Map your journey to the Intelligent Enterprise with MicroStrategy
Let MicroStrategy guide your journey.

MicroStrategy has decades of experience, thousands of customers, and a proven track record of success deploying complex, mission-critical analytical and mobility solutions at scale. The Map of the Intelligent Enterprise™ illustrates our comprehensive understanding of the dynamics at play in a business landscape.

This brochure details each map component to help guide your organization on its journey toward the Intelligent Enterprise. It describes the essential capabilities required to deliver powerful suites of analytic and mobile apps to thousands of constituents, and maintain them with high levels of performance, reliability, and security.

Delivering the Intelligent Enterprise requires more than superior technology; it also requires exceptional technique. To that end, the map describes the best practices, personnel, and deployment architectures an organization should employ to maximize the utility of the MicroStrategy Intelligence Platform and fully leverage the potential of its data and enterprise assets.

Assessing Your Progress

This brochure offers a detailed explanation of the map, but to get the most from it, we recommend that you take advantage of a free assessment that will help gauge your organization’s progress on its journey to becoming an Intelligent Enterprise. MicroStrategy will create a detailed custom report that identifies key challenges, maps out recommended solutions, and plots your next steps forward.

Schedule Your Free Assessment

1-888-537-8135 | microstrategy.com/us/go/contact-me
**APPLICATIONS**

- Enterprise Analytics
- Mobile Telemetry
- Voice
- Collaboration
- Telemetry
-esa

**DEVICES**

- Email
- Google Search
- Excel

**TECHNOLOGY OPPORTUNITIES**

- Cloud Computing
- Machine Learning
- Mobile Computing
- Blockchain

**MARKET DISRUPTORS**

- Apple
- Amazon
- Google
- Facebook
- Alibaba
- Twitter
- Microsoft

**EXECUTIVES**

The business executives are the analysts and mobility strategy for the function. They establish the business priorities, program, budget, and timelines, while maintaining certification for the platform assets and resources by tracking and publishing adoption, impact, and return on investment.

**USERS**

**FUNCTIONS**

- Executives
- Management
- Sales Reps

**TOOLS**

- Email
- Google Search
- Excel

**ENTERPRISE ASSETS**

(150+ DRIVERS and GATEWAYS)

**METADATA**

- Attributes
- Metrics

**SERVICES**

- Optimized Multi-Source Connectivity
- Parallel Processing

**APPLICATION SERVICES**

- A suite of enterprise services add on to cognitive services available for architects to quickly and easily integrate into any application.

**PLATFORM SERVICES**

- Critical capabilities to deploy analytics and mobility applications with high performance and scalability on top of enterprise assets.

**DRIVERS AND GATEWAYS**

Out of the box gateways and drivers that make it easy to connect to almost any enterprise information resource.

**BUSINESS USERS**

Express and interact with published analytics. Enhance applications using self-service data discovery to create custom groups, derived metrics, and dynamic filters. Foster adoption through collaboration and sharing.

**INTELLIGENCE DIRECTOR**

**APPLICATIONS**

- Design and publish a digital identity architecture that depends on any standard device—organizational data, telemetry, and graph.

- It creates an infrastructure to make the user more intelligent.

- An Intelligence Platform helps to optimize authentication for internal and external users.

- Enables enterprise-wide, multi-factor, geo-specific digital authentication for internal and external users.

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- Digitizes authentication to deliver security, stability, scalability, and economy by combining platform capabilities to deliver security, stability, scalability, and economy by combining platform capabilities.

- Design the optimal federated enterprise data layer and abstract complexities of the underlying data.

- Create, share, and maintain intelligence applications for the enterprise and department.

- Surface integrated collaboration and sharing capabilities within applications.

- Without restriction or limitation.

- Deploy, analyze, share across various devices (desktop, web, mobile, voice)."
DATA SCIENTISTS
- Build and publish advanced statistics, predictive models, and machine learning algorithms using libraries such as Scikit-learn, R, Python, H2O, and MATLAB, that are leveraged by Analysts and Developers.

DEVELOPERS
- Import, extend, and embed intelligence into custom and third-party applications using programming languages such as JavaScript, Java, PHP, Python, M language (JVM, Objective-C, C, C++, and other common languages).

HIERARCHY OF NEEDS

Functionality
- Enable Business Users, Analysts, and Developers to perform all tasks (build, deploy, analyze, share) across various devices (desktop, web, mobile, voice) without restriction or limitation.

Popularity
- Surface integrated collaboration and sharing capabilities within applications that promote social adoption and usage by design.

Economy
- Manage multiple enterprise environments using a single powerful platform tool for one-click deployment, task automation, architecture management, and system monitoring.

Simplicity
- Deliver user experiences, like voice, chatbots, and natural language, that feel familiar and effortless even upon first use, supported with tools that require zero training.

Scalability
- Share sophisticated personalized applications, built on billions of rows of data, with 10,000s users while maintaining sub-second responsiveness.

Stability
- Deploy applications on a robust architecture with hot, warm, and cold failure strategies, clustering, and multi-tier governance combining to assure system crashes under peak usage and data loads.

Security
- Ensure enterprise managed access to enterprise assets, controlled via a granular security model, via convenient multi-factor digital credentials.
External Forces

In a volatile business landscape fueled by constantly evolving regulatory, technological, market, and competitive pressures, organizations that can build an intelligent edge over their competitors will be the dominant forces of tomorrow.
The relentless innovation of data-related technologies is continually disrupting and reshaping the established order within every industry. By quickly embracing these new technologies, organizations can gain a competitive advantage by operating with more data-driven efficiency and precision. Established organizations that fail to evolve their legacy systems risk becoming obsolete. Alternatively, these innovations can empower new entrants, unburdened by legacy investments, to springboard into new markets and rapidly displace the old guard.

THE PACE OF BUSINESS IS ACCELERATING

Consider the explosion in cloud computing offerings typified by the likes of Amazon Web Services (AWS), Microsoft Azure, SAP, and Salesforce.com. Organizations can spin up new business offerings or expand existing ones overnight, without the delay or investment risk of acquiring and deploying dedicated infrastructure, software, or staff.

BIG DATA YIELDS PRECISION INSIGHTS

With innovations in the areas of big data, Internet of Things (IoT), and machine learning, organizations can absorb and analyze massive volumes of data on virtually every aspect of their operations. With detailed insights into their customers, products, service offerings, manufacturing processes, infrastructure, and equipment, organizations can make proactive adjustments to increase efficiency, optimize operations, and improve the customer experience.

INSTANT ACCESS TO CUSTOMERS

With over 5 billion mobile subscribers in the world, one can safely assume that nearly every constituent in your enterprise ecosystem carries a mobile device. Mobility gives organizations a powerful opportunity to push data-driven intelligence to every corner of the operation, empowering everyone to make better, faster business decisions.

SECURITY IS PARAMOUNT

With increasing volumes of data stored in more places, accessed by more people, on more devices, businesses are becoming more susceptible to breaches, fraud, and abuse. Every business and economy needs a strategy to safeguard its data. Digital badges, for example, give organizations an added layer of authentication for safeguarding physical and logical assets.
New economic powerhouses are exerting untold influence over our economy, public policy, and consumer behavior. Technology behemoths such as Apple, Amazon, Google, Facebook, and Alibaba now sit atop the list of the world’s most valuable companies. After dominating their core industries, these juggernauts are steamrolling into new markets, transforming the status quo, and displacing established organizations. To compete in this business landscape, organizations must reinvent themselves by leveraging data and intelligence to their advantage.

Consider the impact of Amazon. From a book seller without bookstores to a retailer without showrooms, Amazon is steadily careening into new industries and radically reshaping them. Amazon Cloud is absorbing corporate IT infrastructure, and its purchase of Whole Foods will likely reshape the grocery business. Amazon’s fleet of private trucks, plans for its own air cargo hub, and experiments with drone delivery foreshadow disruption in the shipping business, and its announced intention to enter the health insurance space sent tremors throughout the healthcare industry.

Likewise, Apple devices fundamentally disrupted markets for personal computers, music and entertainment, phones, cameras, and watches. In fact, Apple now sells more watches than all of Switzerland. Then there are the second-order impacts of Apple’s smartphone and mobile app paradigm, which have revolutionized consumer workflows, such as the impact of Uber on the taxi industry.

Social media giants, like Facebook and Twitter, can instantly amplify a constituent’s voice a thousand-fold, which can drive social change, topple governments, and destroy reputations. Every enterprise must be involved in the social conversation, as swings in public sentiment can have dramatic and instantaneous impacts on customer loyalty and market share.
In virtually every industry, continuously increasing regulatory requirements are having fundamental effects on businesses. For global organizations, the reporting burden can be particularly onerous, as they can be subjected to scores of regulatory exams each year from multiple states, agencies, and countries. Their reporting sources are often spread across disparate systems and vast geographies, which increases the complexity and risk of error in their compliance reporting.

New and changing industry regulations can significantly shift the scope of analytics reporting, forcing enterprises to modify or replace their existing systems in order to quickly aggregate required information.

For instance, in Europe, the General Data Protection Regulation (GDPR) recently replaced the Data Protection Directive as the primary law regulating the way companies protect the personal data of EU citizens. Many companies had to scramble to achieve GDPR compliance before its implementation deadline to avoid facing stiff penalties and fines.

Organizations subject to frequent regulatory challenges must equip themselves with enterprise-grade intelligence platforms that easily aggregate massive volumes of data from a multitude of sources and quickly produce detailed, accurate reports.
Every organization has established competitors. There can be a tendency to focus attention and energy on the familiar battlefronts within the marketplace. However, unanticipated shifts or disruptions within the underpinnings of your business can rapidly escalate or erode a leadership position. In today’s fast-paced market, competitive advantages are short-lived. Organizations need to maximize opportunities while they last, and quickly identify and mitigate counterproductive trends within their operations.

Consider the challenges facing biotechnology and pharmaceutical companies. These businesses operate in intensely competitive global markets where the battle to discover new drugs and successfully bring them to market requires high-stakes investments, cutting-edge research, fine-tuned manufacturing processes, and specialized commercial sales teams. It can take over 17 years to bring a new clinical product to market, so biotech and pharma organizations need to make well-informed initial investments and maximize development efficiency to beat their competitors to market. For newly approved drugs, firms are typically granted a period of market exclusivity (generally five years in the US); during that limited time, it’s essential for them to maximize sales and optimize production to generate a return from their massive development efforts.

By harnessing their enterprise intelligence, drug companies can boost the effectiveness of their commercial sales teams, optimize their supply chains, and harmonize their marketing efforts to maximize returns on new product offerings.
Enterprise Assets

In the face of unyielding external forces, every forward leaning company is racing to become an Intelligent Enterprise. By harnessing the potential of its existing data and enterprise assets, an organization can empower every employee, partner, customer, and constituent with highly customized business applications that maximize the value of information and accelerate the pace of business.
Every company has a potential trove of business insights hidden within their existing enterprise assets and data investments. An effective intelligence platform will leverage all of those systems to maximize every opportunity to “connect the dots” and uncover new insights. However, the opportunity goes beyond data assets. An ideal intelligence platform interconnects with and informs other core enterprise systems to unlock capabilities that have previously never been possible.

With a vast library of over 150 native gateways and drivers, MicroStrategy can connect to virtually any enterprise asset, enabling organizations to fully leverage their existing investments.
Intelligence Platform

With the MicroStrategy Intelligence Platform, organizations can quickly build, deploy, and maintain sophisticated intelligence applications. The Platform's advanced capabilities and industrial-strength infrastructure enable organizations to deliver powerful suites of analytics and mobile applications to thousands of constituents, while maintaining the exceptional levels of performance, reliability, and security expected of a vital corporate resource.
Out-of-the-box gateways and drivers make it easy to connect to almost any enterprise information resource.

The MicroStrategy Intelligence Platform supports a vast and growing library of native gateways and drivers, so organizations can fully leverage their existing enterprise resources including relational databases, MDX cubes, big data sources, enterprise mobility management (EMM) systems, physical access control systems (PACS), and enterprise applications.

**RELATIONAL**
The MicroStrategy platform leverages native ODBC drivers to provide optimized connectivity to over forty RDBMS systems. Support for relational databases is included with the Intelligence Server license.

**OLAP**
MicroStrategy easily connects to MDX cube sources such as SAP BW, IBM Cognos TM1, Oracle Essbase, or Microsoft Analysis Services. The MicroStrategy Server converts data stored in an MDX cube source into MicroStrategy objects using the MDX language.

**BIG DATA**
MicroStrategy supports all major Hadoop distributions, including Cloudera, Hortonworks, MapR, and Amazon EMR. Once connected, data stored in Hadoop is treated just like any other source, allowing organizations to easily build big data applications.

**EMM**
MicroStrategy offers native SDK integration with three major EMM providers: MobileIron, Good, and AirWatch. MicroStrategy Mobile further supports EMM capabilities by incorporating guidelines set by the AppConfig Community.

**PACS**
Preconfigured gateways communicate with market-leading Physical Access Control Systems, giving organizations the ability to digitize their physical infrastructure with mobile credentialing and access management.

**LOGICAL**
Gives users the ability to access a set of logical gateways to add multi-factor authentication to enterprise applications, including gateways that provide access to SAML applications, custom applications, Web applications, Mobile apps, VPNs, and workstations.

**APPLICATION**
An out-of-the-box MicroStrategy project that compliments any Badge implementation. It delivers pre-built cubes, hierarchies, attributes, metrics, reports, and dashboards that are relevant to understanding enterprise resource utilization.
The MicroStrategy Intelligence Platform provides the essential capabilities for deploying analytics and mobility applications with high-performance and scalability on top of your enterprise assets. Its industrial strength implementation is focused on reliability, efficiency, and scalability, so you can confidently publish reports and deploy applications to thousands of constituents while maintaining exceptional performance.

**OPTIMIZED MULTI-SOURCE CONNECTIVITY**
MicroStrategy’s multi-source engine lets analysts and business users seamlessly access and blend together data stored across multiple sources. It optimizes performance by pushing complex calculations down to the database whenever possible.

**PARALLEL PROCESSING**
MicroStrategy accelerates in-memory analytics using powerful parallel processing across large in-memory cubes partitioned across multiple CPU cores. The ability to execute jobs and render data parallel to the in-memory layer leads to much faster response times.

**MULTI-LEVEL CACHING**
The cache manager dynamically builds a multi-level cache based on user query behaviors. With this dynamic approach, frequent requests are served directly from memory, which boosts response times and helps maintain high performance as the system scales.

**DYNAMIC SOURCING**
Dynamic sourcing can greatly improve report performance by automatically sourcing data from an Intelligent Cube whenever possible, rather than executing against the data warehouse.

**MULTI-NODE SERVER CLUSTER**
MicroStrategy’s clustering capabilities automatically balance processing loads across each MicroStrategy Intelligence Server in the cluster, helping to optimize report performance and ensure the availability and uptime of the deployment.

**PLATFORM ANALYTICS**
MicroStrategy offers tools that allow administrators to monitor every environment in a MicroStrategy deployment and quickly view usage patterns, system resources, uptime, and alerts across environments.

**MULTI-TENANCY**
With multi-tenancy, organizations can share a single application across thousands of tenants and create tenant-specific applications. Shared projects can be personalized with custom branding, logos, and naming conventions.

**USAGE TELEMETRY**
Telemetry information that reveals how systems and facilities are being used across an enterprise. It provides insights into the activities of Badge users, such as the logical applications and physical resources they access.

**COMPUTE ELASTICITY**
With MicroStrategy’s cloud deployment options, organizations of any size can launch fully configured and ready-to-use enterprise analytics and mobility projects, and can easily resize them as requirements change.
MicroStrategy’s Application Services empower organizations to harness the full potential of their enterprise assets. It provides capabilities that help users uncover valuable insights from their data more rapidly, allows them to take informed action, and enables greater levels of sharing and collaboration. Application Services can publish personalized information to all constituents and improve an organization’s overall security posture.

**INTELLIGENCE**
The Intelligence Server is the architectural foundation of the MicroStrategy platform and provides organizations the essential capabilities for configuring, deploying, and managing enterprise applications in high-scale production environments.

**ANALYTICS**
The Analytics Server creates and manages Intelligent Cubes, multi-dimensional cache structures that speed up access to frequently used data. It also enables advanced and predictive analytics with R integration and support for third-party data PMML tools.

**TRANSACTION**
Transaction Services allow organizations to leverage write-back functionality in documents, dashboards, and mobile apps to approve requests, submit orders, change plans, and capture information.

**DISTRIBUTION**
Distribution Services enables a robust, scalable, and efficient rollout of automated reporting to corporate users, external partners, and customers, and can distribute millions of personalized reports within a specified time frame.

**TELEMETRY**
Telemetry Services generate real-time data on enterprise access and authentication by automatically capturing and analyzing data from identity clients and servers.

**IDENTITY**
Identity enables administrators to create, configure, distribute, and manage digital identity badges for users, providing a convenient and secure alternative to existing authentication solutions.

**COLLABORATION**
Collaboration gives users the ability to communicate with each other by exchanging messages, tagging users, and sharing filter selections.

**GEOSPATIAL**
MicroStrategy’s Application Services include integration with Mapbox, enabling users to build interactive, highly performant maps.

**LANGUAGE**
MicroStrategy supports the querying and processing of natural language requests made in voice or text form, and it can translate analytical insights into text-based narratives using NLG services.
An enterprise data implementation can be extremely complex, involving disparate data systems, hundreds of table structures, and inconsistent terminology. MicroStrategy’s Intelligence Platform abstracts this complexity into a single, object-oriented schema which models an organization’s business using terms that analysts can easily understand. Every object is uniquely defined within a single logical model, eliminating the potential for data conflicts and ensuring a single version of the truth.

MODELS
A logical data model represents the definitions, characteristics, and relationships of data across an enterprise environment in unambiguous business terms.

ATTRIBUTES
Attributes give the business model context for reporting on and analyzing information. In MicroStrategy, attributes are identified by the column headers of the reports.

METRICS
Metrics are the business measures and key performance indicators used in an analysis.

TEMPLATES
Templates specify the layout and formatting of a report, and the information the report should retrieve from data sources.

FILTERS
Filters limit the data extracted from the data source in order to present relevant information to the end user.

SETS
A dataset can be a MicroStrategy report or Intelligent Cube, or data imported directly from an external data source.

VISUALIZATIONS
Visualizations display data using a variety of charts, graphs, and grids. They provide a multitude of ways for users to present and interact with the data in a dossier or dashboard.

PROMPTS
A prompt is a question presented to a user to help shape a report analysis. Based on the user’s input, the report returns different data from the data source.

FORMS
Forms provide mobile write-back capabilities, powered by Transaction Services, that let users update systems of record from the field.
Intelligent Enterprises are increasingly dependent on large, federated collections of data. Organizations need mechanisms to help certify their data and enforce a single version of the truth. With this increasing scale, organizations also need to publish and package data in ways that simplify the development process and ensure high performance. MicroStrategy’s Intelligence Platform supports a range of data storage techniques and administrative capabilities that help expedite development and ensure scalable performance.

**VIEWs**
Views are virtual tables, built on top of other tables. They essentially "point" to data elements that may be stored across multiple tables and databases. Views simplify the user experience by abstracting the complexity of the underlying data systems.

**CUBES**
A MicroStrategy cube is a multi-dimensional set of data that can be shared as a single in-memory copy, among many different reports created by multiple users. Stored as an in-memory cache structure, cube data can be pulled into analysis quickly, avoiding the delay of database queries.

**MARTS**
A data mart is a subset of data derived from a primary data warehouse. It’s a table or collection of tables containing core information that analysts require for reporting efforts. These smaller, more relevant collections of data increase report performance and help analysts operate more efficiently.

**DICTIONARY**
Dictionaries are glossary-style resources that give developers descriptions of all the available MicroStrategy objects and their dependencies. Data Dictionaries guide developers through large MicroStrategy environments so they can quickly locate the correct elements for their analyses.

**LINEAGE**
Lineage helps organizations ensure enterprise-wide data governance by letting users analyze the original sources of the data shown in their analyses. This capability helps administrators certify analytics applications and ensures a single version of the truth.
Containers of actionable intelligence, packaged and published to the enterprise and departments.

Organizations have diverse arrays of constituents, and each has unique requirements and preferences for how they receive and interact with intelligence. MicroStrategy gives organizations a tremendous range of options for how they publish, consume, and share analytical insights. MicroStrategy enables users to interact with analytics in the form of intuitive dossiers, interactive dashboards, or embedded analytics in third-party apps and websites. In addition, organizations can easily publish production-ready financial reports, business scorecards, invoices, statements, and business documents.

**Dossiers**
Dossiers are intuitive, interactive applications that organize intelligence in a familiar chapter and page structure. Users can easily navigate through reports and visualizations, share insights, and collaborate with colleagues.

**Dashboards**
Dashboards are interactive displays that provide at-a-glance views of business performance. Dashboards combine visualizations, grids, and other visual components in a simply designed layout.

**Documents**
Report documents consolidate and present business information in a wide variety of formats including grids, graphs, banded reports, scorecards, invoices, and business statements.

**Distributions**
Distributions automatically deliver personalized documents, reports, and dossiers to thousands of users across the enterprise based on user-defined parameters.

**Custom Apps**
The MicroStrategy Software Development Kit (SDK) makes it easy to incorporate MicroStrategy analytics functionality into other corporate systems and third-party applications.

**Web Services**
MicroStrategy Web Services enable developers to directly embed the full suite of MicroStrategy functionality into any web application or portal.

**Data Services**
MicroStrategy can act as a data service, where it serves as a backend data hub enforcing a single version of truth while third-party tools provide the front-end interface.

**Cards**
Cards are objects that provide at-a-glance access to KPIs on highlighted terms within a web browser.
With ever-increasing volumes of data stored in more systems and accessed by more people on more devices, businesses are increasingly susceptible to breaches, fraud, and abuse. Every organization needs a strategy to safeguard its data. MicroStrategy’s object-oriented, schema-based framework enables a powerful set of capabilities for authenticating users, defining their functional privileges, and gating the data they’re allowed to access.

**LIBRARY**

The MicroStrategy Library is a secure, personalized portal for every end user to access all their BI content in dossiers. End users can log in to the MicroStrategy Library to find a list of all dossiers to which they have access.

**USERS**

From an administrative perspective, a User represents a person who uses the MicroStrategy features. Each User is prescribed a set of permissions and privileges appropriate for their role.

**GROUPS**

A User Group is a collection of users that share a common set of privileges and permissions. User groups provide a convenient way for administrators to manage a large number of users.

**BADGES**

Digital Badges secure MicroStrategy applications by adding a layer of multi-factor authentication to the login process, and they can be used to gate user access even further based on location and time.

**PRIVILEGES**

Privileges give users access to specific application functionality. MicroStrategy employs over 160 privileges that can be assigned to user groups, user roles, and individual users.

**PERMISSIONS**

Permissions define the degree of control users have over individual objects within a MicroStrategy environment, such as the abilities to browse, read, write, control, use, or execute.

**ROLES**

Security roles enable administrators to assign unique sets of privileges to users on a per-project basis.

**SECURITY FILTERS**

Security filters control data access to ensure that each user or user group only has access to data that is appropriate for their role within the organization.
Clients that enable intuitive, fast, and enjoyable analytics and mobility experiences across web, desktop, and mobile interfaces.

With MicroStrategy’s comprehensive range of client products, organizations can deliver analytical experiences to every user through interfaces tailored to their needs. Business users, developers, and analysts can fully engage with data through the Desktop and Web interfaces. Employees on the go can interact with analytics in real time on their mobile devices. IT developers and administrators can create logical data models with Architect and deliver custom applications using a powerful set of APIs. MicroStrategy can even empower passive users by embedding contextual insights directly into their browser-based content.

**ARCHITECT**
A BI development tool that maps the physical structure of one or more data sources to a single, logical, object-oriented metadata model.

**DESKTOP**
A free self-service data discovery tool that allows business users to connect to multiple data sources, create dossiers and dashboards, and make more informed decisions.

**WEB**
A zero-footprint web interface that allows users to access analytics on multiple browsers and design, interact with, and consume information via pixel-perfect reports, documents, or dashboards.

**REPORTER**
A consumer license that allows end users to view, execute, and interact with dashboards, reports, and documents via MicroStrategy Web.

**MOBILE**
MicroStrategy Mobile allows organizations to deploy mobile analytics and build powerful productivity apps that deliver native, secure, mobile-optimized experiences.

**COMMUNICATOR**
Communicator provides analytics, identity discovery, mustering, and two-way communication features that help optimize productivity for Badge users.

**BADGE**
Replace physical badges, key fobs, and passwords with digital credentials on a branded mobile app that are securely linked to an individual’s unique privileges and access rights.

**HYPER**
HyperIntelligence drives business productivity and makes analytics accessible to every user by embedding contextual insights directly into browser-based content.

**APPLICATION**
Allows organizations to build a governed, scalable, secure, and highly-performant environment that can be used to build and deploy custom branded applications for Web or Mobile.
Intelligence Everywhere

By empowering every user in every job function with highly customized, role-specific intelligence applications, an Intelligent Enterprise can dramatically boost efficiency and productivity throughout its organization and gain a competitive advantage in an increasingly challenging business environment.
An Intelligent Enterprise must empower every user role, ranging from executives and business users engaged in self-service data discovery, to analysts and data scientists building analytics and mobility applications for their departments, to developers producing highly-specialized intelligence applications for enterprise-wide deployment. MicroStrategy’s open architecture enables users to work with the tools they love on a platform they can trust.

**Roles**

**EXECUTIVES**

The Business Executive sets the analytics and mobility strategy for the function. They establish the function’s priorities, programs, budget, and plan, while maintaining justification for the platform assets and resources by tracking and publishing adoption, impact, and return-on-investment.

**BUSINESS USERS**

Explore and interact with published analytics. Enhance applications using self-service data discovery to create custom groups, derived metrics, and dynamic filters. Foster adoption through collaboration and sharing.

**ANALYSTS**

Create, share, and maintain intelligence applications for the department using enterprise security, data, and application objects to help ensure a single version of the truth.

**DATA SCIENTIST**

Build and publish advanced statistics, predictive models, and machine learning algorithms using libraries such as TensorFlow, R, Python, and MATLAB, that are leveraged by Analysts and Developers.

**DEVELOPERS**

Inject, extend, and embed intelligence into custom and third-party applications using programming languages such as JavaScript, Java, PHP, Python, SWIFT, Objective-C, C#, .Net, and other common languages.

**Tools**

- Email
- Google Search
- Excel
- PowerPoint
- Power BI
- Qlik
- Tableau
- Alteryx
- Paxata
- Trifacta
- Datawatch
- Jupyter
- Matlab
- R Studio
- SAS
- SPSS
- Eclipse
- Python IDE
- Visual Studio
- xCode
From enterprise reporting and data discovery to mobile productivity and real-time telemetry, only MicroStrategy gives organizations the full breadth of capabilities they need to transform their data into actionable intelligence.

**ENTERPRISE REPORTING**
MicroStrategy addresses the full spectrum of enterprise analytics needs, from self-service data discovery, to advanced and predictive analytical tools for the data scientist, to the automated distribution of personalized reports and dossiers to thousands of users across an organization.

**BIG DATA**
With its wide range of out-of-the-box connectors, MicroStrategy enables organizations to leverage their existing investments in big data technology and directly connect to Hadoop distributors like Cloudera, Hortonworks, MapR, IBM BigInsights, and Pivotal.

**DATA DISCOVERY**
MicroStrategy's self-service analytics capabilities give business users the freedom to access, explore, and analyze data on their own, without sacrificing the data governance, scalability, or security of an enterprise analytics environment.

**EMBEDDED ANALYTICS**
MicroStrategy embedded analytics empower organizations with highly customized, functional, and powerful web and mobile reporting applications that reflect your brand and suit your business needs.

**MOBILE ANALYTICS**
Organizations can leverage existing visualizations, reports, and dashboards to instantly deploy mobile BI. Organizations can empower their employees to make better decisions from anywhere by putting up-to-date intelligence directly into their hands.

**MOBILE PRODUCTIVITY**
Specialized mobile productivity apps can bring insight and action to the frontlines of business. Industry-leading capabilities, such as transactions, multimedia, and personalized alerts empower mobile app users to make better decisions, take instant action, and be more productive from any location.

**EXTERNAL APPS**
The MicroStrategy SDK gives developers tremendous flexibility to refine and customize their mobile apps to deliver polished user experiences that closely reflect corporate branding standards, and then publish those apps to public or internal app stores.

**MOBILE IDENTITY, SECURITY AND COMMUNICATIONS**
Organizations can readily deploy digital credentials to employees, customers, suppliers, and partners. These credentials seamlessly sync with existing physical access control systems (PACS), logical systems, and user directories to streamline enterprise access and authentication and improve user productivity.

**MOBILE TELEMETRY AND IOT**
MicroStrategy telemetry and IoT solutions enable organizations to get real-time data on enterprise access and authentication. A rich source of enterprise intelligence, this telemetry data is the key to unlocking a smarter, more productive workforce.
Let every user consume and interact with intelligence on the devices best suited for their roles and work flows.

The MicroStrategy Intelligence Platform enables organizations to project intelligence throughout their ecosystems, empowering every employee, partner, customer, and constituent with highly customized business applications that maximize the value of information and accelerate the pace of business.

Delivering intelligence throughout an enterprise is not a one-size-fits-all proposition. Consider the diverse range of users and work flows within the sales function. Sales executives might benefit from a mobile dossier summarizing essential KPIs, sales analysts could be most effective using web-based data discovery tools, and the sales team could boost its productivity using specialized mobile apps.
A tightly integrated architecture that delivers all the essential capabilities for a successful Intelligent Enterprise.

Transforming into an Intelligent Enterprise requires more than nice-looking data visualizations. As reflected below, an enterprise-grade Intelligence platform must deliver a broad, unified spectrum of capabilities. It must provide a secure, industrial-strength infrastructure that meets the on-going needs of the IT organization. At the same time, it must deliver the advanced functionality, openness, and ease-of-use expected by today’s technology-savvy end users.

The MicroStrategy Intelligence Platform is built from the ground up for enterprise-scale operation, and the Map of the Intelligent Enterprise reflects our ongoing commitment to your success.

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<th>SCALABILITY</th>
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<td>Share sophisticated personalized applications, built on billions of rows of data, with 100,000s users while maintaining sub-second responses.</td>
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<th>STABILITY</th>
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<td>Deploy applications on a robust architecture with hot, warm, and cold failover strategies, clustering, and reliable governors combining to avert system crashes under peak usage and data loads.</td>
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<th>SECURITY</th>
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<tr>
<td>Facilitate seamless managed access to enterprise assets, controlled via a granular security model, via convenient multi-factor digital credentials.</td>
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</table>
Technology and technique

Delivering the Intelligent Enterprise requires more than exceptional technology; it also requires exceptional technique.

To maximize the utility of the MicroStrategy Intelligence Platform, an organization must develop a robust Intelligence Center that puts the necessary best practices, personnel, and deployment architectures in place to ensure success.

MicroStrategy Consulting and Education teams offer a comprehensive set of programs, services, and training to help your organization achieve its goals.
Our Consulting team offers a suite of Development and Foundation programs designed to guide your organization in the deployment, development, and operation of its Intelligent Enterprise.

The MicroStrategy Intelligence Platform includes a wealth of integrated capabilities, features, and adjustments that organizations can leverage to maximize performance, simplify administrative tasks, and streamline lifecycle management. A proper Intelligence Program will give your organization a sound foundation for successful deployments, optimized systems, and satisfied constituents.

**DEVELOPMENT PROGRAMS**

These program offerings can help your organization create powerful analytic and mobile intelligence applications and deploy them throughout your enterprise.

**APPLICATIONS**

Publish an application framework and best practices that enable all functions to build consistently impactful applications. Establish a foundation of shared components to speed departmental application development.

**MOBILITY**

Establish a framework, discipline, and architecture so Analysts and Developers can build and deploy mobile applications. Establish processes, protocols, and programs so the Intelligent Enterprise can consume apps on mobile devices.

**INTELLIGENCE**

Inject artificial intelligence, machine learning, deep learning, and predictive analytics algorithms into enterprise applications and federated datasets. Publish and curate a library of models for Analysts and departmental Data Scientists.

**SERVICES**

Convert datasets and application components into published services for Developers to inject intelligence into their custom applications. Publish samples and documentation and empower Developers to use their preferred programming tools and languages.

**DEPARTMENTAL**

Empower departments to rapidly build applications on federated trusted data using MicroStrategy or other tools (i.e. Tableau, Power BI, Excel). Orchestrate collaboration with the intelligence center so datasets are continually appraised, optimized, and updated.

**ENTERPRISE**

Harness the power of your other BI investments and extend the value to all constituents on various devices. Migrate legacy SAP BusinessObjects and IBM Cognos applications onto a modern platform.
FOUNDATION PROGRAMS

These offerings can help your organization architect, install, configure, and deploy an Intelligent Enterprise architecture optimized for your enterprise environment.

PLATFORMS
Architect, install, configure, and deploy the Intelligent Enterprise architecture. Design the optimum architecture to deliver security, stability, scalability, and economy by combining platform capabilities with on-premises, cloud, and/or hybrid services.

ADMINISTRATION
Monitor, support, and maintain the Intelligent Enterprise architecture to facilitate ongoing security, stability, and economy. Monitor system use, automate tasks, and implement upgrades to help ensure an optimal, reliable, and modern user experience.

DATABASE
Configure the intelligence platform to optimize performance against various database technologies (i.e. Oracle, SQL, Snowflake, HDFS), including relational, OLAP, big data, unstructured, vector, and streaming platforms. Track throughput and performance, and provide architecture design and optimization recommendations to the database administrator.

ANALYTICS
Design the optimal federated enterprise data layer and publish it to Analysts, Data Scientists, Developers, and Architects. Work with Departments to evolve the data architecture to meet changing business needs.

IDENTITY
Design and publish a digital identity architecture that enables enterprise-wide multi-factor geo-specific digital authentication for internal and external users. Implement the digital identity architecture and gateways on top of all logical and physical assets.

SYSTEMS
Integrate data from enterprise systems (i.e. ERP, CRM, MRP, HR) and blend with other data sources to build custom analytics and mobility applications. Design, implement, and optimize an integrated architecture to overcome the reporting limitations and extend the capabilities of enterprise systems of record.
An Intelligent Enterprise must support all modes of analytical operation, from business users performing ad-hoc data discovery, to departmental analytics and reporting, to the enterprise-wide deployment of specialized intelligence applications. This sort of flexibility requires a highly adaptive and scalable environment for development and deployment.

**ARCHITECTURE**

The MicroStrategy Intelligence Architecture enables organizations to support diverse modes of operation, from departmental implementations to enterprise-wide deployments, while ensuring performance, data governance, and security.

**DEPLOYMENT**

MicroStrategy’s open architecture gives organizations a tremendous range of deployment options, from dedicated on-premise implementations to virtualized cloud deployments, and everything in between. You can deploy on your choice of infrastructure today, and easily move to a different choice as requirements evolve.
MicroStrategy Education offers a comprehensive set of training and certification programs to equip your team with the expertise, technique, and best practices required for these critical Intelligence Center roles.

DELIVERING POWERFUL ANALYTICS AND MOBILE APPS TO THOUSANDS OF CONSTITUENTS WHILE MAINTAINING ENTERPRISE-GRADE LEVELS OF PERFORMANCE, RELIABILITY, AND SECURITY IS A CHALLENGING ENDEAVOR. AN INTELLIGENT ENTERPRISE MUST ENSURE THAT THE APPROPRIATE PERSONNEL AND BEST PRACTICES ARE IN PLACE TO SUCCESSFULLY ACHIEVE ITS OBJECTIVES.

An organization might begin its intelligence journey with a small departmental initiative, but as the scale, sophistication, and criticality of that deployment increases, it will need to build an Intelligence Center—a team of expert architects to properly maintain the platform and intelligence processes.

INTELLIGENCE DIRECTOR
Create Intelligence environments by deploying the Intelligence Architecture, supervising the Intelligence Center, and running Intelligence Programs to support enterprise and departmental analytics and mobility apps for all constituents.

APPLICATION ARCHITECT
Create, share, and maintain intelligence applications for the enterprise. Publish standardized application objects, and promote departmental applications from self-service into the enterprise environment.

ANALYTICS ARCHITECT
Create, publish, and optimize a federated data layer as the enterprise’s single version of the truth. Build and maintain the schema objects and abstraction layer on top of various, changing enterprise assets.

MOBILE ARCHITECT
Build, compile, deploy, and maintain mobile environments and applications. Optimize the user experience when accessing applications via mobile devices. Integrate with preferred VPN, SSO, and EMM protocols.

IDENTITY ARCHITECT
Build, compile, deploy, and maintain digital identity applications integrated with enterprise directories. Digitally secure all existing and new logical and physical assets. Integrate authentication, communication, and telemetry into other applications.

SERVICES ARCHITECT
Inject, extend, and embed analytics into portals, third-party, mobile, and white-labelled applications. Publish web services and data services for use by Developers in building departmental applications.

DATABASE ARCHITECT
Design and maintain database enterprise assets. Optimize database performance and utilization based on query type, usage patterns, and application design requirements.

PLATFORM ADMINISTRATOR
Install and configure the Intelligence Architecture on-premises and/or in the cloud. Maintain the security layer, monitor system usage, and optimize architecture in order to reduce errors, maximize uptime, and boost performance.

SYSTEM ADMINISTRATOR
Set up, maintain, monitor, and continuously support the infrastructure environment through deployment on AWS, Windows, or Linux, all while optimizing performance and controlling costs.

MicroStrategy Education offers a comprehensive set of training and certification programs to equip your team with the expertise, technique, and best practices required for these critical Intelligence Center roles.