

Magic Quadrant pour les plateformes d'analyse et de Business Intelligence

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Les responsables des données et de l'analytique doivent utiliser des plateformes d'analyse et de BI pour répondre aux besoins de l'informatique, des analystes, des consommateurs et des scientifiques des données. Bien que l'intégration avec les écosystèmes cloud et les applications métier soit une exigence clé de sélection, les acheteurs ont également besoin de plates-formes pour soutenir l'ouverture et l'interopérabilité.

Définition/description du marché

Les plates-formes d'analyse et de business intelligence (ABI) permettent aux utilisateurs techniques, y compris les gens d'affaires, de modéliser, d'analyser, d'explorer, de partager et de gérer des données, de collaborer et de partager les résultats, grâce à l'informatique et augmentée par l'intelligence artificielle (IA).

Depuis plusieurs années, le Magic Quadrant for Analytic and Business Intelligence Platforms met l'accent sur le libre-service visuel pour les utilisateurs finaux, complété par l'IA pour fournir des informations automatisées. Bien que cela reste un cas d'utilisation important, le marché des plateformes ABI devra de plus en plus se concentrer sur les besoins des consommateurs de contenu analytique et des décideurs commerciaux. Pour ce faire, les informations automatisées doivent être pertinentes dans le contexte des objectifs, des actions et du flux de travail d'un utilisateur.

De nombreuses plates-formes ajoutent des fonctionnalités permettant aux utilisateurs de composer facilement des flux de travail et des applications d'automatisation low-code ou no-code. Cette combinaison de fonctionnalités contribue à élargir la vision de l'analyse au-delà de la simple fourniture d'ensembles de données et de la présentation de tableaux de bord. Les plateformes ABI d'aujourd'hui peuvent fournir des informations contextualisées enrichies, recentrer l'attention sur les processus décisionnels et, en fin de compte, prendre des mesures qui apporteront de la valeur commerciale.

En plus de la tendance croissante à l'accent mis sur la conception grand public, nous constatons d'autres tendances clés du marché, notamment la nécessité d'améliorer la gouvernance de la création et de la diffusion de contenu analytique et la demande d'une architecture ouverte sans

tête. Par exemple, une plate-forme ABI sans affichage découplerait le magasin de métriques de la couche de présentation frontale, permettant une plus grande interopérabilité avec les produits concurrents.

La fonctionnalité de la plate-forme ABI comprend les 12 capacités critiques suivantes, qui ont été mises à jour pour refléter les domaines de l'évolution du marché, de la différenciation et de la demande des clients :

- **Insights automatisés** – Attribut essentiel de l'analyse augmentée, il s'agit de la possibilité d'appliquer des techniques d'apprentissage automatique (ML) pour générer automatiquement des informations pour les utilisateurs finaux (par exemple, en identifiant les attributs les plus importants d'un jeu de données).
- **Catalogue d'analyse** – Il s'agit de la capacité du produit à afficher du contenu analytique pour le rendre facile à trouver et à utiliser. Le catalogue est consultable et fait des recommandations aux utilisateurs.
- **Préparation des données** – La préparation des données comprend la prise en charge du glisser-déposer, la combinaison de données provenant de différentes sources axée sur l'utilisateur et la création de modèles analytiques (tels que des mesures, des ensembles, des groupes et des hiérarchies définis par l'utilisateur).
- **Connectivité des sources de données** : les fonctionnalités de connectivité des sources de données permettent aux utilisateurs de se connecter et d'ingérer des données structurées contenues dans différents types de plates-formes de stockage, à la fois sur site et dans le cloud.
- **Storytelling de données** – La narration de données est la capacité de combiner la visualisation interactive des données avec des techniques narratives pour regrouper et fournir des informations sous une forme convaincante et facile à comprendre pour la présentation aux décideurs.
- **Visualisation des données** – La visualisation des données implique la prise en charge de tableaux de bord hautement interactifs et l'exploration des données par la manipulation d'images graphiques. Vous y trouverez un éventail d'options de visualisation qui vont au-delà de celles des diagrammes circulaires, à barres et linéaires, tels que les cartes thermiques et arborescentes, les cartes géographiques, les nuages de points et d'autres visuels spéciaux.
- **Gouvernance** – Les fonctionnalités de gouvernance suivent l'utilisation et gèrent la façon dont les informations sont partagées et promues.
- **Requête en langage naturel** – La fonctionnalité de requête en langage naturel (NLQ) permet aux utilisateurs de poser des questions sur les données à l'aide de termes tapés dans une zone de recherche ou parlés.

- **Création de rapports** — La fonctionnalité de création de rapports fournit des rapports paginés parfaits au pixel près qui peuvent être planifiés et diffusés à une vaste communauté d'utilisateurs.
- **Intégration de la science des données** — Capacités qui permettent le développement et le prototypage accrus de modèles de science des données composables et d'apprentissage automatique (DSML) par les scientifiques des données citoyens et les scientifiques des données avec intégration dans l'écosystème plus large de la science des données et de l'apprentissage automatique.
- **Stockage des métriques** — La possibilité de fournir une couche virtualisée qui permet aux utilisateurs de créer et de définir des métriques sous forme de code, de gouverner ces métriques à partir d'entrepôts de données et de servir toutes les applications d'analyse, de science des données et d'entreprise en aval. Cela inclut également des fonctionnalités telles que la gestion des objectifs.
- **Collaboration** — La collaboration analytique est l'application des capacités de collaboration aux flux de travail analytiques pour les organisations qui souhaitent fournir un environnement dans lequel un large éventail d'utilisateurs peuvent coproduire simultanément un projet d'analyse.

Gartner a ajouté trois nouvelles fonctionnalités critiques dans le cadre de ses critères d'évaluation cette année : le stockage de métriques, la collaboration et l'intégration de la science des données. Ces nouvelles fonctionnalités illustrent certains des changements clés que les acheteurs attendent de leurs fournisseurs de plateformes ABI.

Les plateformes ABI ont toujours été axées sur la mesure. Pendant des décennies, le découpage en tranches et en dés des mesures en fonction de leurs attributs dimensionnels était synonyme d'acte d'effectuer de l'intelligence d'affaires. Cependant, au cours de la dernière décennie, l'accent mis sur les mesures et la mesure a été éclipsé par la visualisation des données. Lorsque la visualisation des données est devenue la capacité la plus visible, certains dirigeants d'entreprise ont commencé à confondre les plates-formes ABI avec la visualisation des données, comme si les plates-formes ABI étaient des magiciens des graphiques glorifiés. Cette idée fautive minimise une grande partie du travail effectué et de la valeur commerciale fournie par les plateformes ABI. L'établissement de magasins de métriques en tant que capacité d'exécution essentielle montre clairement que la définition et la communication des mesures de performance dans l'ensemble d'une organisation sont l'un des principaux objectifs d'une plate-forme ABI.

La collaboration analytique est une combinaison de nombreuses fonctionnalités (telles que l'intégration Slack/Teams, les cadres d'action) qui améliorent collectivement la capacité d'une organisation à prendre des décisions par consensus. L'intégration de la science des données reflète la probabilité croissante qu'un analyste métier veuille utiliser la science des données pour tester certaines hypothèses, et que les scientifiques des données devront tirer parti de fonctionnalités telles que la préparation et la visualisation des données.

En outre, Gartner change les « catalogues » en « catalogues analytiques » pour mettre l'accent sur un ensemble d'exigences qui ne sont pas satisfaites par les fournisseurs de plateformes ABI aujourd'hui. La plupart des grandes entreprises ont des milliers de rapports créés sur plusieurs plates-formes ABI, mais les consommateurs de ces organisations n'ont pas de moyen facile d'accéder à ces rapports. Le changement de nom en catalogues analytiques reflète la nécessité pour les fournisseurs de plate-forme ABI de fournir un contenu analytique en pensant au consommateur.

Trois capacités critiques ont été retirées de nos critères d'évaluation : la sécurité, la génération de langage naturel (NLG; intégrée à la narration de données) et l'analyse cloud (qui ne sera plus considérée comme une capacité de plate-forme, mais plutôt comme une stratégie de commercialisation couverte dans le Magic Quadrant). Et l'un des sous-critères de sécurité, concernant la granularité de l'autorisation (par exemple, la sécurité basée sur les lignes) a été déplacé vers la capacité de reporting de l'entreprise.

Magic Quadrant

Figure 1 : Magic Quadrant pour les plateformes d'analyse et de Business Intelligence



Forces et mises en garde des fournisseurs

Alibaba Cloud

Alibaba Cloud est un challenger dans ce Magic Quadrant. Elle est principalement en concurrence sur le marché de l'Asie/Pacifique (APAC). Alibaba Cloud est le plus grand fournisseur de plateforme de cloud public de la région. Son produit, Quick BI, offre la préparation des données, la découverte visuelle des données, les tableaux de bord interactifs et les rapports. La plateforme est disponible en tant qu'option SaaS fonctionnant sur l'infrastructure d'Alibaba Cloud. Quick BI offre également une option sur site sur Apsara Stack Enterprise Edition et des options d'analyse intégrées avec Alibaba Business Advisor et Alibaba DingTalk.

Quick BI a étendu sa feuille de route cloud d'Alibaba Cloud à la prise en charge de plusieurs clouds compatibles avec Tencent Cloud, Microsoft Azure et Huawei Cloud. Alibaba développe également son réseau de partenariats régionaux. Enfin, en 2022, Quick BI a fait de DingTalk l'un de ses principaux canaux de vente.

Forces

- **Analyse et collaboration axées sur l'espace de travail numérique** : Quick BI est bien intégré à diverses applications de lieu de travail numérique telles que Alibaba DingTalk, Tencent WeCom et Lark, qui ont été massivement adoptées en Chine. Avec un déploiement simple, les utilisateurs peuvent accéder rapidement aux fonctionnalités d'analyse Quick BI.
- **Analyse composable** : Quick BI peut être lancé en tant qu'outil autonome. Mais il est bien connu dans le cadre du portefeuille Alibaba LYDaaS (initialement connu sous le nom de Data Middle Office d'Alibaba Cloud), qui offre des capacités modulaires et réutilisables de données et d'analyse (D & A) et ferme la boucle des tâches analytiques. Il peut également être intégré dans des solutions SaaS basées sur des scénarios fournies par des partenaires pour certains cas d'utilisation et industries.
- **Programme de littératie des données** : Alibaba favorise la réussite des clients en lançant des programmes visant à améliorer les compétences de ses utilisateurs en matière de littératie des données, de formation basée sur les tâches et de certifications de subventions. Le programme est associé à des incitations qui fournissent des coupons pour compenser le coût de la licence et les crédits de magasin pour la boutique de commerce électronique d'Alibaba Cloud .

Précautions

- **Objectif d'investissement** : Bien qu'Alibaba Cloud soit une grande taille globale de l'entreprise, Quick BI n'est pas un objectif stratégique par rapport aux gammes de produits SGBD et IA du fournisseur. Quick BI R&D compte environ 100 employés, ce qui est nettement inférieur à l'effectif des autres plateformes ABI des grands hyperscalers.
- **Environnement complexe**: Quick BI opère principalement dans la région Asie/Pacifique. En plus de concurrencer les fournisseurs mondiaux, Quick BI est également en concurrence avec

d'autres fournisseurs bien connus basés en Chine, tels que FanRuan, Yonghong, SmartBI et Guandata.

- **Présence géographique et ralentissement de la dynamique du marché** : Alibaba Cloud se concentre sur le marché chinois, avec une base installée minimale ailleurs. En tant qu'offre SaaS, Quick BI a souvent été intégré à la solution intégrée LYDaaS (Data Middle Office) du fournisseur. Son adoption est limitée en dehors de l'écosystème Alibaba.

Amazon Web Services

Amazon Web Services (AWS) est un challenger dans ce Magic Quadrant. Son Amazon QuickSight est largement vendu dans l'écosystème client AWS. De nombreux utilisateurs sont des développeurs d'analyses qui effectuent la création basée sur le code de rapports paginés gérés de manière centralisée. Les API et les kits de développement logiciel (SDK) matures de QuickSight servent des cas d'utilisation d'analyse intégrée, y compris pour les fournisseurs de logiciels indépendants. Ses opérations sont géographiquement diversifiées et son édition Enterprise sert des clients de toutes tailles et de tous secteurs verticaux. Les clients citent la force de l'intégration avec la pile de données et d'analyse AWS, l'évolutivité, les performances et un modèle de tarification compétitif comme principales raisons de l'adoption.

En 2022, AWS a étendu ses investissements dans le service de BI cloud sans serveur, attirant des consommateurs augmentés avec des histoires de données et des informations automatisées. Cela s'appuie sur son lancement en 2021 de QuickSight Q, sa capacité de requête en langage naturel alimentée par ML.

Forces

- **Tarification compétitive** : Amazon QuickSight offre une flexibilité tarifaire pour aider les clients à éviter le surprovisionnement. Son modèle de paiement à l'utilisation s'applique lorsque les utilisateurs accèdent à des tableaux de bord ou des rapports. À 30 cents par session de 30 minutes, maximum 5 \$ par utilisateur et par mois, ou 10 \$ avec Q activé, il offre un prix abordable. Son architecture cloud sans serveur peut faire évoluer des déploiements à forte simultanéité en fonction de l'utilisation, plutôt que des ressources fixes, minimisant ainsi l'infrastructure onéreuse et la planification et la gestion des capacités.
- **Service cloud mondial intégré** : AWS est l'un des plus grands fournisseurs de services cloud (CSP) au monde en termes de chiffre d'affaires et d'empreinte mondiale. Faire partie de la pile AWS D&A est une force majeure pour les clients QuickSight. De nombreux architectes d'entreprise investissent dans des piles CSP et privilégient l'intégration cloud (par exemple, Amazon Redshift, Athena, Elastic MapReduce) plutôt que la différenciation concurrentielle des fonctionnalités analytiques.
- **L'architecture sans serveur permet une évolutivité** : QuickSight offre une évolutivité des volumes d'utilisateurs et une simultanéité pour les cas d'utilisation analytiques complexes, sans que les clients aient à se démener pour ajouter des serveurs ou une infrastructure supplémentaires. La nature élastique de cette architecture cloud native sans serveur aide les clients QuickSight lors d'une demande saisonnière et irrégulière à allouer et à payer uniquement la bonne capacité, afin de garantir la réactivité pendant les heures de pointe.

Précautions

- **Accent limité sur les capacités critiques émergentes** : QuickSight a une capacité de catalogue analytique plus faible que ses pairs dans cette recherche. Il est également à la traîne dans certains domaines où des perturbations du marché se produisent, comme en témoignent deux des nouvelles capacités critiques de Gartner en matière de magasins de métriques (indépendants des ensembles de données) et de collaboration.
- **Commentaires sur l'expérience client** : les examinateurs de Gartner Peer Insight signalent trois domaines d'amélioration potentielle pour l'expérience client globale de QuickSight : une communauté naissante d'utilisateurs pairs, une disponibilité limitée de la formation des utilisateurs finaux et un éventail limité d'intégrateurs et de fournisseurs de services tiers régionaux (à l'exclusion des propres équipes ProServe d'AWS).
- **Manque d'écosystème d'applications métier** : AWS ne dispose pas d'un écosystème d'applications métier propriétaires pour les acheteurs et les utilisateurs finaux d'Amazon QuickSight. De même, ses offres de productivité personnelle et de collaboration récemment publiées (Amazon WorkDocs) manquent d'adoption significative, contrairement aux offres similaires de Microsoft et Google. Cela limite à la fois les possibilités pour les acheteurs QuickSight de stimuler l'adoption par les utilisateurs professionnels et l'attrait comparatif d'Amazon QuickSight pour les utilisateurs finaux.

Domo

Domo est un challenger dans ce Magic Quadrant. Il a traditionnellement été préféré par les utilisateurs professionnels exécutifs, mais les innovations de produits au cours des dernières années en font une option populaire pour les développeurs analytiques, les analystes commerciaux et les scientifiques des données.

Domo s'est taillé une niche solide dans l'espace de l'analyse marketing, et maintenant il gagne également du terrain auprès des organisations qui ne disposent pas d'une base d'entrepôt de données solide, en particulier dans les petites et moyennes entreprises. Bien que Domo ne soit pas une solution clé en main, sa bibliothèque de plus de 1 000 connecteurs de données et d'applications natifs, associée à sa pile de données et d'analyse, permet un retour sur investissement rapide en accélérant le processus d'ingestion, d'intégration et de transformation des données.

En 2022, Domo a introduit le « Domo App Framework » pour permettre aux développeurs citoyens disposant d'un environnement low-code d'intégrer du contenu BI dans un flux de travail de processus métier et de mener des analyses de simulation en isolant des variables spécifiques. Toujours en 2022, Domo a approfondi son intégration avec les espaces de travail Jupyter, permettant aux développeurs de publier des modèles en production avec un codage minimal.

Forces

- **Support multipersona** : Dans un marché exclusivement axé sur les besoins de l'analyste métier, Domo a répondu aux besoins du consommateur de contenu analytique. Il prend désormais en

charge les analystes, les concepteurs et les développeurs. Magic ETL de Domo offre des capacités de préparation de données exceptionnelles, permettant aux utilisateurs professionnels de connecter, de mélanger et d'enrichir les données sans effort. Le framework d'applications de Domo offre des fonctionnalités low-code qui permettent aux développeurs citoyens de connecter les informations sur les données aux flux de travail des processus métier et d'effectuer des analyses de simulation.

- **Évoluez avec contrôle et sécurité** : le nouveau tableau de bord de gestion de Domo Everywhere, l'API JavaScript et l'environnement d'analyse intégré de Domo, permet aux organisations de définir des droits d'accès et de publier en toute sécurité du contenu sur des milliers d'abonnés, à l'intérieur et à l'extérieur de l'organisation, sans compromettre le contrôle, la sécurité et la cohérence.
- **Stimuler l'innovation** : Domo propose des innovations bien accueillies dans les nouvelles fonctionnalités critiques ajoutées cette année : collaboration, intégration de la science des données et magasin de métriques. En outre, Domo fonctionne très bien avec les catalogues analytiques et la préparation des données.

Précautions

- **Manque de canaux d'écosystème d'applications plus larges** : Domo est confronté à un désavantage concurrentiel par rapport aux fournisseurs de plates-formes ABI qui tirent parti de la base installée existante de leur propre écosystème d'applications et de leurs plates-formes cloud. Certains acheteurs donneront la priorité aux fournisseurs de plateformes ABI qui offrent des synergies avec leurs propres écosystèmes cloud (AWS, Microsoft ou Google) et applicatifs (Salesforce, Oracle ou SAP).
- **Présence géographique limitée** : En tant que fournisseur basé sur le cloud, Domo s'appuie sur une présence virtuelle pour les pays autres que les États-Unis, le Japon, le Royaume-Uni et l'Australie. Les utilisateurs doivent examiner la pertinence d'un support basé sur le cloud ou virtuel par rapport à une présence dans le pays.
- **Modèle de tarification premium** : les prix de Domo sont toujours supérieurs à ceux des fournisseurs de cloud à faible coût. Domo a été contraint de s'adapter et de lancer son nouveau modèle de tarification prépayée, qui en est encore à ses débuts.

GoodData

GoodData est un acteur de niche dans ce Magic Quadrant. GoodData a trouvé un créneau solide dans les cas d'utilisation où les clients sont intéressés par la création et l'intégration d'un magasin de métriques en tant que couche sémantique universelle dans leur environnement, en utilisant une approche headless étroitement alignée sur les pratiques DevOps matures. L'approche de GoodData en matière de « analyse en tant que code » se différencie et offre des API et des SDK robustes pour la personnalisation frontale et l'intégration à des outils ABI et de science des données tiers et à d'autres applications.

Les deux offres majeures de GoodData, GoodData Cloud Native et GoodData Cloud (son offre SaaS), ont toutes deux été livrées et améliorées tout au long de 2022. En tant qu'entreprise privée

autofinancée, GoodData a également franchi une étape importante en 2022 : la rentabilité. Cela indique de solides fondamentaux opérationnels alignés sur la demande croissante dans le marché de niche qu'il cible.

Forces

- **Vision sans tête** : GoodData double la mise sur le besoin du marché de disposer d'un magasin de métriques centralisé pour la cohérence des définitions de métriques et la mise en correspondance avec les objectifs commerciaux. Les partenariats avec des sociétés de pipeline de données et les intégrations avec d'autres fournisseurs ABI pour les métriques push and pull permettent à GoodData de se positionner comme un acteur neutre sur le marché des magasins de métriques.
- **Caractéristiques de composabilité** : Le modèle commercial et les fonctionnalités de GoodData suivent le principe de « l'analytique en tant que code » et s'adressent au marché de la composabilité grâce à la capacité d'intégrer et d'aligner le développement de contenu analytique avec le cycle de vie du développement d'applications. Cette approche permet à GoodData d'aider les équipes d'analyse à faire évoluer les opérations de la chaîne de valeur des données lorsque le besoin d'automatisation et de gestion des versions augmente.
- **Disponibilité des ressources tierces** : GoodData se distingue par sa disponibilité de ressources tierces pour la mise en œuvre et sa capacité à s'intégrer à des applications tierces, selon Gartner Peer Insights. Cela permet à la plate-forme GoodData d'adapter sa capacité à prendre en charge les cas d'utilisation grâce à l'extension du réseau de partenaires et de bien fonctionner au sein d'un écosystème technologique.

Précautions

- **Limité aux acheteurs matures** : Adopter une approche analytique en tant que code pour mettre à l'échelle l'intelligence au sein de l'organisation suppose un niveau élevé de maturité en ingénierie des données. Les acheteurs potentiels doivent déterminer s'ils sont suffisamment matures pour tirer pleinement parti de l'offre de GoodData.
- **Evolution incertaine des magasins de métriques** : GoodData s'est positionné comme un innovateur de premier plan dans les magasins de métriques. La mise en garde ici est que les magasins de métriques en général seront un concept fluide qui évoluera à court et moyen terme. Plusieurs fournisseurs d'analyses commencent à s'efforcer de créer leurs propres magasins de métriques pour la centralisation des métriques. Les acheteurs devront soit prendre des décisions sur le choix des technologies de magasins de métriques qui sont « neutres », soit adopter des magasins de métriques fournis par les plus grands fournisseurs ABI et centraliser leurs définitions de métriques là-bas.
- **Les déploiements ABI traditionnels sont limités** : GoodData est évalué comme inférieur à la moyenne pour toutes les fonctionnalités critiques, à l'exception des magasins de métriques. Il est plus faible dans la prise en charge des cas d'utilisation ABI traditionnels par rapport aux concurrents.

Google (en anglais)

Google est un challenger dans ce Magic Quadrant. Looker de Google Cloud est une plate-forme ABI à l'architecture cloud qui offre des analyses hautement gouvernées, y compris des visualisations et des tableaux de bord en libre-service, ainsi qu'une couche de modélisation sémantique basée sur LookML. Looker Studio peut fonctionner en libre-service de manière entièrement autonome, ou il peut se connecter à Looker s'il souhaite utiliser la couche sémantique pour fusionner des données gouvernées et non gouvernées. La plate-forme d'analyse axée sur les développeurs de Looker fournit un cadre collaboratif sous contrôle de version pour créer à la fois une BI interne et permettre aux clients de créer des applications.

In 2022, Google unified the Looker platform to include Looker, Looker Studio (formerly Data Studio), and Looker embedded with first-class citizen access to the LookML semantic layer. Additionally, Google has provided direct access to Google Sheets, Salesforce (Tableau) and Microsoft Power BI, broadening the reach of its governed semantic layer.

Strengths

- **Governed self-service semantic layer:** Looker is built on a developer-focused, code-centric virtualized semantic modeling layer (LookML). Google has now opened LookML to its internal portfolio of tools, including Looker Studio (formerly Data Studio) and Google Sheets. It offers native connectivity for Salesforce (Tableau) and Microsoft Power BI as a universal enterprise semantic layer.
- **Decision support and workflow resources:** Looker includes “blocks,” prebuilt dashboards and data exploration capabilities for several industry verticals. The blocks are built on LookML data models drawing on data from sources inside and outside the Google Cloud Platform (GCP) environment, including leveraging the capabilities of BigQuery ML and Vertex AI APIs. Looker then offers “actions” as integrations to push data or instructions into third-party tools.
- **GCP integration:** Looker benefits from deep integration with open-source data technologies provided through the wider Google Cloud Platform. Tools including Dataproc, Dataprep and Composer provide data engineers the native capabilities to process data, while further augmented using Vertex AI, AutoML and BigQuery ML.

Cautions

- **Developer/data engineer focus:** In contrast to competitors' visual drag-and-drop data modeling and advanced analytics, Looker requires coding for developers and data modelers. While prebuilt blocks aimed to support industry analytical patterns, overall underlying development patterns limit the ability for nontechnical analysts to contribute to the analytical data modeling.
- **Incomplete analytical modeling loop:** The unification of the Looker suite of tools, specifically Looker Studio, brings supported capabilities for self-service analysis that were not previously possible in Looker alone. However, there is no development path to incorporate the insights created in Looker Studio into the broader Looker semantic model, making it difficult for self-service users to promote its analytic content.

- **Limited native augmentation:** Automated insights remain weak compared with Looker's competitors. Some capabilities in this category are only available when incorporating Google products outside Looker, such as BigQuery ML. Support for data storytelling, including narrative automation and infographic support, is notably missing.

IBM

IBM is a Visionary in this Magic Quadrant. IBM Cognos Analytics with Watson offers consistent core capabilities across hybrid, multicloud, public and on-premises deployments. Cognos Analytics on Cloud Pak for Data can be deployed on AWS, Azure, GCP and IBM Cloud. Customers may choose to use it in conjunction with IBM's containerized stack of D&A services, including storage, data virtualization, data refinery, data catalog and DSML services.

In 2022, IBM added the Analytics Content Hub, a new platform capability that unifies an organization's analytics assets from multiple vendors including IBM, Microsoft, Salesforce and Google. By breaking down analytic silos, users can access content from multiple ABI platform vendors. Also, IBM made several enhancements to its augmented capabilities, improving its time entity filtering, multivariate forecasting, time series library, natural language generation and search. Finally, IBM built on its existing Slack integration by adding integration with Microsoft Teams. Users can now share content into Teams from Cognos and embed dashboards and reports directly within their Teams environment.

Strengths

- **Comprehensive offering and supported roles:** IBM is one of the few vendors that can support enterprise reporting, governed and self-service visual exploration, self-service data prep, augmented analytics and embedding in a single platform.
- **Flexible deployment options:** IBM offers deployment options including on-premises, SaaS, hosted on the IBM Cloud, "bring your own license" for any third-party cloud provider, and deployment with the containerized IBM Cloud Pak for Data platform.
- **Roadmap for applying analytics everywhere:** IBM offers one of the few ABI platforms to offer "what if?" scenario planning, Mode 1 reporting, predictive models and forecasting. Its sales strategy includes selling Cognos and IBM Planning Analytics with Watson together with links to the wider IBM portfolio.

Cautions

- **Diminishing market awareness:** IBM put significant effort into its broad D&A marketing efforts and vision centered on IBM Cloud Pak for Data. While the vision embraces openness and market convergence technologically, the messaging is not resonating with evaluators in the market, based on Gartner inquiries. Cognos rarely appears on evaluation shortlists seen by Gartner, unless IBM is already an incumbent vendor.
- **Lack of sales adoption drivers:** Despite being a large vendor with a wide D&A offering, IBM's lack of a digital workplace application "uplift" (e.g., Google Workspace, Microsoft 365, Zoho

Workplace) or an enterprise application “tailwind” (e.g., Oracle, Salesforce, SAP) limits IBM Cognos Analytics’ touchpoints with organizations that might invest in the platform.

- **Price versus cloud vendor alternatives:** Cognos subscription license pricing per user per month for new customers has been reduced substantially, in line with pricing of smaller or independent ABI vendors. While pricing per user is higher than some other large cloud providers, this may be offset by the end-to-end analytics life cycle capabilities that Cognos offers.

Incorta

Incorta is a Niche Player in this Magic Quadrant. Incorta’s key value proposition is its ability to quickly model data from enterprise applications such as SAP, Oracle, Salesforce and JD Edwards. With Incorta’s Direct Data Mapping technology, customers eliminate many steps in the data modeling and extraction, transformation and loading (ETL) process. Data is ingested without transformation in its original form, and joins are inferred from the metadata. On top of this data warehouse automation capability, Incorta adds data acquisition, data management, and data visualization/reporting capabilities.

In 2022, Incorta introduced Marketplace — a showcase for data applications and application components that partners and customers are able to contribute to. The vendor also expanded its slate of data applications for which it provides prebuilt content. In addition, Incorta added data destinations, which provide the ability to set up third-party systems such as data lakes, data warehouses, file systems and other databases to receive data outputs.

Strengths

- **Agile operational reporting:** Business users can start with high-level key performance indicators (KPIs) and drill down to transaction-level detail, issue ad hoc queries, and reach across functional areas and across data sources. This is accomplished without lengthy ETL and data warehousing efforts.
- **Security and scalability:** Incorta works with billions of records refreshed hundreds of times per day directly from enterprise applications. Incorta offers a single platform that can start at the departmental level, yet provide the performance and governance, including fine-grained security, needed for enterprise adoption. By inheriting data access privileges from source applications, IT can eliminate data-related compliance and security risks and enable data access to all enterprise users.
- **Strong appeal for low-maturity customers:** Customer feedback shows that Incorta tends to be shortlisted by organizations that lack a high degree of data and analytics maturity and that are seeking a quick boost to their capabilities largely derived from automating the data warehouse creation process.

Cautions

- **Lack of functionality for the augmented consumer:** Incorta lacks NLQ, automated insights and collaboration capabilities. Incorta customers will need to rely on integration with third-party

partners for these functionalities.

- **Competition from packaged analytic applications:** Most of Incorta's business comes from integration with large enterprise applications. Increasingly, enterprise application vendors will embed fully comprehensive analytics and BI platforms into their applications, reducing the overall demand for a data warehouse automation platform like Incorta.
- **Lack of market awareness:** Gartner inquiry and search data as well as a review of job postings on third-party websites reveal lower momentum for Incorta relative to competitors. And when they do go head-to-head against other ABI platforms, customers cite strong reporting, governance and data source connectivity, but mostly below-average evaluations for the other critical capabilities.

Microsoft

Microsoft is a Leader in this Magic Quadrant. Its primary ABI platform, Power BI, has massive market reach and momentum through Microsoft 365, Azure and Teams integration, flexible pricing, well-above-average functionality, and an ambitious product roadmap.

In 2022, Microsoft added a metric-tracking capability that enables teams to align their goals and key priorities in a collaborative visual experience. Its new Premium Gen 2 increases price/performance and value through its autoscale capabilities. Finally, Microsoft added low-code data marts for easy access to self-serve managed relational analytics solutions.

Strengths

- **Alignment with Microsoft 365, Teams and Azure Synapse:** The inclusion of Power BI in Microsoft 365 E5 has provided an enormous channel for the platform's spread. As many customers turn to Teams for remote work collaboration, the ability to access Power BI and now "Goals" within the same Teams interface is a compelling integration for business users. Power BI and Azure Synapse alignment addresses multiple D&A personas and use cases.
- **Price/value combination:** The Power BI service now has a per-user offering to appeal to smaller organizations with 300 or fewer employees. Large organizations can still opt for the per-capacity option, which tends to be more cost-effective with more users. Microsoft doesn't use a cross-selling strategy to increase revenue per customer, like most ABI platform vendors do.
- **Power portfolio and product ambition:** Microsoft has a clear vision for cross-utilization of Power BI, Power Apps and Power Automate to drive business value. Power Apps can be embedded in Power BI dashboards or it can access Power BI datasets. Power Automate flows can be constructed to take various actions based on the data. AI-powered services, such as text, sentiment and image analytics, are available within Power BI Premium.

Cautions

- **Governance of content creation and publication:** Gartner receives an increasing number of inquiries from Power BI customers struggling to govern the analytic content creation and publication process. Customers express concern over multiple ways to accomplish most tasks

such as modeling data or promoting content. For example, data modeling tasks can be done with datasets, data marts, dataflows and Dataverse. With the low cost and easy setup, Power BI deployments tend to proliferate, and it is difficult to enforce standard governance practices.

- **Limited headless, open architecture:** While most Power BI service customers appreciate the tight integration of the Microsoft architecture, there is an increasing demand to see more interoperability across competitive BI platforms. In particular, as an analytics catalog and a metrics store, many Power BI customers would like to see more open, headless integration with products competitive to Microsoft.
- **Azure as the only deployment option:** Microsoft does not give customers the flexibility to choose a cloud IaaS offering. While data connectivity enables multicloud and hybrid cloud scenarios, its Power BI service runs only in Azure. However, customers that utilize Azure can take advantage of the global reach and multigeography capabilities offered by Microsoft's cloud platform.

MicroStrategy

MicroStrategy is a Challenger in this Magic Quadrant. MicroStrategy excels at scalability, manageability and governance. It offers rich BI and reporting functionality, including hyperIntelligence, which uses a semantic graph to dynamically identify predefined insights within existing applications. MicroStrategy has a wide geographic presence, present in 37 countries, and in 2022 launched a new technology center of excellence in Argentina.

In 2022, MicroStrategy became FedRAMP-authorized, allowing it to provide managed services for government agencies in the U.S., one of its key vertical focuses for 2023. As of 27 December 2022, it had invested \$4.03 billion to acquire 132,500 bitcoins. While MicroStrategy weathered a significant Bitcoin price drop in 2021, extensive Bitcoin investments remain a concern for some MicroStrategy customers and prospects.

Strengths

- **Stability of integrated product:** MicroStrategy does not acquire codebases. All new developments are built organically. This leads to more stable, less buggy code, especially compared with competitors that fill product gaps with acquisitions.
- **Open platform:** As companies inevitably make investments that span multiple cloud and business application stacks, MicroStrategy stands out as one of the few vendors that truly prioritizes both deployment and data connectivity interoperability. Its interoperability is bolstered by a strong direct query architecture.
- **Enterprise reporting and governance:** MicroStrategy is evaluated highly for both its governance and reporting capabilities. The combination of these two capabilities, along with its reputation for scalability and security, is a big driver for enterprise buyers.

Cautions

- **Absence of surrounding data or application ecosystem:** Much of the momentum in the ABI platform market still comes from the shift to deployment on cloud ecosystems, as well as to

cloud-based business applications. Although MicroStrategy's platform is offered as a service on AWS and Microsoft Azure, and interacts well with other cloud technologies, ABI solutions owned by cloud and business application megavendors have a go-to-market advantage.

- **Augmented analytics capabilities:** Although MicroStrategy Insights was launched in 2022, signaling that MicroStrategy understands this should be an area of investment focus, its capabilities are still behind most of its competitors in delivering automated insights and NLG.
- **Lack of product differentiation:** Despite delivering outstanding enterprise reporting capabilities, it might not be enough to differentiate from the fierce competition as the market moves toward the augmented consumer experience. Traditionally, MicroStrategy has been evaluated as one of the top vendors across all critical capabilities. Over the last few years, only its enterprise capabilities are drawing the same level of commendation.

Oracle

Oracle is a Visionary in this Magic Quadrant. Oracle Analytics Cloud (OAC) is its lead ABI Platform. While other cloud service providers gain recognition for their productivity software, Oracle is recognized for its leadership in database management and comprehensive cloud business applications. Oracle Analytics Cloud provides prebuilt OAC content for nearly every Oracle business application as a key part of its go-to-market strategy. It is also reducing the time to value for customers to deliver advanced analytics by including 17 prebuilt data science models.

In 2022, Oracle demonstrated leading-edge vision with innovative new features including composability, action frameworks, and a human realistic avatar presenting analytics news. Its roadmap shows significant investment in external connectivity to popular applications like ServiceNow, Mailchimp, SurveyMonkey and Yelp.

Strengths

- **Enterprise cloud D&A:** Oracle offers an end-to-end cloud solution, including infrastructure, data management, analytics and analytic applications, with data centers in cloud regions globally. In addition, Oracle Fusion Analytics offers native integration and closed-loop actions for Oracle's ERP, human capital management, supply chain and NetSuite products, making it an excellent choice for Oracle business application users.
- **Augmented capabilities throughout:** Oracle enhanced its already-strong augmented analytics capabilities by enhancing its data storytelling capabilities. This further advances its integrated graph analytics capabilities such as subgraphs, shortest path and page rank, as well as enhancing explainability of ML models generated. Oracle is committed to expanding the use of OAC to less technical users, demonstrated by its leading-edge vision for the future of business consumer analytics. OAC is also the only platform on the market to support NLQ in 28 languages.
- **Comprehensive data management:** Oracle offers a powerful and cohesive view of data for its customers and every persona across the D&A continuum. By using ML techniques and technology based on the underlying OCI platform, the DBMS is able to tune, patch and upgrade

itself to provide stronger security. Clients who invest in Oracle products across the D&A pipeline will see reduced efforts in data management and integration.

Cautions

- **Momentum in a crowded market:** Oracle is not considered as frequently as the Leaders in this Magic Quadrant in competitive evaluations known to Gartner. Oracle's benefits are less obvious when users are not invested in its business applications ecosystem. It is often overlooked for new projects outside of its existing customer base.
- **Oracle application-centric:** Although OAC can access any data source, its packaged analytic applications (Fusion Analytics Warehouse and NetSuite Analytics Warehouse) are just starting to work with non-Oracle enterprise application providers. For example, in 2022 Oracle provided a direct connector to Salesforce for live queries to cache data into OAC.
- **Pricing:** Oracle pricing can be rigid and some aspects will be non-negotiable. This is not uncommon for very large vendors. Oracle has prioritized its cloud investments appropriately, but on-premises licensing can be a pain point for many customers as they see continued increase in pricing and support costs. On-premises customers can leverage Oracle's Bring Your Own License (BYOL) option to get more flexibility and move to the cloud at their own pace.

Pyramid Analytics

Pyramid Analytics is a Visionary in this Magic Quadrant. Pyramid offers an integrated suite for modern ABI across the data life cycle, out of the box. Pyramid's "factory" design is underpinned by ML-based data preparation and data wrangling, through to data discovery and sharing via business-user-generated dashboards and reports in a low-code/no-code environment. Pyramid is completely browser-based and cloud-platform-agnostic, allowing for hosting in AWS, Azure, GCP, Oracle Cloud or Alibaba.

In 2022, Pyramid introduced Tabulate, an app that brings extensive spreadsheet functionality and business modeling capabilities to the dashboard and reporting development process, allowing users to embed these spreadsheets as part of analytical deployments. Also new in 2022, Pyramid's Solve plug-in engine enables business analysts and analytical developers to perform decision modeling and prescriptive optimization. Insights developed in Solve can be easily shared with other users to make optimal business decisions.

Strengths

- **Accessibility for nontechnical users:** As a browser-based, no-code environment, Pyramid delivers its full suite of data prep, modeling, discovery and deployment capabilities to nontechnical users in the enterprise. The incorporation of Tabulate opens a capability for users looking to include and augment more traditional spreadsheetlike features.
- **Augmented analytics at its core:** Along with a comprehensive data science workbench, basic DSML capabilities are native to the data preparation stages of model development. Solve provides capabilities for delivering prescriptive analytics: The "Explain the Difference" feature

leverages AI to identify the significantly contributing factors between multiple points within the data model.

- **Investment in community building:** Pyramid's investment in its customer advisory board and learning hub appears to have assisted with growth in the user community, as evidenced by its growth in social and digital engagement and overall community member growth over 2022.

Cautions

- **Lack of market awareness:** While Pyramid has started to see market improvement and increases in media coverage, it continues to experience a lack of awareness among consumers looking for low-code/no-code ABI solutions, and Gartner rarely sees it shortlisted.
- **Less focus on developer-centric capabilities:** Pyramid focuses its interface and processes on nontechnical users or those looking for a low-code/no-code environment, but high-code options also exist in the platform. Organizations with existing code-focused development practices may find adaptations to development processes challenging.
- **Limited catalog interoperability and user enrichment:** With the need for analytics catalogs growing, Pyramid lacks significant capabilities to integrate with third-party catalog tools. Users' capabilities to enrich the native Pyramid catalog are focused on report and dashboard artifacts with minimal linkage to the related data components.

Qlik

Qlik is a Leader in this Magic Quadrant. Its primary product in the analytics and BI platform market is Qlik Sense Enterprise SaaS, which includes Qlik Sense, Qlik AutoML and Qlik Application Automation. Qlik also sells Qlik Sense as a client-managed product that can be deployed on-premises or in the customer's own cloud. However, Qlik Sense Client-Managed is not bundled with Qlik AutoML or Qlik Application Automation. Qlik is a cloud-agnostic vendor and has the highest level of partnership for each of the three primary cloud service providers (AWS, Microsoft and Google), along with partnerships with Databricks and Snowflake.

In 2022, Qlik integrated its acquisition of Big Squid to create Qlik AutoML, which provides automatic forecasting, clustering and key driver analysis for citizen data scientists. Qlik also delivered Augmented Authoring, which creates AI-generated dashboards with natural language inputs and automated dashboard layouts.

Strengths

- **Composable analytics:** Qlik's open API in combination with its Application Automation enables integration of analytics with business processes. Analytics can be embedded into business applications. Application Automation leverages a visual no-code approach to quickly assemble automated flows that can be scheduled or event-driven.
- **Comprehensive data and analytics capabilities:** Through acquisitions and organic development, Qlik has created a comprehensive set of technologies to support multiple business personas including citizen data engineers, citizen data scientists, business analysts and analytics developers.

- **Cloud-agnostic:** Many markets are experiencing disruptions from cloud vendors that are making it easy and cost-effective for their customers to extend their investment in cloud infrastructure to their tightly integrated application software stack. However, some organizations worry about vendor lock-in from their cloud provider and consequently value a cloud-agnostic vendor like Qlik.

Cautions

- **Absence of surrounding data or application ecosystem:** Much of the momentum in the ABI platform market still comes from the shift to deployment on cloud ecosystems, as well as to cloud-based business applications. Although Qlik Sense is offered as a service, and interacts well with other cloud technologies, ABI solutions owned by cloud and business application megavendors have a go-to-market advantage.
- **Prioritizing data integration:** Its recent announcement of intent to purchase Talend, another leading data integration provider, further increases Qlik's commitment to data integration and consequently reduces the time it has to focus on the analytics space. While Qlik's integration of Big Squid has gone well, it is making a lot of acquisitions, which increases the product integration burden.
- **Product licensing complexity:** While most of its direct competitors offer a lower-cost consumer or viewer license, Qlik does not. Qlik's lowest-priced product offering, Qlik Sense Analyzer, is priced closer to most competitors' midtier user roles. Sometimes this higher price point is negated in enterprise license agreements, but not always. Qlik Sense clients can also opt for the time-based option that offers full interactivity. However, that option can be costly for frequent view users, and it is harder to budget based on unpredictable consumption patterns.

Salesforce (Tableau)

Tableau, a Salesforce company, is a Leader in this Magic Quadrant. Its products are mainly focused on visual-based exploration that enables business users to access, prepare, analyze and present findings in their data. CRM Analytics, formerly Tableau CRM, provides augmented analytics capabilities for analysts and citizen data scientists. Tableau has global operations and serves clients of all sizes.

In 2022, Tableau reinforced its augmented consumer vision to provide contextualized insights with deeper integration with Salesforce Data Cloud. IT also improved decision intelligence by bringing domain-aware insights into action with Revenue Intelligence and other Salesforce-native apps. The extensible design and x-platform integrations (Salesforce Flow, MuleSoft, UiPath and Looker) further enable composable analytics to bring insights into workflow with agility.

Strengths

- **Tableau as a skill:** Tableau has created a massive community of visual analytic developers that influences ABI buying decisions. Its user community has become a strong self-learning hub to drive tool adoption, improving its market momentum by increasingly demanding Tableau skills from the talent market.

- **Agnostic and flexible position:** Although acquired by Salesforce, Tableau remains a more cloud-, data source- and application-agnostic choice compared to some of its competitors. The users can still use the on-premises version with little difference from the cloud version. Organizations today still use a portfolio approach to build the analytics solutions, and Tableau has better composability in a wider D&A ecosystem with technology partnership.
- **Analytics experience:** The proprietary VizQL engine sits at the center of the entire analytics workflow of Tableau, providing an optimal visual analytics experience while more augmented analytics capabilities are incorporated into the platform. The user-centric product improves the multipersona collaboration within the tool, expanding the adoption of the tool by more business users.

Cautions

- **Market momentum and support concerns:** While it is still showing strong market momentum, Tableau has had slower revenue growth recently. And clients are sharing concerns about recent layoffs. Also, timeliness of some support functions continues to be an issue, particularly for Standard Support customers, some of whom feel compelled to purchase the Premium Support add-on to receive adequate support.
- **Salesforce-centric innovation:** Some of Tableau's emerging capabilities, including CRM Analytics and Data Cloud, are designed to integrate with Salesforce. Some clients have expressed concerns about not getting the most of the combined platform if they don't move to Salesforce. Alternatively, they will need to spend extra to get the capabilities that belong to the other product lines.
- **Serve on-premises clients:** Tableau has a huge number of on-premises clients who use Tableau desktop and server. With the acquisition from Salesforce, the product portfolio has a clear direction to be cloud-first or even cloud-only, aligning with the overall Salesforce product strategy. This move could impact existing clients who have no plan to move to the cloud soon.

SAP

SAP is a Visionary in this Magic Quadrant. SAP Analytics Cloud is a cloud-native multitenant platform with a broad set of capabilities across data visualization, reporting and augmented analytics. It unifies analytics and enterprise planning to build end-to-end processes from insights to business actions. In the last year, SAP Analytics Cloud significantly increased its market momentum, as measured by Gartner client inquiry, searches and Gartner for Peer Insights.

In 2022, SAP improved its reporting, data storytelling and analytic developer capabilities to optimize the user experience (UX) for citizen analytics developers, business analysts and report consumers. The low-code and advanced coding capabilities of analytics applications offer composable analytics apps to lines of business (LOBs). It enhanced data integration and modeling capabilities, especially in leveraging the full context of SAP data and application ecosystems.

Strengths

- **SAP data integration and connectivity:** SAP Analytics Cloud offers seamless native connectivity to SAP enterprise applications including SAP S/4HANA, SAP SuccessFactors and SAP Ariba. Predefined data integration and data models can be leveraged directly based on SAP data sources. SAP Analytics Cloud directly queries on-premises SAP resources (SAP BusinessObjects Universe, SAP Business Warehouse and SAP HANA) for live data. The deep integration with SAP Datasphere also enriches its connectivity capabilities.
- **Augmented capabilities and closed-loop analytics:** SAP Analytics Cloud enables what-if simulation, predictive forecasting and key influencer analysis. It covers the closed-loop analytics and planning process to finalize business decisions and actions. These integrated functionalities for planning, analysis and prediction differentiate it from competitors.
- **Analytics accelerators for SAP business apps:** SAP Analytics Cloud is part of a wider D&A portfolio that includes SAP Datasphere and offers prebuilt business content for various industries and lines of business online. It includes data models, data stories and visualizations, templates for SAP Digital Boardroom agendas, and guidance on using SAP data sources.

Cautions

- **Average product capabilities:** SAP Analytics Cloud is evaluated as average among all vendors for product critical capabilities. While it is consistent from use case to use case, it doesn't really stand out in any one use case. Customers should evaluate their product capabilities carefully to ensure functional fulfillment.
- **Limited adoption outside of SAP ecosystem:** SAP Analytics Cloud sells predominantly into its existing business application customers and legacy BI installed base. Customers without a SAP-centric application or data ecosystem rarely shortlist SAP Analytics Cloud, based on conversations with clients via the Gartner inquiry service.
- **Cloud-only deployments:** SAP Analytics Cloud is a public cloud-native platform (although it can query on-premises data and offer private tenants). Customers seeking an on-premises or private cloud deployment would need to leverage SAP BusinessObjects BI and support SAP Analytics Cloud and its analytics catalog functionality and Universe connector for a complete hybrid deployment experience. SAP Analytics Cloud and SAP BusinessObjects BI have different roadmaps, support and maintenance schedules.

SAS

SAS is a Visionary in this Magic Quadrant. SAS Visual Analytics is one component of SAS's end-to-end portfolio, offering visual and augmented data preparation, ABI, DSML and AI solutions.

In 2022, SAS Visual Analytics broadened its integration with Microsoft Azure by releasing model publishing and scoring actions in Databricks, which is also available on AWS. SAS Embedded Process for Spark continuous session with Databricks or with Synapse enables start-and-stop actions. Other capabilities have been enhanced, like geo pie objects, outlier insights, and a new content components library added to the SAS Viya SDK for easier content navigation within custom webpages or web applications.

Strengths

- **Unified platform:** SAS offers a compelling product vision for customers to prepare their data, analyze it visually, and build, operationalize and manage data science, ML and AI models in an augmented design experience. Moreover, with Visual Analytics, SAS is one of the few vendors in this Magic Quadrant to support text analytics natively in a core product.
- **Market-leading data visualization and automated insights:** SAS Visual Analytics continues to lead the market with high marks for data visualization, interactivity, variety of visualization styles supported, geographic mapping, support for charting libraries and time series animation. It provides a comprehensive set of automated insights features for outlier detection, key driver analysis, clustering and time series forecasting.
- **Global reach with industry solutions:** SAS is one of the largest privately held software vendors, with a physical presence in 47 countries and a global ecosystem of systems integrators. SAS Visual Analytics forms the foundation for most of SAS's extensive portfolio of industry solutions.

Cautions

- **Limited adoption:** Based on Gartner inquiries, searches on Gartner.com and feedback on Gartner Peer Insights, SAS Visual Analytics has seen limited traction in the market. The lack of a major business application or public cloud ecosystem doesn't give it a huge installed base to sell into. However, with the launch of SAS Viya on the Microsoft Azure marketplace, SAS gains a new installed base to sell into.
- **Bundled pricing:** SAS Visual Analytics is typically bundled as part of a larger software purchase of other SAS products. SAS has lowered the price of SAS Visual Analytics substantially to make it more competitive. Although SAS offers line-item pricing, it is hard for clients to know how much they are paying for SAS Visual Analytics versus other SAS products. And being part of a large software bundle makes SAS Visual Analytics seem more expensive when not sold as a stand-alone service.
- **Limited natural language query:** The platform is lagging the market in NLQ. It lacks support for a question-and-answer format, synonyms, spatial and time reasoning, type-ahead features, and suggestions. Other UX cautions include a weak personalization feature and a non-native chat box. Smart suggestions are delegated to conversation designers, but are not built in.

Sisense

Sisense is a Visionary in this Magic Quadrant. Sisense is one of the only nonhyperscaler vendors that can equally support both self-service augmented analytics and embedded use cases in a hybrid cloud environment. Its product investments support the ramp-up in demand for embedded analytics. The current platform offerings are Sisense Fusion Analytics, Sisense Fusion Embed and Sisense Infusion Apps. The deployment options for Sisense Fusion cover both self-hosted and SaaS or Sisense Cloud using both single and multitenancy and the same codebase for

consistency. 2022 has signaled a pivotal shift of interest in the Sisense Cloud deployments, driven both by increased appeal from the midmarket as well as enterprise demand for hosting.

Strengths

- **Strong embedded offering:** In 2022, Sisense continued the momentum of investment in embedded capabilities to support embedded use cases by adding integrations for Microsoft Office 365. It also firmed up its capabilities for augmented analytics, especially in automated insights and NLQ.
- **DevOps-first principles:** To meet the needs of the developer persona and to integrate intelligence in applications, Sisense delivered native Git integration for DevOps in Sisense Fusion. This bridges together data engineering, analytics development tasks and application development in a consistent release management workflow, with granular file-level access possible through the Git server capabilities.
- **Innovation speed:** In the past, Sisense has been a pioneer in integrating augmentation services in its platform, including third-party services like Alexa and NLG services. In early 2023, Sisense announced its integration with ChatGPT, which is applied primarily toward enabling data preparation automation and code generation for developers working in the platform.

Cautions

- **Metrics store integration:** Metrics store support and/or integration is becoming a core capability, based on buyer feedback and other vendor behavior. However, Sisense does not offer a metrics store, which limits its ability to ingest metrics or push metrics definitions to centralized stores for upstream or downstream use.
- **Lacks a surrounding data or application ecosystem:** A lot of the momentum in the ABI platform market comes from the shift to deployment on cloud ecosystems, as well as to cloud-based business applications. Although Sisense is offered as a service, and interacts well with other cloud technologies, ABI solutions owned by cloud and business application megavendors have a go-to-market advantage.
- **Community support:** Sisense has been focusing on developing its user community of practice. These efforts have resulted in an increase of 450% in community membership. However, based on Gartner Peer Insights' aggregated scores for community support, Sisense is still below average in community support compared to its peers.

Tellius

Tellius is a Visionary in this Magic Quadrant. It delivers capabilities for consumers, analysts and citizen data scientists. Tellius delivers insights using its "What?," "Why?," and "How?" interfaces. "What?" insights are derived using an NLQ search interface. The "Why?" interface automatically surfaces hidden key drivers and trends. The "How?" interface identifies underlying segments and allows decision makers to act.

In 2022, Tellius introduced Multi-Business View Vizpads (MBV Vizpads) that allow users to perform analysis across data sources with common columns without joining them. Tellius also introduced industry-specific market share calculations directly from its search interface for consumer packaged goods and pharmaceutical customers.

Strengths

- **Rapid time to insight with NLQ and automated insights:** Tellius is an NLQ-first platform. It provides robust Q&A capabilities, including learning from user behavior and providing contextualized insights. Tellius's natural language search is multilingual and comes pretrained with common synonyms. Tellius is evaluated very highly for automated insights capabilities like key driver analysis, outlier detection and clustering.
- **Performance and scalability:** Tellius supports autoscaling to manage workload and consumption. It can handle ad hoc queries as well as AI/ML workloads. Tellius leverages Apache Spark for data processing. Tellius is built on microservices-based architecture, wherein each service can be scaled independently.
- **Multipersona support:** Tellius automates key aspects of the analytics workflow, which allows business users get quicker insights. In addition, it supports citizen data scientists and data scientists through guided AutoML capabilities and can write Python codes to build predictive models.

Cautions

- **Lack of market momentum:** Gartner Peer Insights, gartner.com search and client inquiry data reveal lower market momentum for Tellius compared to other vendors in the market. Gartner Peer insights reviews also mention that newer users initially find it complex to grasp all the features in the platform.
- **Product gaps:** Tellius provides robust NLQ and automated insights functionalities, but it doesn't focus on data storytelling capabilities like supporting infographics, connected slideshows, and allowing users to control verbosity, detail or tone of data stories. It does not allow users to publish and share metrics, nor does it integrate with DSML platforms to access features in these sources.
- **Emerging geographic strategy:** Tellius is headquartered in the U.S., with three support centers in the U.S. and one in India, along with an engineering presence in the APAC region. While Tellius has customers distributed across the Americas, Europe and Asia, prospects should carefully evaluate Tellius's ability to provide global support.

ThoughtSpot

ThoughtSpot is a Visionary in this Magic Quadrant. ThoughtSpot's customers frequently cite its consumer-friendly UX, its ability to handle complex analysis and its scalability to analyze large datasets as reasons for purchase. ThoughtSpot's search experience indexes and ranks the data models, metadata and each data value, enabling the software to guide the user to more granular insights. SpotIQ – ThoughtSpot's automated insight capability – continuously monitors the data

to learn to produce more personalized insights. Notably, ThoughtSpot runs its search and automated insight workloads via direct queries of databases to minimize data movement.

In 2022, ThoughtSpot targeted smaller teams and organizations with a consumption-based pricing model. Other recent innovations include code-free integration with its new partner dbt Labs, integrating Sync (formerly SeekWell) to push insights into third-party business applications, and a free web plug-in for Google Sheets.

Strengths

- **Market recognition:** ThoughtSpot's forward-looking vision culminated in its extensive recognition as an augmented analytics platform, as seen in its shortlisting by most Gartner inquiry service users when prioritizing augmented consumers and direct-query NLQ capabilities.
- **Augmented consumer-centric product offering:** ThoughtSpot's product strategy offers buyers a strong vision for augmented analytics. It enables less data-literate analytics consumers to monitor KPIs through ML-powered personalization. It delivers automated insights from SpotIQ and NLQ search-centered modes of discovery, which learn over time based on usage and feedback, and include gamification features and data storytelling capabilities.
- **Embedded product offering strategy:** ThoughtSpot Everywhere embraces the vision for composability for analytics developers, enabling direct-query Live Analytics at scale on a governed, modern data stack (dbt, Alation, Matillion, Fivetran, Google Big Query and Marketplace-native app plug-in, and AWS Marketplace). Its open, low-code developer playground, CodeSpot samples and bring-your-own-model capabilities enable developers to build custom analytics applications.

Cautions

- **Narrowing functional differentiation:** ThoughtSpot has emerged as an innovative Visionary, guiding the market from what had become "traditional" visual self-service analytics toward a new vision of an augmented analytics platform. However, several vendors are also now investing heavily in AI and natural language capabilities. Over time, it may be challenging for ThoughtSpot to maintain that differentiation.
- **As a pure play, ThoughtSpot lacks a full D&A stack solution:** While it does integrate well with the leading vendors of the cloud data stack such as Snowflake, dbt and Databricks, ThoughtSpot doesn't have its own large business application or cloud platform ecosystem to sell into. As the industry moves to the quicker software release cycles that SaaS provides, some companies are prioritizing stack integration over functional differentiation.
- **Smaller customer installed base:** ThoughtSpot has built a solid business over the last few years, adding several major customer wins. It continues to show growth, but its customer installed base is not as big as those of the vendors in the Leaders quadrant.

TIBCO Software is a Visionary in this Magic Quadrant. TIBCO Spotfire combines visual exploration and data science, with strong support for streaming, including the capability to combine real-time and static data. It can also perform predictive models on streaming data. Spotfire also provides 45 prebuilt data functions for business users to perform advanced analytics.

In 2022, TIBCO Spotfire introduced “actions,” a no-code functionality to trigger workflows across cloud and on-premises applications. It has also continued to build over 25 community-developed Mods, which are custom visualizations used to create domain-specific applications. In addition, TIBCO strengthened its model management capability, enabling customers to score and monitor performance of pretrained data science models in a visual analytics environment.

Strengths

- **Support for data scientists and citizen data scientists:** Spotfire can integrate with R and Python, provide explainability for autogenerated models and allow guided model building through TIBCO. Through TIBCO ModelOps, it allows users to monitor and govern model performance.
- **Deployment flexibility and autoscaling:** The Spotfire platform can be deployed anywhere on-premises or in the cloud. Spotfire is designed to be fully cloud-agnostic, including both hybrid and multicloud options. Spotfire also autoscales based on independent metrics.
- **Prebuilt domain applications:** Spotfire supports prebuilt solution accelerators for specific industry use cases like dynamic pricing accelerator, healthcare interoperability accelerator, continuous supply chain accelerator and more. In addition, Spotfire users can create and deploy custom visualizations, known as Spotfire Visualization Mods; Spotfire Data Functions that perform any type of data management or data science calculation; and newly introduced Spotfire Actions that invoke external actions in hundreds of other systems from within a Spotfire analysis.

Cautions

- **Limited market momentum:** TIBCO has relatively less overall momentum compared to other vendors in the market, possibly due to its longevity in markets served by specialized partners such as PerkinElmer (pharmaceuticals), Schlumberger (energy), Change Healthcare (Healthcare) and PDF Solutions (manufacturing). Gartner receives relatively few inquiries from clients about Spotfire.
- **Steep learning curve:** Although Spotfire is quite feature-rich, Gartner Peer Insights reveal that Spotfire is not easy to learn, offering less guidance for new users. Limited end-user training and support seem to be a pain point for a significant number of users, according to Gartner Peer Insights.
- **Product feature gaps:** TIBCO Spotfire has weak natural language query capabilities. It provides no in-line type-ahead or pretype suggestions for users. In addition, there is no learning from user’s search actions and interaction with content. Spotfire has some data storytelling capabilities, but more automation of this process could be provided.

Zoho

Zoho is a Niche Player in this Magic Quadrant. Zoho Analytics is mainly focused on data preparation, data visualization and its marketplace of prebuilt analytical apps for business analysts. Its operations are geographically diversified and its clients tend to be small to midsize companies.

In 2022, Zoho improved its composability by introducing a pluggable microservices architecture for public cloud deployments and data source connectivity by enabling live connection to all sources, including popular SaaS business applications.

Strengths

- **Unified business analytics:** Users can integrate data from a wide range of LOB applications. Zoho Analytics comes with hundreds of domain-specific prebuilt reports and dashboards. The smart data blending capability enables users to automatically blend data across LOB applications to offer end-to-end business insights.
- **Composable analytics vision:** Zoho Analytics has a pluggable microservices architecture that allows buyers to use their own services when deploying in preferred cloud providers including AWS, Microsoft and Google. The marketplace approach enables users with low-code/no-code experience to assemble the essential components from rich prebuilt contents, such as e-commerce analytics using Shopify.
- **Zoho opportunities:** Zoho has 80 million existing SaaS users, accelerating Zoho Analytics' adoption with the platform effect. Organizations can buy any Zoho apps and integrate with Zoho Analytics with ease. In particular, Zoho is well-positioned to enable users to move beyond reporting and analysis to true decision intelligence. This is due to the integration with business applications as well as Zoho's strength in collaboration, one of the three new critical capabilities added this year.

Cautions

- **Product capability gaps:** Many of Zoho's product capabilities are evaluated lower than the average of 20 vendors assessed in this Magic Quadrant research. It does have a continuous product release schedule, however, with over 70 product updates in 2022.
- **Market momentum:** Zoho has lower momentum compared to others in the space based on job posting, gartner.com search and Gartner inquiry volume data. It only has three support centers globally specific to Zoho Analytics. However, it does have other global support centers for the entire Zoho suite of products, which includes Zoho Analytics.
- **Lack of advanced analytics:** Zoho Analytics is mainly designed for self-service business analysts. It lacks the vision to support advanced analytics use cases, including using augmented analytics or integrating with data science tools.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

GoodData met the inclusion criteria for 2022, and was added.

Dropped

Based on the market momentum index, Yellowfin did not make the list of the 20 included vendors.

Inclusion and Exclusion Criteria

To qualify for inclusion in this Magic Quadrant, vendors had to meet both of the following criteria:

- Offer a generally available software product that met Gartner's definition of an ABI platform:
- Analytics and business intelligence platforms enable less-technical users including business people to model, analyze, explore, share and manage data, and collaborate and share findings, enabled by IT and augmented by AI. It may optionally include the ability to create, modify or enrich a semantic model including business rules.
- Rank among the top 20 organizations in the market momentum index defined by Gartner for this Magic Quadrant. Data inputs used to calculate ABI platform market momentum included a balanced set of measures:
 - Gartner customer search and inquiry volume and trend data.
 - Volume of job listings specifying the ABI platform on TalentNeuron and on a range of employment websites in the U.S., Europe and China.
 - Frequency of mentions as a competitor to other ABI platform vendors in reviews on Gartner's Peer Insights forum during the year ending July 2022.
 - Social media communities and overall trends.

In line with Gartner's Magic Quadrant methodology, the number of vendors covered is limited to 20. There are many more ABI platform vendors that are not covered in this research.

Honorable Mentions

The vendors mentioned below either featured in the 2022 edition of this Magic Quadrant or have momentum that may make them of interest to organizations looking beyond the vendors covered in the present Magic Quadrant. The following list, which does not include all the notable vendors absent from this Magic Quadrant, is in alphabetical order:

- **Aible.** Aible offers several products, including Sense, Explore and Optimize, to use AI to automate data engineering, data analytics, and data science tasks. Aible ensures data is of sufficient quality to generate insights, discover patterns in the data, and make recommendations.
- **AnswerRocket.** AnswerRocket offers an augmented analytics platform for data exploration, analysis and insights discovery. It allows users to monitor key metrics, identify performance drivers, and detect critical issues within seconds. AnswerRocket's latest release harnesses OpenAI's ChatGPT technology to enable conversational analytics on proprietary data.
- **AtScale.** AtScale provides a semantic layer platform that connects data consumers using common BI tools with data assets managed in cloud data platforms. AtScale also provides a data modeling utility that lets data teams build semantic models, design metrics and conformed dimensions that are published within a metrics store accessible from BI platforms.
- **Board.** Board differentiates itself by providing an intelligent planning platform (analytics and financial planning and analysis) that supports business processes more fully than vendors of competing ABI products aim to.
- **FanRuan.** FanRuan is one of the largest ABI vendors in China, where its traditional, report-centric BI product, FineReport, is widely used. Its new FineBI product offers self-service, visually driven BI via an on-premises deployment model.
- **Infor.** Infor Birst is an end-to-end data warehouse, reporting and visualization platform built for the cloud. Birst integrates with Infor ERP applications with context-aware filtering and workflows.

Evaluation Criteria

The Ability to Execute criteria used in this Magic Quadrant are as follows (for the sources of information that informed Gartner's evaluations using these criteria, see the Evidence section):

- **Product or Service:** This criterion assesses how competitive and successful a vendor's ABI platform product is with regard to the critical capability areas, in light of the vendor's RFP response and video submission.
- **Overall Viability:** This criterion concerns the organization's financial status and model as it relates to ABI. It also takes account of existing and prospective customers' views about the vendor's likely future relevance.
- **Sales Execution/Pricing:** This criterion covers the vendor's capabilities in sales activities. It includes the overall evaluation and contract negotiation/flexibility with a vendor as well as the value the customer receives.
- **Market Responsiveness/Record:** This criterion addresses the extent to which a vendor has momentum and success in the worldwide market using a balanced set of measures.

- **Customer Experience:** This criterion concerns customers' experience of working with a vendor after a purchase. Factors include the availability of quality third-party resources (such as integrators and service providers), the quality and availability of end-user training, and the quality of the peer user community.
- **Operations:** This criterion concerns how well a vendor supports its customers, and how trouble-free its software is.

Ability to Execute

Table 1: Ability to Execute Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Product or Service	High
Overall Viability	High
Sales Execution/Pricing	Medium
Market Responsiveness/Record	High
Marketing Execution	NotRated
Customer Experience	High
Operations	High

Source: Gartner (April 2023)

The Completeness of Vision criteria used in this Magic Quadrant are as follows (for the sources of information that informed Gartner's evaluations using these criteria, see the Evidence section):

- **Market Understanding:** This criterion concerns how closely aligned a vendor is with the shifting needs of analytic buyers and how widely its customers use recent and emerging capabilities.

- **Marketing Strategy:** This criterion considers whether a vendor has a clear set of messages that communicate its value and differentiation in the ABI platform market, and whether that vendor is generating awareness of its differentiation.
- **Sales Strategy:** This criterion concerns the extent to which a vendor’s sales approach benefits from a range of options and drivers that encourage customers to evaluate its ABI platform.
- **Offering (Product) Strategy:** Gartner evaluates a vendor’s ability to support key trends that will create business value in future. Existing and planned products and functions that contribute to these trends are factored into each vendor’s score for this criterion, based on its presented roadmap.
- **Vertical/Industry Strategy:** This criterion assesses how well a vendor can meet the needs of various industries through templates or packaged data and analytics content.
- **Innovation:** This criterion gauges the extent to which a vendor is investing in, and delivering, unique capabilities. It considers whether a vendor is setting standards for innovation that others are emulating.
- **Geographic Strategy:** This criterion considers how well-represented a vendor is around the world.

Completeness of Vision

Table 2: Completeness of Vision Evaluation Criteria

Evaluation Criteria ↓	Weighting ↓
Market Understanding	High
Marketing Strategy	High
Sales Strategy	High
Offering (Product) Strategy	High
Business Model	NotRated
Vertical/Industry Strategy	Low

Evaluation Criteria ↓	Weighting ↓
Innovation	High
Geographic Strategy	Medium

Source: Gartner (April 2023)

Quadrant Descriptions

Leaders

Leaders demonstrate a solid understanding of the key product capabilities and the commitment to customer success that buyers in this market demand. They couple this understanding and commitment with an easily comprehensible and attractive pricing model that supports proof of value, incremental purchases and enterprise scale. Buying decisions are made, or at least heavily influenced, by business users who demand products that are easy to buy and use. They require these products to deliver clear business value and enable the use of powerful analytics by those with limited technical expertise and without upfront involvement from the IT department or technical experts. In a rapidly evolving market featuring constant innovation, Leaders do not focus solely on current execution. Each also ensures it has a robust roadmap to solidify its position as a market leader and thus helps protect buyers' investments.

Challengers

Challengers are well-positioned to succeed in this market. However, they may be limited to specific use cases, technical environments or application domains. Their vision may be hampered by the lack of a coordinated strategy across various products in their portfolio. Alternatively, they may fall short of the Leaders in terms of effective marketing, sales channels, geographic presence, industry-specific content and innovation.

Visionaries

Visionaries have a strong or differentiated vision for delivering a modern ABI platform. They offer deep functionality in the areas they address. However, they may have gaps when it comes to fulfilling broader functionality requirements or they may have lower scores for customer experience, operations and sales execution. Visionaries are thought leaders and innovators, but they may be lacking in scale, or there may be concerns about their ability to grow and still execute consistently.

Niche Players

Niche Players do well in a specific domain (industry, vertical or use case), or they are good at meeting the ABI needs of organizations using a particular cloud stack. But they may have limited ability to surpass other vendors in terms of innovation or performance. They may focus on a specific domain or aspect of the ABI platform market, but lack deep functionality elsewhere. Alternatively, they may have a reasonably broad ABI platform, but limited implementation and support capabilities or relatively limited customer bases (in only a specific region or industry, for example).

Context

This Magic Quadrant assesses vendors' capabilities on the basis of their execution in 2022 and future development plans. As vendors and the market are evolving, the assessments may be valid for only one point in time.

Readers should not use this Magic Quadrant in isolation as a tool for selecting vendors and products. They should treat it as one reference point among the many required to identify the most suitable vendor and product. When selecting a platform, they should use this Magic Quadrant in combination with [Critical Capabilities for Analytics and Business Intelligence Platforms](#). We also recommend using Gartner's client inquiry service.

Readers should not ascribe their own definitions of Completeness of Vision or Ability to Execute to this Magic Quadrant (they often incorrectly equate these with product vision and market share, respectively). The Magic Quadrant methodology uses a range of criteria to determine a vendor's position, as shown by the Evaluation Criteria section above.

Market Overview

Cloud data and analytics ecosystems continue to drive spending. All but one of the seven hyperscale cloud infrastructure and platform service vendors have an offering in the ABI platform market either directly or via an acquired subsidiary (see [Magic Quadrant for Cloud Infrastructure and Platform Services](#)).¹

The presence of the major cloud ERP and CRM application providers is also an influencer of ABI platform selection considerations. On one hand, cloud-led sourcing creates inevitable concerns about lock-in and unforeseen costs of the data and analytics portfolio. On the other, the cloud service providers accept the importance of openness in their software stacks and the growing importance of "multicloud" approaches, whereby organizations run applications in, and across, multiple cloud offerings.

Currently, one vendor – Microsoft – dominates the market in terms of user adoption. The massive growth of the Microsoft Power BI cloud service has continued, fueled largely by the bundling of this product with Office 365 (at E5 license level) at a greatly reduced price. The increasing integration of Power BI with Microsoft Teams fuels further growth, given the importance of remote working.

The dedicated, specialist analytics vendors in the ABI platform market are using their independence from the big cloud providers as competitive differentiators against the large cloud

players, playing on customers' lock-in concerns. One flanking approach is to open previously closed products in order to minimize competition with ubiquitous ABI tools. Another is to focus on finding specific market segments and matching offerings to their needs.

The proliferation of augmented analytics capabilities is putting the ABI and data science and ML platform markets on a collision course. ABI platforms increasingly include functionality to perform augmented data science and ML tasks, with predictive models being executed "behind the scenes," and insights "surfaced" within the ABI process flow. Data science and ML platforms, for their part, increasingly feature enhanced data transformation and discovery capabilities, such as data visualization, that are traditionally more characteristic of ABI platforms (see [Market Guide for Augmented Analytics](#)).

The market is continuously evolving, with many platforms adding capabilities for citizen analysts/developers to easily compose low-code or no-code automation workflows and applications. This blend of capabilities is helping to expand the vision for analytics beyond simply delivering datasets and presenting dashboards to delivering enriched contextualized insights. This has refocused attention on the decision-making processes and ultimately on taking actions that deliver business value (see [Market Guide for Embedded Analytics](#)).

Evidence

Gartner's analysis in this Magic Quadrant is based on sources that include:

- Gartner analysts' opinions of vendors.
- Customers' perceptions of vendors' strengths and challenges, drawn from ABI-related inquiries received by Gartner
- Gartner Peer Insights data (see below)
- A questionnaire completed by vendors about their business
- Vendor briefings covering differentiation, customer use cases and product roadmaps
- An extensive RFP questionnaire inquiring how each vendor delivers the specific features that make up the 12 critical capabilities defined for this market
- Video demonstrations of how vendors' ABI platform products address the 12 critical capabilities
- Externally sourced data on market momentum (job postings, videos on the web and so on)

Gartner Peer Insights

Gartner Peer Insights reviews were considered for metrics relating to operations (service and support, and quality of technical support), customer experience (availability of third-party resources, quality/availability of end-user training, and overall experience), sales experience

(pricing and contract negotiation), market responsiveness (value received) and market understanding (understanding customer needs). We considered reviews for modern ABI platform products posted from 26 December 2021 through 26 December 2022.

¹ The exception, Chinese vendor Tencent Cloud, has invested in Yonghong Tech and offers its Yonghong BI platform on an OEM basis.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Market Responsiveness/Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen

to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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