

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Web Marketing (SEO)	N/A	<ul style="list-style-type: none"> Management consider that Alaska has built an effective organic search presence through a long term strategy of search engine optimisation (SEO) best practices and methodologies that are updated to ensure alignment with Google online search guidelines Management further stated that the SEO strategy includes a focus on content aligned with the search intent of the customer (i.e. if a customer is searching for 'what is forex trading' they will be presented with a page that explains this topic) Management also confirmed Alaska ensures that the website page speed, titles and descriptions of pages, images, backlinks and the general user experience is optimised in order to improve the organic ranking of important pages and ultimately acquisition of customers Management stated they believe they have an effective internal expertise in organic SEO, based on a team of 12 SEO experienced staff, native speakers of eight different languages (EN, FR, IT, RU, ES, PT, HE & AR) and will continue to invest and grow this customer acquisition channel in the future 	<ul style="list-style-type: none"> Alaska appears to have an appropriate SEO strategy 	<ul style="list-style-type: none"> We noted no additional recommendations required relating to Management's approach to Web Marketing

Key:

- Low cost or complexity to resolve
- Moderate cost or complexity to resolve
- Significant cost or complexity to resolve
- N/A No issues noted

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Web Marketing (Customer Acquisition and Comms)	N/A	<ul style="list-style-type: none"> Management stated the company employ a multi-faceted approach to customer acquisition that targets a wide ranging and balanced customer base. Alaska's omni channel approach includes Online and Offline Partners, SEM, Media, Organic SEO and Referrals Alaska acquires customers through a wide variety of PPC platforms and utilises the available methodologies combining internal and external expertise to ensure efficiency, constant improvement and testing Management also stated Alaska maintains regular contact with the partners of media sources such as Google to target that best practices are met and new opportunities are tested regularly Management further stated that data from SEM media sources is collected and centralised into Tableau which enables the team to optimise and test whilst presenting all KPIs in a single location combined with customer projected LTV (Lifetime Value) and therefore ROI. We understand that all data is collected and processed into tableau, to ensure that maximum insight is gained from the campaigns being run 	<ul style="list-style-type: none"> The company's core acquisition team processes involve creating, testing and iterating new marketing materials in order to improve conversion. These materials include, but are not limited to, banners (HTML and static), ad text, videos (short & long format) and landing pages. Testing is completed through managed media channels such as Google, Facebook and others, and in coordination with 3rd parties through utilisation of their ad server or BtaTrade bespoke adserver where Alaska can host multiple creatives or destinations In addition to rotating new marketing materials in order to improve click through and conversion rates, Alaska also have ongoing processes to alternate new onboarding funnels in order to further increase conversion. This can include registration flows, post-registration landing pages, and deposit UI utilising a 3rd party personalisation tool and marketing automation techniques. Alaska appears to have adopted a comprehensive approach to customer acquisition which involves evaluating their marketing communication and approach on an ongoing basis 	<ul style="list-style-type: none"> We noted no additional recommendations required relating to Management's approach to customer acquisition and communication

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- Significant cost or complexity to resolve
- N/A No issues noted

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Software Development (IP Ownership)	N/A	<ul style="list-style-type: none"> Alaska uses a combination of internally developed and off the shelf applications for the delivery of services and operational platforms. Management have identified six key applications which have been internally developed, these are: <ul style="list-style-type: none"> - Content websites: marketing content websites - My Bta: Account management - AOWS: Bulk uploads of clients from affiliates - Tracking system: monitoring the association of the clients to the source - DWH: Data warehouse to support consolidation of data for Tableau - Tableau reports: internal business reports Management stated that they have ownership of all IP rights for these applications 	<ul style="list-style-type: none"> Management also identified three additional key applications (defined as level 1) where the IP is not owned but where there is an option to purchase the IP from the vendor: <ul style="list-style-type: none"> - BtaTrade Go: Proprietary trading platform (mobile apps) - Web trader: Proprietary trading platform (web for desktop and mobile) - Bta Partner: Partner relationship management 	<ul style="list-style-type: none"> Management appear to have establish reasonable control over key applications, including the option to purchase IP. We would recommend that the IP ownership position for each of the identified applications and systems is validated as part of any legal due diligence process

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- N/A No issues noted

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Software Development (Third party support)	N/A	<ul style="list-style-type: none"> Management stated Alaska utilise three third parties for software development across four of the identified applications as follows <ul style="list-style-type: none"> - Proline (Bta Partner) - TradeCore (CRM – IP owned by Alaska) - Devexperts (Btrade Go and Web trader) Management stated that their current arrangements with these third party contractors would enable the business to increase development activity in line with business growth as required through scale up of the resources being provided by the third parties 	<ul style="list-style-type: none"> Management provided a breakdown of opex and capex spend across each of these third parties for 2020 and 2021 (forecasted). Management also confirmed that provided sufficient notice is provided to these third parties, Alaska is not required to utilise their services for development on their respective applications (see previous page regarding IP ownership) 	<ul style="list-style-type: none"> Management appear to have a good relationship with these key third party contracts. We would suggest that future growth forecasts for additional resources are provided to these partners, and updated, on a regular basis to allow them to plan and optimise delivery of services to Alaska

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- Significant cost or complexity to resolve
- N/A No issues noted

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Software Development	● ○ ○	<ul style="list-style-type: none"> The BtaTrade system is built using C# on a .NET platform, this serves the APIs that the Web, Android and iOS platforms interface with The APIs are produced following REST API conventions, using the RestSharp package. RestSharp is a popular package used for serving REST APIs in .NET Autofac is used as an Inversion of Control container. Inversion of Control is a popular methodology which aids in a modular system build and maintenance RabbitMQ is used for message management. RabbitMQ is a widely used messaging package for this type of system and is well supported The BtaTrade system functions as a middleware between the client apps and the MT4/MT5 backend. It routes the data calls to the MT4/MT5 system MT4 and MT5 (MetaTrader) are considered as industry standard trading platforms BtaTrade Go, the mobile app is built using Object C in the iOS platform and Java in the Android platform The web interface, known as the WebTrader is built using React and is designed to be responsive and can also be used on mobile devices 	<ul style="list-style-type: none"> Our review of the coding approach and technical stack being used (full details on page 29 – 32) has identified that standard development techniques and technical solutions have been adopted by the business, these present readily available tools, which are well supported with skills typically commonly available The design and ongoing enhancement of the system requires a good understanding of the MetaTrader platform (MT4/MT5), the trading market and the customer needs, which Alaska appears to demonstrate 	<ul style="list-style-type: none"> The understanding of MT4/MT5, the trading market together with the customer needs appear to be an IP for Alaska. This approach should be documented and formalised, as the actual technology deployed appears to be standards based




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IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Software Development	● ○ ○	<ul style="list-style-type: none"> Alaska use an Agile Scrum development methodology. Management stated a key principle of Scrum is the recognition that during product development, customers can change requirements. Scrum incorporate iteration and the continuous feedback that it provides to successively refine and deliver a software system Daily Meeting and weekly meetings are continuously held with the dev teams, with before and after sprint ceremonies and ongoing discussions with the project managers driving these Microsoft TFS (Team Foundation Server) is used to manage the tasks and its version control services is used for hosting the source code Code development follows four main branches of Development, QA, Staging and Production New development is completed on the development branch and is locally tested. When ready this is merged to the QA branch where it is tested by a wider audience, before then going to Staging for final verification before being made live on the Production environment Code reviews are completed at code check-in time, any automated tests are also run at this time. We understand that the main tests are currently being done manually by the QA team 	<ul style="list-style-type: none"> Alaska follows a standard process for development, testing and going live The software is version controlled and the version control branches drives the development progress, following very standard practices There's good regular communications between the development team and the stakeholders The main tests are being currently done manually 	<ul style="list-style-type: none"> Alaska should consider the benefits to automate testing, reducing the human element and resources in the current process. Benefits of automated testing for Alaska may include: <ul style="list-style-type: none"> faster than the manual testing approach wider test coverage of application features possible more reliable in results ensure consistency of approach improves accuracy human intervention is not required while execution completed increases in efficiency
Key:	<ul style="list-style-type: none"> ● Low cost or complexity to resolve ● Moderate cost or complexity to resolve ● Significant cost or complexity to resolve N/A No issues noted 			

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Server Architecture	  	<ul style="list-style-type: none"> The BtaTrade system resides on dedicated servers in a hosting centre in London. The servers are deployed in a scale-out system. With scale-out, extra loads are dealt with by the addition of extra servers The servers are also deployed in a tiered format, with the MT4/MT5 systems on their own servers and the BtaTrade API system on another set of servers. The Webtrade platform sits on another set of servers The server systems are mirrored in the DR site in the Netherlands. Going from Live to DR is a straightforward but quite long and manual process 	<ul style="list-style-type: none"> Alaska have adopted a standard approach for this kind of system. A scale-out system allows for increasing traffic via the addition of extra servers while a tiered system clearly defines the responsibility of each tier, focusing on that tier's needs 	<ul style="list-style-type: none"> The move from Live to the DR environment and back again, appear to require several manual steps. To make the move easier to perform and test, this should be automated as much as possible

Key:

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-  Significant cost or complexity to resolve
-  N/A

No issues noted

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Platforms and applications	N/A	<ul style="list-style-type: none"> • The business utilise a number of key business systems to support various elements of the operating model. • Management provided the following descriptions for Alaska's primary trading applications: <ul style="list-style-type: none"> - BtaTrade website: BtaTrade website is the first step of every new trader, the site is translated to 30 local sites, the main purpose of the site is to motivate the visitor to open an account with BtaTrade - Bta WebTrader: WebTrader is an innovative online trading platform, designed especially for novice traders - BtaTradeGo: BtaTradeGo is an innovative and ease of use technology for novices and traders. Clients can manage their trading accounts and deposit directly from the app - MetaTrader4: MT4 is an online trading platform which is easily customisable, it is a user-friendly for novices, traders/investors and market pros 	<ul style="list-style-type: none"> • Alaska appears to have a comprehensive application architecture supporting the various business functions • In addition, Alaska has a range of trading applications to support a variety of traders 	<ul style="list-style-type: none"> • No recommendations noted

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IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
Platforms and applications (cont.)	N/A	<ul style="list-style-type: none"> - MetaTrader5: MT5 is the next generation online trading platform based on MT4 success with better performance and technology, it is a user-friendly for novices, traders\investors and market pros - Liquidity Hub: OneZero liquidity hub allows Alaska to control and connect liquidity providers to their instruments on MT4/MT5. All settings are also controlled from here (spreads/Safety settings etc) - DupliTrade: A focused, transparent, user-friendly trading platform, that allows users to automatically duplicate the actions of expert traders directly into their BtaTrade trading account. Clients can choose from a variety of strategies, define their risk level and choose how capital is allocated. - BtaOption (Sentry): options trading and asymmetric hedging - Pelican (Social Trading): To have an alternative platform for new traders with a simpler interface than other Alaska platforms 	<ul style="list-style-type: none"> • See previous page 	<ul style="list-style-type: none"> • See previous page

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IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
IT Infrastructure (Datacentres)	N/A	<ul style="list-style-type: none"> The Group's IT infrastructure is configured across five principal locations : <ul style="list-style-type: none"> London, England – The Group uses Equinix as its main production data centre. Through this data centre, the Group has links to its liquidity providers for real-time, low-latency access to market quotations Amsterdam, The Netherlands – The Group uses Equinix data centre premises in Amsterdam as its disaster recovery site of trading platforms and market liquidity providers. Like the London data centre, the Amsterdam data centre has direct links to the Group's liquidity providers and can be used by the Group in the event of a critical failure of trading platforms and market liquidity providers in the London site. This site is also serving as a backup site for the platforms to enable recovery. Dublin, Ireland – The Group's principal office and trading room is connected to both the London and Amsterdam data centres, to enable the Group's management to monitor the Group's trading activity and to effectively implement its risk management strategy in real-time. Herzliya, Israel – The Group's secondary office is connected to both the London and Amsterdam data centres, to enable the Group's management to support monitoring the Group's trading activity and to effectively implement its risk management strategy in real-time. 	<ul style="list-style-type: none"> Considering the nature of Alaska's business operations focusing on leveraging trading, low levels of latency is a key concern so that traders (customers) can react to price movements Management confirmed that the communication latency (ping) between the data centre in London and Reuters (primary provider of market quotations) is 2ms Alaska appear to have appropriate connectivity with its liquidity providers to provide low-latency access to market quotations for traders 	<ul style="list-style-type: none"> No further recommendations noted

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- Significant cost or complexity to resolve
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IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
IT Infrastructure (Datacentres, cont)	N/A	<ul style="list-style-type: none"> Amazon AWS – The Groups CRM platform resides on Amazon EC2 platform to ensure high availability and accessibility. The EC2 environment has direct connectivity to the data centres and to the Dublin and Israel Offices 	<ul style="list-style-type: none"> See previous page 	<ul style="list-style-type: none"> See previous page
IT Infrastructure (Scalability)	N/A	<ul style="list-style-type: none"> Management stated the Group's IT infrastructure has demonstrated stability, scalability, reliability and high performance by supporting the Group's historical growth in trading volumes across its entire suite of trading platforms Specifically, the Group platforms supported handling 164K trades on a daily average during January 2021 (compared to an average of 28K trades per day in January 2016 and 87K trades per day in January 2020) Management confirmed these volumes were handled with sufficient network capacity for further connections, trades and price requests Management stated performance and capacity parameters are regularly collected and used to better forecast any increases in IT infrastructure requirements to ensure traffic spikes are handled appropriately 	<ul style="list-style-type: none"> Management provided data displaying the 2020 trading activity. The data shows that the total daily average trades were 198k. Management confirmed the highest capacity in 2020 was 498k Management further stated processing capacity is regularly monitored and increased to maintain headroom for peak days. The current BtaTrade platform capacity is 1,000k trades 	<ul style="list-style-type: none"> No recommendations noted





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IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
IT Infrastructure (Legacy Servers)		<ul style="list-style-type: none"> There are 138 server instances across Alaska. This includes the following: <ul style="list-style-type: none"> 1 Server – Windows Server 2003 3 Servers - Windows Server 2008 34 Servers - Windows Server 2012 The Windows Server 2008 operating systems went out of out of extended support in January 2020. In addition, all Windows 2003 and Windows 2000 servers are now out of support. In addition, the Windows Server 2012 standard operating systems went out of mainstream support in January 2018 and will go out of extended support by 10 October 2023 	<ul style="list-style-type: none"> Microsoft no longer release security updates or bug fixes for operating systems no longer in extended support Unsupported software maybe more susceptible to malware as any vulnerability identified may not be resolved, and this may provide an opportunity for exploitation by hackers In addition, older hardware maybe more prone to failure which may increase the amount of support required 	<ul style="list-style-type: none"> Management should allocate spend towards the replacement of legacy servers We would suggest that when replaced, these servers are built to support virtualisation which may provide additional flexibility for testing new applications in future without purchasing additional hardware. We estimate that the servers and associated operating system software would cost in the region of £6k - £10k per device and therefore a total investment of £12k - £20k maybe required Alternatively, instead of purchasing hardware, Management may wish to expedite their move to cloud based solutions and consider the use of cloud-based Platform as a service (PaaS) solutions including Microsoft Azure where servers may be rented on a subscription basis

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-  N/A
- No issues noted

IT Due Diligence Findings

Area	RAG	Observations	Comments	Recommended action
User transactions	N/A	<ul style="list-style-type: none"> Customers are categorised in the Alaska CRM system as follows: <ul style="list-style-type: none"> Lead: a customer who has signed up with minimal details – no access to the trading platform is provided Demo: a registered customer with full details entered - access to the demo trading account is then provided Real: customers who have signed up to the live trading platforms. These are further sub categorised in to the following three categories depending on the level of detail they have provided: <ul style="list-style-type: none"> Incomplete: profile has missing information for regulation requirements Complete (Limited): all information is provided but the customer is in the process of KYC checks – customer is still unable to trade until these are completed Complete (Full): All information provided, no restrictions on trading or withdrawing 	<ul style="list-style-type: none"> Alaska currently has a total of c.852k users across all trading platforms of which c290k are classified as Real users. Management stated a further c.272k real customers are in the pipeline Alaska appears to have a robust process of onboarding users, migrating leads through to demo and real accounts. The process also appears to ensure the appropriate regulatory requirements for customer information is also followed 	<ul style="list-style-type: none"> No recommendations noted

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D. Code review methodology (1 of 4)

Software Development Environment and Processes (SDEP) (cont.)

- Source Code Documentation: Where developers include comments to document their source code, which can improve software maintainability. Developers should maintain these comments when adding new code or changing code. Additionally, developers may need to follow a specific source code documentation format, depending on their chosen

Logic and libraries

- Aligned to code complexity, the design strategy and coding requirements, will be heavily dependant on the need to address and code specific features and logic within the code to deliver the required functional goals, or to overcome specific technical challenges. The use of existing and properly licensed source solutions (libraries, OpenSource, Modules) can increase delivery speed and simplify. However, where new IP, innovation or inherent technical challenges or new features are being provided, there may be a need to solve these through the creation of new proprietary code elements

Code technology and choice

- The coding tools used for development depend upon the requirements for the product (ie. platforms and environments being used), the availability of new/latest technologies to be selected as being the most appropriate, and the skills and experience of the development team in place
- The number of different technology stacks employed, and their respective maturity from a technical perspective, will contribute the overall complexity the code, and represent potential impacts on quality

Project Management

- Clearly defining business requirements for a software project allows developers to write code that correctly implements intended functionality. Poorly defined requirements drive unclear design specifications, which can impact the progress of resources and contribute to poor code quality and incorrectly implemented functionality
- Unrealistic project timelines can also impact code quality. Completion of a project in accordance with unrealistic schedules or budget constraints may cause developers to create less than ideal code solutions or to implement without proper testing

Indicators

- Some of the indicators we consider to determine code quality include complexity, technical debt, code duplication, and coupling:
 - Code Complexity: a measure of how easy code is to understand and maintain. Smaller blocks of code containing less functionality are easier to understand and maintain than large code containing complex functionality. Complicated code which uses many different looping or nesting structures increases code complexity and can contribute to poor code quality
 - Code Duplication: Code duplication refers to similar or identical sections of reused or refactored source code. Code duplication can reduce maintainability and increase time needed to modify functionality if the same section of code must be modified in multiple parts of a program. Thus, code duplication may indicate poor code quality. However, a developer may decide to use duplicate code in cases where it improves code readability, with a trade-off of reduced maintainability.

D. Code review methodology (2 of 4)

Indicators (cont.)

Removing duplicate code and functionality to reusable methods or classes that can be called when needed can eliminate or at least reduce instances of code duplication

- Coupling: Coupling is a measure of interdependence between sections of code. Tightly coupled code connects functionality between two otherwise unrelated sections of code. As a result, modification of tightly coupled code may affect functionality in unintended ways and impact how well the program functions as a whole, which can contribute to poor code quality
- Technical Debt: Technical debt refers to work needed to correct previous code. Therefore, technical debt can contribute both to project delay and to poor code quality, as many temporary solutions never receive necessary revisions

Innovation and design control

- The adherence and delivery of the target outcomes and capabilities of the product being developed will be dependant upon the degree of engagement with the technical design authority, availability of clearly defined product strategy and roadmaps which articulate the intended outcomes, and adherence to delivery of these objectives through regular review and verification of the original goals
- This process can be managed through any SDLC, with Agile providing a more flexible approach to adjustments and changes to the outcomes based on SCRUM sessions within each sprint, or formal change control processes where a more traditional Waterfall approach is used, with both requiring significant participation of the product managers and design authorities

Code review assessment (3 of 4)

Summary of our review IT Due Diligence Findings

- The table to the right shows our opinion of the BtaTrade suite of module's code and development practise and approach against each of the criteria areas we define in our code review methodology. In summary, our comments from our review are:
 - Development Team and Resources
 - Long standing development partner, understands the business well. Management has stated that they would not want another development team
 - SDEP - Version Control
 - Version control is in Microsoft TFS (Team Foundation Server. Developer understands its usefulness and there's a wish to use it in the future
 - SDEP – Static Code Analysis
 - EsLint is used throughout the development process. EsLint is a popular linting package that helps keep the code base in a common format and helps locate common coding mistakes
 - SDEP- Manual Code Review
 - Code Review is done by the developer as well as in house development lead
 - SDEP – Testing
 - There's both automated testing and manual testing, but there is quite heavy reliance on the manual testing
 - SDEP – Source Code Documentation
 - Code is documented appropriately with meaningful names and extra documentation where required
 - SDEP – Automated build and deploy
 - Automated build and deployment is done by the TFS software. As the code is committed it is automatically built, any errors will stop the build. DevOps will take the successful builds and merge it into production. Code deployment is done automatically, any config is required is done manually



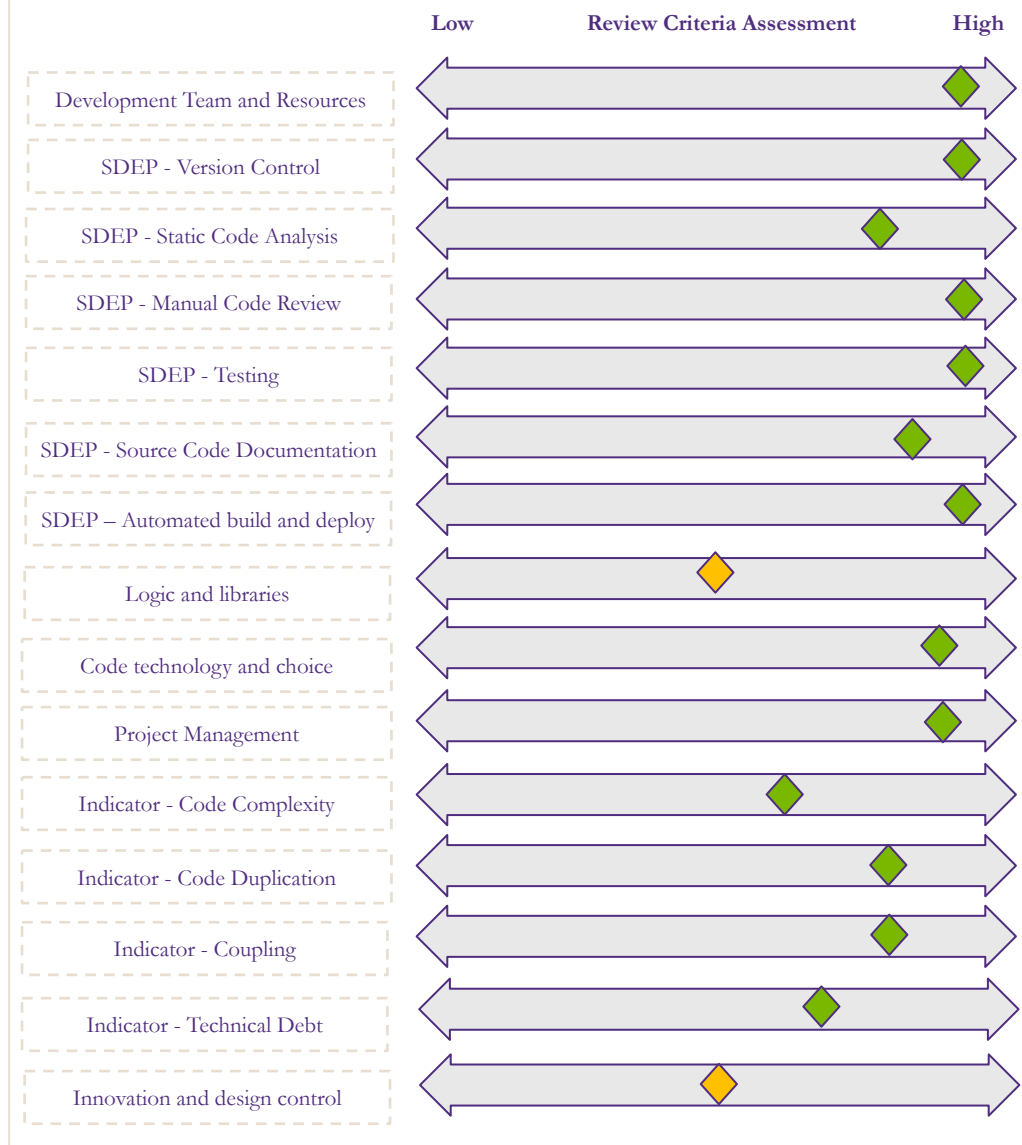
Notes: a. High reflects significant degree of demonstrated best practise, Low rating indicates limited evidence or no evidence

Code review assessment (4 of 4)

Summary of our review IT Due Diligence Findings

- Comments continued:
 - Logic and libraries
 - Libraries used does not extend beyond the standard Microsoft offerings
 - Core technology and choice
 - .NET C# is a good technology choice for these applications. It would not be difficult to find external programmers to support the development
 - Project Management
 - the Project appears to be well managed, and the team demonstrates a good understand of the business needs and has delivered an excellent suite of products
 - Metrics – Code Complexity
 - in our opinion the code is not hugely complex but was well laid out for reading and understanding to determine purpose and approach
 - Metrics – Code Duplication
 - there is little evidence of code duplication, the layers and the functions appear to be well laid out
 - Metrics - Coupling
 - the coding is separated clearly to layers and they are well decoupled
 - Metrics Technical Debt
 - Technical debt is managed in the backlog with clearly ticketed items that are prioritised together with general workload
 - Innovation and design control
 - while there are some examples of specific developments to overcome challenges, extensive technical innovation is limited but the code base is well designed

Development and code assessment



Notes: a. High reflects significant degree of demonstrated best practise, Low rating indicates limited evidence or no evidence