KIEFER CONSULTING **PLAYBOOK**

Getting Started with Microsoft Power BI

A practical primer for public-sector clients that want to get started with Microsoft Power BI

Gold Microsoft Partner

Microsoft

Leverage data, gain insights, make better decisions.

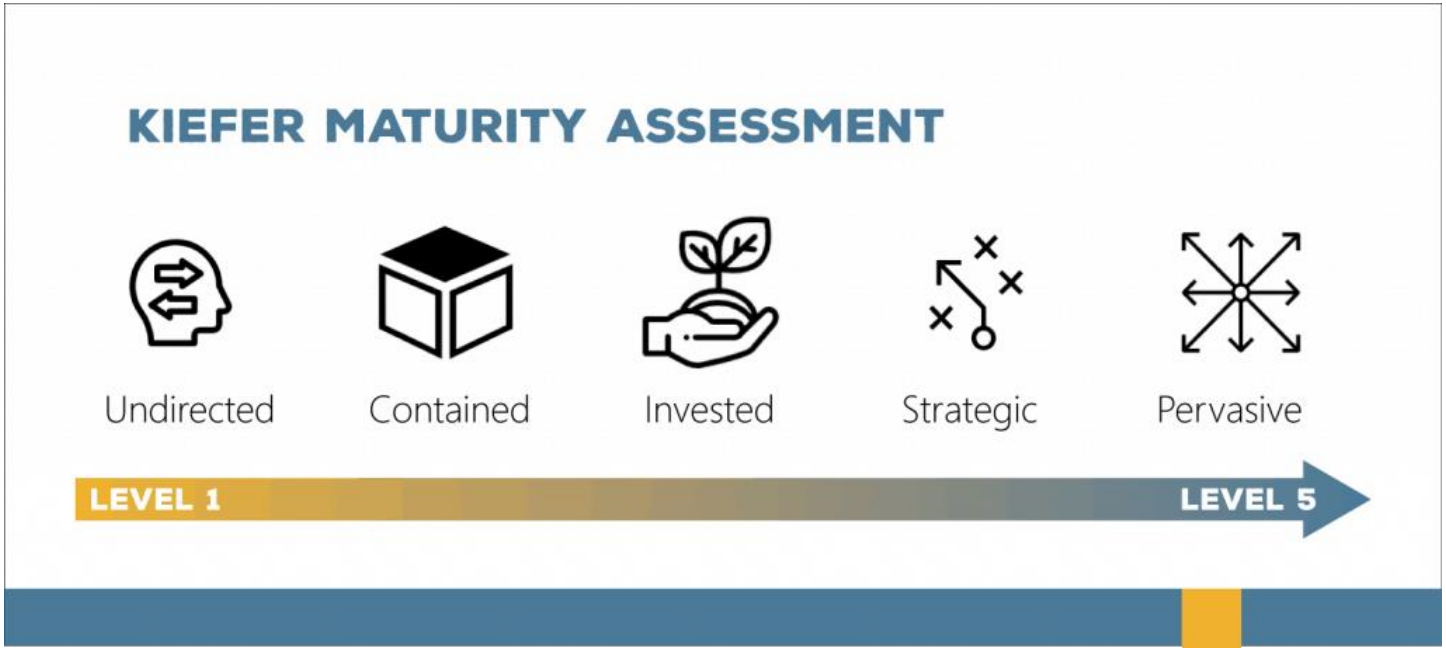
Kiefer Consulting has successfully helped clients do more with their data. In 2018, Kiefer made the decision to establish four practice groups to better serve our customers. The Data Analytics and Visualization practice area focuses primarily on helping customers leverage data, gain insights, and make better decisions.

Our practice is built on years of experience with Excel, SSRS, SQL, Power Query, and Power Pivot. When Power BI became more widely distributed and business intelligence was offered as a self-service tool, we began to get more calls about business intelligence services. Kiefer clients began expressing interest in Power BI dashboards so they could uncover relevant information in complex datasets. Organizations that were new to Power BI wanted us to help with a proof of concept so they could better understand what is possible with Power BI.

This eBook offers practical guidance on how to get started with Microsoft Power BI and offers tips that will help you in fostering a culture that leverages data to drive better decisions.

Assess Your Maturity

Before you get started with Power BI, you should determine where your organization may sit on the Kiefer Digital Maturity Model for Data Analytics and Visualization. We use the maturity roadmaps to assist clients in making a long-term plan for digital transformation. The maturity model helps identify the characteristics of an organization that has reached a specific level, and the anticipated challenges that may prevent them from advancing to a higher level. We also consider *appetite for change* and evaluate *appetite* against an organization's *ability to change*. Our team often works with clients to understand their current position on the maturity model and offer strategies and best practices to produce a plan and a roadmap.



See the Kiefer Digital Maturity Roadmap on the next page.

Data Analytics & Visualization
Maturity Roadmap

KIEFER CONSULTING

Level 1: Undirected
- Unaware of business intelligence (BI) tools or business value
- Data lives in spreadsheets
- Reports are built on request or handled on a one-off basis

Enterprise Value: Unrealized

Challenges at Level 1:
- Business is not making fact based decisions
- No internal expertise to aggregate data or visualize data
- Data quality is suspect

Level 2: Contained
- BI used in specific areas of the business
- No executive sponsorship or IT investment to leverage BI enterprise-wide
- Data is inconsistent

Enterprise Value: Low

Challenges at Level 2:
- Adoption is limited to early adopters
- Lack of standards
- A few great reports floating around, but capabilities are not consistent across the organization
- Some good examples of BI being used in areas of the business
- Data is available, however the organization lacks the tools and skills to leverage information for insights or decision making

Level 3: Invested
- BI is being applied to address specific business needs
- Establishment of a BI team that supports business units on a project-by-project basis
- Data quality shows improvement
- Data is being handled more strategically (Single-source-of-truth)

Enterprise Value: Increasing

Challenges at Level 3:
- User adoption is not occurring
- Training on the new system is lacking
- Outlier tools are still being used
- Standards for report type and reporting processes are undefined
- Certain BI features have still not been incorporated
- Self-service tools are non-existent
- Infrastructure does not support "big data" requirements

Level 4: Strategic
- BI is critical to executing business objectives
- BI Team is an important part of the business
- Data governance and policies are defined and enforced
- BI is being used to analyze data and improve processes
- Data warehousing/Cloud service being used

Enterprise Value: High

Challenges at Level 4:
- Use of the solution is increasing, however, change management is crucial to enterprise adoption
- Visualizations may not be consistent from department to department, making information more difficult to evaluate
- Self-service BI has not fully been embraced

Level 5: Pervasive
- BI capabilities are extended to suppliers, customers and business processes
- BI is being used across the enterprise
- Self-service BI enables users to see and share data
- Dashboards deliver business metrics
- BI is leveraged to make informed business decisions
- Infrastructure is designed to support large volumes of data

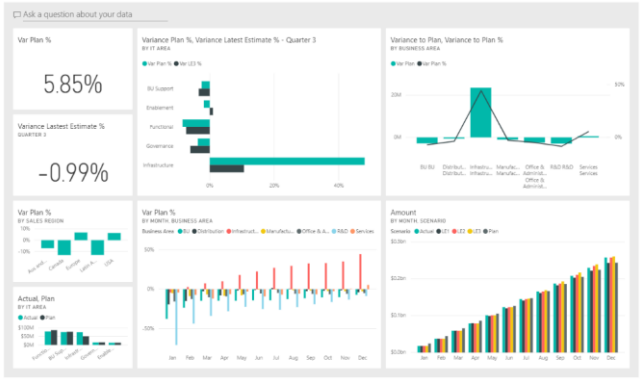
Enterprise Value: Critical

Challenges at Level 5:
- User adoption/Change management
- Organization fails to aggregate enterprise data insights to improve decision making, identifying trends, and improving legacy processes

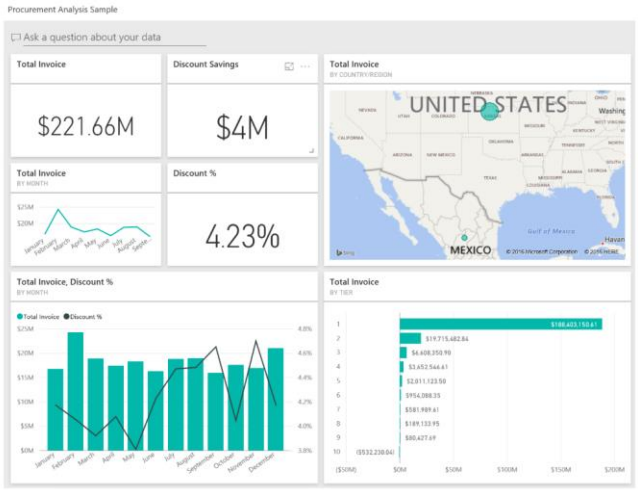
Top 5 benefits of Data Analytics & Visualization
- Turn insights into action
- BI helps improve data quality
- Better understand your business and plan for the future
- Quicker answers to business related questions
- Fact based decision making

Our Data Analytics & Visualization practice builds sophisticated, yet practical tools that allow organizations to better interact with their data and enables the extraction of meaningful insights.

Kiefer Consulting, Inc. - Confidential (Updated 1/8/19) www.kieferconsulting.com



IT Spend Sample



Procurement Analysis Sample

Human Resources Sample

Start with a Proof of Concept

As organizations explore possible applications for Microsoft Power BI, we often recommend a proof of concept (PoC). A PoC offers organizations the opportunity to see their data on a dashboard and data visualizations that have relevance to them. Demonstrations of dashboards that we have built for other clients do not resonate as well as a dashboard that presents visualizations that are relatable and utilize a client's *own* data.

We have discovered that PoCs that are built to answer three or four questions about a client's data will frequently result in the client asking to see the dashboard answer three or four more questions that they hadn't considered. This demonstrates the value of using actual data as opposed to using pre-built demos to show the capabilities of Microsoft Power BI.

Typical Power BI PoCs have included

- IT Spend Analysis
- Human Resources
- Opportunity Analysis
- Procurement Analysis

Let's Get Started!

Kiefer has worked with many clients to deliver a proof of concept. This is often a very logical place to start. By starting small, iterating, and then expanding, the organization can better understand where and how dashboards can provide benefit to the organization.

The Dashboard Readiness Assessment

Kiefer uses a proven methodology to initiate a Dashboard Development project. Here are a few of the high-level questions we ask in order to estimate level of effort, time, cost, etc.

- First, it's important to understand what you'd like to learn from your data. Think about the questions you'd like to answer with a visualization.
- Make all the data sets you'd like us to work with available to the Kiefer team. These are the data sets where the answers to the questions live. Sometimes the data may not all be in one data set – so, you'll need to provide us with access to all pertinent data. We can use a Power BI Gateway to interface with the data. Worst case, the data can be extracted and provided as a .CSV file.
- Kiefer will then look at the data, understand what data is important to present on a Power BI dashboard and determine how best to answer the questions using the dashboard. This step is important to determining the level of effort required to build the dashboards. By examining the data and understanding the insights you'd like to gain, we'll be able to estimate how many hours we'd need to deliver the dashboard solution.
- Based on the questions and the data, we'll give you a proposal for each dashboard. Depending on the amount of work we need to do with the data (formatting, cleansing, etc.), the dashboard build and desired branding, the cost of development may vary from dashboard to dashboard.

Connecting to Data Sources

Data can come from just about any system. Kiefer has a proven approach to extracting, transforming, and loading (ETL) data and blending data from multiple sources to build a data warehouse. This warehouse will feed dashboards that pull data from one or more sources. Instead of having to inspect lines of tabular data or having to uncover trends on a spreadsheet, dashboards can help organizations better consume complex sets of data and make better decisions more quickly.

Our team can help you better understand how to get data from systems. We have helped organizations extract data from ERP systems, financial systems, public data sources, and much more.

Read this Microsoft Doc to better understand how Power BI connects to various data sources.

[*Data sources for Power BI - Power BI | Microsoft Docs*]

Business Intelligence is critical as the State of California looks ahead.

2020 is behind us but numerous challenges remain as the State of California looks ahead to 2023.

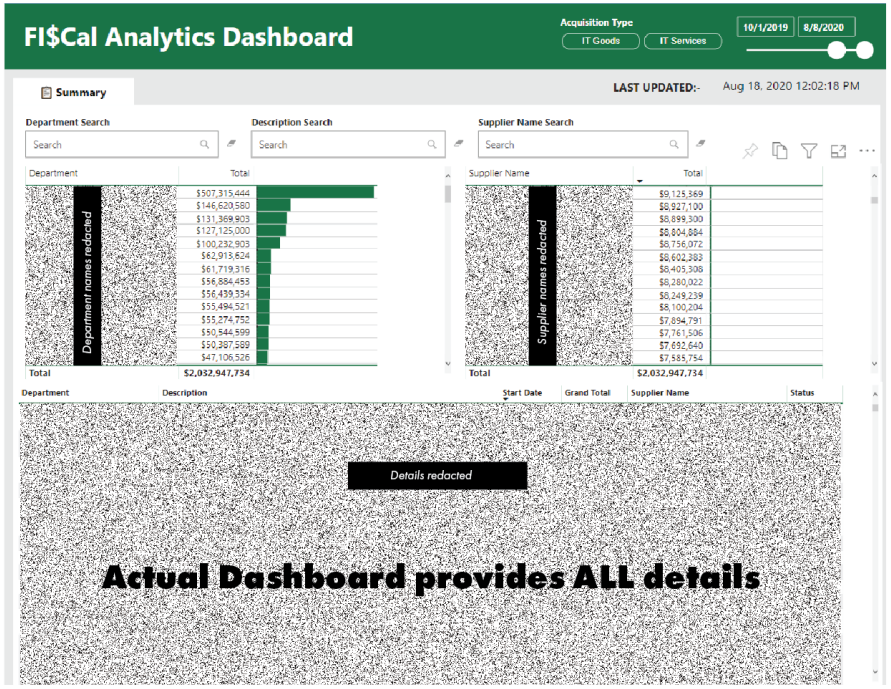
It's been just over a year since many of us began sheltering in place and, as a result, working remotely. While many smaller, private sector companies had – or quickly obtained – the agility to make such a drastic pivot, large organizations like, say, the government of California, weren't as well-equipped. Yet they like all of us made valiant efforts to keep the things up and running. We've all learned several lessons over the past year, which hopefully will inform decisions and actions in the future.

To that end, the California Department of Technology recently unveiled its latest strategic plan, titled Vision 2023. This plan outlines the technology priorities for the State of California. Business intelligence solutions will help solve challenges that have been identified by the State of California.

Power BI: Business Intelligence

"Programs often lack the operational insights, dashboards or metrics to identify opportunities to change policy and operations, improve technology , and use automation. Without this information, programs are unable to effectively prioritize changes."

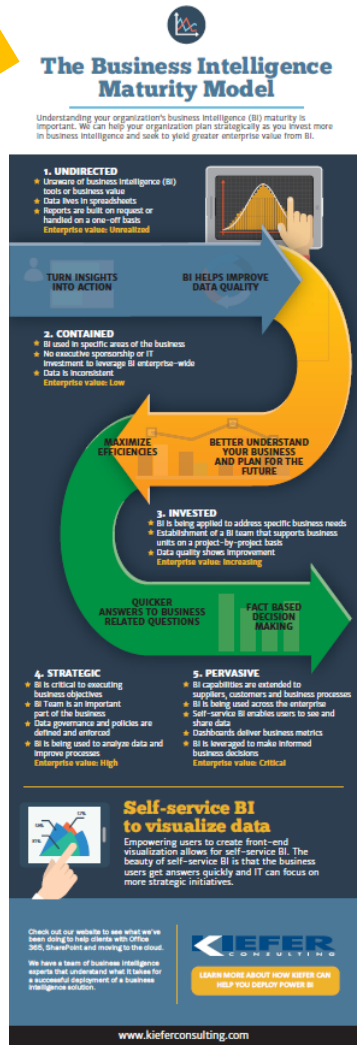
- Vision 2023
California Department of Technology Strategic Plan



Kiefer built this dashboard to analyze FI$Cal procurement data

Get this free infographic:

[Business Intelligence Maturity Model]



Why Power BI?

1. You Don't Have to Move Data

With Power BI you don't have to deal with the hassles of moving data around in order to make sense of it. Instead, Power BI connects directly to hundreds of data sources from any location – in the cloud, on-premise, within spreadsheets. Power BI doesn't care where data is or what type of data it is. Whatever and wherever it is, Power BI connects to it and helps you make sense of it.

2. Visualization

The awesome visualization capabilities of Power BI are, for obvious reasons, its most attention-grabbing feature. Power BI allows users to create immersive, visually compelling reports that can be explored interactively and collaboratively. This is the case for historical data sets and real-time data. Power BI dashboards are sandboxes – users can create, customize and visualize practically anything.

3. Works Anywhere Across Devices

Today more than any other time, the capability of working remotely is critical. Power BI, like everything in the Microsoft 365 ecosystem, enables people and organizations to work wherever and whenever they need to. With native apps for iOS, Android and Windows devices, the organizational insights afforded by Power BI can be accessed on any device. Plus, it seamlessly integrates with Microsoft business apps like Dynamics 365 and Excel.

4. Data Analytics

If you are a data analyst delivering reporting and analytics to your organization, Power BI lets you be productive and creative with what you build. Power BI Desktop is a feature-rich data mashup and report authoring tool. You can combine data from disparate databases, files, and web services with visual tools that help you understand and fix data quality and formatting issues automatically.

5. Bring Data to Life

Power BI can unify all an organization's data, whether in the cloud or on-premises. Using the Power BI gateways, users can connect SQL Server databases, analysis services models, and many other data sources to the same dashboards in Power BI. If users already have reporting portals or applications, embedding Power BI reports and dashboards results in a truly unified experience.

13405 Folsom Blvd. Suite 501
Folsom, CA 95630

(916) 932-7220

www.kieferconsulting.com

Updated: April 27, 2021
While we have made every attempt to ensure that the information contained in this eBook has been obtained from reliable sources, Kiefer is not responsible for any errors or omissions, or for the results obtained from the use of this information.