

3.7 Data and Analytics Reference

What to know:

Project has benefits for the stakeholders and talent development

Early projects should have two qualities:

- ◇ Is a quick win
- ◇ Uncovers an insight of interest

What to do:

- Ensure alignment and support
- Use a clear process to gather and organize data, including five **steps**

What to know:

- ◇ Data is presented in alignment with stakeholder needs
- ◇ Scaling and integrity are important to showing proportions and relationships.
- ◇ How **data-driven an organization** affects their readiness to use data for decision-making.

What to do:

- Define the outcome to influence
- Choose the **relationship** to show
- Choose the **tools** to tell the story

What to know:

- ◇ Purpose is what the stakeholders want and need to know
- ◇ Talent development owns **valuable information** for the organization

What to do

- Identify the **stakeholders**
- Determine their power and influence

What to know:

Analyses are used to measure the business value and effectiveness of training initiatives

Four analysis are available to find hindsight, insight, and foresight:

- ◇ Descriptive analytics
- ◇ Diagnostic analytics
- ◇ Predictive analytics
- ◇ Prescriptive analytics

What to do:

- Use the analysis that will best identify useful information
- Begin by plotting data or using pivot tables
- Identify useful information and determine initial conclusions
- Avoid **data analysis pitfalls**

What to know:

Interpretations determine the best course of action, guide recommendations, and are reported.

Four considerations to determine the **legitimacy and usefulness of conclusions**:

- ◇ Benefits of the conclusions
- ◇ Original research question
- ◇ Exploration all perspectives
- ◇ Any objections to address

What to do:

- Refer to the original plan and purpose
- Gather and review simple number details
 - ◇ Sample size, response rate, number of responses
 - ◇ Mean, min and max, standard deviation
- Use quantitative data first, then qualitative to provide context

Resources:
Talent Development Book of Knowledge. Td.org/tdbok



Frequently Asked Questions

What are the five steps to gather and organize data?

1. Define the question to answer
2. Set clear priorities for what to measure and how to measure it
3. Collect the data
4. Analyze the data
5. Interpret the results

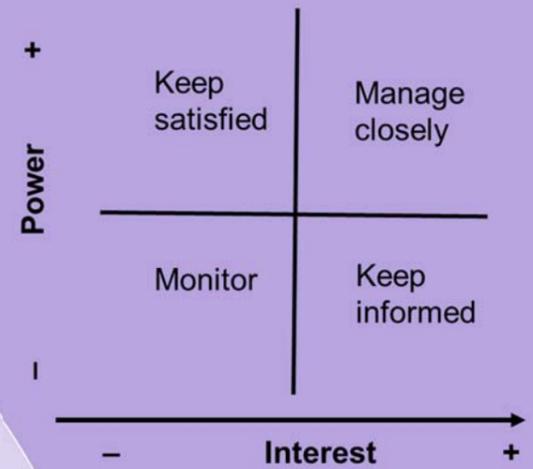
What are examples of valuable TD information?

- ◇ Skills needed to improve business performance
- ◇ Ways to predict turnover
- ◇ Data to measure business impact of leadership development programs
- ◇ Ways to determine the effectiveness of onboarding programs

What are three ways to group stakeholders?

- ◇ Hierarchy, such as team leads, department heads
- ◇ Function or department, such as sales, marketing
- ◇ Decision-making authority, such as when a authority extends across departments

What to do with Stakeholder groupings?



What are the five factors that define a data-driven

- ◇ A strong company culture
- ◇ An experimentation mindset and objectively learn from failures
- ◇ A digital technology influence
- ◇ A focus on the future
- ◇ Are organizationally agile



What are the four analysis?

- ◇ **Descriptive analytics** measure *what happened*.
- ◇ **Diagnostics analytics** measure *why something happened*.
- ◇ **Predictive analytics** measure *what will happen in the future*.
- ◇ **Prescriptive analytics** measure *how to make something happen*.

What are data analysis pitfalls?

- ◇ Starting with a conclusion or jumping to conclusions
- ◇ Unconscious bias
- ◇ Overusing the mean, and avoid the mode or median
- ◇ Incorrectly defining the sample size
- ◇ Hypothesis testing without accounting for Hawthorne effect of observers or placebo effect

What tools show which relationships?

Distribution of a single variable	columns, histogram, scatter chart, bar chart
Distribution of multiple variables	heat maps, bubble charts
Relationship	bubble charts, scatter chart
Comparison	bars and columns, timeline, line chart, scatter plots
Connection	relationship or connection maps, heat maps, venn diagrams
Composition of the whole	pie chart, stacked bar chart
Location	maps, building diagrams, processes

How to determine the legitimacy and usefulness of conclusions?

- ◇ How likely will the conclusions be beneficial?
- ◇ Do the results answer the original research question?
- ◇ Does the analysis explore all perspectives?
- ◇ Does the data address any objections?