



Powerful Data Skills, Insights, and Software To Fuel Your Business Growth

[Home](#) [Business Intelligence](#) [Data Science](#) [Market Intelligence](#) [Management](#)

[Free Resources](#) [Write a Post](#)


[Home](#) / [Management](#) /

[Decision Tree Examples: Problems With Solutions](#)

Decision Tree Examples: Problems With Solutions

Let's explain decision tree with examples. There are so many solved **decision tree examples** (real-life problems with solutions) that can be given to help you understand how decision tree diagram works.

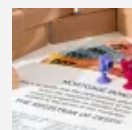
State of Marketing Report

 4,100 marketers weighed in on understanding their customers better.

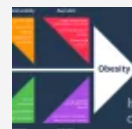
As graphical representations of complex or simple problems and questions, decision trees have an important role in business, in finance, in project management, and in any other areas.

On this page:

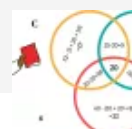
Related Posts



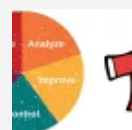
Freeware Document Management Software: The 3 Best ...



Fishbone Diagram Examples and Definition



Venn Diagram Examples, Problems and Solutions



6 Best Six Sigma Definitions



Context and Level 1 Data Flow Diagram ...

[Free Download](#)

- **What is decision tree? Definition.**
- **5 solved simple examples of decision tree diagram** (for business, financial, personal, and project management needs).
- **Steps to creating a decision tree.**

Let's define it.

A decision tree is a diagram representation of **possible solutions** to a decision. It shows different outcomes from a set of decisions. The diagram is a widely used **decision-making tool** for analysis and planning.

The diagram starts with a box (or root), which branches off into several solutions. That's way, it is called decision tree.

Decision trees are helpful for a variety of reasons. Not only they are easy-to-understand diagrams that support you 'see' your thoughts, but also because they provide a framework for estimating all possible alternatives.

In addition, decision trees help you manage the brainstorming process so you are able to consider the potential outcomes of a given choice.

Example 1: The Structure of Decision Tree

Let's explain the decision tree structure with a simple example.

Each decision tree **has 3 key parts**:

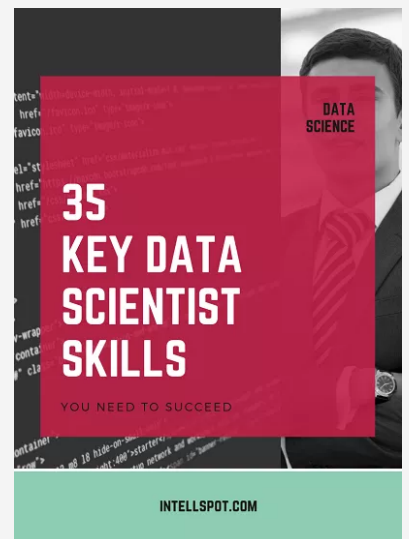
- a root node
- leaf nodes, and

Whitepaper For Free Download

10 COOL WAYS TO SHOW BUSINESS DATA



Free Download



Recommended Posts

35 Data Scientist Qualifications And Skills Needed To Succeed

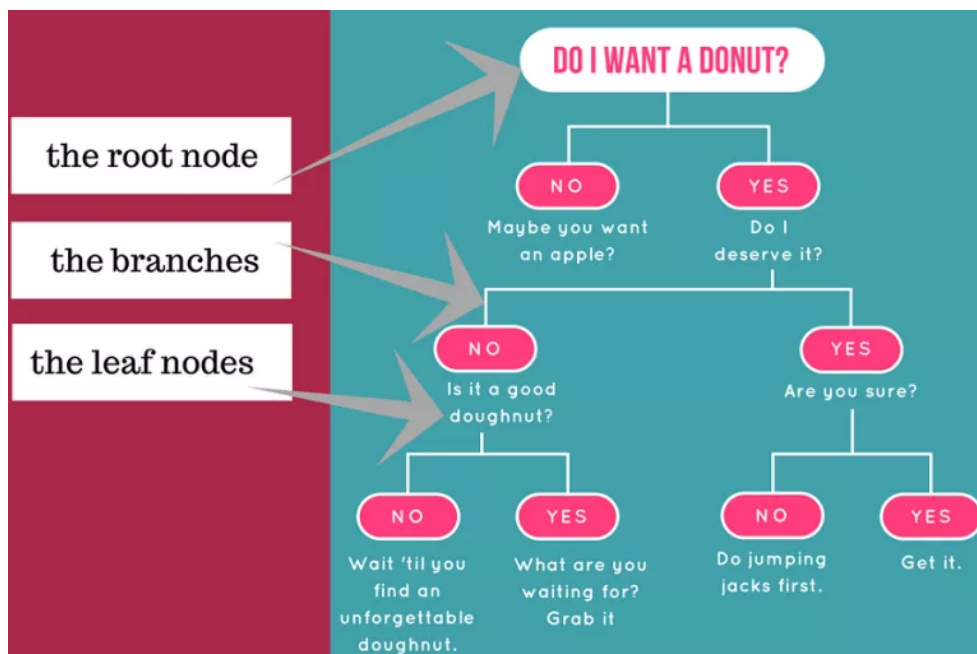
Marketing Intelligence: Types, Definition, Examples

20 Top Marketing Intelligence Tools: Free and Paid

○ branches.

No matter what type is the decision tree, it starts with a specific decision. This decision is depicted with a box – the root node.

Root and leaf nodes hold questions or some criteria you have to answer. Commonly, nodes appear as a squares or circles. Squares depict decisions, while circles represent uncertain outcomes.



As you see in the example above, branches are lines that connect nodes, indicating the flow from question to answer.

Each node normally carries two or more nodes extending from it. If the leaf node results in the solution to the decision, the line is left empty.

How long should the decision trees be?

A decision tree should span as long as is needed to achieve a proper solution.

Supervised vs
Unsupervised Learning:
Algorithms and Examples

Best Ways to Learn
Machine Learning

10 Key Types of Data
Analysis Methods and
Techniques

Types of Graphs and
Charts And Their Uses

Data Driven Decision
Making: Process and Model

6 Different Types of Data
Every Data Scientist Must
Know

**Get more stuff
from intellspot.com**

Subscribe to our mailing
list and get interesting
stuff and updates to your
email inbox.

Enter your email here

SIGN UP NOW

We respect your privacy and take
protecting it seriously. We will use
your emails only to send you
notifications for the new posts.

Online Flowchart Maker

Make beautiful flowcharts in minutes. Free.

Theoretically, when you are depicting a decision tree you should involve every possible decision and outcome in the tree. This will help you with analysis, planning, and will allow you avoid bad surprises.

Now we are going to give more simple decision tree examples.

Example 2: Simple Personal Decision Tree Example

Let's say you are wondering whether to quit your job or not. You have to consider some important points and questions. Here is an example of a decision tree in this case.

Download the following decision tree in PDF



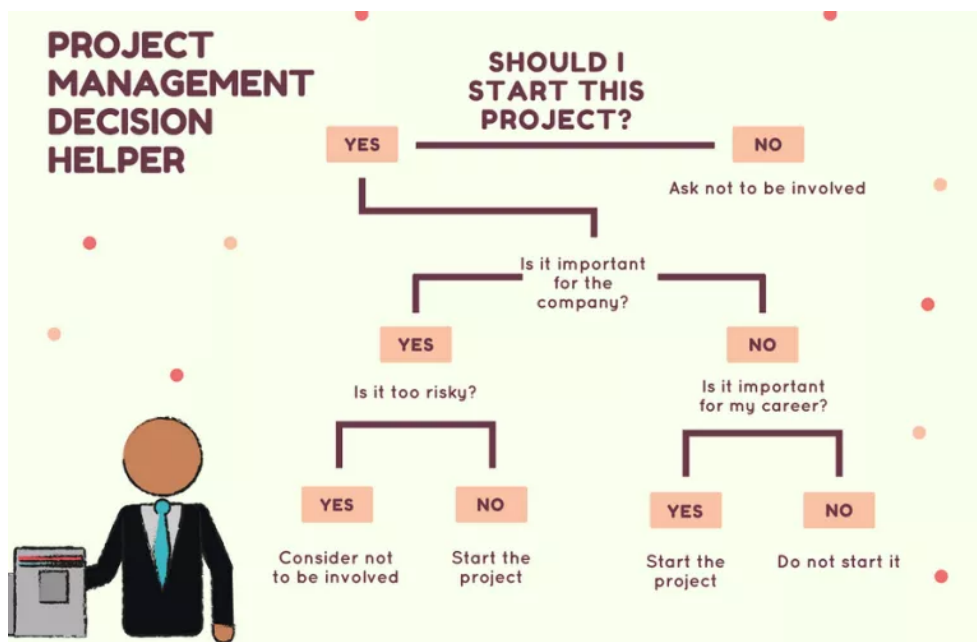
Now, let's deep further and see decision tree examples in business and finance.

Example 3: Project Management Decision Tree Example

Imagine you are an IT project manager and you need to decide whether to start a particular project or not. You need to take into account important possible outcomes and consequences.

The decision tree examples, in this case, might look like the diagram below.

Download the following decision tree diagram in PDF.



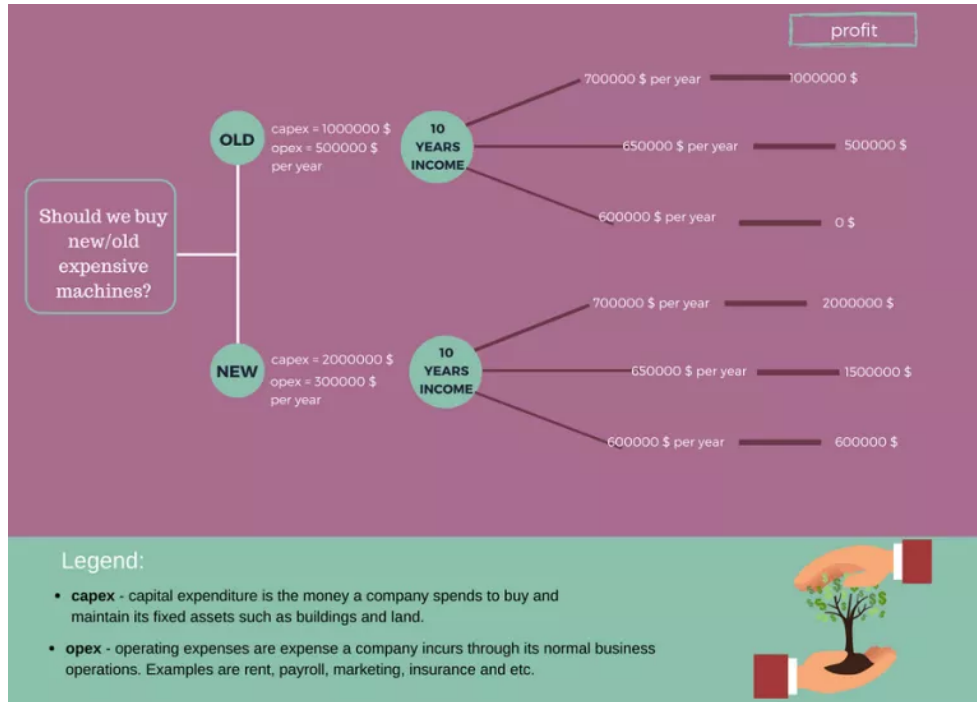
Don't forget that in each decision tree, there is always a choice to do nothing!

Example 4: Financial Decision Tree Example

When it comes to the finance area, decision trees are a great tool to help you organize your thoughts and to consider different scenarios.

Let's say you are wondering whether it's worth to invest in new or old expensive machines. This is a classical financial situation. See the decision tree diagram example below.

Download it.



The above decision tree example representing the financial consequences of investing in old or new machines. It is quite obvious that buying new machines will bring us much more profit than buying old ones.

Need more decision tree diagram examples?

Example 5: Very Simple Desicion Tree Example



As we have the basis, let's sum the steps for creating decision tree diagrams.

Steps for Creating Decision Trees:

1. Write the main decision.

Begin the decision tree by drawing a box (the root node) on 1 edge of your paper. Write the main decision on the box.

2. Draw the lines

Draw line leading out from the box for each possible solution or action. Make at least 2, but better no more than 4 lines. Keep the lines as far apart as you can to enlarge the tree later.

3. Illustrate the outcomes of the solution at the end of each line.

A tip: It is a good practice here to draw a circle if the outcome is uncertain and to draw a square if the outcome leads to another problem.

4. Continue adding boxes and lines.

Continue until there are no more problems, and all lines have either uncertain outcome or blank ending.

5. Finish the tree.

The boxes that represent uncertain outcomes remain as they are.

A tip: A very good practice is to assign a score or a percentage chance of an outcome happening. For example, if you know for a certain situation there is 50% chance to happen, place that 50 % on the appropriate branch.

When you finish your decision tree, you're ready to start analyzing the decisions and problems you face.

How to Create a Decision Tree?

In our IT world, it is a piece of cake to create decision trees. You have a plenty of different options. For example, you can use paid or **free graphing software** or **free mind mapping software** solutions such as:

- Canva
- **Lucidchart**
- Smartdraw
- Silverdecisions

The above tools are popular online chart creators that allow you to build almost all **types of graphs** and diagrams from scratch.

Of course, you also might want to use Microsoft products such as:

- Word
- Excel
- PowerPoint

And finally, you can use a piece of paper and a pen or a writing board.

Advantages and Disadvantages of Decision Trees:

Decision trees are powerful tools that can support decision making in different areas such as business, finance, risk management, project management, healthcare and etc. The trees are also widely used as **root cause analysis tools** and solutions.

As any other thing in this world, the decision tree has some pros and cons you should know.

Advantages:

- It is very easy to understand and interpret.
- The data for decision trees require minimal preparation.
- They force you to find many possible outcomes of a decision.
- Can be easily used with many other decision tools.
- Helps you to make the best decisions and best guesses on the basis of the information you have.
- Helps you to see the difference between controlled and uncontrolled events.
- Helps you estimate the likely results of one decision against another.

Disadvantages:

- Sometimes decision trees can become too complex.
- The outcomes of decisions may be based mainly on your expectations. This can lead to unrealistic decision trees.
- The diagrams can narrow your focus to critical decisions and objectives.

Conclusion:

The above decision tree examples aim to make you understand better the whole idea behind. As you see, the decision tree is a kind of probability tree that helps you to make a personal or business decision.

For a decision tree to be efficient, it should include all possible solutions and sequences.

**Online Flowchart
Maker**

Make beau
minutes. Fi

Decision trees are highly effective diagram structures that illustrate alternatives and investigate the possible outcomes.

In addition, they show you a balanced picture of the risks and opportunities related to each possible decision.

If you need more examples, our posts [fishbone diagram examples](#) and [Venn diagram examples](#) might be of help.

Silvia Valcheva



Silvia Vylcheva has more than 10 years of experience in the digital marketing world – which gave her a wide business acumen and the ability to identify and understand different customer needs.

Silvia has a passion and knowledge in different business and marketing areas such as inbound methodology, data intelligence, competition research and more.

Related Posts



December 3, 2018

10 Superb Data Presentation Examples To Learn From



November 28, 2018

11 Best SEO Tools for Auditing and Enhancing Website Performance



November 11, 2017

Freeware Document Management Software: The 3 Best Free Download Tools

Leave a Reply

Message

Name

Email

Website

- ☐ Notify me of follow-up comments by email.
- ☐ Notify me of new posts by email.

Post Comment

This site uses Akismet to reduce spam. [Learn how your comment data is processed.](#)

About

Intellspot.com is a blog that aims to help you understand and use data to reveal valuable insights, improve decision making and boost innovations. Here you will find articles, lessons, insights, tools, techniques and powerful software solutions that help you grow.

Menu

- Home
- Business Intelligence
- Marketing Intelligence
- Management
- Free Resources

Additional Info

- Privacy Policy
- Contacts
- Guest Posts

Get more stuff

Subscribe to our mailing list and get interesting stuff and updates to your email inbox.

Enter your email

SIGN UP NOW

We respect your privacy and take protecting it seriously. We will use your emails only to send you notifications for the new posts.