



Best Practices Guide

Ramping Up with MicroStrategy AI

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Introduction

The Best Practices Guide provides actionable insights and strategies to effectively implement MicroStrategy AI capabilities, such as Auto Answers, Auto Dashboards, and Auto Bot, to maximize their potential within your organization. Whether you're just starting out or looking to optimize your current use, this guide covers essential planning, data preparation, customization, testing, and deployment practices to ramp up the use of AI for maximum business outcomes.

MicroStrategy AI offers a range of generative AI-powered capabilities designed to empower users of any skill level. For business analysts, Auto Dashboard accelerates the generation of new analytic content. For business users and content consumers, MicroStrategy AI provides Auto Answers and the standalone MicroStrategy AI Bot, making it easy for users—regardless of their analytic skill level—to interact with data using natural language.

Auto for Business Users

Getting Started with Auto Dashboard

Auto Dashboard is your top collaborator on visualizations, dashboards, reports, or entire apps. Ask a question and watch content appear on your screen in seconds. Imagine the data you want and the style you prefer. Auto will adhere to all your design specifications, consider previous design choices, and ensure security compliance.

- **Start Simple:** Begin with simple, directional, and foundational questions to establish a baseline understanding of the data. Once Auto Dashboard generates initial visualizations, you can:
 - Manually edit the visualizations to further refine and customize them.
 - Ask Auto Dashboard more detailed or specific follow-up questions for a more nuanced analysis and to generate additional pages and visualizations.
- **Anticipate User Questions during Consumption:** If users will leverage Auto Answers when analyzing the dashboard, anticipate the types of questions they will ask as you decide what metrics to include on the page.
 - Users can only ask questions relevant to data on the single page of the dashboard they are currently viewing. A metric must be on the dashboard page for Auto Answers to use it. You can place it in a tooltip or an information window, or in a hidden grid, if you don't want it displayed directly on the page.

To optimize your success in designing pages with Auto Dashboard, consider the following best practices:

- **Utilize the AI-Generated Suggestions:** The AI-generated suggestions provide a good baseline and show you how questions that are phrased precisely can generate the best responses. They also provide instant visibility of the types of analyses that are possible with your dataset. Use these as a better starting point, than phrasing your own questions.
- **Build for All Users:** Make sure you build the dashboard at a level that is useful to all users and consider their level of access to the data. For example, if you have a visualization that shows a metric by 'territory managers', consider that a territory manager user may only have access to see their own, and therefore will just see a single number.

- **Find Commonality Among Users:** As you are building your dashboard, find a correlation between the business users you are working with and focus the scope of the data based on your audience. This way, the dashboard is not too broad or overwhelming.
- **Ensure Metric Visibility:** Make sure to have all relevant metrics visible in the Dashboard.
- **Define Necessary Derived Objects:** Define and include necessary derived objects, such as:
 - Profit Margin
 - Units Returned
- **Remove Redundant Metrics:** Remove any self-generated “row count metrics” after loading your dataset in memory, as these might be used in Auto Dashboard.

Prompting with Auto Dashboard

Auto Dashboard is engineered to generate the most relevant visualizations based on the dataset(s) and user input. However, there are certainly best practices to optimize the results and insights generated by Auto Dashboard, as it is designed to answer a wide range of business questions based on the data provided.

This includes, but is not limited to, the following examples:

1. Retail and Sales Analysis:

- "Revenue and profit analysis based on product category, and what are the trends over time?"
- (Ensure you have category and time-related attributes, and revenue and profit metrics in the dataset).

2. Finance and Banking:

- "How do loan defaults compare across different regions, and what are the associated risk factors?"
- (Your dataset should have regional attributes, default rates, and risk-related metrics).

3. Healthcare:

- "Treatment success rates analysis across regions and hospitals over the years."
- (Ensure your dataset has treatment types, region, hospital names, time attributes, and treatment outcome metrics).

4. Real Estate:

- "How have property values fluctuated in urban vs. suburban areas in different metropolitan areas over the last few years?"
- (Your dataset should contain property locations, community type, time attributes, and property value metrics).

5. Education:

- "How do student performances correlate with different teaching methods across schools?"
- (Ensure your dataset has school and teaching method classifications as attributes, and student performance metrics).

6. Travel and Tourism:

- "Travel destination analysis based on factors like tourist count, social development, price, and time."
- (Dataset should include destination name, time attributes, tourist count, social development score, price range, and other related metrics).

7. Telecommunications:

- "Regional mobile data usage analysis, and how has this trended over the past few years?"
- (Dataset should include regional and year attributes, and data usage metrics, and maybe other related metrics like price, and attributes like mobile plan).

FAQs

How was the recommendation generated? Is there any limit to the user input? How can I master the user input to generate the best Dashboard?

Yes, there is a character limit for user input when using the Auto Dashboard feature. Users are limited to a maximum of 1,000 Latin characters for their queries. However, in terms of the nature and complexity of the questions, there is no specific limit. Users have the flexibility to pose either high-level, broad, and overarching questions that provide a general perspective, such as "Sales analysis" and "Trend analysis," or detailed descriptions that specify attributes and metrics they are interested in visualizing.

How was the recommendation generated?

The recommendation feature of the Auto Dashboard is an intelligent system that analyzes the dataset(s) to suggest potential analyses. The Auto Dashboard begins by scrutinizing the dataset's object names and data types, identifying key attributes, metrics, and potential relationships. For instance, if the dataset includes attributes like "Product Category" and metrics like "Sales," a potential recommendation could be "Sales Analysis by Product Category."

Does Auto Dashboard work against multiple datasets?

Yes, the Auto Dashboard supports and provides recommendations against multiple datasets. However, there are specific considerations and limitations in its operation:

- **Single Dataset Selection:** To avoid issues such as cross joins or potential performance impacts, the AI Auto Dashboard selects only one dataset for generating a Dashboard page. The chosen dataset is determined based on its relevance to the user's input, or the recommendation selected by the user.
- **Dynamic Dataset Selection:** Each time a user creates a new page using the AI Auto Dashboard with a different question or recommendation, the system reassesses available datasets and selects the most appropriate one for the query. Consequently, different pages within the same Dashboard could be based on different datasets, depending on the nature of each query.
- **Avoiding Data Conflicts:** Restricting each page to one dataset ensures data integrity and prevents conflicts or misinterpretations that could arise from merging multiple datasets.
- **Recommendation Adaptability:** The AI Auto Dashboard adjusts its recommendations based on the datasets available. If multiple datasets are present, it may offer diverse recommendations tailored to the unique attributes and metrics of each dataset.

Getting Started with Auto Answers and Bot

Auto Answers and Bots automatically provides answers to questions for self-service insights, explaining the "why" behind the data. Ask for specific data points, summaries, or about what-if scenarios in real time. AI simplifies analytics and lowers the barrier to accessing data.

Prompting with Auto Answers and Bots

To optimize success when asking questions using Auto Answers or standalone Bots, consider the following best practices:

- **Understand the Data:** Ensure you understand the data and the context around it and use this information to formulate business-driven questions.
- **Pose One Question at a Time:** Refrain from submitting multiple business questions in one step.
 - Example: Rather than asking, "Which store had the highest profit and which category had the lowest units sold?", split these questions and submit them separately.
- **Avoid Ambiguity:** Ask specific questions and include the necessary criteria and qualifiers to narrow down the answer.
 - Example: If you have a dataset with multiple years, rather than asking, "What is the revenue for April?", be more specific and indicate which year.
- **Leverage the List of Suggested Metrics and Attributes:** This helps Auto Answers retrieve the precise information you're interested in and removes ambiguity in cases where several metrics be named similarly in the dataset.
- **Precise Phrasing:** Use exact terms like "highest profit" instead of "best performance".
- **Specify an Attribute Form:** When available in the dataset, specify an attribute form when filtering on an attribute. For example, "List the Store IDs with the highest margins".
- **Identify Visualizations Clearly:** With Auto Answers, it helps when visualizations in your page are clearly identified with a unique name. You can refer to specific visualizations in your questions to gather additional insights within their specific context.
- **Expect Slight Variations in Responses:** Due to the nature of AI, you might receive a slightly different visualization and response when asking the same question, though both are accurate.
- **Specify Date Ranges:** Use specific time frames like "July 2023".
- **Prompted Attributes and Metrics:** Instruct Auto Answers on which data points it needs to use to generate results.
- **Contextual Prompts:** Use the correct attribute names from your data.
- **Syntax Matters:** Word order can influence results. Consider this example comparing two versions of the same question. The first one is ambiguous and does not return an expected answer, whereas the second is precise and generates a successful response.
 - Ambiguous question: "Based on Continuous Service Date list all workers who in July, August and September celebrate 5th, 10th and 15th work anniversary. For each group give me total number of workers. Do not include contingent workers."
 - Precise Question: "Based on Continuous Service Date create 3 groups of workers, one for those that celebrate their 5th anniversary in Q3, one for those that celebrate a 10th anniversary in Q3 and one for those that celebrate a 15th anniversary in Q3. Please also list out the workers in each group."
- **Clear Chat History Regularly:** Clear the chat history regularly to improve performance and to discard unnecessary context in the conversation with Auto.
- **Correlation Limitations:** Correlation is currently supported only between a metric and an attribute. Correlation between two metrics will be available in a future product release.

Creating Bot and Configuring Auto

Getting Started with Auto Bot

Many organizations find it effective to drive AI adoption by introducing MicroStrategy Auto Bot, as it can act as an assistant to answer questions on any dataset, and it can easily be embedded into any application. To drive the most value from the start, it's best to strategically focus on a specific use case within the organization, following these steps:

- **Define Clear Objectives:** Establish the purpose and goals of the bot. Understand the business problem it aims to solve.
- **Meet with Business Users:** Collaborate with those who deal with the use case daily to create relevant scenarios for the bot's audience.
- **Create Detailed Use Cases:** Document specific scenarios the bot will handle. This helps design effective conversation flows and ensures comprehensive coverage.
- **Understand User Needs:** Gather detailed requirements from end-users to ensure the bot meets their expectations.
- **Design Conversational Flows:** Map out conversation paths, including prompts, user inputs, and bot responses.

Customization and Knowledge Base

By providing more business context, bots become smarter, contributing to increased usability and overall efficiency. MicroStrategy AI offers features for customization, including the ability to import business knowledge assets for additional context (e.g., business acronyms, common calculations, regions, product names, etc.). This ensures that generated answers can be tailored to the specific needs of the business.

- **Branding:** Most companies have a distinct brand, look, feel, and culture. Instill these elements in the bot both visually and in its responses.
- **Business Terminology:** Fully utilize the Knowledge Asset feature to provide the bot with a dictionary of business terminology and synonyms, allowing business users from different departments to communicate in their daily language, even if attributes and metrics in the dataset are named differently.

Dataset Preparation

It's important to tailor your dataset for optimal bot performance, ensuring accurate results:

- **Keep Your Dataset Focused:** Include only necessary attributes and metrics.
- **Standardize Naming Conventions:** Adopt consistent naming for tables, columns, and metrics to ensure the system correctly interprets user queries.
- **Cleanse and Normalize Data:** Ensure data is consistent and free from inconsistencies and missing values. Address outliers that could skew results, discussing exclusions as needed with your client.
- **Create Relevant Derived Metrics:** Develop metrics essential for answering specific business questions targeted at your audience.
- **Integrate Time Dimensions:** Incorporate time-based dimensions where feasible, such as YEAR 2024 and MONTH September.
- **Column Limits:** Maintain the number of columns (attributes and metrics) under 50 for easier management and performance optimization.
- **Units and Currencies:** Clearly indicate monetary values or units in metrics to prevent misinterpretations.

Data Access and Security

- **Security Measures:** Implement robust security measures to safeguard sensitive business data.
- **Access Controls:** Define access controls and permissions to ensure that only authorized personnel can access the dataset.

AI Projects

User Acceptance

Ensuring user acceptance is critical for the successful implementation of AI capabilities.

- **Data Validation:** Create a parallel page with a list of the business questions and certified answers from the analyst team, allowing testers to feel confident in the bot's answers.
- **Feedback:** In addition to testing, collect feedback for the improvement of both answers and the bot's personality and branding.

Deployment Plan

A well-structured deployment plan ensures a smooth rollout and effective utilization of the bot.

- **Sponsor Intro:** Have the business sponsor or lead user introduce the bot.
- **Resource Page:** Create a resource page that includes a description of the bot, relevant data, links to videos, and the bot itself.
- **Education:** Create short how-to videos or materials that include overview of the bot, its features, description of dataset, sample questions, and prompting technique.

- **Create a Feedback Loop:** Collect user feedback on bot responses and use it to identify areas for improvement. Set up procedures to update the dataset, customization, or knowledge assets based on this feedback.

FAQs

Does Auto support localization, and how?

Yes, the Auto Dashboard feature offers robust support for localization, ensuring seamless interaction for users from different linguistic backgrounds. Here's how the localization support works:

- **Multi-Language Understanding:** The AI Auto Dashboard can comprehend dataset object names in all languages supported by MicroStrategy. Whether your dataset includes attributes named in English, Spanish, Mandarin, or any other supported language, the AI Auto Dashboard recognizes and processes them.
- **Visualization and Title Generation:** Besides understanding multiple languages, the AI Auto Dashboard generates visualization titles and page titles in any language supported by MicroStrategy. This ensures outputs align with user linguistic preferences.
- **User Input Comprehension:** Designed to understand user inputs in any language supported by MicroStrategy, the AI Auto Dashboard processes questions or intentions posed in French, Japanese, or any other supported language to generate relevant visualizations.
- **Optimal Content Generation:** While the AI Auto Dashboard comprehends various languages, it's crucial for dataset objects to have clear, human-readable names. Clear naming enhances content relevance and comprehension.

Auto adheres to the user's locale settings in MicroStrategy, ensuring recommendations align with these settings.

Conclusion

By following the best practices outlined in this guide, organizations can realize the full potential of MicroStrategy AI's capabilities, such as Auto Answers, Auto Dashboards, and Auto Bot and drive business success. With careful planning, data preparation, thoughtful customization, rigorous testing, and strategic deployment, you can ensure a seamless integration of these AI-powered features into your workflow. This guide is designed to help you navigate this journey, ensuring you leverage MicroStrategy AI for maximum efficiency and impact.

To learn more about MicroStrategy and what our platform can do for you, visit microstrategy.com.