ISx4
AI & ANALYTICS
Insight, Strategy, Solutions, Services & Support

Meeting your analytics needs

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About us

ISx4 deliver Insight through Analytics Strategy, Solutions, Services & Support.

We bring vast industry experience to help derive competitive advantage by moving our clients from **Hindsight,** through **Insight** to **Foresight.**

We create, deliver and manage analytics solutions in all areas of the organisation to include Finance, Risk (including fraud, waste & abuse), Customer Marketing, HR, IT, Audit, Logistics, AML, ALM, Clinical Trials, Life Sciences and Platform Support.
Our service is increasingly relevant and in demand as analytics services become a core competency in every area of the business.

Customers & staff located throughout Europe. (US, UK, IRL, PRTGL, NL, IT, ESP, Ger, IND)

ISx4 have formal certified partners with SAS, RStudio, Anaconda, Microsoft, IBM and AWS. These strategic partnerships allow us to remain vendor neutral and focused on our core competency area of analytics service delivery.

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Strategic Partners

§sas
THE POWER TO KNOW.

IBM
DIGITAL ANALYTICS

ANACONDA

RStudio

aws partner network

Google Cloud

Microsoft Partner

Logos Page

The ISx4 service offering

At ISx4 we drive Insight, Strategy, Solutions, Services & Support through Data Analytics. Our team of specialists are experts in all aspects of Analytics and can help with Strategy Creation, Solution Implementation, Service Delivery and In-Life Support of all Analytics solutions and environments.

Our Service Offerings are broken into 4 simple areas (Sx4);

1) **Strategy**:   working to create a plan of action to achieve long term analytics benefits

2) **Solutions**:   delivering analytics techniques, tools and technologies to derive customer insight

3) **Service**:   the provision of experienced SME and technical delivery implementation resources

4) **Support**:   the In-Life and BAU management of analytics solutions and environments

Our approach;

1) A technology and vendor agnostic approach to analytics.
2) Listen, Understand, Scope, Install, Implement & Deliver (LUSIID)
    i.   Self service analytics enablement within your organisation.
    ii. End to end managed service of analytics environment including interface touch point integration.
    iii. Bespoke point in time solution delivery.
    iv. Analytics resource augmentation.

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Benefits to using ISx4

ISx4 offer a tailored end to end client service to focus on key customer priorities including operational delivery excellence & support. ISx4 bring critical industry knowledge expertise & service delivery elements.
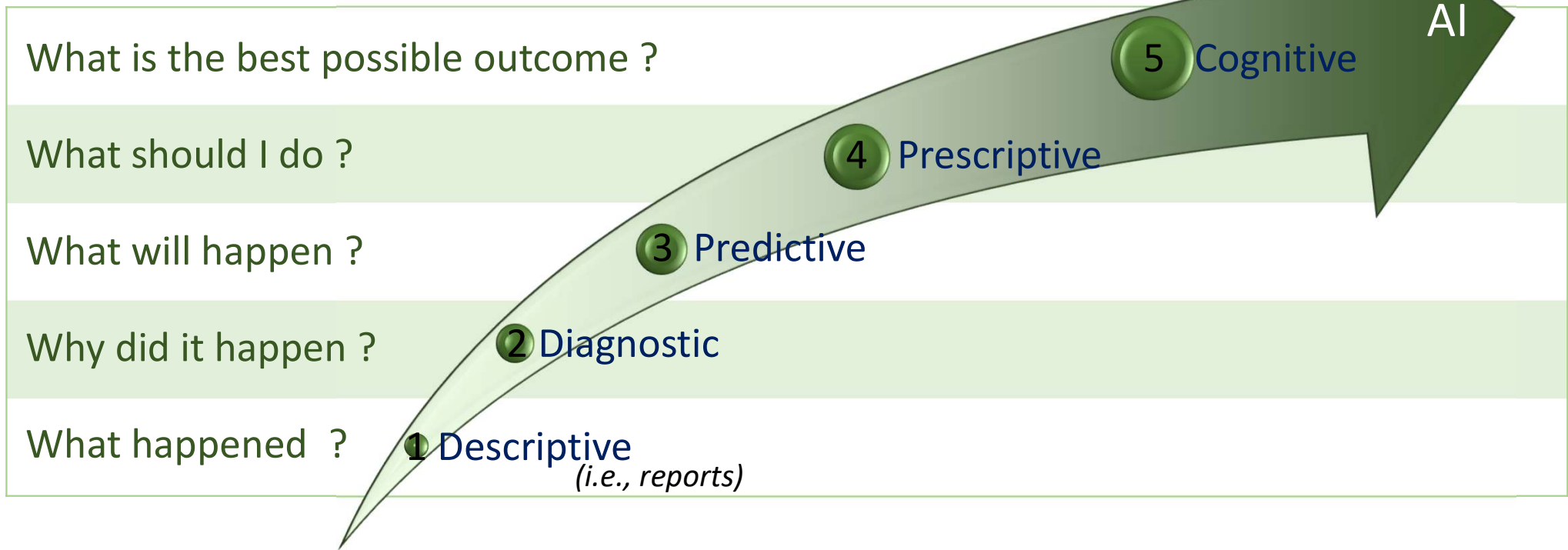
The ISx4 Team has 4 core practice offerings;

1) **Data Management** – ETL, Data Provisioning, BI, Visualisation

2) **Data Science & Solutions** – Data Modelling, Risk and Vendor Specific solution consultants

3) **Platform Management** - Installation, In-life Management & Support Services

4) **Cloud Services –** Architecture, Deployment and In Life Management

Our Team work with industry leading vendors and customers who are currently planning or have already made the strategic leap to new service delivery paradigms. Not only do ISx4 have the strategic understanding but we back it up with real life experience with the ISx4 team actually delivering these transitional changes – again noting the importance of taking the existing staff with us on that journey.

Current Technology focus areas include:
Cloud Adoption, Dockers & Kubernetes, self service, AI, RPA, Dev Ops, Agile & SDLC, AWS, IAM, Open Source adoption, underpinned by real life experience and industry approved foundational services.

The 5 Stages of Analytics Maturity

What is the best possible outcome ?

What should I do ?

What will happen ?

Why did it happen ?

What happened ?

5 Cognitive

4 Prescriptive

3 Predictive

2 Diagnostic

1 Descriptive
(i.e., reports)

AI

Customer Journey

Hindsight → Insight → Foresight

ISx4 – Product offerings

Analytics as a Service
powered by ISx4

ISx4 is responsible for the analytics services
Client is responsible for the analytics platform

Platform as a Service
powered by ISx4

Client is responsible for the analytics services
ISx4 is responsible for the analytics platform

Analytics Managed Service
powered by ISx4

ISx4 is responsible for the analytics services
ISx4 is responsible for the analytics platform

Just add data

Data Analytics Strategy

An Analytics Strategy document is focussed on enabling and empowering the adoption of data and analytics initiatives which add value across the organisation. It does not make explicit technology recommendations as these should be underpinned by IT & Data strategies and driven by business requirements.

There are four pillars of the Analytics Strategy:
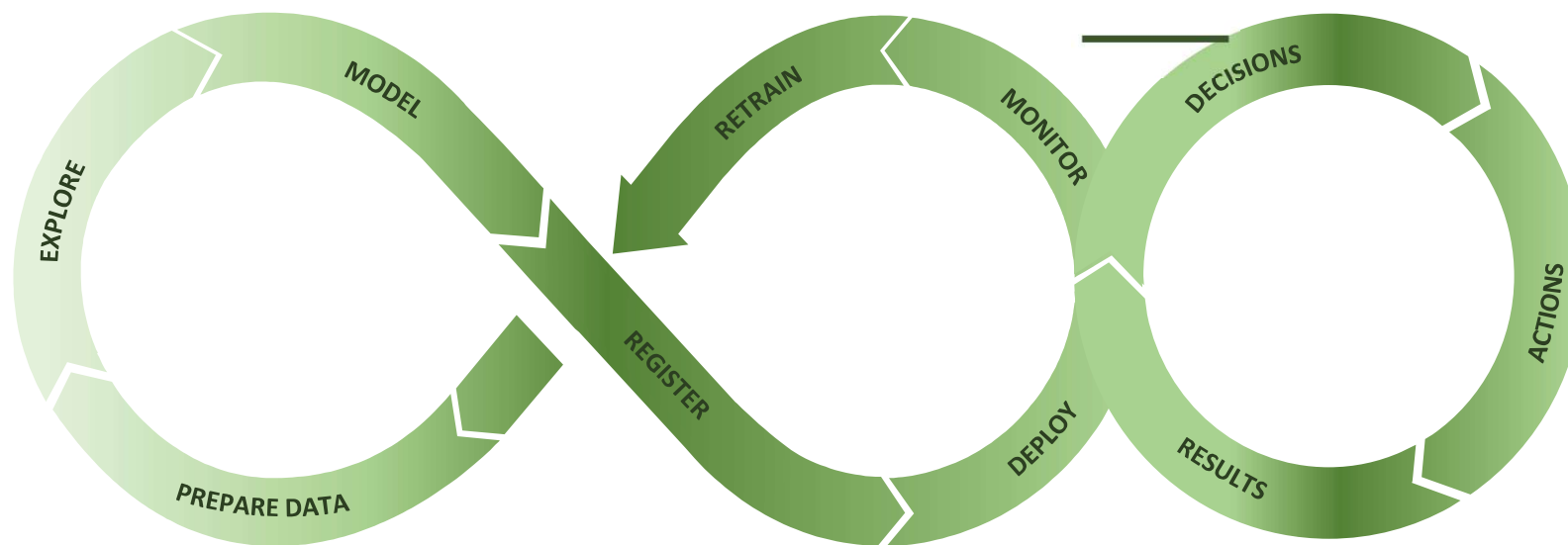- Alignment
- Roadmap
- People
- Platform

An Analytics Strategy should outline the following:
- A framework for assessing analytics maturity
- An approach to delivering analytics projects
- An overview of the core capabilities of an analytics platform

ISx4 – Operationalising Analytics

Business journey start point
…..to do what? …..why ?

EXPLORE · MODEL · RETRAIN · MONITOR · DECISIONS · ACTIONS · REGISTER · PREPARE DATA · DEPLOY · RESULTS

ANALYTICS   IT   BUSINESS
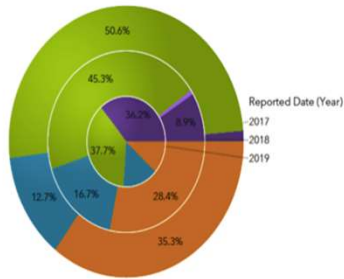
Maintain a controlled flexible analytics environment

Analytics Visualisation

Below are some sample dashboards and reports

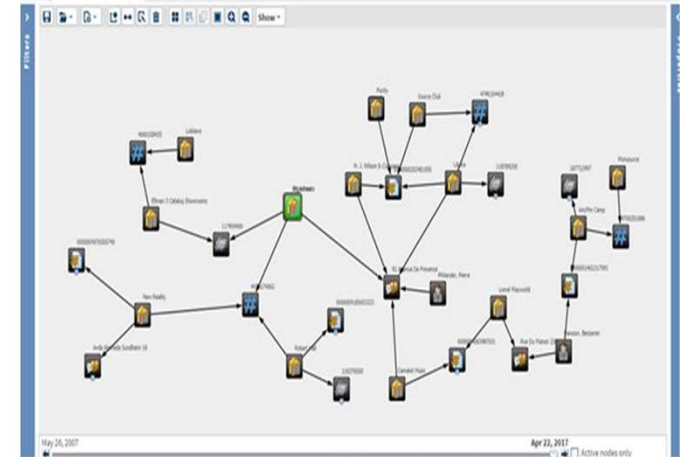# ISx4 – Open Source Technology Integration / collaboration
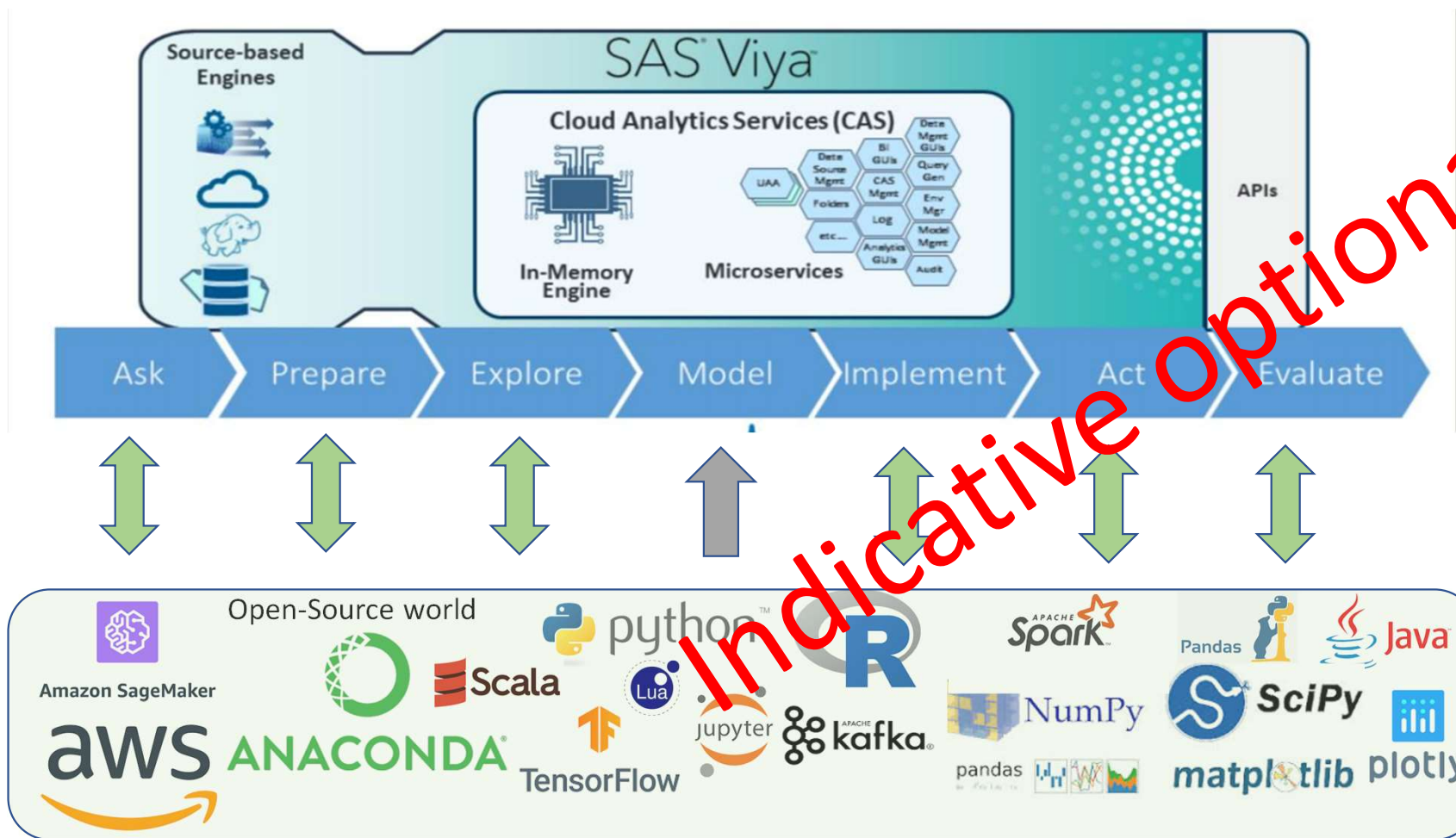
ISx4 Typical Operations & Support Model

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Incident Management Tool

Controlled Escalation Process

ISx4 Service Delivery Team

Project Delivery Team

Daily project / support tasks
Weekly project / support tasks
Monthly project / support tasks
Quarterly project / support tasks
Annual project / support tasks
Ad Hoc project / support tasks
Additional Services

Project Support Team

Solution SMEs
Industry SMEs
Consultants
Technical Consultants

Std / non Std working Hours
Escalations
Additional services

System Administration	System Monitoring	Help Desk Call Support	End User Support	Service Improvements
Trouble shooting	JML Process Support	Upgrade, Patch Deployments	Validation lifecycle Mgnt	Disaster Recovery
System Config Management	Change Management	Knowledge Management	3rd party App Issue Mgnt	Security

Business unit A

Business unit B

Admin

Internal IT

Data team

Vendor A

Vendor B

Other 3rd Party vendors

Business Leader

Internal IT

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Analytics Post Covid19. …. So what ?

As we continue to see a lot of turmoil in the world and lack of economic stability - The 2 Key questions which must now be considered for every analytics project are;

- What data matters ?
- What data makes sense ?

To ensure accuracy of outcomes (in our new world) we must incorporate "new" people behaviour experiences into our models and decisions. This ensures near-term improvement, and a more resilient process going forward. Listed below are the five key considerations for effective analytics post C19:

- Welcome new data
- Incorporate expert judgement
- Analyse the hypothetical (because in some scenarios previous assumptions no longer hold)
- Build for fast flexibility
- Monitor for early warnings

Failure to apply these considerations in your analytics techniques will simply result in a reduced accuracy of your outputs

ISx4 Retail Bank Case Study

ISx4 worked with a medium sized bank on its extensive & complex analytics platform to provide analytics leadership, direction and support through a three pronged process of stabilize, embed & enhance. Widely understood to be an exemplar service within the bank and has set the bar for other service delivery vendors to aspire to.

Problem Statement:

- ✓ Lack of analytics direction
- ✓ Lack of understanding in relation to what to do to help move up the food chain
- ✓ Unsupported enterprise analytics platform
- ✓ Performance Issues with their analytics environment
- ✓ Unstructured analytics processes leading to potential audit & regulatory issues
- ✓ Allied with an Increase in analytics demand due to regulatory requirements of IFRS9 and IRB
- ✓ Lack of appropriate analytics resources
- ✓ Provision of Subject Matter Expertise - The client needed direction in relation to some business focused problem areas. E.g., Risk & Customer Analytics, Fraud, Audit etc

What we did:

- ✓ A bespoke analytics readiness review study
- ✓ An analytics strategy document
- ✓ We then moved to implement that strategy on 3 fronts:
    - ✓ Analytics leadership, guidance & direction
    - ✓ Analytics platform support
    - ✓ Analytics application dev & support
- ✓ We developed an enterprise analytics support agile framework based on three key elements:
    - ✓ Stabilise: a base level of Support and no system down times.
    - ✓ Embed: a support framework
    - ✓ Enhance: a defined deployment process to support the operating model

Key Results:

- ✓ Industry leading, multiple **Award Winning** analytics service
- ✓ Significant growth in internal user population, end users and resultant return on investment figures
- ✓ State of the art analytics operating model
- ✓ Stable environment with a significant reduction in issues.
- ✓ Single go to point of contact regarding all aspects of analytics
- ✓ Internal analytics business functions working hand in glove with senior analytics SMEs
- ✓ Full end to end integration capability for vendor specific and open source analytics solutions to work seamlessly

ISx4 Product Development Case Study

ISx4 has delivered the end-to-end development of a critically important application for a leading bank, which has direct impact on their business revenue. The application, used by every customer applying for a mortgage, performs highly complex mortgage and risk-related decision making and ensures adherence to regulatory requirements.

Problem Statement:

✓ Our client wanted a one-stop solution to assess each customer's affordability, provide a "Go / No Go" decision, and an associated recommended mortgage product personalised to the customer's individual needs.

✓ The objective was to remove the need for repeatedly performing complex calculations in a multi spreadsheet environment, and the time-consuming activity of referencing an unstructured set of documents for regulatory requirements aligned with local risk and tax compliance rules.

✓ The application was required to encode the rules and regulations in a configurable and flexible solution, and in conjunction with the customer's individual financial status, assess the customer's eligibility, and offer the most appropriate mortgage product.

What we did:

Development of a complex analytical application enabling critical mortgage decision making

✓ Work with business and technical stakeholders to undertake extensive analysis of all business rules and regulatory compliance requirements

✓ Provided expert guidance on the application architecture and integration, including how to interact with the front-end to display the customer information to the end users

✓ Provided technical experts to design, develop, and implement the application considering all different rules and requirements along with complex mortgage calculations for various available mortgage products.

✓ Designed, developed, tested and deployed the solution to integrate the back-end application with the user-driven front-end application

Key Results:

✓ Successfully developed and implemented the fully automated end to end application

✓ The client can now provide a personalised mortgage decision within seconds

✓ It is considered to be the most critical application by business stakeholders; now used for every mortgage evaluation

✓ Significant cost saving by eliminating unnecessary time and effort of intermediary manual intervention.

✓ Highly efficient and easy to use application results focused application

✓ ISx4 provides ongoing support and maintenance of the application e.g., amending dynamic data such as budgetary and tax rules as per new year's regulatory requirements

# ISx4 Irish Elite International Sports Team Case Study

ISx4 have been working with international high performance sports management teams and elite athletes, to deliver game changing insights and take athletes to the next level of performance using analytics insight. Sport Ireland prepare Irish sporting teams to compete in the Olympic, Paralympic and European Championships.

Problem Statement:

✓ The project was driven by a desire to enhance the performance of elite athletes, and provide a competitive edge through the use of analytics to bring value and insights - the small percentages!

✓ Our client felt that they were spending too much time focusing on the building of analytical reporting from the raw data generated from boxing tournaments.

✓ Gaps in their technical knowledge meant that a robust internally developed solution would have proved too difficult and time consuming to undertake.

✓ A lack of understanding of the available options to land at the best solution drove the need to engage with a professional services consultancy.

✓ The client's desire to include a level of self sufficiency was key to the success of the process design and final solution.

What we did:

✓ Designed a data model that would drive the current analysis reporting and facilitate the development of further analytics.

✓ Built a tool that efficiently transforms the raw data into the reporting data model.

✓ Delivered a dashboard for the boxing coaches to have access to clear and informative data visuals relative to each athlete.
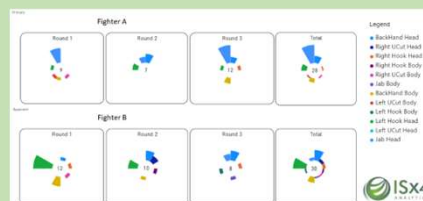
✓ Import all bout data into a punch plot dashboard using the developed solution.

✓ Led the client through the process ensuring critical KPI targets were met throughout.

Key Results:

✓ Successful implementation of a fully functional, interactive and standalone solution to produce analysis dashboards from the captured raw data.

✓ Empowered the end client to own and flex the solution to deliver against their own internal bout specific priorities.

✓ Aid the boxing coaches to identify trends based on punches thrown and conceded dependent on their success, to provide analysis that can be used to improve the athletes' performances.

✓ ....Gold Medals !

ISx4 Finance & Risk Modernisation Case Study

ISx4 worked in a large European Financial Services Institution on an end to end finance and risk modernisation programme. Finance and Risk Architecture Alignment Initiative (FRAAI). The objective was to build a more effective and efficient finance, risk and regulatory reporting environment in parallel with the existing legacy environment, then, migrate and move to live.

Problem Statement:

✓ Architect the restructuring, re-platforming and transformation of the entire finance and risk estate and operating model, to deliver an efficient regulatory compliant environment.

✓ Creation and provision of finance and risk data management & techniques to include end to end lineage & governance.

✓ Enterprise model risk management and process orchestration to promote transparency, traceability and automation.

✓ Development of analytics forecasting activities for scenario-based capital planning & regulatory requirements.

✓ Build out the complete End to End release management process to align with each of the 7 core business work streams onto each of the 7 environments in tandem with the programme plan, drivers and milestone objectives.

What we did:

Developed a CICD RAT (Continuous Improvement Continuous Development - Release Automation Tool) using Python with operational functionality.

✓ Analysed end to end flow – then designed and built an industry leading state of the art organic CICD RAT service.

✓ Created new CICD operating model.

✓ Build critical ETL flows and data marts to facilitate an efficient process flow.

✓ Manage/maintain deployed code content, so that logs & dead code don't accumulate.

✓ Trigger and run flows in process manager.

✓ Fully automated Test suite.

✓ Ensured full open source & vendor specific CICD Integration.

Key Results:

✓ Our CICD process is now the spine which allows the complete end to end FRAAI programme to breathe and evolve.

✓ Significant programme cost savings through process efficiencies. (€100Ks).

✓ Stable environment, reduction in issues, increased time to production, vendor specific, fully automated & integrated, open source release management tool.

✓ Additional Usages include; Server Upgrades, Maintenance Releases, Backups & Disaster Recovery Planning.
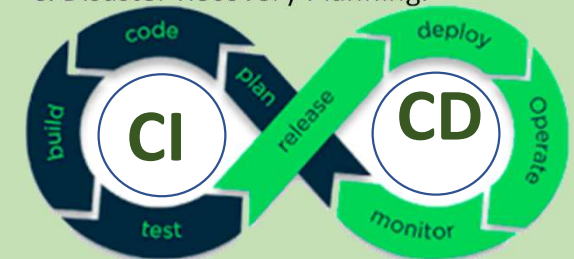
ISx4 Life Science

ISx4 have worked extensively to Design, Build, Modernize, Implement and Support a validated SCE environment in a Life Science organization. We implemented an innovative build and personalized support model which gave competitive advantage by maximizing system resources with minimum impact on critical clinical deliveries.

Problem Statement:

✓ Lack of system stability & reliability

✓ Data sharing challenges creating inefficiencies during workflow resulting in long delays

✓ SCE system not current

✓ System resource allocations and workload segregation not optimized for a **Life Science Organization**.

✓ Shared support resource bottleneck resulting in delay and huge backlog of issues

✓ Business negatively impacted by inadequate processing, support capability, instability and significant overhead of integration of other tools with System platform

What we did:

✓ Engage key business and IT stakeholders across the organization to understand the role of the business, current and anticipated business needs

✓ Build SCE capable of accommodating maintenance releases without significantly impacting the business

✓ Grid configuration designed to address:

- ✓ Maximum utilisation of core based license between validated and non-validated resource allocation

- ✓ Customised to support high and low usages during critical delivery period

- ✓ Agile, efficient, high-available, and scalable system implementation

✓ Dedicated expert worked proactively to minimise response time with unbiased consultation for future business need

Key Results:

✓ Successful implementation of Grid based SCE system with reduced license cost and increased utilization

✓ Business users empowered and educated with customised toolset to accurately plan and utilise Grid system to meet their business needs

✓ Quick response operating model by implementing system monitoring & alerting

✓ Stable environment with a significant reduction in issues

✓ System fully configured to clients current needs to include defined process for future upgrades & new product integration

✓ SOPs updated defined SPOC to resolve all integrated business tools with Systems

ISx4 - Customer Case Study Summary Headline

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ABN·AMRO
Environment Mgmnt
Managed service
Risk Analytics

IBM
Analytics Strategy
Data Science
AI / ML

nationale nederlanden
Claims normalization
Data Science

Department for Work & Pensions
Open Source
Data Analytics
Adoption &
Integration

AIB
E2E Analytics
Managed Service
Data Mgmnt
Dev Ops

CRÉDIT AGRICOLE
Data Migration

Deutsche Bank
Analytics
Support

HM Revenue & Customs
Data Migration
Fraud Investigation
Data Visualisation
Cust Profiling

RSA
Insurance Fraud

permanent tsb
Customer Insights
Marketing

REGENERON
E2E Pharma
managed
services

Ulster Bank
SME Bank Book
Migration

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