, to deliver a series of 'accelerator' insight packs across Adult Social Care, Housing & Landlord Services, HR and Children's Social Care so that automated analytics becomes the norm for those services with core data in the Azure data lake and self-serve analytic insights are standard practice.
- 2.** Develop and implement a plan to transition the above into a joint delivery programme and a managed handover.
- 3.** Review and refresh our approach to corporate performance management.
- 4.** Review and refresh our approach to research to ensure a rich range of qualitative and quantitative sources are mined to inform thinking and link to service improvement/policy change.
- 5.** Ensure that our approach to data collection and usage underpins our approach to equality, diversity, and inclusion.

Measures

- Increased suite of insight products created for service areas working alongside itelligent-i, with demonstrable take up and regular feedback/review cycle leading to quantifiable outcomes.
- Percentage of Council staff trained to compile and access insight products using Power BI.
- Clear pathway through DIAB for data driven projects across service areas prioritising according to demand and risk.
- New corporate performance management framework consulted upon and embedded.
- Performance clinics trialled and rolled out across directorates.
- Performance business partners initiate data and evidence-based recovery and improvement plans for individual service areas that lead to outcome-based improvement.
- A range of performance information is readily accessible to elected members.
- Satisfaction with performance reporting/management amongst key clients (CLB, Cabinet, Scrutiny Committees).
- Range of strategic intelligence products produced that widely inform and improve practice and outcomes.
- Research projects undertaken in partnership with academic institutions.

[Read about Objective 2 in more detail in Appendix B](#)

Objective 3: Manage our information safely, securely and appropriately

Why it matters

Data, although an asset, ranges from anonymous and basic in nature through to highly sensitive. It is crucial for both legislative compliance and public trust that before the council even seeks to use data (see [objective 4](#) below); how it acquires, processes, stores and manages that data must be carefully protected and securely handled. We must retain only the data and information that we need and embed sound Information Governance policy and practice.

Compliance and good governance are the watchwords around Information Governance and maintaining ISO standards provides confidence to citizens that we take data security seriously.

High level actions

1. Continue the Information Governance Service's (IGS) GDPR Phase 2 programme to further embed the compliance with the Data Protection Act 2018 and UKGDPR within Council services.
2. Implement an integrated Information Governance framework which is embedded in the day to day operations of BCC and which is compliant with relevant legislation, standards and regulatory codes of practice and demonstrate good practice and is linked to effective Data Protection and Information Security.
3. Implement risk-based Information Governance policies and processes that are clear, accessible, and flexible and aligned with business requirements.
4. Corporate data priorities addressed through a corporate data management function with clearly accountable ownership at senior level.

Measures

- Increased suite of insight products created for service areas working alongside itelligent-i, with demonstrable take up and regular feedback/review cycle leading to quantifiable outcomes.
- Percentage of Council staff trained to compile and access insight products using Power BI.
- Clear pathway through DIAB for data driven projects across service areas prioritising according to demand and risk.

- New corporate performance management framework consulted upon and embedded.
- Performance clinics trialled and rolled out across directorates.
- Performance business partners initiate data and evidence-based recovery and improvement plans for individual service areas that lead to outcome-based improvement.
- A range of performance information is readily accessible to elected members.
- Satisfaction with performance reporting/management amongst key clients (CLB, Cabinet, Scrutiny Committees).
- Range of strategic intelligence products produced that widely inform and improve practice and outcomes.
- Research projects undertaken in partnership with academic institutions.

[Read about Objective 3 in more detail in Appendix B](#)

Objective 4: Create a more efficient and effective approach to the use of data

Why it matters

Our structures and processes must lend themselves to efficiency. The amount of data we access and use should automatically flow through an end-to-end digital approach which joins partners, services, commissioners and leaders together through design, delivery and review, to provide shared understanding of value, risk or opportunity through transparent insight and enable truly collaborative innovation and improvement. Development must be requirement led with use cases for Business Intelligence development clear and prioritised according to impact and value as well as readiness.

The council operates a diverse range of systems to store and manage its data and the consolidation of these systems will smooth the transition of our data into a highly secure cloud based data lake that enables us to maximise the potential of the analytical tools and expertise at our disposal. As technology and capability evolves, we must continually ask ourselves what is possible and explore the use of artificial intelligence and machine learning to improve our services.

The council has a duty to ensure that it operates in an open and transparent manner, sharing data with the public wherever possible will lead to improved public trust, confidence and digital inclusion. By making data available to third parties, they are able to benefit from our data to enable them to make informed decisions and develop further services without the need to contact the council.

High level actions

- 1.** Creation of a centralised enterprise data management and function to standardise our approach and bring consistency around corporate data governance.
- 2.** Refresh our Open Data offer, ensuring we are comparable with peer authorities and consider options around regional collaboration and commercialisation where appropriate.
- 3.** Develop and implement a corporate Data and Analytics Platform that brings together data of ever improving quality and relevance, updating at least daily, directly from all relevant line of business systems, the corporate spatial database, open source datasets, partner data and sensor (Internet of Things) data.

Measures

- New Open Data strategy that lays out the expectations of open data aligned to the council's priorities.
- Increase the number of Council and partner datasets shared on the open data platform and the level of public access.
- Public-facing dashboards are built that compare service levels or Quality of Life measures on a ward by ward basis.
- Raw data is released to enable third parties to develop their own interpretations and usage of the data leading to an increase in the number of citizen facing mobile/web applications built by third parties using our data.
- Compliance with the Local Government Transparency Code 2015.
- Number of systems loaded to the Data & Analytics platform.
- Master Data Matching based People and other Entity based profiling requirements agreed and prioritised with corporate work programme.
- Increase in data activity in the platform monitored and audited through end-to-end control with auditing presented as visual detailed analytics.
- Agreement of single corporate delivery roadmap.
- Enterprise Data management Team in place.

[Read about Objective 4 in more detail in Appendix B](#)

Objective 5: Establish the supply and use of data as a key enabler of a more connected, 'smarter city'

Why it matters

By using our data, particularly large data sets acquired over time, we can digitally 'map' the City's systems (roadworks, air quality, inward investment, employment etc) to create a Digital Twin using data. Twin City modelling uses this Digital Twin to understand the city at scale, and all the interconnecting systems. These large data sets are created by accumulating significant small bits of data such as temperature, air quality or vehicle movements. By building this data at scale, it is possible to determine patterns that would otherwise not be visible.

These patterns, and connections, allow 'what if' planning to be taken, supporting effective decision making in the future. We can plan for a number of possible scenarios, making strategic choices which best anticipate future needs or challenges.

Understanding the city better, using data will help us increase the resilience of the city, building its ability to respond both to long term challenges and short term shocks or stresses. The impacts of currently unforeseen linkages between events on the city and the results which are experienced, can be modelled and allow for an improved approach to be taken.

Improved comparisons between other cities, locally, regionally, nationally and internationally will aid our understanding of how Bristol compares, and the similarities and differences with our peer cities.

High level actions

1. Understand the benefit of Data and Insights to promote/support the Digital Place agenda as part of the One City Plan.
2. Driving Digital Place and Smart City ambitions through city-wide data collection and analysis, twin city modelling for 'what-if', impact transport and digital inclusion.
3. Explore and consult around the use of video as a data source to provide anonymised 'big data' to help model the city.
4. Use AI-enabled capability to identify issues and develop interventions.

Measures

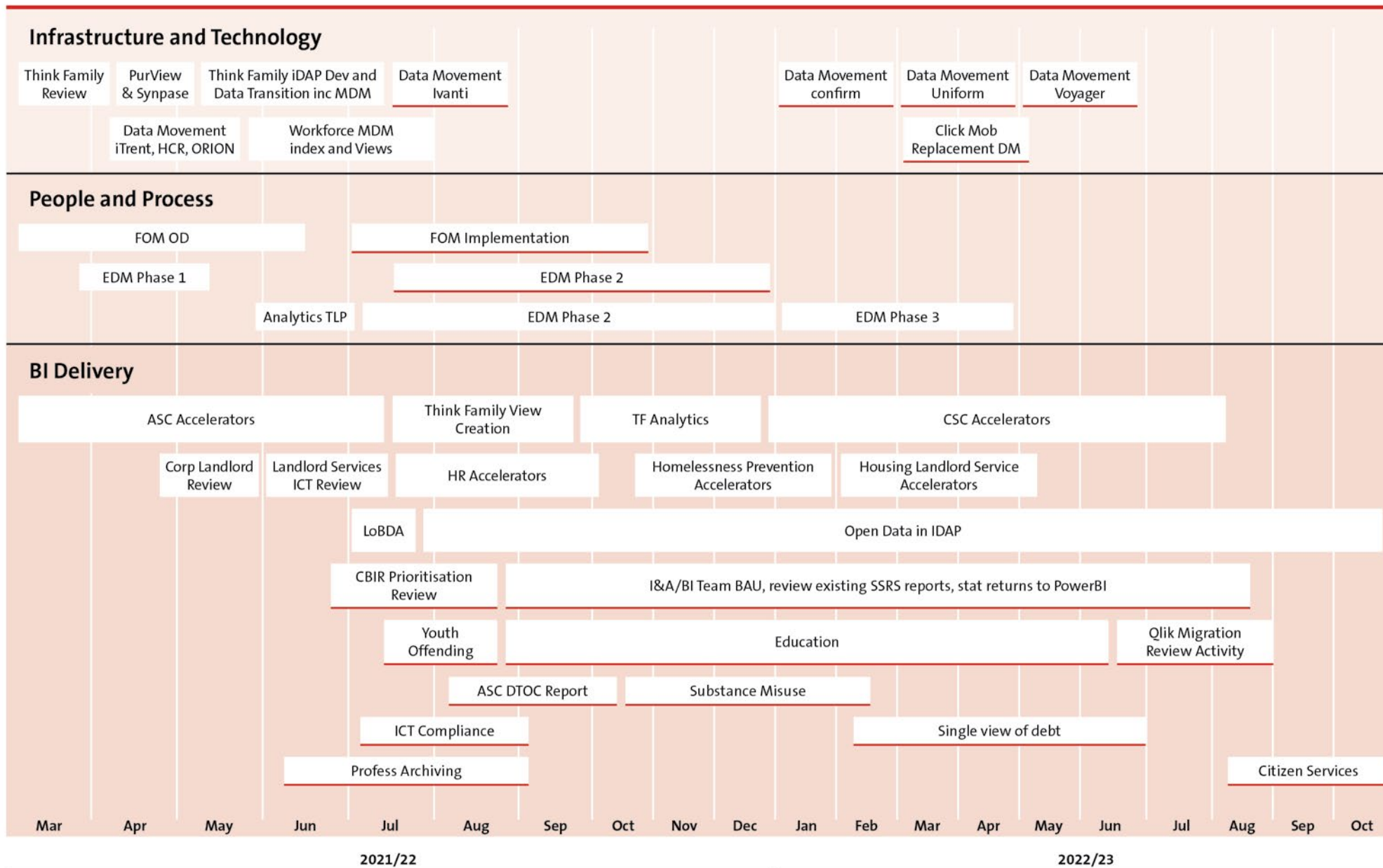
- Data and Insights support to the One City Digital Board forms part of the council's wider programme of work.

- Video data is actively used to support decision making and identify anti-social behaviour and/or support vulnerable citizens.
- Options pertaining to traffic flow changes and pollution are modelled and outcomes compared before formal decision making is undertaken.

[Read about Objective 5 in more detail in Appendix B](#)

Appendix A: Timeline of Draft Programme of Insight Work (12-24 months)

Intelligent-i resource
Bristol resource



Appendix B: Objectives with more detail; broken down by each high-level action into: What – Who – Why

Objective 1: Create the right culture and environment for great collaboration amongst teams and partners

Establish a governance and assurance process that aligns to the wider Digital Transformation Programme to oversee the initiation, development and implementation of data driven projects.

- Evaluate and build a programme of work with internal staff and external partners – Head of Insight, Performance & Intelligence (IPI)/ DIAB – To ensure effective usage and training/adoption of the new technologies, to build business cases for funding and to baseline/ manage/assure efficiencies from the new technologies and approaches.
- Agree scope of functional operating model for insights and appropriate consultation – DIAB – To ensure all views are considered when developing the delivery model for the data and insight programme

Create a new centralised community of professional practice operating model incorporating data management; research; analytics and performance management.

- Functional Operating Model devised drawing on the ‘common activities’ approach, consulted upon and implemented – Head of IPI – To bring reporting lines into a central point allowing activity and cost to be managed, enabling better governance, clear auditing of activity, resilience/flexibility, consistency, controlled access to raw data for analytics and monitoring thereof through corporate standards, as well as the use of analytic insight, viewed through a single, trusted hub for business insight and analysis. The activities of business intelligence/ insight resource with corporate and service priorities will be aligned so that we establish clearly accountable and enabled teams with clear direction, resource, skill and process alignment working to a common goal and developing real insight as opposed to reporting numbers.
- Draw up Service Level Agreements with individual service areas – Head of IPI – To set operating framework, methodology and expectations around the commissioning of analytical and insight products and services from the central team.

- Provide tools, training and support for staff and end users – Head of IPI & external partner – To ensure BI Developers, Data Analysts & Data Scientists are working across the organisation to a common set of standards and that end users are able to interpret, understand and interact with insight products that add value to their service area.
- Embed the use of Power BI across the organisation and with elected members – Head of IPI – To offer clear and easy to understand insight visualisation to all staff and members.

Develop an ethical governance framework that embeds the recommendations of the Centre for Data Ethics & Innovation’s (CDEI) report following their work with the council.

- CDEI report recommendations considered by DIAB & CLB – Head of IPI – formal approval and acceptance of report and agree future direction of travel.
- Formal engagement with CDEI – Head of IPI – To embed the recommendations with a focus on developing ethical framework and citizen trust through engagement.
- Seek external funding opportunities to develop ethics framework – Head of IPI – To establish a framework that sets clear standards and expectations of data related projects.
- Creation of an Ethics Board – Head of IPI – To offer external assurance and transparency that ethical use of data is a key consideration when considering/approving all data related projects.
- Publish a guide data ethics impact assessment template – Head of Information Governance - There is a clear expectation from the regulator (Information Commissioner) that the level of governance and risk management capabilities should be commensurate and proportionate to an organisation’s data protection risks.
- Provide a one-page guide detailing ethical considerations to all staff – Head of IPI – To ensure all staff consider questions around ethics when devising and implementing data related projects.

Objective 2: Become an insight-rich, data driven organisation to improve performance

Continue the programme of work with our strategic partner itelligent-i, to deliver a series of ‘accelerator’ insight packs across Adult Social Care, Housing & Landlord Services, HR and Children’s Social Care so that automated analytics becomes the norm for those services with core data in the Azure data lake and self-serve analytic insights are standard practice.

- Implement a data driven approach that provides the council with the ability to understand its business – DIAB & External Partner – To understand current activity and known demand and associated costs and impact; to understand future demand and associated costs; to better understand customer preference, community capacity and perception of value and; to understand where to digitise, inform digital design and track iterative improvement.
- Develop a data architecture that demonstrates new insights and dashboards to support and monitor the strategic decisions and operational activity that determines and manages efficiency – DIAB & External Partner – To ensure operational and strategic effectiveness through visualisations that translate insight into outcomes.
- Evaluate & review the delivered/planned accelerators with service areas and analysts – Head of IPI & External Partner – To ensure that delivery of accelerator insight aligns with service need and that users and analysts understand the benefits, interactivity and functionality. A programme of ongoing review of usage and outcome will ensure validity.

Develop and implement a plan to transition the above into a joint delivery programme and a managed handover.

- Use knowledge and experience of external partner to transition towards BCC ownership of data management and insight functions – DIAB, External Partner & Head of IPI – BCC insight team, service managers, team managers and front-line staff able to easily visualise their processes and activity on a daily basis. Managers can drill up to see the impact of their operations on the strategic challenges and opportunities they are contributing to and, where appropriate, securely drill down into individual customer records.
- Devise a set of corporate descriptive and diagnostic insights – Head of IPI – To provide a clear evidence base for prioritising further investment in predictive analytics and wider digital automation.

- Professionalisation of the roles of data and insight specialists – Head of IPI – To effectively lead innovation and serve the business needs of the council.
- Develop and deliver ongoing programme of training and accreditation for insight team and end users – DIAB & Head of IPI – Ensure all users are sufficiently skilled to derive benefit from the tools available.
- Review and monitor service level agreements to ensure compliance – Head of IPI & Heads of Service – To ensure insight provision remains current, monitor levels of service and appropriate assessment and prioritisation of requests.
- Quarterly themed insight workshops – Insight Team – To increase skills in particular focused areas and help grow our own talent and gather content.

Review and refresh our approach to performance management.

- Develop a performance framework that enables performance reporting to update automatically using a proportionate number of key indicators – Head of IPI & External Partner – Remove the volume of manual data sharing, extraction and manipulation required by using the data and analytics platform to access to all data required for performance reporting that is updated daily.
- Revisit and review the actions contained in a 2019 external review and the CBIR – Head of IPI – Contextualise these in the midst of our transformation journey and seek to implement recommendations for improvement.
- Develop and share interactive dashboards – Head of IPI - Provide the organisation with interactive performance information that could be explored by Senior Management, Members and the public.
- Introduce performance clinics for service areas – Head of IPI - Provide an opportunity for service heads and colleagues to engage in informal discussion around performance issues.
- Explore models that provide appropriate levels of both management and strategic information – Head of IPI – To provide a suite of performance reports and dashboards, based on a balanced scorecard that monitors key progress and targets and utilises the single version of the truth to automatically update and securely distribute performance reports. It is envisaged that such a scorecard can be replicated for transformation projects and programmes, tracking the performance of transformational delivery.

Review and refresh our approach to research to ensure a rich range of qualitative and quantitative sources are mined to inform thinking and link to service improvement/policy change.

- Align existing strategic intelligence products to wider policy linked research – Head of IPI & Head of Policy and Public Affairs – Ensure consistency of approach to provide the organisation with the analytical evidence required to make strategic decisions for short and long-term challenges.
- Explore and develop research links with academic institutions – Head of IPI & Head of Policy and Public Affairs – Access to a broad range of expertise, data and techniques that leads to upskilling, greater collaboration and shared products.
- Improve and expand the use of research to inform decision making through the analysis of data across all levels of the organisation and alongside externally published open data sets – Head of IPI – To provide context and a greater understanding of organisational priorities, highlight new facts and challenge long standing theories.
- Develop and utilise methods to collect and analyse customer insights, key priority areas and primary research – Head of IPI – To understand drivers for demand and associated risk factors along with the needs and behaviours of residents.

Ensure that our approach to data collection and usage underpins our approach to equality, diversity, and inclusion.

- Develop and utilise methods to acquire, analyse and present high quality data on detailed demographics as standard, avoiding inappropriate aggregation that can disguise inequalities and preferring use of specific disaggregated demography and equalities information – Head of Equality & Inclusion and Head of Insight – To provide a more accurate and informed data picture that enables in depth analysis.
- Ensure demographic data is not based solely on Economically Active population and, where this is unavoidable, calibrate against other data sources. When updated Census data is available (mid-2022), use this as a default basis for strategic intelligence, insight and decision making – Head of Insight - To provide a more accurate and informed data picture that enables in depth analysis.
- Agree data collection, analysis and insight for Equality and Inclusion Programme measures – Head of Equality & Inclusion - To enable effective decision making by its corporate governance structure and effective programme management.

- Improve data sharing between key services and the Equality and Inclusion programme management team – Head of Equality & Inclusion - To enable monitoring of impact.
- Insight based on city wide data through an E&I lens – Head of Equality & Inclusion and Head of Insight - To monitor impact of BCC interventions and horizon scan for issues.
- Collection of relevant workforce data with detailed disaggregation based on information collected under the census and other available data – Head of HR- To enable appropriate interventions which improve diversity, recruitment and selection and talent management.

Objective 3: Manage our information safely, securely and appropriately

Continue the Information Governance Service's (IGS) GDPR Phase 2 programme to further embed the compliance with the Data Protection Act 2018 within Council services.

- Information Governance policies take account of our legislative requirements, recommendations and codes of practice from the UK Information Commissioner, Government guidance (including our Codes of Connection) alongside industry good practice, but which are appropriate, proportionate, measured and part of business as usual – Head of Information Governance Service – To enable the council to operate in a compliant and secure manner whilst maintaining business as usual.
- Ensure that any future use of data complies with the requirements of the Data Protection Act 2018 and UKGDPR – Head of Information Governance Service and individual officers – This is an ongoing legislative requirement.
- Increase officer awareness of the Data Protection Act 2018 and UKGDPR – Head of Information Governance Service - The council recognises that the Data Protection Act 2018 and UKGDPR are not a barrier to sharing personal data. In fact, the Data Protection Act 2018 and UKGDPR contain additional provisions that enable public authorities to use personal data for specific purposes providing it is done in a fair, lawful and transparent way.
- Information Asset Owners (IAO), Lead Custodians and Data Custodians will actively engage in leading out best practice across the organisation, these officers will be actively supported by the Information Governance Service – Named Officers – To provide a senior point of contact and support the organisation's legal obligations and regulatory best practice as a priority to our staff.

Implement an integrated Information Governance framework which is embedded in the day to day operations of BCC and which is compliant with relevant legislation, standards and regulatory codes of practice and demonstrate good practice and is linked to effective Data Protection and Information Security.

- Develop effective processes to manage our records and information – Head of Information Governance Service – To enable the council to operate in a compliant secure manner whilst maintaining good governance and enhanced public trust.

- Publish and share communication materials that inform individuals about the proposed uses of their personal information and that they are informed about their rights in terms of access and to prevent disclosure or use – Head of Information Governance Service – To enable the council to operate in a compliant secure manner whilst maintaining good governance and enhanced public trust.
- Implement controlled access to Information Assets and systems by ensuring that system functionality is configured to support user access controls and by ensuring that formal procedures are in place to control the allocation of access rights to all information systems and services – Head of Information Governance Service – To enable the council to operate in a compliant secure manner whilst maintaining good governance and enhanced public trust.
- Establish and maintain a formal Information Security risk assessment and management programme for Information Assets – Head of Information Governance Service – To enable the council to operate in a compliant secure manner whilst maintaining good governance and enhanced public trust.

Implement risk-based Information Governance policies and processes that are clear, accessible, and flexible and aligned with business requirements.

- Ensure that there are audit processes in place to monitor Information Governance policy and processes are being implemented and to measure the effectiveness and adherence to such processes – Head of Information Governance Service – To ensure everyone knows our corporate narrative, what is expected of them and how they contribute to good Information Governance.
- Ensure that personal information received or obtained by BCC is managed and used responsibly, securely, ethically and lawfully – Head of Information Governance Service and all Council officers - Compliance with data protection legislation and increased public trust and promote transparency and openness about how we handle personal information providing confidence to the individuals and third parties who pass personal information to us
- Champion the Information Governance foundation – Head of Information Governance Service – To raise awareness across the council.
- Introduce a data management policy – Head of Information Governance Service & Head of Data Management Team – To ensure appropriate Data and Analytics Platform (DAP) and Microsoft Power BI (PBI) governance and best practice.

Data quality addressed through a corporate data management function with clearly accountable ownership at senior level.

- Responsibility for data quality is everyone's – Chief Executive – Convey the importance of good data quality to all staff using any council system and the consequences/impact of poor data. Data integrity is paramount for the business, councillors and citizens to have trust and confidence in data, analysis and insight.
- Introduce service-based data stewards; this is the principle of having subject matter experts available in business areas – Head of IPI – To support the development of analytics and support the data management function to improve data quality issues. This is not a new role, but a set of responsibilities
- Increased use of audit, compliance and data quality tools in the Data and Analytics Platform – Head of IPI – Improve data quality by sharing data quality reports with business users to identify issues and themes.
- Central control of data quality reporting and implementing support to resolve data quality issues within the service areas – Head of IPI – Ensure centralised support for identifying and rectifying data quality issues.

Objective 4: Create a more efficient and effective approach to the use of data

Creation of a centralised enterprise data management and function to standardise our approach and bring consistency around corporate data governance.

- Define roles, responsibilities and scope of the data management team – Director DT & Head of IPI – Data Management does not presently exist at a corporate level in any recognisable shape or form. To provide management of the enterprise data platform and the key corporate tools within it, management of effective corporate data architecture that supports the majority of all corporate data requirements, central management of data security and auditing and central control of data quality reporting and support.
- Mitigation of risk from poor management and use of data – Director DT & Head of IPI – To enable the data management function to work alongside IGS to monitor security and enable the organisation to meet the desired goals using data.
- Improve support to end users and report developers – Head of IPI - Centralised resource to improve data management, security and access, data governance and quality.

Refresh our Open Data offer, ensuring we are comparable with peer authorities and consider options around regional collaboration and commercialisation where appropriate.

- Revisit our Open Data requirements and formulate a plan around the future use of Open Data by the council – Head of IPI – An external review acknowledged that open data had been allowed to ‘drift’ and would benefit from clear strategic direction.
- Develop a task and finish group that draws upon the expertise of the extant Open Data Working Group – Head of IPI – To deliver the above plan and ensure views are captured from across and beyond the council drawing in particular on a review conducted by itelligent-i in 2020.
- Explore the potential benefits from a collaborative regional approach to Open Data – Head of IPI - The council has also made in-roads into democratising data through its Open Data platform. This is still at the heart of Council thinking, as it wants to continue to not only utilise data internally but also wants to encourage others to help Bristol achieve its ambitions by sharing knowledge, insight and opportunities through open data. The range of data available across regional

partners is extensive and lends itself to further, and with Council support, formal consideration.

- Link the development of Open Data to the current data and insight programme – Director DT & Head of IPI – To ascertain whether Open Data uses the data and analytics platform as its foundation, with open datasets surfaced in several ways including automated views and insights in Power BI. This will reduce/remove manual Open Data activity to make Open Data more easily available so the council can offer the right Open Data not just what is easy to share.
- Consider commercialisation opportunities from a hosted platform and/or sharing of identified and specific data sets – Head of IPI – To manage and share the costs involved alongside potential to generate revenue and make our running of the Open Data platform at least cost neutral.
- Publish external/public guidance on how to access and use Open Data – Head of IPI – To encourage partners and public to access and share their own data.

Develop and implement a corporate Data and Analytics Platform that brings together data of ever improving quality and relevance, updating at least daily, directly from all relevant line of business systems, the corporate spatial database, open source datasets, partner data and sensor (Internet of Things) data.

- Improve data access and security – Director DT - With the implementation of the Data and Analytics Platform, a data management function can take responsibility for access and security of data for the organisation and can provide the capacity to monitor and secure data access across the organisation which satisfies the governance criteria.
- Continue migration of data from Council systems to the MS Azure data lake and consolidation of systems into a smaller number – Director DT – To maximise the potential to exploit new technology and allow analysts to look across the organisation for a single version of the truth. Legacy reporting and insight solutions are removed from the estate as they are superseded, enabling existing reporting and insights to be produced until they are no longer needed.
- Implement corporate standards – Director DT - An infinitely scalable enterprise data and analytics platform supported by common skillsets and clear corporate standards allows data to be moved from each system to the analytics platform for transformation, reporting and analytics.

- Analyse and map customer journeys tracked across multiple datasets using master data matching – Head of IPI – To understand and improve customer experience of Council services.
- Geographic profiling of localities, featuring presentation of customer interaction, service availability, physical assets and community capacity – Head of IPI – As above.
- Develop and utilise analytics that help target wider digital investment, enabling iterative digital development and tracking channel shift and associated efficiencies – Director DT & Head of IPI – To make best use of emerging technology to drive investment in service and improve outcomes for citizens.
- Develop links to the Corporate Spatial Database enabling the use of spatial data to be maximised within the Data and Analytics Platform – Director DT – To make best use of the corporate single source of spatial data to enrich data analytics, insights and visualisations.

Objective 5: Establish the supply and use of data as a key enabler of a more connected, 'smarter city'

NB: This is an emerging area that will be expanded upon in future iterations of the strategy as we mature our approach.

Understand the benefit of Data and Insights to promote/support the Digital Place agenda as part of the One City Plan.

- Ensure close working with the soon to be established One City Digital Board – Director DT and Head of City Office – To further the digital inclusion agenda and ensure integration between One City Plan's digital strategy, the Connecting Bristol smart city strategy and the emerging BCC Digital Transformation strategy.

Driving Digital Place and Smart City ambitions through city-wide data collection and analysis, twin city modelling for 'what-if', impact transport and digital inclusion.

- Ensure linkage between developing data and insights work and the smart city agenda within the Connecting Bristol strategy – Director DT – To reduce digital exclusion and to maximise opportunities presented by emerging technology to improve outcomes for citizens.
- Explore the potential around the council's use of VuCity (3D modelling software) – City Design Service – To support planning application discussions and build a picture of cumulative development over time.
- Scope and assess potential for the creation of a digital twin city – City Design Service – To understand the costs, benefits, complexity and scope of a digital twin to improve council performance and outcomes for citizens.

Explore and consult around the use of video as a data source to provide anonymised 'big data' to help model the city.

- Expand ANPR and traffic flow monitoring – Director DT and Head of Connected City – Improve traffic flow and reduce pollution.
- Identify potential issues and opportunities for early intervention, for example around rough sleeping and anti-social behaviour – Director DT & relevant service leads – Improve outcomes and address vulnerability.
- Link the work of the Sustainable City and Climate Change services to deliver Climate and Ecological Emergency action plans – relevant service leads – To ensure better and more consistent measurement and analysis of tree canopy cover, biodiversity levels, air quality etc, using that analysis to improve outcomes.

Use AI-enabled capability to identify issues and develop interventions.

- Utilise AI on council vehicles to assess roads and highways furniture to early identify potholes and other issues – Director DT & Head of Connected City – To reduce congestion and pollution and assist traffic flow across the city.
- Continue to explore options to creatively but ethically use AI – Director DT & relevant service leads – To effectively and efficiently utilise technology to improve outcomes for citizens.
- Support outputs from the We Are Bristol History Commission – relevant service leads – To help citizens engage with the history of the city and play an active role in shaping its future.
- Support HM Government drive to digitise the planning system – relevant service leads – To support community engagement in a wider range of projects and initiatives.

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