Data Insights & Analytics Offering

Executive Summary

AIM Consulting presents a comprehensive approach to implementing a robust data platform that aligns with your organization's mission and objectives. Our solution is designed to streamline processes across eight critical workstreams: Discovery Process, Oversight and Delivery Assurance, Data Governance & Management, Architecture Framework and Platform Implementation, Data Ingestion and Transformation, Infrastructure, Report Migration & BI Modernization, and Machine Learning MVP.

Our approach begins with a meticulous Discovery Process to understand your unique requirements, ensuring the solution caters to the needs of internal staff, corporate sponsors, leaders, and end-users. Throughout the engagement, we set clear expectations for Client staff involvement, fostering collaboration between business and IT teams.

To achieve your aspirational goals, our solution emphasizes Program Maintenance, ensuring knowledge transfer and equipping Client to operate and maintain the data platform independently. Our commitment extends to Solution Support, encompassing post-implementation support, regular health checks, user training, knowledge transfer sessions, incident management, continuous improvement, scalability, upgrades, and both remote and on-site support options.

Quality Assurance is ingrained in our methodology to ensure the solution's reliability and performance. We employ rigorous testing, validation, and monitoring practices to guarantee the highest standards are met throughout the implementation.

The heart of our proposal lies in the Solution Architecture, where our detailed evaluation led us to select Azure as the optimal cloud platform. Leveraging Azure's strengths and features, our proposed architecture aligns seamlessly with project requirements. The decision to choose Azure over other providers was strategic, considering factors such as services cost, scalability, analytics/reporting capabilities, security, and AI/ML capabilities.

In terms of Solution Platforms, our architecture leverages Azure services such as Azure Data Factory, Event Hubs, Azure Data Lake, Azure ML, Azure Synapse, Azure Data Share, and Power BI. These platforms are strategically chosen to address each facet of the project, ensuring a cohesive and efficient solution.

Our Network Requirements, Scalability, and Security measures are meticulously designed to meet the highest standards, providing a robust foundation for the data platform. The Deployment Approach focuses on designing effective business and system processes, implementing migration strategies, and estimating timelines with minimal impact on daily operations.

In conclusion, AIM Consulting is committed to delivering a tailored solution that not only meets but exceeds Client's expectations. Our strategic use of Azure, coupled with a meticulous approach to every aspect of the project, ensures a successful and sustainable data platform that aligns seamlessly with your organizational goals. We look forward to the opportunity to bring this vision to fruition and contribute to the continued success of Client.
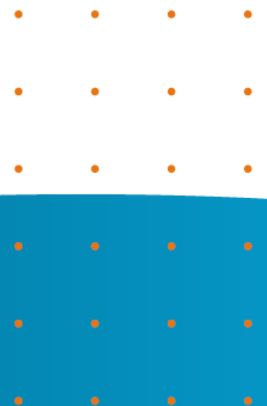
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I. General Questions

A. Company and Services Overview

1. Company Overview

AIM Consulting is a leading technology consulting firm, collaborating with organizations to implement cutting-edge solutions in the realms of digital, data, and cloud. Our commitment lies not just in delivering technological solutions but in infusing a human touch into the digital landscape. Our comprehensive approach, tailored solutions, and unwavering commitment to lasting value set us apart in the technology consulting sphere.

Visionary Leadership

Leading AIM Consulting is Mike Mallahan, President and a seasoned industry leader. Under his guidance, AIM has evolved into a dynamic force, fueled by a leadership team comprising industry and technical experts. Together, we orchestrate operations across our strategic locations in Seattle, Minneapolis, Denver, Houston, and Chicago.

Agile and Talented Team

AIM Consulting thrives on the strength of a cohesive team, comprising nearly 500 professionals, including full-time and project consultants. Our success is not merely defined by project outcomes but by empowering client teams to achieve sustained high performance independently. We nurture long-term relationships with top-tier technology consulting talent, ensuring the seamless execution of roadmaps and driving modern technology initiatives.

Nationwide Presence, Global Strength

Strategically positioned in key business hubs, AIM Consulting boasts a national reach with offices in major cities. As a proud member of the Addison Group family since 2017, we leverage a robust network of over 30 offices, enhancing our capabilities to provide industry-leading services with both a national reach and a localized touch.

Recognized Excellence

AIM Consulting has consistently been recognized as one of the region's top companies. Recent accolades include being named among the 2022 Fastest Growing Firms by Consulting Magazine, Washington's 100 Best Companies to Work for by Seattle Business Magazine, and "Best and Brightest Companies to Work For®" by the National Association for Business Resources (NABR). Additionally, AIM was honored as a Silver Stevie® Award winner in Healthcare Technology Solutions at the 20th Annual American Business Awards®.

Commitment to Diversity, Equity, and Inclusion

Diversity, equity, and inclusion are not just buzzwords at AIM; they are embedded in our DNA. We are dedicated to fostering a workplace culture that values and celebrates diversity. Our ongoing efforts include initiatives related to DEI, wellness programs supporting employee health and fitness, and expanding employee resource groups. At AIM, we believe in creating an inclusive environment where every team member can bring their whole selves to work, contributing to a workplace that nurtures personal and professional growth.

Empowering Growth and Advancement

Our overarching goal is to empower our employees' growth, invest in their future, and advocate for the importance of a diverse workforce. AIM Consulting is not just a technology partner; we are catalysts for innovation, driving digital transformation and ensuring our clients are future-ready. Join us on the journey towards technological excellence and lasting impact.

2. Company Key Information

Company Name	APFS Staffing Inc. on behalf of AIM Consulting
Headquarters and Major Locations	*Headquarters*: Seattle, WA *Other Major Locations:* • Minneapolis, MN • Chicago, IL • Denver, CO • Houston, TX
Key Management Contacts and E-Mail Addresses	Steve Tycast: STycast@aimconsulting.com Mike Rowse: mrowse@aimconsulting.com Mike Mallahan: mmallahan@aimconsulting.com

3. Company History

AIM Consulting was established in the Seattle area in 2006 as a provider of IT professional solutions, experiencing significant growth and expansion since its founding. In 2010, AIM Consulting embarked on a national expansion strategy, expanding its reach to Denver, broadening its expertise in IT consulting across multiple regions. In 2014, the company founded its branch in Minneapolis, strengthening its foothold in the Midwest region. This expansion allowed AIM Consulting to serve a wider range of clients and leverage its expertise in various markets.

In 2017, AIM Consulting experienced a significant milestone in its history with the strategic acquisition by the Addison Group. This acquisition marked a pivotal moment for the company, accelerating its growth and positioning it for even greater success in the consulting industry. AIM Consulting continued its expansion by establishing AIM Houston in 2019, further enhancing its presence in the Texas market. In 2020, the company expanded its operations to Chicago, solidifying its commitment to serving clients in the city's vibrant business landscape.

Throughout its history, AIM Consulting has demonstrated a steadfast commitment to delivering exceptional consulting services and fostering long-term partnerships with its clients. With a strong foundation and a continued focus on excellence, AIM Consulting is poised to continue its growth and innovation in the years to come.

AIM takes a holistic approach to technology solutions through five main capability areas, at right.

APPLICATION DEVELOPMENT

Our teams are passionate about collaborating on innovative and architecturally sound applications using modern technology and development best practices.

DATA & ANALYTICS

We harness the power of data to help clients make quicker decisions and generate greater insights using the latest in data science and technologies.

DELIVERY LEADERSHIP

Our project leaders act as advisers, strategists, and communicators to lead complex initiatives and ensure excellence across all AIM-driven solutions.

DIGITAL

Our creative and digital teams work together to deliver engaging experiences that drive results across web, mobile, and emerging technologies.

CLOUD & OPERATIONS

We upgrade systems and transform processes to provide the utmost in performance, scalability, resilience, efficiency, and service quality -- reducing cost and frustration.

4. Company Differentiators

At AIM, we believe in our ability to drive innovation, understanding business challenges and seeking out the best technology solutions and services for our clients. This pursuit of excellence helps our clients realize increased revenue and cost efficiencies to gain a competitive advantage in their market.

As a strategic consulting firm, we bring deep full-stack expertise across Data, Digital and Cloud. Being industry and technology agnostic, we bring a holistic and objective approach to our clients with thought leadership and client empowerment, strategy, ideation, design, development and delivery excellence.

We operate as a cohesive extension of our client's team – upskilling and empowering throughout the project journey so upon solution completion, our clients are set up for success and self-reliant. All in all, AIM Consulting consistently delivers:

A Reputation Built on Merit	We Bring a New Point-of-View	Passion for What We Build
Embarking on a strategic journey is just the beginning. At AIM, we underscore the significance of partnership and flexibility. Recognizing the distinctiveness of your needs, we believe that true success lies in the collaborative achievement of your goals.	Our value proposition is deeply rooted in strategic acumen. With a profound understanding of technology and an unwavering commitment to modern delivery processes, we bring a fresh perspective to every engagement.	At AIM, our approach combines rigorous standards, agile execution, and a focus on empowering your team for lasting success. Through effective knowledge transfer, we equip your team to sustain peak performance independently, beyond project delivery.

5. Total Employees

Continued Success Amidst Challenges

In the face of the recent pandemic and economic uncertainties, AIM Consulting has consistently achieved year-over-year growth, a testament to our unwavering commitment to excellence. Our success is rooted in a profound emphasis on our people—recognizing that in the ever-evolving landscape of technology, it's our talented individuals who truly make the difference. With an average workforce of 350-500 employees at any given time, AIM Consulting stands as a dynamic force.

Positioned for Distinction: A Unique Boutique Consulting Firm

Our boutique consulting firm, AIM Consulting, proudly distinguishes itself within the consulting industry. Positioned between the agile, smaller entities and the vast global conglomerates, AIM strikes a balance that sets us apart. This unique stance allows us to not only compete with large enterprises but also preserves the human touch in all our endeavors. At AIM, we embody the perfect fusion of being large enough for competitive prowess and small enough to infuse a personal touch into everything we undertake.

6. Data Analytics & AI/ML Team

As mentioned in Section 6 above, AIM Consulting continues to see growth, especially in the Data Analytics and AI/ML space. Currently, AIM employs a dedicated and skilled team of 45 specialists within our Data Analytics and AI/ML practice, with 9 leadership positions strategically distributed across our five offices located in Seattle, Minneapolis, Denver, Houston, and Chicago.

Our Data & Analytics practice comprises professionals with diverse expertise, ranging from data engineers and analysts to machine learning and artificial intelligence specialists. With our team, we are poised to continue delivering transformative solutions, pushing the boundaries of what is possible in the ever-evolving landscape of data and artificial intelligence.

7. Cloud Partnerships

AIM Consulting is a technology agnostic systems integrator, partnering only with a select few companies that provide innovative, integrated and highly valuable solutions for our clients. With the current shift from on-premises to more cloud-based solutions, AIM has been partnering with Microsoft for many years, allowing lasting relationships and access to the latest advancements in the space.
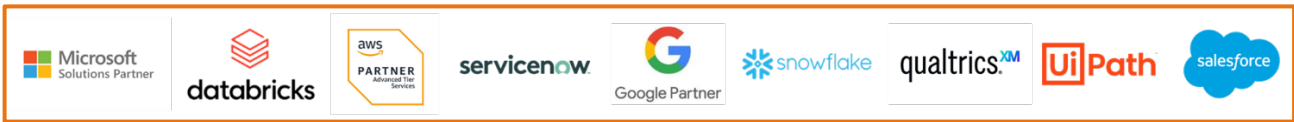
AIM Consulting also places a high degree of emphasis on our technical competency and continuous education. For example, AIM has technical and advanced certifications in Microsoft, while being a Solution Partner and achieving specific competencies in Data & AI.

Overall, we take the time to dive deep into the technology, obtaining certifications and skills that we then pass back to our clients. This helps drive holistic solutions as a path towards our client's future growth. We thrive on new, innovative ways to bridge the gap for our customers.

8. Other Services

AIM takes pride in its technology-agnostic approach, bolstered by strategic alliances that enable us to deliver comprehensive, solution-driven engagements to our clients. In addition to our versatile core competencies, AIM excels in highly specialized areas, ensuring unparalleled proficiency in:

Application Development	Data & Analytics	Delivery Leadership
• Engineering Excellence • Client-Side Engineering • Cloud Strategy • Full-Stack Custom Development	• Data & Analytics Capability Design • Data & Analytics Enablement • Advanced Analytics and Automation	• Product Development • Technical Delivery • Transformation

9. Technical Vision – Data Insights & Analytics Platforms

Please describe your technical vision for the future on data insights and analytics platforms.

AIM Consulting is acutely aware and active in the latest tech trends and innovations across various industries.

AIM views the Data and Analytics space as the cornerstone of every organization's strategic growth initiatives. No longer do companies see data as an expense, rather an asset that has the ability to provide actionable insights to gain a competitive advantage in the market.

Each year, our leaders and technology publish a trend report to help our clients keep pace and understand this rapidly changing market. You can see a summary of these predictions at right, as well as view the full published reports below.
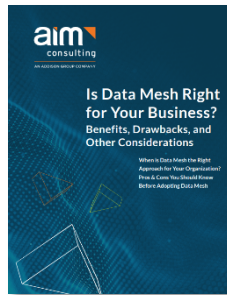
AIM Trend Reports

Tech Trends Insights Report

A look at the predictions and insights for the year in technology from AIM experts.

What Is Data Mesh – White Paper

A look at the predictions and insights for the year in technology from AIM experts.

Is Data Mesh Right for Your Business?

When is Data Mesh the Right Approach for Your Organization? Pros & Cons You Should Know Before Adopting Data Mesh

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CLOUD DATA PLATFORMS

In response to the demand for cost efficiency and enhanced flexibility, clients have transitioned to cloud-based data platforms over the past 5 years. AIM Consulting empowers clients with greater visibility and cost forecasting, utilizing user-friendly solutions on cloud platforms.

DATA ARCHITECTURES

Evolving beyond traditional data lakes, data architectures now embrace flexible constructs like modern data warehouses and the innovative data mesh concept. AIM Consulting, with extensive experience in cutting-edge data architecture concepts, ensures clients stay at the forefront of these advancements.

SELF-SERVICE ANALYTICS

AIM transforms analytics for clients, moving beyond point-and-click dashboards to generative and responsive self-service solutions. By enhancing search capabilities and relevance, AIM delivers a seamless blend of analytics and AI/ML, pushing insightful information to users and minimizing their navigation efforts.

DATA GOVERNANCE

In the era of escalating data volumes, AIM emphasizes the necessity of high-quality and accurate data for effective analytics. Going beyond traditional data management, AIM implements strategies like Master Data Management, Automation, and OCM, ensuring control, reduced errors, and improved accuracy.

AUTOMATION & IoT

AIM collaborates with organizations to keep pace with market dynamics through IoT solutions and real-time analytics. By incorporating efficient business and technology process automation, AIM helps clients achieve enhanced efficiency, cost savings, and end-user satisfaction through real-time, accurate information.

10. Technical Vision – AI/ML

The AI/ML space continues to grow at an extremely rapid pace, with the underlying technology outpacing the ability for humans and organizations to understand and effectively integrate these technologies into business environments. AIM believes that this technology demonstrates a tremendous amount of potential value; however, in some cases poses unknown risks that are both identified and unidentified.

In the next two to three years, we believe organizations will be able to better leverage and integrate these solutions to be more "mainstream" and part of everyday business process and decision making.

The following are concepts and techniques AIM is helping to lead the charge for organizations to capitalize on processing data for improved business decisions:

Generative AI	Leveraging advanced algorithms to create new, synthetic data, enhancing data diversity, and supporting creative applications such as content generation, image synthesis, and more.
Recommendation Engines	Implementing sophisticated algorithms to analyze user behavior and preferences, providing personalized recommendations, and enhancing user experience across various platforms.
Predictive / Streaming Analytics	Utilizing machine learning models to analyze real-time or streaming data, enabling organizations to make proactive decisions and predictions based on the most up-to-date information available.
Anomaly Detection / Responsive IoT	Implementing AI-powered anomaly detection to identify irregular patterns or events within data streams, particularly valuable for IoT (Internet of Things) environments, enhancing responsiveness and security.
Computer Vision	Applying AI algorithms to interpret and make decisions based on visual data, enabling systems to understand and interpret images or videos, with applications ranging from facial recognition to object detection and autonomous vehicles.

11. GDPR and CCPA/CPRA Compliance

Is your organization GDPR and/or CCPA\CPRA compliant?

In the ever-evolving landscape of data privacy, the importance of compliance with regulations such as GDPR and CCPA/CPRA cannot be overstated. AIM Consulting takes proactive measures to safeguard your organization by aligning with these stringent standards.

GDPR Compliance

AIM Consulting adheres diligently to the General Data Protection Regulation (GDPR), ensuring that our practices meet the high standards set forth by this comprehensive data protection framework.

CCPA/CPRA Compliance

Recognizing the significance of data protection in the Californian landscape, AIM Consulting is fully compliant with the California Consumer Privacy Act (CCPA) and the California Privacy Rights Act (CPRA). Our commitment to privacy is not only evident in our online Privacy Policy but is also explicitly stated in our client contracts, affirming our dedication to upholding and abiding by these regulations.

Rest assured that when you choose AIM Consulting, you are partnering with a company that places the highest priority on data privacy and operates within the bounds of the most stringent global and regional data protection standards.

B. Customers and Relationships

1. Sample Customers

Our clients range from enterprise customers to start-ups and non-profits. Some portfolio examples are included below.

Key Client	Subject Matter	Work Performed
Boston Scientific	Data Modernization Agile Coaching + Organizational Change Management	AIM was pulled in to support an Enterprise SAP implementation, specifically focusing on creating data strategy for multiple data assets across the organization to move to modern architecture for accessibility by teams. AIM was leaned on to support an Enterprise SAP implementation, tasked with providing agile coaching to the organization to ensure newly formed teams were prepared in operating in an efficient/effective manner. This included 13 teams globally focused on manufacturing, finance, R&D, and more. AIM also provided organizational change coaching and guidance for new product launches in manufacturing sites to ensure seamless process for new team roles.
3M	Data Modernization	AIM architected and designed a DataMesh based solution to allow laboratory teams to quickly and easily access Data/previous experimentation across different laboratory groups. Work included Design, Build, Adoption, and Run support.
UnitedHealth Group	Data Modernization	AIM has been leaned on for strategy, process capabilities and feature delivery tied to reporting and visualization, modern data architecture, and analytics transformation efforts, to name a few.
Allina Health Systems	Application Development	AIM built and modified their critical patient scheduling portal and provided Agile coaching for Allina.org website development teams.
Triumph Higher Education Group, LLC (Escoffier School of Culinary Arts)	Digital Transformation	As a trusted partner to Escoffier School of Culinary Arts, AIM Consulting led a digital transformation program with Triumph Education to overhaul the internal operations team focused on maintaining federal accreditation, and harnessing new revenue channels through B2B opportunities. The AIM team collaborated closely with key stakeholders at Escoffier to define a vision, strategy, and are in progress to deliver a responsive custom solution based on user and market research.

2. Customer Success Stories

Company & Appendix Reference	Subject Matter	Success Story
CAPELLA UNIVERSITY **Capella University** Appendix Case Study 1	**Enhancing Web Analytics and Digital Marketing with Adobe Suite Enhancement**	A prominent American online university encountered challenges in their digital marketing transformation. AIM's intervention delivered transformative results: – *Cost Savings*: Cut data hosting costs by $80,000 annually, eliminating redundant data stores. – *Data Empowerment*: Quadrupled data utilization, fostering informed decision-making. – *Improved Confidence*: Significantly increased confidence and trust in data accuracy among analytics and marketing teams. In conclusion, AIM's Adobe Suite Upgrade not only resolved challenges but empowered the university with a cost-effective, data-driven approach to digital marketing. *See full case study in Appendix >*
PATH **Path** Appendix Case Study 2	**AIM Helps Global Nonprofit Create Data Governance and MDM Strategy to Support New Financial System**	An international nonprofit specializing in public health and health advocacy underwent a major overhaul of its financial system, it brought to light the critical lack of data integrity throughout the organization. AIM leveraged their data and analytics expertise to build the nonprofit a detailed roadmap to evolve data governance, implement a newly selected financial system, and execute the back-office data cleanup and migration strategy. Maturation in data governance capability, along with the implementation of the new financial system, will reduce overhead and allow for efficient use of the grant money. *See full case study in Appendix >*
TRIUMPH **Escoffier** SCHOOL OF CULINARY ARTS **Triumph Higher Education Group / Escoffier School of Culinary Arts** Appendix Case Study 3	**Transforming Education: Escoffier Connect OGSM Advisory**	The Auguste Escoffier School of Culinary Arts, part of the Triumph Higher Education Group, envisioned a B2B platform for partnerships with enterprise-level culinary and hospitality employers. The project holds the potential for substantial revenue growth, converging the product with the existing business of education and career services, opening up new opportunities. The platform, with AIM's strategic solution and effective implementation, transformed an idea into a tangible, impactful platform, setting the stage for future success. *See full case study in Appendix >*

Customer Success Stories, Continued

Company & Appendix Reference	Subject Matter	Success Story
Optum Appendix Case Study 4	**Architecting and Deploying an Enterprise Modern Data Architecture**	Optum, one of the largest healthcare companies in the world, struggled with maintaining the thousands of data sources they used for analytics, and the integration of hundreds more systems every year left end-users hopeless to find, combine, and leverage the data they needed. These data silos led to siloed reports with duplicate & redundant data, which often led to inaccurate decisions by the executives that relied on the reporting team for informed decision-making. AIM implemented Azure Data Factory as a data ingestion component. With nearly 100 connectors, AIM connected most sources needed to ingest all the client's data; and for any source without a native connector, there was the ability to execute custom code through Azure Functions to ingest the data. The use of Azure Data Factory also gave the ability to land the data in Azure Storage, creating a consolidated data lake for access organization wide. *See full case study in Appendix >*
MedInformatix Appendix Case Study 5	**FHIR API Implemented through Application Modernization**	MedInformatix, a leading provider of award winning RIS and EHR software solutions to the healthcare industry, had requirements to meet US regulatory requirements. AIM recommended and built a serverless architecture hosted in MSFT to implement the FHIR APIs and the adoption of Agile methodology for fast feedback loops. To ensure compliance to the ONC's Cures Act Final Rule and alignment with the Health Level Seven International FHIR standards, AIM drove the requirements gathering and analysis for each API the company EHR had to support. AIM then designed, developed and validated the underlying APIs. *See full case study in Appendix >*
BILL & MELINDA GATES *foundation* **Bill & Melinda Gates Foundation** Appendix Case Study 6	**CRM Strategy and Implementation for Large Charitable Organization**	Despite investing in a CRM solution from a global management consulting company, the organization faced inefficiencies. Six months post-launch, only a few users actively utilized the tool, resulting in scattered information storage and operational inefficiencies. AIM proposed a strategic migration of information for six internal teams to Microsoft Dynamics CRM Online. A key feature of the original tool was transformed by AIM into a more robust Software as a Service (SaaS) solution, and AIM's intervention not only addressed the initial challenge but also provided a transformative solution that became an integral part of the organization's daily operations. *See full case study in Appendix >*

C. Engagement Approach

1. Our Approach

In approaching the engagement outlined in the RFP from Client, AIM Consulting would adopt a comprehensive and strategic methodology to ensure the successful execution of the project. Our approach encompasses several key phases:

Discovery and Planning: Our initial phase involves in-depth discovery sessions to understand the unique requirements, goals, and challenges of Client. This includes engaging with stakeholders to gather insights into the current data landscape, business processes, and desired outcomes. We would conduct a thorough assessment to identify data sources, governance needs, and migration requirements.

Architecture Design and Provisioning: Drawing upon the insights gathered during the discovery phase, our team would design a scalable and modern data architecture (MDA) framework tailored to Client's specific needs. This involves creating a detailed plan for infrastructure provisioning, including considerations for Azure integration, data zones, and layers. Emphasis will be placed on ensuring secure and efficient data provisioning.

Data Migration and Integration: AIM Consulting would orchestrate the migration of data from identified sources, including Our approach includes configuring self-hosted integration runtimes, developing delta and full load pipelines, and managing the overall table development process.

Data Governance and Security: A critical component of our approach is the establishment of robust data governance practices. This involves conducting a thorough data governance discovery, assessment, and strategy development. We would design and implement a data catalog, security measures, and access controls to ensure compliance and reliability.

Business Intelligence and Reporting: AIM Consulting's approach includes the development of dashboards and reports to meet Client's specific needs. This involves building wireframes in collaboration with business stakeholders, followed by the iterative creation of dashboards for end-users and Executive reporting.

Machine Learning MVP: We would embark on a machine learning journey, focusing initially on the Student Journey. This includes engaging our data scientists to discover, collect, model, and develop algorithms for insightful predictions and decision-making.

Continuous Improvement and Empowerment: Throughout the engagement, AIM Consulting is committed to continuous improvement. We would provide training and empowerment sessions, ensuring that operational runbooks and playbooks are in place. Furthermore, we would evaluate the potential for Azure Data Engineering Architecture beyond the initial scope.

Deliverables: Our approach aims to deliver tangible outcomes, including the design and provisioning of a scalable MDA, development of data dashboards, successful data migration, and the implementation of robust data governance. The result is a modern, efficient, and empowered data ecosystem aligned with Client's strategic objectives.

2. Discovery Process

AIM Consulting's discovery process is designed to be thorough, collaborative, and focused on understanding the unique needs of Client and its diverse stakeholders, including internal staff, corporate sponsors, researchers, and students. Our approach to discovery involves the following key elements:

Stakeholder Engagement: We initiate the discovery process by actively engaging with key stakeholders from Client. This includes one-on-one interviews, group sessions, and workshops to gather insights into their respective roles, responsibilities, and expectations from the data solution. By involving a cross-section of stakeholders, we ensure a holistic understanding of requirements.

Needs Assessment: Our team conducts a comprehensive needs assessment, delving into the specific challenges and objectives faced by each stakeholder group. We explore pain points, desired outcomes, and any existing processes that need improvement. This assessment guides our understanding of data sources, governance requirements, reporting needs, and potential areas for machine learning applications.

Current State Analysis: Understanding the existing data landscape is crucial. AIM Consulting conducts a thorough analysis of Client's current data infrastructure, including data sources, formats, storage, and accessibility. This analysis informs decisions related to data migration, architecture design, and integration strategies.

Requirements Gathering: Our discovery process includes a detailed requirements-gathering phase. This involves collaboratively defining the functional and non-functional requirements for the data solution. We prioritize these requirements based on stakeholder input, ensuring that our solution aligns with the organization's strategic goals.

Wireframing and Prototyping: To ensure clarity and alignment with stakeholder expectations, we employ wireframing and prototyping techniques. This involves creating visual representations of data dashboards and reports, allowing stakeholders to provide feedback early in the process. This iterative approach ensures that the final solution meets the visual and functional expectations of users.

Data Governance Discovery: A critical aspect of our discovery process is the exploration of data governance requirements. We work closely with stakeholders to define data ownership, access controls, and security measures. This includes understanding PII considerations and incorporating them into the overall data governance strategy.

Continuous Feedback Loop: Throughout the discovery process, we maintain a continuous feedback loop with stakeholders. Regular check-ins, progress updates, and collaborative sessions ensure that any emerging insights or changes in requirements are addressed promptly. This agile and adaptive approach enhances the likelihood of delivering a solution that truly meets the evolving needs of Client and its stakeholders.

Documentation and Validation: Our discovery process is thoroughly documented, and findings are validated with stakeholders at key milestones. This ensures that our understanding is accurate, and any

adjustments are made in real-time. Documentation serves as a valuable reference throughout the engagement.

Alignment with Strategic Objectives: Ultimately, our discovery process is aligned with Client's strategic objectives. By understanding the goals and expectations of each stakeholder group, we ensure that the proposed solution contributes to the organization's broader mission and enhances the overall impact of their initiatives.

3. Expectations

To facilitate a successful engagement, AIM Consulting has certain expectations regarding the availability and involvement of Client staff, encompassing both Business and IT stakeholders. Our collaborative approach relies on active participation and engagement to ensure that the project progresses efficiently and aligns with Client's goals. Here are the key expectations:

Business Stakeholder Availability:

1. *Subject Matter Expertise (SME) Engagement:*
   - We expect designated SMEs from Client's business teams to be available for scheduled interviews, workshops, and requirements gathering sessions.
   - These SMEs should have a comprehensive understanding of their respective domains, processes, and desired outcomes from the data solution.
2. *Feedback and Validation:*
   - Timely feedback on project deliverables, including wireframes, prototypes, and documentation, is crucial for maintaining alignment with business requirements.
   - Validation of data visualizations, reports, and dashboards will be sought to ensure they accurately represent the information that stakeholders need.
3. *Requirement Clarification:*
   - Availability for periodic meetings to clarify requirements, address questions, and provide additional context as needed.
   - Willingness to participate in agile and iterative feedback loops to refine and validate evolving project components.

IT Stakeholder Availability:

1. *Technical Collaboration:*
   - Collaboration with Client's IT teams is essential for understanding existing infrastructure, security protocols, and technical constraints.
   - Regular engagement to discuss architecture design, data migration strategies, and infrastructure provisioning is expected.
2. *Security and Data Governance Consultation:*
   - In-depth discussions on security requirements, data governance policies, and access controls will require the involvement of IT security experts.
   - Collaboration for defining and implementing security measures aligned with organizational policies and industry best practices.

3. *Data Source Insights:*
    - Collaboration with IT staff to gain insights into the intricacies of existing data sources, formats, and any specific considerations for data migration and integration.
    - Active participation in discussions regarding data quality, reliability, and any potential challenges related to data extraction and transformation.

Overall Project Involvement:

1. *Steering Committee Representation:*
    - Client is encouraged to designate representatives for a project steering committee that meets at key project milestones.
    - Steering committee members will play a pivotal role in decision-making and ensuring project alignment with organizational goals.
2. *Regular Check-ins:*
    - Scheduled regular check-ins with AIM Consulting to discuss project progress, address concerns, and align on priorities.
    - Ad-hoc meetings as needed to discuss emerging requirements or changes in project scope.
3. *Adaptive Collaboration:*
    - Flexibility and adaptability in collaborating with AIM Consulting's project team, accommodating potential changes in project timelines or requirements.
    - Open communication channels to address any issues or challenges promptly.

By adhering to these expectations, we aim to foster a collaborative and communicative partnership that maximizes the value delivered by the project and ensures the success of Client's data solution implementation.

4. Program Maintenance

As part of our commitment to empowering Client to independently operate and maintain the data platform at the conclusion of the engagement, AIM Consulting employs a comprehensive knowledge transfer and training approach. Our strategy is designed to ensure that Client's teams, both in business and IT, possess the requisite skills and understanding for ongoing program maintenance. The key components of our knowledge transfer plan include:

1. **Documentation and Operational Runbook:**
   - We will compile detailed documentation covering every aspect of the data platform, including architecture, data models, infrastructure setup, security protocols, and data governance policies.
   - An Operational Runbook will be created, providing step-by-step instructions for routine tasks, troubleshooting, and common operational procedures.

2. **Training Workshops and Sessions:**
   - Customized training workshops will be conducted for Client's teams, tailored to their specific roles and responsibilities.
   - Workshops will cover platform administration, data governance practices, report creation, and any other relevant topics identified during the engagement.

3. **Hands-On Sessions:**
   - Practical, hands-on sessions will be organized to familiarize Client's IT staff with the day-to-day management of the data platform.
   - These sessions will include tasks such as data source connection management, security administration, and monitoring.

4. **Knowledge Transfer Meetings:**
   - Regular knowledge transfer meetings will be scheduled to address any questions, concerns, or additional training needs identified by Client's teams.
   - These meetings will facilitate an ongoing dialogue, ensuring that the transfer of knowledge is a dynamic and responsive process.

5. **Scenario-Based Training:**
   - Training will include scenario-based exercises to simulate real-world situations and provide practical experience in handling various aspects of the data platform.
   - This approach enhances the teams' problem-solving abilities and prepares them for potential challenges.

6. **Post-Implementation Support:**
   - At AIM Consulting, our primary focus is on tailored consulting during implementation. However, upon request, we offer responsive, customized managed services for post-implementation support, ensuring clients achieve sustained success.

7. **Transition Plan:**
   - A comprehensive transition plan will be collaboratively developed to outline the steps, timelines, and responsibilities for the transfer of operational control to Client.
   - This plan will be regularly reviewed and adjusted as needed based on the evolving readiness of Client's teams.

By combining these elements, AIM Consulting ensures that Client's staff will be well-equipped to operate and maintain the data platform autonomously. Our goal is to foster self-sufficiency, allowing Client to leverage the full potential of the implemented solution and adapt it to evolving needs.

II. Solutions

A. General

1. Achieving Your Goals

AIM Consulting's solution is intricately designed to empower Client in achieving its mission, vision, and aspirational goals by revolutionizing its data infrastructure and analytics capabilities. The key components of our solution that directly contribute to Client's overarching objectives include:

1. **Scalable Modern Data Architecture (MDA):**
   - Our solution proposes the design and implementation of a Scalable Modern Data Architecture (MDA) that ensures flexibility, scalability, and efficiency in handling Client's diverse data sources.

2. **Data Governance and Security:**
   - The establishment of robust data governance practices and security protocols ensures the integrity, confidentiality, and availability of Client's data.
   - Data governance features, including a well-defined data catalog, facilitate compliance with regulations and standards.

3. **Efficient Data Migration:**
   - The migration of data from various sources, such as Cornerstone, Hub, BAT, MS Dynamics, and others, to the new MDA ensures a consolidated and centralized repository.
   - This migration enhances data accessibility, accuracy, and the overall efficiency of data-driven processes.

4. **BI Reporting and Analytics:**
   - The implementation of advanced Business Intelligence (BI) reporting tools, such as Power BI, enables Client to derive meaningful insights from its data.
   - Dashboards and reports provide real-time visibility into student journeys, program performance, donor/funder engagement, and executive-level reporting.

5. **Machine Learning for Student Journey Optimization:**
   - The incorporation of machine learning models, specifically focused on optimizing the student journey, enhances Client's ability to personalize and improve support services for students.
   - Predictive analytics contributes to proactive decision-making, identifying trends and patterns that impact student success.

6. **Operational Efficiency and Automation:**
   - Automation of infrastructure provisioning, data ingestion, and data cleansing processes enhances operational efficiency.
   - The implementation of Continuous Integration/Continuous Deployment (CI/CD) pipelines streamlines development and deployment workflows.

7. **Data-Driven Decision-Making:**
   - Client gains the capability to make informed, data-driven decisions through comprehensive data models and analytics.
   - Dashboards and reports cater to different stakeholders, supporting internal staff, corporate sponsors, researchers, and students in accessing relevant information.

8. **Knowledge Transfer and Training:**
   - Our solution includes a robust knowledge transfer plan to equip Client's teams with the skills and knowledge needed to independently operate and maintain the data platform.

9. **Flexibility for Future Growth:**
   - The architecture is designed with scalability in mind, accommodating future growth and evolving data requirements seamlessly.

By aligning our solution with Client's mission to mobilize support for students, our approach directly contributes to creating a data-centric environment that fosters innovation, efficiency, and strategic decision-making. The solution not only addresses current challenges but lays the foundation for Client to adapt to future opportunities and challenges in the ever-evolving education landscape.

2. Meeting Your Requirements

We've structured our approach to comprehensively address each of the eight workstreams outlined in the initiative:

1. **Discovery Process:**
   - *Stakeholder Interviews*: Conduct individual and group interviews with key stakeholders from Client, including representatives from Business, IT, and other relevant departments. Capture their specific data needs, pain points, and expectations.

   - *Workshops and Facilitation*: Facilitate workshops to encourage active participation and gather insights into critical processes and data dependencies. Use collaborative tools and techniques for effective brainstorming and idea generation.

   - *Document Analysis*: Review existing documentation, including system architecture diagrams, data dictionaries, and process flows, to gain a comprehensive understanding of the current data landscape.

   - *System Analysis*: Perform an in-depth analysis of existing systems such as Cornerstone, Hub, BAT, and MS Dynamics. Identify integration points, data flow, and potential areas for improvement.

2. **Oversight and Delivery Assurance:**
   - *Governance Structure*: Establish a governance framework that includes steering committees and regular project status meetings. Develop key performance indicators (KPIs) to measure project success and adherence to timelines.

- *Risk Management*: Identify potential risks and develop mitigation strategies. Regularly update risk registers and conduct proactive risk assessments to ensure timely issue resolution.

3. **Data Governance & Management:**

- *Framework Development*: Collaborate with Client to develop a tailored data governance framework. Define data governance policies, procedures, and guidelines.

- *Data Stewardship*: Assign data stewardship roles to responsible individuals within Client. Clearly outline their responsibilities in terms of data quality, data ownership, and metadata management.

- *Catalog and Metadata*: Implement a data catalog and metadata repository to document and manage Client's data assets. Ensure that metadata includes relevant information such as data lineage, data definitions, and data classifications.

4. **Architecture Framework and Platform Implementation:**

- *Requirements Gathering*: Collaborate closely with Client to gather detailed requirements for the new data platform. Ensure alignment with Client's long-term goals and scalability requirements.

- *Scalable Modern Data Architecture*: Design a scalable Modern Data Architecture (MDA) that leverages cloud services such as Azure. Pay special attention to factors like data security, compliance, and interoperability.

- *Best Practices Adherence*: Ensure that the architecture framework adheres to industry best practices, standards, and regulatory requirements.

5. **Data Ingestion and Transformation:**

- *Source System Analysis*: Conduct a thorough analysis of data sources, including formats, structures, and update frequencies. Identify potential challenges and opportunities for optimization.

- *ETL Process Implementation*: Develop and implement Extract, Transform, Load (ETL) processes tailored to Client's data. Include data validation and error-handling mechanisms to ensure data integrity.

- *Data Quality Enhancement*: Implement data profiling and cleansing routines to enhance data quality. Establish data quality metrics and regularly monitor and report on data quality levels.

6. **Infrastructure:**

- *Scalable Infrastructure Design*: Define and implement a scalable and secure infrastructure that aligns with Client's data storage, processing, and accessibility requirements.

- *Infrastructure-as-Code (IaC):* Utilize Infrastructure-as-Code principles for efficient provisioning and management. Implement version control and automated deployment processes for infrastructure changes.

- *Backup and Disaster Recovery*: Develop and implement robust backup and disaster recovery mechanisms to safeguard Client's data. Regularly test and update recovery procedures to ensure their effectiveness.

7. **Report Migration & BI Modernization:**

- *Report Migration Strategy*: Develop a comprehensive strategy for migrating existing reports to modern BI tools. Prioritize reports based on business criticality and user requirements.

- *User Training*: Develop and deliver training programs to end-users to ensure a smooth transition to the new reporting environment. Provide ongoing support and documentation to address user queries and feedback.

8. **Machine Learning MVP:**

- *Use Case Definition*: Collaborate with Client to define a specific use case for the Machine Learning Minimum Viable Product (MVP). Identify a business problem or opportunity that can be addressed through machine learning.

- *Algorithm Selection*: Select machine learning algorithms and models that are relevant to the defined use case. Consider factors such as data availability, model interpretability, and scalability.

- *Continuous Improvement*: Implement feedback loops to continuously improve the accuracy and relevance of machine learning predictions. Monitor model performance, update models as needed and ensure alignment with Client's evolving needs.

Throughout these workstreams, AIM Consulting will maintain a transparent and collaborative communication approach with Client, providing regular updates, seeking feedback, and ensuring that the solution aligns seamlessly with their mission, vision, and aspirational goals.

3. Partners

AIM is technology agnostic, working with a variety of partners. Based on the analysis performed in Section B.1, our partners of focus include Microsoft Azure.

Azure

a) **Partner Details**

As we near the conclusion of 2023, we are actively collaborating with Microsoft to secure our 2024 contacts. Considering the annual updates to these details, we anticipate receiving the updated partner contact information in January 2024.

AIM is a Microsoft Solutions Partner

b) **Why Azure is Recommended**

Azure is recommended for its comprehensive suite of cloud services and strong integration capabilities. It aligns well with Client's potential use of Microsoft technologies, and its flexibility allows for seamless integration with existing systems.

c) **What Azure Should Be Used For**

Azure can be utilized for hosting, migration, and integration needs. Services such as Azure SQL Database, Azure Blob Storage, and Azure Logic Apps can contribute to data storage, processing, and workflow automation.

d) **Existing Relationship**

In our partnership with Azure, we emphasize a strategic collaboration that goes beyond being a mere reseller. We are deeply involved in service delivery, utilizing our expertise to implement and optimize Azure cloud services. This relationship positions us as more than just a conduit for products; it positions us as a trusted entity for comprehensive, client-focused service delivery leveraging the expansive capabilities of Azure.

e) **Details of Relevant Projects**

Refer to Case Study 4 in the Appendix titled "Optum: Architecting & Deploying an Enterprise Modern Data Architecture " for a comprehensive account of our collaboration. This case study highlights our effective collaboration and the development team's adept use of the Microsoft ecosystem. Specifically, we showcase our comfort with the ecosystem by strategically choosing Azure Data Factory for data ingestion. With nearly 100 connectors, we seamlessly connected to diverse data sources, using custom code through Azure Functions where native connectors were unavailable. The adoption of Azure Data Factory allowed us to establish a consolidated data lake in Azure Storage, demonstrating our expertise in implementing successful and sophisticated data architectures on the Azure platform.

4. Solution Support

1. **Post-Implementation Support:**
   - At AIM Consulting, our primary focus is on tailored consulting during implementation. However, upon request, we offer responsive, customized managed services for post-implementation support, ensuring clients achieve sustained success.

2. **Regular Health Checks:**
   - Periodic health checks throughout deployment will be conducted to assess the overall performance and stability of the implemented solution.
   - These assessments will help identify areas for optimization and ensure that the solution continues to meet Client's evolving needs.

3. **User Training and Documentation:**
   - Comprehensive training sessions will be conducted for Client staff to ensure proficiency in using and maintaining the solution.
   - Detailed documentation, including user guides and operational manuals, will be provided to serve as a valuable reference resource.

4. **Documentation Repository:**
   - A centralized repository for all project-related documentation, including design specifications, configurations, and operational manuals, will be provided for easy reference.
   - This repository will serve as a comprehensive knowledge base, facilitating efficient troubleshooting and future decision-making.

5. **Knowledge Transfer:**
   - Throughout the engagement, knowledge transfer sessions will be conducted to empower Client staff with the skills needed to manage and operate the implemented solution.
   - AIM will facilitate the transfer of expertise, promoting self-sufficiency within your team.

6. **Continuous Improvement:**
   - Regular feedback loops during development and deployment will be implemented to gather insights from Client staff.
   - Feedback will be used to identify opportunities for enhancement, ensuring continuous improvement in the solution's performance and alignment with Client's goals.

7. **Scalability:**
   - The solution will be designed to scale with the growing needs of Client.

8. **Ongoing Collaboration:**
   - A collaborative approach will be maintained, with regular check-ins and meetings to address any emerging needs or changes in requirements.
   - AIM will proactively engage with Client to stay aligned with their evolving strategic objectives.

9. **Remote and On-Site Support:**
   - Both remote and on-site support options will be available, providing flexibility and responsiveness to any unique support requirements or preferences.

5. Quality Assurance

Ensuring the quality of the solution is integral to our approach. AIM Consulting employs a comprehensive set of practices and methodologies to guarantee the effectiveness, reliability, and sustainability of the implemented solution.

1. **Requirements Validation:**
   - Rigorous validation of requirements will be conducted at the outset, ensuring a clear understanding of Client's needs.
   - Stakeholder collaboration will be emphasized to validate and refine requirements throughout the project life cycle.

2. **Testing Strategy:**
   - A robust testing strategy will be implemented, encompassing unit testing, integration testing, system testing, and user acceptance testing (UAT).
   - Test cases will be meticulously designed to cover all aspects of functionality, performance, and security.

3. **Automation Testing:**
   - Where applicable, automation testing tools will be employed to streamline repetitive and critical testing processes.
   - Automated tests will be regularly executed to identify and address potential issues proactively.

4. **Code Reviews:**
   - Regular and thorough code reviews will be conducted by our experienced development team.
   - This process ensures adherence to best practices, identifies potential code vulnerabilities, and promotes knowledge sharing within the team.

5. **Performance Testing:**
   - Performance testing will be conducted to assess the solution's responsiveness, scalability, and stability under varying workloads.
   - This includes stress testing, load testing, and capacity planning to guarantee optimal performance.

6. **Security Measures:**
   - Stringent security measures will be implemented, including encryption protocols, access controls, and vulnerability assessments.
   - Regular security audits will be performed to identify and address potential threats promptly.

7. **User Acceptance Testing (UAT):**
   - User acceptance testing will involve collaboration with Client stakeholders to ensure the solution aligns with their expectations and needs.
   - Feedback from UAT will be incorporated to refine the solution and enhance user satisfaction.

8. **Monitoring and Analytics:**
   - Continuous monitoring and analytics will be established to track system performance, user behavior, and potential issues.

- This proactive approach allows for swift identification and resolution of issues before they impact the user experience.

9. **Documentation Compliance:**
   - The solution will adhere to comprehensive documentation standards, ensuring that all aspects of the system are well-documented.
   - This documentation facilitates knowledge transfer, troubleshooting, and future system maintenance.

10. **Continuous Improvement:**
    - Regular retrospectives and feedback loops will be implemented to gather insights from the development and user communities.
    - Lessons learned will be applied to continuously improve the solution's quality and address evolving requirements.

By incorporating these quality assurance measures, AIM Consulting aims to deliver a solution that not only meets Client's immediate needs but also provides a robust foundation for future growth and adaptability.

6. Security Frameworks

In terms of security frameworks, we are well-versed in supporting and recommending several industry-leading frameworks and guidelines to ensure a robust and compliant security posture. Some key frameworks we commonly incorporate include:

1. **NIST (National Institute of Standards and Technology):**
   - Utilizing NIST standards provides a comprehensive and widely recognized foundation for information security. We align our security practices with NIST guidelines to ensure a systematic and effective approach to managing cybersecurity risk.

2. **ISO (International Organization for Standardization):**
   - ISO standards offer a globally recognized framework for establishing, implementing, maintaining, and continually improving an Information Security Management System (ISMS). Our adherence to ISO standards enhances the security and resilience of Client's information assets.

3. **California Privacy Act:**
   - Complying with the California Consumer Privacy Act (CCPA) is crucial for organizations handling personal information of California residents. We integrate CCPA principles into our security framework to protect individuals' privacy rights.

4. **FERPA (Family Educational Rights and Privacy Act):**
   - As FERPA governs the privacy of student education records, we ensure that our security measures align with FERPA requirements. This includes robust controls over access to student data, data encryption, and other safeguards.

In addition to these frameworks, we implement security measures that align with the principles of Zero Trust, Risk-Based Identity Scoring, Role-Based Access Control (RBAC), and Data Access Control. For Identity and Access Management (IAM), our architecture leverages the inherent security features of Microsoft 365, ensuring that access is strictly controlled based on roles and responsibilities.

Moreover, we tailor our security approach to align with specific compliance goals, such as FedRamp, GDPR, and FERPA. We utilize relevant validation schemas to demonstrate compliance, and we work closely with Client to identify their specific needs and attributes, incorporating controls that address regulatory and compliance requirements.

Our approach to sharing information is customizable, ranging from internal-only access to external access with appropriate Non-Disclosure Agreements (NDAs). We work diligently to identify and implement controls that match the compliance goals of Client, whether for internal purposes, with internal and external parties under NDA, or for external stakeholders. This tailored approach ensures that security measures are aligned with the scope and nature of information sharing, providing a secure and compliant foundation for Client's data management.

B. Architecture

1. Solution Architecture

*Please describe the overall approach that you would utilize in this engagement.*

To strategically align our Solution Architecture with the optimal cloud platform, our approach commenced with a meticulous ranking of diverse components across, Azure based on their relevant capabilities. This comprehensive evaluation spanned crucial domains such as Services Cost, Scalability, Ease of Use, Analytics/Reporting, Integration Capability, Security, Maintenance, Skills Required, AI/ML Capabilities, and Governance. After discerning the top two contenders from this rigorous assessment, we proceeded to create proposed architecture diagrams tailored to the specific strengths and features of these selected platforms. This methodology ensures that our Solution Architecture is not only well-informed by the unique attributes of each cloud provider but is also strategically designed to harness the full potential of the chosen platforms, fostering optimal performance, scalability, and alignment with our project requirements.

Azure Proposed Architecture:

In constructing our Solution Architecture, AIM Consulting strategically chose Azure, with a primary focus on harnessing the vast capabilities of the cloud platform. Our approach centers on implementing a Modern Data Architecture, leveraging Azure's comprehensive suite of services for optimal performance and scalability. This architecture incorporates multiple data layers and zones, each serving a specific purpose in the data lifecycle.

At the core of this Modern Data Architecture is the Data Lake, providing a centralized repository for raw and curated data. This scalable and cost-effective storage solution facilitates seamless data exploration and analysis. Complementing the Data Lake are dedicated zones, including the Raw Data Zone for ingesting and storing unprocessed data, the Curated Data Zone for refined and transformed datasets, and the Analytics Zone for data processing and exploration. Azure's managed services, such

as Azure Synapse Analytics and Azure Data Factory, play integral roles in orchestrating data workflows, ensuring efficient data movement, transformation, and analytics. Additionally, our solution harnesses the power of Azure Machine Learning for advanced analytics, empowering Client to derive meaningful insights from their data. This Modern Data Architecture is designed to meet the diverse needs of Client, providing a scalable, secure, and future-proof foundation for their data-driven initiatives.
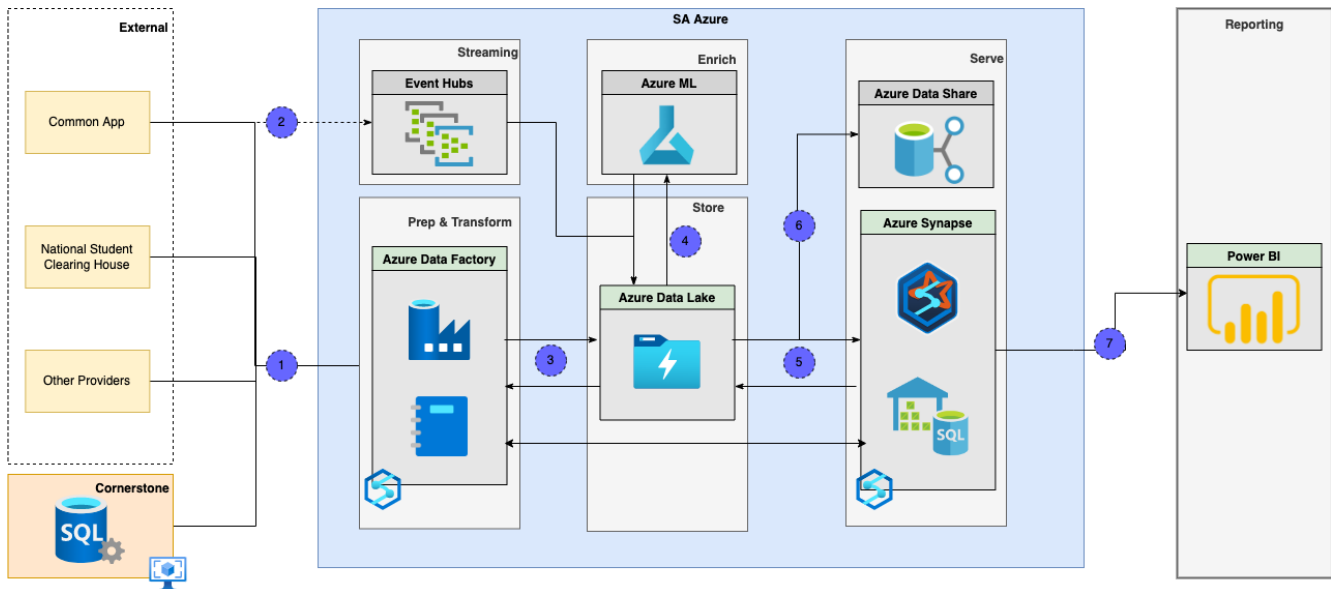
1. Data is ingested from internal & external sources via Azure Data Factory and stored in Azure Data Lake.
2. Streaming & real time sources are ingested via Azure Event Hubs into Azure Data Lake Storage.
3. Azure Data Factory performs data cleansing and transformations to move data through the zones (raw, stage, final) and prepare data for consumption. Azure Data Factory can execute Synapse Spark Notebooks for more flexible transformations.
4. Prep, train, and deploy data science models in Azure ML by referencing data in the Data Lake.
5. Serve fully modeled data through dedicated SQL pools on relational tables. Data Lake tables can be integrated with the existing data model through Spark pools.
6. Azure Data Share controls external accounts that have access to your Data Lake.
7. Power BI is the enterprise reporting tool. Data is presented through reports & dashboards developed and shared with the organization. Users can explore data from the lake data in their workspace.

Why Azure as the First Choice:

Azure was chosen as the preferred cloud provider based on a comprehensive evaluation across various key performance indicators. Azure demonstrated strong capabilities and emerged with a total score of 30, outperforming other cloud providers. This decision was influenced by Azure's familiarity with Client's existing application, providing a valuable advantage. The nuanced strengths of Azure, particularly in areas such as scalability, security, and governance, aligned more closely with the specific

needs of this project. The decision-making process considered factors such as cost, ease of use, scalability, security, AI and machine learning capabilities, integration, maintenance, required skills, and governance. The total score reflects Azure's robust performance across these critical domains, making it the preferred choice for the proposed solution.

2. Solution Platforms

Our solution is designed to run on cloud-based platforms, specifically leveraging the capabilities of Microsoft Azure. Azure provides a comprehensive set of services and resources to host, manage, and scale the solution efficiently. The absence of physical hardware allows for increased flexibility, scalability, and ease of management.

Azure Solution Platforms:

1. **Azure Data Factory:** Azure Data Factory, our ETL service on the Azure platform, orchestrates complex data workflows. Its flexibility ensures adaptability to evolving integration requirements, enhancing Client's data processing capabilities.

2. **Event Hubs:** Event Hubs, a fully managed event streaming platform, facilitates the ingestion of significant event data. This ensures real-time analytics, enabling Client to stay responsive to evolving data streams.

3. **Azure Data Lake:** Azure Data Lake, our repository for big data analytics, provides secure and scalable storage. This ensures efficient management and analysis of large datasets, supporting Client's data-driven initiatives.

4. **Azure ML (Machine Learning):** Azure ML enhances our machine learning capabilities, offering a comprehensive suite for model development, training, and deployment. This empowers Client to integrate advanced analytics into their data strategies.

5. **Azure Synapse:** Azure Synapse, our integrated analytics service, unifies big data and data warehousing. This seamless integration ensures agile and efficient data analysis, supporting Client's objectives.

6. **Azure Data Share:** Azure Data Share facilitates secure data collaboration across organizational boundaries. This supports Client's collaborative data approach, ensuring efficient and controlled information sharing.

7. **Power BI:** Power BI remains our preferred business intelligence tool on Azure, ensuring consistency in data visualization and interpretation. This user-friendly interface contributes to informed decision-making across Client.

By intricately integrating these tools and services into our Solution Architecture, AIM Consulting ensures a robust, scalable, and efficient infrastructure aligned precisely with Client's objectives for their comprehensive data platform initiative.

3. Network Requirements

Our Solution Architecture is designed with meticulous attention to network requirements, ensuring a robust and secure foundation for Client's data platform. The network architecture encompasses Azure environments, fostering seamless communication and data flow. The necessity of these components depends on the specific requirements and preferences of Client's infrastructure and operations. Below are the key components and considerations related to network requirements:

1. **Cloud Connectivity:** Azure: Azure ExpressRoute or VPN connections are employed to establish a secure and reliable connection between on-premises infrastructure and the Azure cloud.

2. **Virtual Private Cloud (VPC) and Virtual Network (VNet):** Azure: Azure Virtual Networks (VNets) provide a similar function, facilitating segmentation and isolation of resources within the Azure cloud.

3. **Subnet Design:** In Azure, we implement a well-defined subnet design, categorizing resources based on their functionalities and access requirements. This design ensures efficient network traffic management and security.

4. **Security Groups and Network Security:** Azure: Network Security Groups (NSGs) in Azure serve a similar purpose, enabling the definition of network security policies to control traffic.

5. **Load Balancing:** Azure provides load balancing services to distribute incoming traffic across multiple servers, ensuring high availability and fault tolerance.

6. **DNS Management:** We implement robust Domain Name System (DNS) management to translate domain names into IP addresses, facilitating the seamless identification and communication of resources.

7. **Data Encryption:** Encryption protocols, both in transit and at rest, are implemented to ensure the confidentiality and integrity of data as it traverses the network and resides in storage.

8. **Monitoring and Logging:** Comprehensive monitoring and logging tools, such as Azure Monitor, are integrated to provide real-time insights into network performance, security, and potential issues.

9. **Disaster Recovery and Redundancy:** Network architecture includes provisions for disaster recovery and redundancy, with data replication and failover mechanisms implemented to ensure business continuity.

By incorporating these network requirements into our Solution Architecture, we create a resilient, secure, and high-performance environment that aligns with Client's objectives and supports the seamless operation of the proposed data platform.

4. Scalability

Our Solution Architecture is meticulously crafted to ensure scalability, allowing Client to adapt and grow in tandem with evolving demands. The necessity of these components depends on the specific requirements and preferences of Client's infrastructure and operations. The scalability of our solution is embedded across various dimensions, encompassing Azure platforms:

1. **Vertical Scaling:** The architecture supports vertical scaling by leveraging the capabilities of Azure services. For instance, compute resources can be vertically scaled up to handle increased workloads efficiently.

2. **Horizontal Scaling:** Azure offers auto-scaling features, enabling horizontal scaling by dynamically adjusting the number of instances based on demand. This ensures optimal resource utilization and responsiveness during peak periods.

3. **Elasticity of Cloud Services:** Leveraging cloud-native services like Azure Functions, our architecture enables the automatic scaling of resources based on real-time demand. This elasticity ensures cost-effectiveness and responsiveness to fluctuating workloads.

4. **Storage Scalability:** Azure Data Lake Storage provides virtually limitless storage scalability. As data volumes grow, these storage solutions seamlessly accommodate increased requirements without compromising performance.

5. **Database Scalability:** For databases, Azure offers scalable solutions such as Azure Cosmos DB. These services allow for automatic scaling of database resources to handle growing datasets and increased transactional loads.

6. **Load Balancing:** Load balancing mechanisms, implemented using Azure Load Balancer, distribute incoming traffic across multiple servers. This ensures optimal resource utilization and prevents performance bottlenecks during peak usage.

7. **Serverless Computing:** Utilizing serverless computing, such as Azure Functions, eliminates the need for managing infrastructure. This approach facilitates rapid scalability, as functions automatically scale in response to demand without manual intervention.

8. **Multi-Region Deployment:** To enhance resilience and scalability, our architecture supports multi-region deployment. This ensures that the solution remains available and performs optimally even in the face of regional outages or increased demand in specific geographic areas.

9. **Comprehensive Monitoring and Analytics:** Continuous monitoring of performance metrics and analytics, facilitated by tools like Azure Monitor, allows Client to proactively identify scalability requirements. This data-driven approach ensures timely adjustments to resources.

10. **DevOps Practices:** Incorporating DevOps practices facilitates the automation of deployment and scaling processes. Continuous integration and continuous delivery (CI/CD) pipelines ensure that updates and enhancements can be seamlessly deployed without disruption, contributing to the scalability of the solution.

By strategically integrating these scalability features into our Solution Architecture, we empower Client to navigate growth seamlessly, ensuring that the data platform can efficiently and cost-effectively scale to meet the organization's evolving needs.

5. Security

Our Solution Architecture places paramount importance on security, implementing robust measures across both Azure platforms to safeguard Client's sensitive data. The necessity of these components

depends on the specific requirements and preferences of Client's infrastructure and operations. The following key security features are integrated into the architecture:

1. **Identity and Access Management (IAM):** Leveraging Azure Active Directory (AD), our architecture enforces strict control over user access and permissions. This ensures that only authorized personnel, who have undergone rigorous security clearance, can interact with and modify sensitive data. Our extensive experience in securing Personally Identifiable Information (PII) and Protected Health Information (PHI) data underscores our commitment to safeguarding student and financial information for Client.

2. **Encryption:** Employing encryption at rest and in transit using Azure Key Vault guarantees the confidentiality and integrity of data. This extends to data stored in cloud databases, file storage, and during data transmission.

3. **Network Security:** Leveraging Azure Virtual Network, the architecture establishes secure network boundaries. Network security groups and firewalls are configured to control inbound and outbound traffic, preventing unauthorized access.

4. **Data Loss Prevention (DLP):** Implementing Azure DLP capabilities ensures that Client's sensitive data is protected against unauthorized disclosure. Policies are defined to detect and prevent the unauthorized transmission of sensitive information.

5. **Regular Security Audits:** Routine security audits and vulnerability assessments, facilitated by Azure Security Center, identify and address potential security risks. This proactive approach ensures that the architecture remains resilient to emerging threats.

6. **Compliance Management:** Adhering to industry-specific and regulatory compliance standards, such as GDPR, HIPAA, and others, our architecture ensures that Client remains in compliance with data protection and privacy regulations.

7. **Multi-Factor Authentication (MFA):** Enforcing multi-factor authentication using Azure Multi-Factor Authentication adds an additional layer of security, mitigating the risk of unauthorized access even in the event of compromised credentials.

8. **Incident Response and Logging:** Incorporating Azure Monitor, our architecture provides comprehensive logging and monitoring capabilities. This facilitates rapid incident response by tracking and analyzing security-related events.

9. **Secure APIs and Integrations:** Ensuring that APIs and integrations follow secure coding practices, our architecture mitigates the risk of vulnerabilities. OAuth and API Gateway security features are employed to secure interactions between components.

10. **Security Training and Awareness:** Ongoing security training and awareness programs are essential components of our approach. These initiatives educate Client staff about security best practices, reducing the likelihood of human-related security breaches.

11. **Regular Security Updates:** Implementing timely security updates and patches, coordinated through Azure Update Management, safeguards the architecture against known vulnerabilities, reducing the risk of exploitation.

12. Data Cleansing Protocols: Incorporating robust data cleansing protocols, our process ensures the secure and thorough removal of Client's information from our machines and storage systems at the conclusion of the project. This process follows industry best practices, guaranteeing that residual data is permanently deleted to prevent any unintended exposure or access.

By addressing security comprehensively across these dimensions, our Solution Architecture provides Client with a secure and resilient foundation for its data platform, instilling confidence in the integrity, confidentiality, and availability of critical information.

C. Deployment Approach

Please describe your approach to reach the desired goal state,

1. **Business and System Process Design:**
    *   Our business and system process design is a collaborative endeavor involving in-depth consultations with Client's key stakeholders. Through facilitated workshops and interviews, we gain a comprehensive understanding of existing processes, pain points, and desired improvements. Utilizing industry best practices and Client's specific requirements, we create detailed process maps that serve as the foundation for the new system. Our design ensures that the workflows are not only optimized for efficiency but also aligned with Client's mission and objectives.
2. **Migration and Implementation Strategy:**
    *   Our migration strategy is meticulously crafted to ensure a smooth transition without disrupting daily operations. It encompasses a phased approach:
    *   Data Migration Plan: We conduct a thorough analysis of existing data, categorizing, and prioritizing datasets for migration. A detailed plan is developed, considering data dependencies and relationships. Incremental data migration allows for continuous validation and ensures data integrity.
    *   Application Migration: The application migration strategy involves transitioning modules in a phased manner. Each module undergoes rigorous testing, including functionality, security, and integration checks, before proceeding to the next phase. This iterative approach minimizes the risk of system-wide issues.
3. **Estimated Timelines for Migrations and Implementation:**
    *   Timelines are tailored to Client's unique context:
        *   *Data Migration*: The duration depends on the volume and complexity of existing data. A detailed timeline is provided, ensuring transparency and alignment with project milestones.
        *   *Application Migration and Implementation*: Phased implementation timelines are established, with regular checkpoints for Client's feedback. This approach allows for agile adjustments and ensures that the final implementation meets expectations.

4. **Minimizing Impact to Operations:**
    - Our strategy for minimizing impact is comprehensive:
        - *Phased Rollouts*: We implement the solution in phases, allowing Client to maintain core operations while gradually adopting new features. This approach minimizes disruptions and facilitates a smoother transition.
        - *Stakeholder Engagement*: Regular communication is maintained through scheduled meetings, progress updates, and feedback sessions. Training programs are tailored to different user groups, ensuring a smooth learning curve for the new system.
        - *Testing and Validation*: Rigorous testing, including user acceptance testing (UAT), is conducted at each phase. This proactive approach identifies and addresses issues before full deployment, ensuring a reliable and stable system.
        - *Parallel Operations*: We facilitate parallel operations during the transition, ensuring that existing systems remain operational until the new solution is thoroughly validated. This dual-operation mode serves as a safety net, mitigating risks associated with unexpected challenges.
        - *Risk Mitigation Plan*: A detailed risk mitigation plan is in place, identifying potential challenges and outlining proactive measures. This includes contingency plans for rapid response to unforeseen circumstances.

By providing a detailed roadmap and consistently involving Client stakeholders, our deployment approach prioritizes a seamless transition to the desired goal state while safeguarding ongoing operations and minimizing disruptions.

Appendix

Appendix Contents

aim
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AN ADDISON GROUP COMPANY

Enhancing Web Analytics and Digital Marketing:

A Comprehensive Overhaul by AIM with Adobe Suite Enhancement

Challenge

In the face of a substantial investment in Adobe's suite of products for digital marketing, a prominent American online university encountered challenges that hindered the realization of the promised value. The analytics, marketing, and IT teams were collectively frustrated with the implementation, which led to a complex entanglement of Signal's Tag Management Solution (TMS) and key elements of the Adobe suite. Despite the investment, the university's teams were grappling with a lack of efficiency and perceived value.

Solution

An AIM analytics developer worked across the analytics, marketing and IT groups to craft a solution in five phases:

- ✓ Comprehensive audit of analytics solution and dependencies
- ✓ Complete the Signal TMS implementation
- ✓ Finalize code transfer, clean data and test
- ✓ Perform product upgrades
- ✓ Integrate Adobe Target and Adobe Analytics

After meeting these major milestones, AIM helped the analytics team further mature its web analytics by adding more data points to the solution, largely related to behavior tracking on the website.

Results

AIM's intervention delivered transformative results:

- ✓ **Cost Savings:** Cut data hosting costs by $80,000 annually, eliminating redundant data stores.
- ✓ **Data Empowerment:** Quadrupled data utilization, fostering informed decision-making.
- ✓ **Improved Confidence:** Significantly increased confidence and trust in data accuracy among analytics and marketing teams.

In conclusion, AIM's Adobe Suite Upgrade not only resolved challenges but empowered the university with a cost-effective, data-driven approach to digital marketing.

CAPELLA
UNIVERSITY

AIM Consulting Helps Global Nonprofit Create Data Governance and MDM Strategy to Support New Financial System

Challenge

When an international nonprofit specializing in public health and health advocacy underwent a major overhaul of its financial system, it recognized a critical lack of data integrity throughout the organization.

The data that comprises its back-office function was spread across hundreds of Access databases, Excel spreadsheets and various SQL data marts, and at least 12 different non-integrated systems were in use.

To alleviate the financial and legal risks related to reporting inconsistencies and to reduce internal overhead, the nonprofit knew it needed a data governance program and master data management (MDM) strategy across nearly 20 internal groups.

Solution

AIM leveraged their data and analytics expertise at Path, integrating into their operations including participating in the delivery of a data governance strategy initiative at another nonprofit.

At Path, AIM took the following steps:

1) Conducting a maturity model assessment, building the data governance organization, and laying the foundation for improved data management (information security policies and roadmap, long-term data integration strategy, and master data validation techniques).

2) Near the end of the engagement, AIM transitioned the data governance leadership to an in-house team formed by Finance and IT with data stewards committed to continuing the work on data definitions and processes.

Results

With AIM's guidance, the nonprofit has a program in place to evolve data governance.

AIM left the nonprofit with a detailed roadmap to complete the effort, implement a newly selected financial system, and execute the back-office data cleanup and migration strategy.

Maturation in data governance capability, along with the implementation of the new financial system, will reduce overhead and allow for efficient use of the grant money.

PATH

Transforming Culinary Education: Escoffier Connect OGSM Advisory

Challenge

The Auguste Escoffier School of Culinary Arts, part of the Triumph Higher Education Group (Triumph), envisioned a B2B platform for partnerships with enterprise-level culinary and hospitality employers. However, they faced challenges—limited understanding of business offerings, technology implications, and internal alignment on goals. Previous attempts had not gained traction with enterprises, and existing partnerships were one-way.

Solution

AIM's approach involved a comprehensive 12-week OGSM workshop, aimed at:

- **Scoping:** Defining the Minimum Viable Product (MVP) and establishing a roadmap.
- **Stakeholders:** Engaging key figures such as CEO, CTO), Dir Biz Dev, VP Sales, CMO, and VP Student and Career Services.
- **Kickoff:** Initiating the workshop to determine product direction, crafting both high and low-fidelity prototypes, and creating strategic blueprints.

Implementation

AIM's impact during implementation was marked by:

- **Value Proposition:** Bringing expertise in workshop facilitation, design thinking, and impactful in-person meetings to generate excitement about the tech impact.
- **Anecdotes:** Notable moments included successful workshop facilitation and design thinking sessions, emphasizing AIM's unique skills.
- **Challenges:** Faced challenges in managing a business transformation led by technology, highlighting the need for organizational alignment.

Results

- ✓ **Impact:** A working product, finalizing partnerships with six employers, although revenue from the platform is yet to materialize.
- ✓ **Wins:** Achieved organizational alignment, hired a VP of Sales, and conducted a successful pilot go-live.
- ✓ **Future Implications:** The project holds the potential for substantial revenue growth, converging the product with the existing business of education and career services, opening up new opportunities.

This case study showcases how Escoffier Connect, with AIM's strategic solution and effective implementation, transformed an idea into a tangible, impactful platform, setting the stage for future success.

Architecting and Deploying an Enterprise Modern Data Architecture

Overview

Optum, Inc. is an American healthcare services provider with business interests encompassing technology and related services, pharmacy care services and various direct healthcare services. It has been a subsidiary of UnitedHealth Group since 2011.

Being one of the largest healthcare companies in the world, the organization struggled with maintaining the thousands of data sources they used for analytics, and the integration of hundreds more systems every year left end-users hopeless to find, combine, and leverage the data they needed. These data silos led to siloed reports with duplicate & redundant data, which often led to inaccurate decisions by the executives that relied on the reporting team for informed decision-making.

Approach

AIM's solution was simple – create a consolidated Modern Data Platform to support all the client's reporting & analytics needs. AIM needed to build a solution that would support a quickly growing environment with multiple teams and rapidly changing requirements.

Snowflake – the data cloud – landed as the top pick for the data warehousing tool. With the complete decoupling of storage & compute, it offered Optum the ability to spin up & down virtual warehouses on-demand while also providing easy means to delegating access to compute resources.

Snowflake's hybrid approach to access control allowed data to be shared across teams at the row-level, offering the benefit of easily accessing otherwise siloed data, while not making any sacrifices for security.

Next, AIM faced the issue of getting the data to Snowflake and understanding the client's current state. They had various business-critical sources spanning from tabular data stores like SQL Server & flat files, to big-data platforms like Hadoop & Teradata, to one-off data references only accessible via REST API.

Given the development team's comfortability with the Microsoft ecosystem, Azure Data Factory was an easy choice for the ingestion component. With nearly 100 connectors, AIM connected most sources needed to ingest all the client's data; and for any source without a native connector, there was the ability to execute custom code through Azure Functions to ingest the data. The use of Azure Data Factory also gave the ability to land the data in Azure Storage, creating a consolidated data lake for access organization wide.

Results

☑ Created a consolidated, single source-of-truth for all Optum PHS reporting needs.

☑ Migrated over 5 TB of disparate data sources over a 6-month span.

☑ Orchestrated scheduled data loading for each data source, ensuring that data never went stale.

☑ Greatly increased time-to-value by decreasing the time to integrate new data sources.

☑ Quickly ramped up team members by selecting tools with familiar interfaces & languages.

☑ Increased maintainability by reducing administrative overhead required for the upkeep of on-premise data centers.

Optum

Section **II**

About AIM Consulting

We do things differently.

Delivery Framework was created to capture our best practices around delivery excellence and share those best practices throughout the organization. It is meant to allow us to scale with a degree of consistency but not stymie innovation and creativity.

We are rooted in *people*, *technology*, and *products* – our goal is to ensure our clients' business and delivery teams are set up for success when building products and driving technology change within their organizations.

We are leaders who drive improvement and complete business objectives for our clients, *on-time the first time.*

✔ Collaboration

Our engagement approach is highly collaborative and ensure the engagement is a true partnership. Where possible, we prioritize geographical proximity to our clients to better enable collaboration, efficiency, and strong relationships.

✔ Communication

We know that effective communication is essential to successful delivery. We emphasize continuous communication amongst team members, stakeholders, and end-users.

✔ Expertise

Deep expertise in delivery leadership, application development, and business intelligence. Knowledge & experience working in the Healthcare space.

✔ Commitment

We are committed to every clients' success and delivering value to their organization which is at the center of every engagement.

Building the future of tomorrow.

We are an award-winning industry leader in technology consulting and solutions delivery. Our collaborative engagement model provides cross-functional results and sets us apart.

We value our long-term relationships with the best technology consulting talent and deliver above expectations with modern technologies driving the *future of innovation.*

Diversity, Equity, and Inclusion

We value our differences.

We are constantly working to advance workplace culture and understand that employees increasingly desire to work for an employer who shares and aligns with their values.

Whether it is our continued work on DEI efforts, our Wellness Teams' efforts to support employee health and fitness at home and in the office, or our expanding employee resource groups to ensure our team members can feel empowered to bring their whole selves to the workplace – we are committed to creating and sustaining a company culture that makes AIM a place where employees desire to work and have a place to grow.

Employee Resource Groups (ERGs)

We aim to provide safe and supportive groups for employees with shared backgrounds or experiences to foster their professional growth and contribute to personal development at work.

Black Employee Network

Latinos for Engagement, Advancement & Development

LGBTQ+

Women of the Workplace

Holistic Asian & Pacific Islander

Parents & Caretakers

Support Without Stigma (Mental Health)

To us, fostering diversity, equity, and inclusion is personal.

Employee-Led Advisory Board

Our advisory board comprises professionals from all levels across the Addison Group family of brands who are experts in their field.

Their guidance, subject matter expertise, and passion drive our DEI efforts. The board works closely with our DEI Program Manager on organizational needs across the enterprise.

Inclusive Floading Holidays

As part of our team, employees can use floating holidays to observe days of significance or to volunteer in support of meaningful causes. We continually add floating holidays, allowing more opportunities for our employees to celebrate cultural events and support their communities.

Dedication & Investment

We invest internally over 100,000 of dedicated funding for ERG specific activities, including:

- ▽ Career Development Training
- ▽ Interactive Webinars
- ▽ Networking Activities
- ▽ Community Volunteering
- ▽ Virtual & In-Person Activities

Making an impact in our local communities.

Black Girl Hockey Club

Black Girl Hockey Club (BGHC) is a non-profit whose mission is to inspire and sustain a passion for hockey within the Black community, specifically with their mothers, sisters, daughters, and friends.

To prevent exclusion in hockey based on race, gender, sexuality, or ability in the face of institutional racism, financial gatekeeping, and program access, the Black Girl Hockey Club provides education, scholarship opportunities, and community spaces that give Black women access to hockey.

Their goal is to carve out a safe space for Black women and the people who love them to grow the game of hockey in Black communities worldwide.

Local Support in the heart of Chicago

AIM works with organizations local to the Chicago market that provide extensive technical training and certification for resources living in Chicago's underrepresented communities.

One such organization, Discovery Partners Institute, is a joint venture between the Pritzker Foundation and the University of Illinois System. This organization extensively trains and deploys technologists to firms like ours for deployment in entry-level positions across several technology domains (e.g., Coordination, Application Development, Data & Analytics).

AIM believes that by investing in Chicago's communities and individuals, we can help make a difference in people's lives and contribute significant economic impact to Illinois.

Empower Hour

Empower Hour is AIM Consulting's educational IT webinar, diversity sourcing, and networking event. Data shows that those from diverse backgrounds are more inclined to attend a virtual networking event rather than one in person.

Empower Hour allows us to reach and connect with communities outside of AIM, sharing knowledge of the IT industry, what IT consulting is and accomplishes, an introduction to AIM, our career pathways, culture/DEI efforts, and AIM leadership.

Serving Clients Nationally.

National Strength, Local *Heart.*

We deliver the benefits of working with a leading national business and technology consulting firm with the dedication to relationships and focus on our local communities we build.

AIM Consulting has offices in top tech cities across the US, ensuring our consultants are strategically positioned for national support.

Physical Offices:

Minneapolis Office
7201 Metro Blvd, Suite 600
Edina, MN 55439

Chicago Office
125 South Wacker Drive, 27th Floor
Chicago, IL 60606

Houston Office
1221 Lamar Street, Suite 1200
Houston, TX 77010

Denver Office
4600 S Syracuse Street, Suite 600
Denver, CO 80237

Seattle Office
14450 NE 29th Place, Suite 200
Seattle, WA 98007

"
AIM is unwilling to compromise on quality, we embody change, we strive for excellence in everything we do, and we celebrate each others' wins. Our people are always going to push forward, do what's right for our clients, and have a passion for the projects they execute."

Janna Fichera
Director, Delivery Leadership, *AIM Consulting*