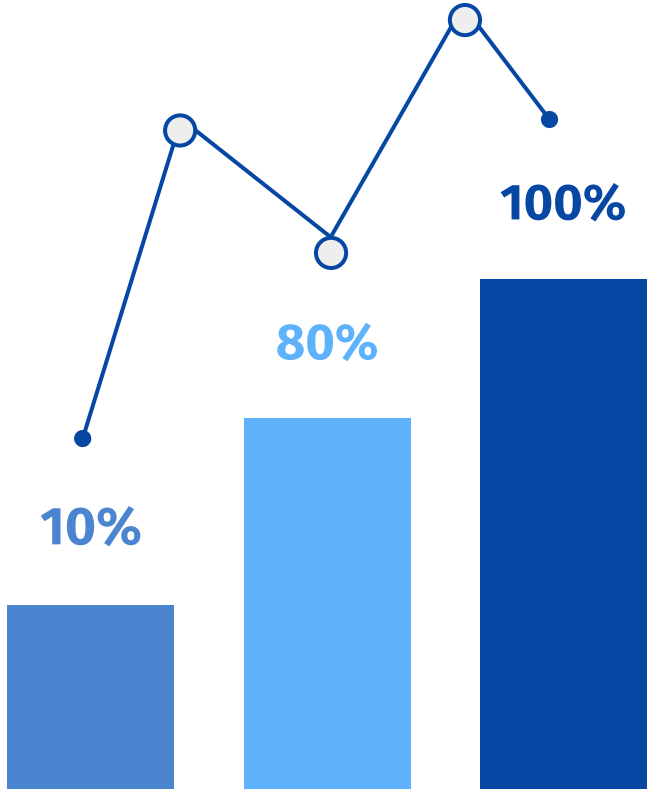
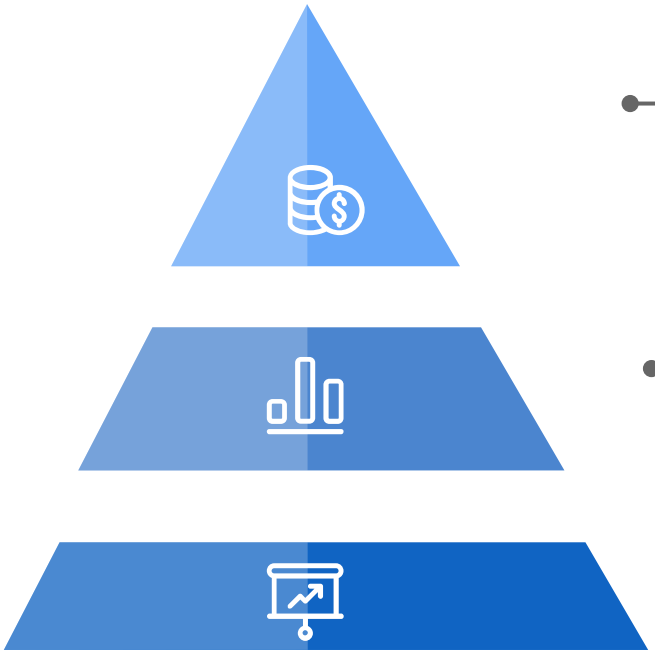
Análise de Dados de Commodities

Bruno Reina
Lerina Mastruian



Premissas para a Análise



DATASET

Commodities Prices - Investing.com

Foram escolhidas as seguintes commodities: Petróleo, Trigo, Ouro e Gás Natural, entre os anos de de 2004 a 2022.

DADOS

As colunas disponíveis no conjunto foram: data e valores de negociação (abertura, fechamento, mínimo, máximo, alteração percentual e volume) separados para cada commodity.

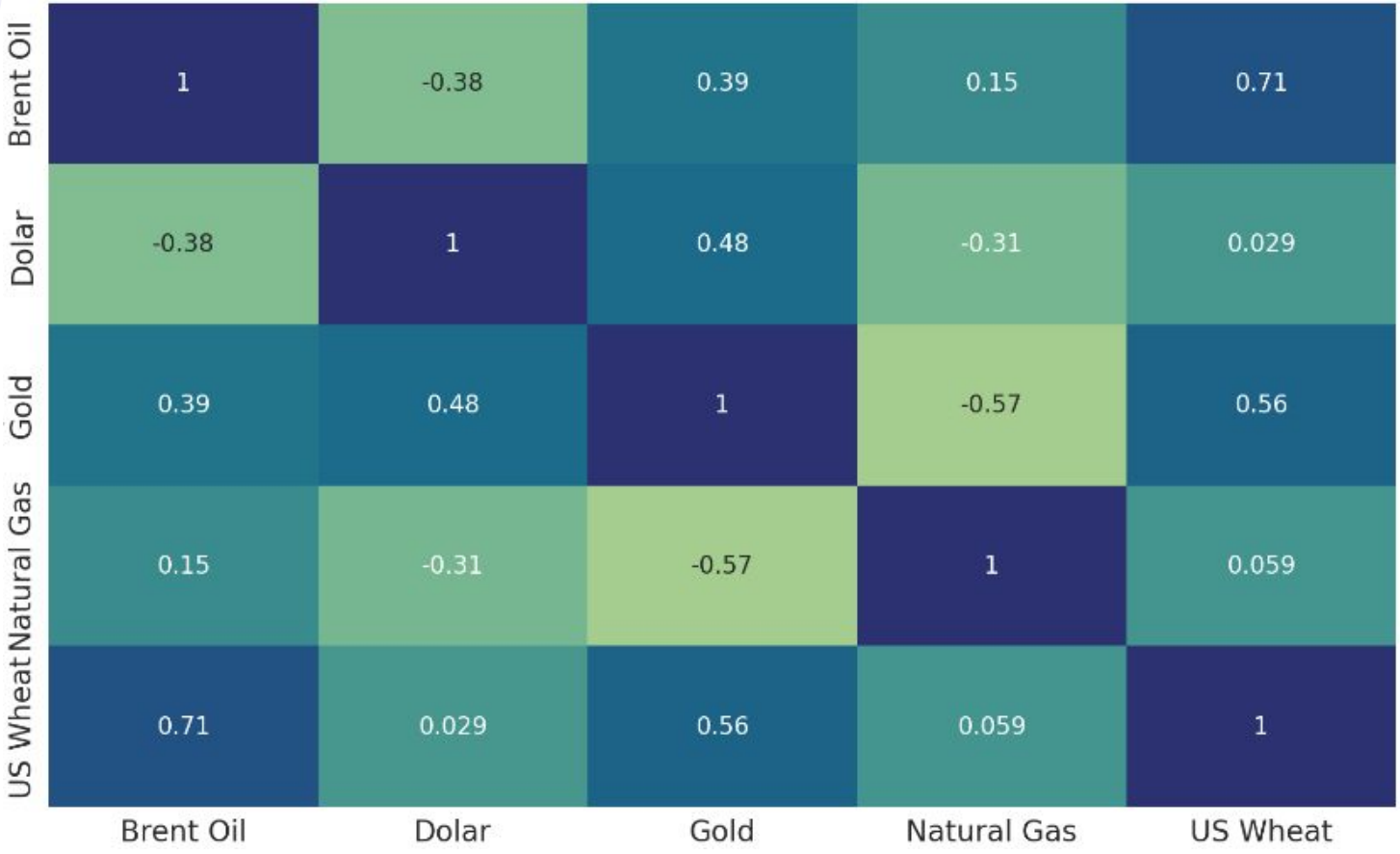
DADOS FALTANTES

Podemos notar que no conjunto de dados não possuímos negociação no Trigo entre os anos de 2010 a 2015.

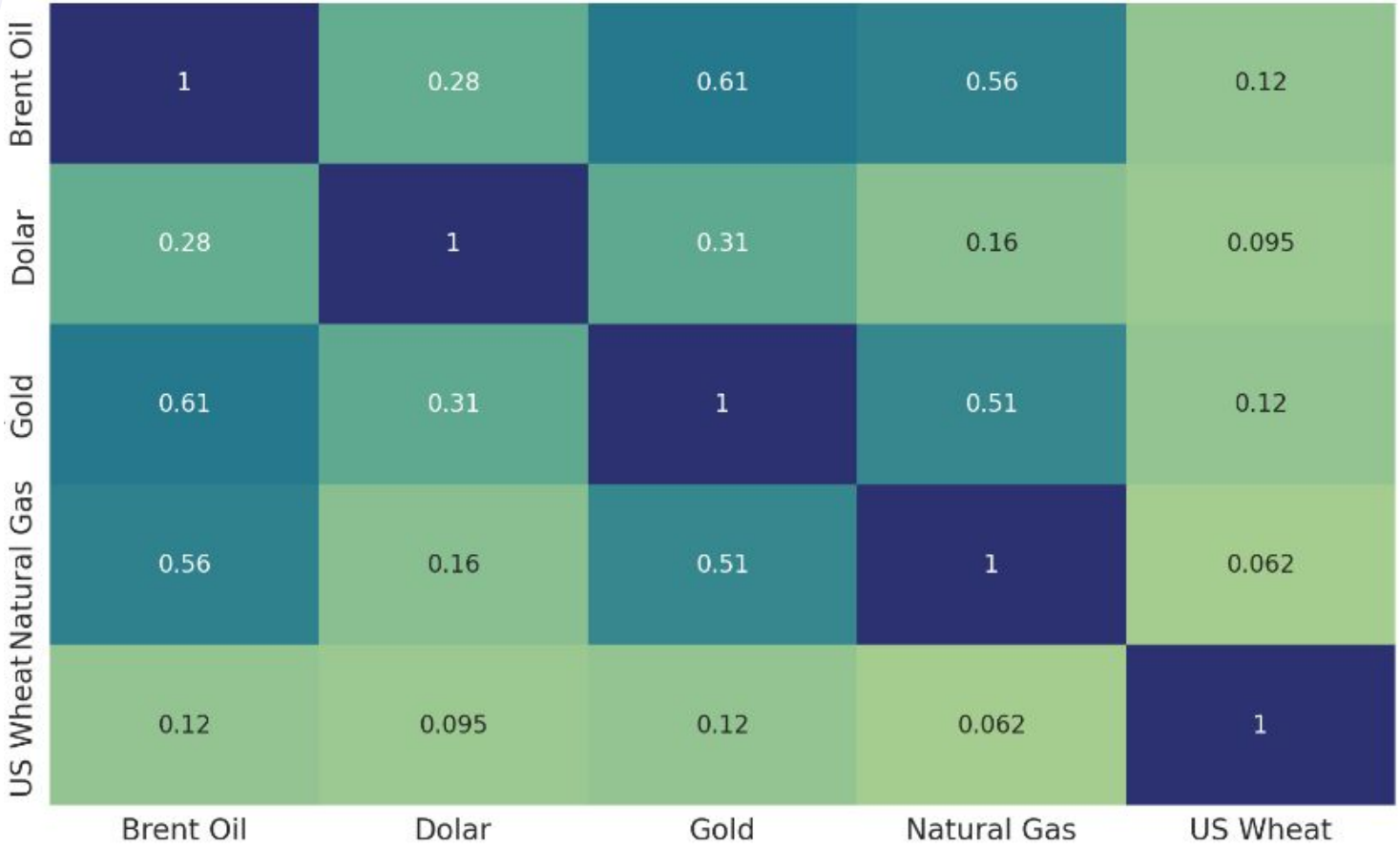
Analise estatística descritiva dos preços Acumulados para cada commodity

Symbol	Brent Oil	Dolar	Gold	Natural Gas	US Wheat
count	5139.000000	5139.000000	5139.000000	5139.000000	5139.000000
mean	74.616114	2.954447	1211.889930	4.599213	576.548455
std	25.820981	1.207547	434.258626	2.340539	176.642289
min	19.330000	1.538300	374.900000	1.482000	283.500000
25%	54.750000	2.008650	909.500000	2.853000	458.250000
50%	69.860000	2.440200	1257.100000	3.903000	531.000000
75%	98.425000	3.748700	1566.200000	5.974500	689.505000
max	146.080000	5.885600	2069.400000	15.378000	1425.250000

Correlações entre Preços



Correlações entre Volumes



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Veja como funciona.

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Inserir

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Veja como funciona.

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Inserir

Procurando dados? Encontre-o no Power BI

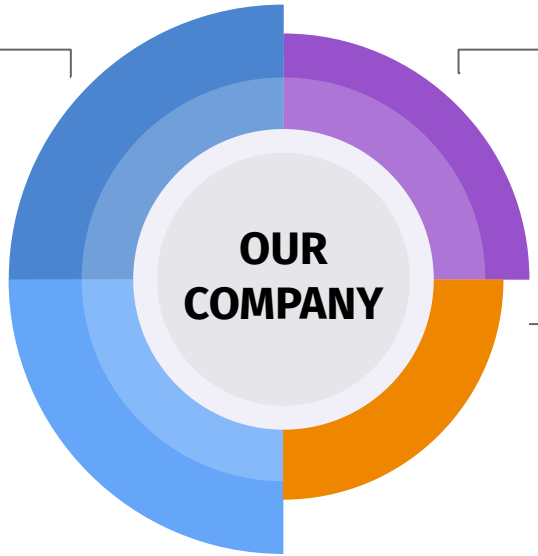
Conclusões da Análise

- Na análise histórica, entendemos que o ouro e o trigo possuem comportamentos de gráficos parecidos, onde realizamos análise de correlação e houve a confirmação.
- Notamos que o petróleo entra em estágio de valores mínimos em média a cada 5 anos.
- Durante o período histórico completo analisado, o ouro foi a commodity que teve a maior valorização percentual.
- Não conseguimos encontrar evidência da falta de dados para o trigo no período entre 2010 e 2015.
- Apesar dos últimos aumentos recentes, devido a guerra entre Rússia e Ucrânia, o gás natural foi a única commodity que ainda teve um decréscimo percentual entre 2004 e 2022.

Conclusões da Análise

- O volume negociado do ouro, do trigo e do petróleo estão diretamente correlacionados, quando um aumenta o outro aumenta, visto que os 3 possuem correlações positivas acima de 50%.
- O preço do ouro está diretamente relacionado aos preços do gás natural e do trigo, apresentando correlações positivas de 57% e 56%, respectivamente.
- O preço do petróleo e do trigo estão fortemente relacionados e de maneira positiva, ou seja, quando um aumenta o outro aumenta, apresentando uma correlação de 71%.
- A commodity mais impactada pelo dólar é o ouro, apresentando uma correlação positiva de 48%.
- Apesar do ouro ter um preço médio muito superior às demais commodities, a commodity com o maior volume negociado no período foi o petróleo, com 37% do volume total, enquanto o ouro ficou em segundo lugar, com 34%.

Escopo



MARS

Despite being red, Mars is actually a very cold place

JUPITER

Jupiter is a gas giant and the biggest planet

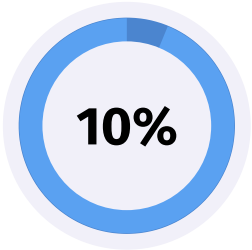
MERCURY

Mercury is the closest planet to the Sun

SATURN

It’s composed of hydrogen and also helium

Budget Infographics



MERCURY

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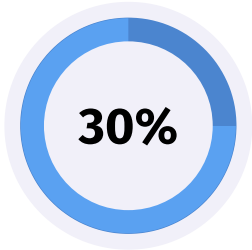
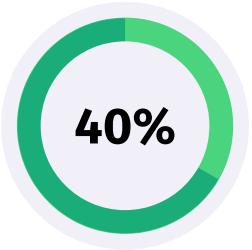


JUPITER

Jupiter is a gas giant and the biggest planet



VENUS

Venus is the second planet from the Sun

Budget Infographics

MERCURY

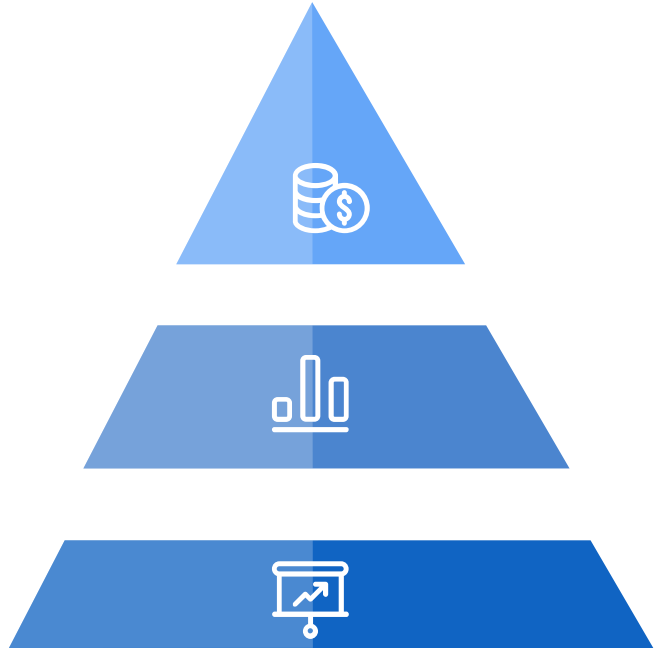
Mercury is the closest planet to the Sun and the smallest one

VENUS

Venus has a beautiful name and is the second planet from the Sun

MARS

Despite being red, Mars is a very cold place full of iron oxide dust



Escopo

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Despite being red, Mars is actually a very cold place

JUPITER

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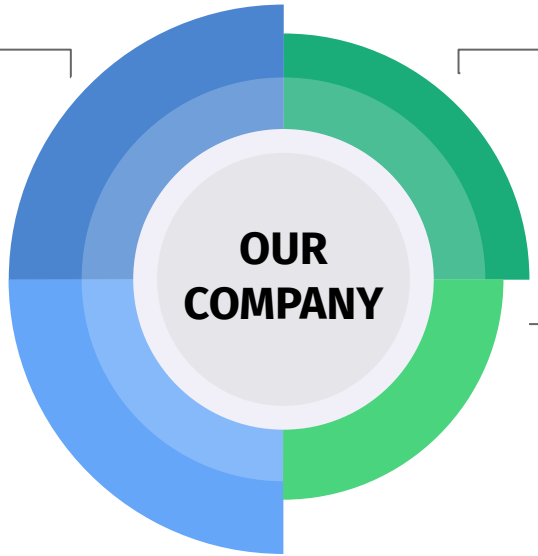


MERCURY

Mercury is the closest planet to the Sun

SATURN

It’s composed of hydrogen and also helium

Budget Infographics

SATURN

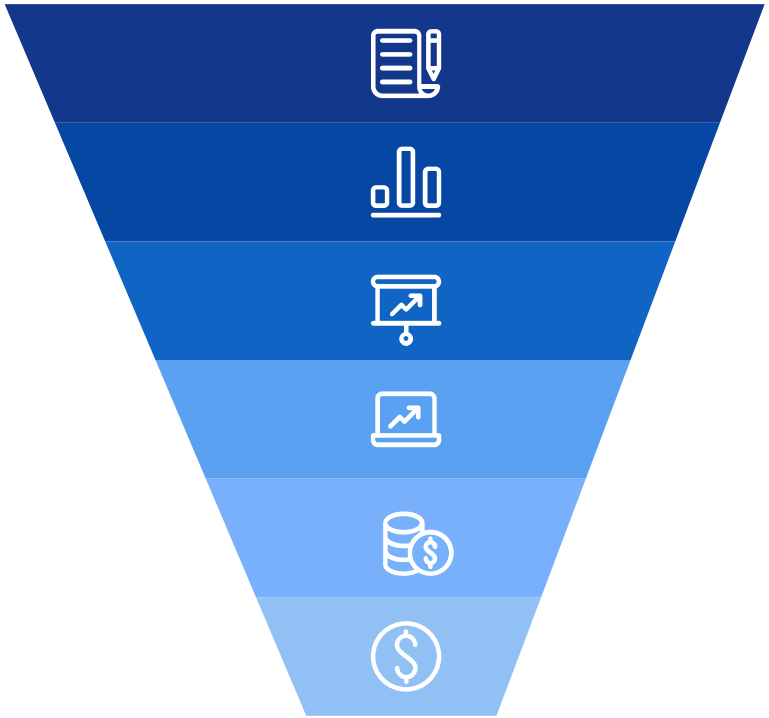
It’s composed of hydrogen and also helium

MARS

Despite being red, Mars is actually a cold place

VENUS

Venus is the second planet from the Sun



JUPITER

Jupiter is a gas giant and the biggest planet

MERCURY

Mercury is the closest planet to the Sun

NEPTUNE

Neptune is the farthest planet from the Sun

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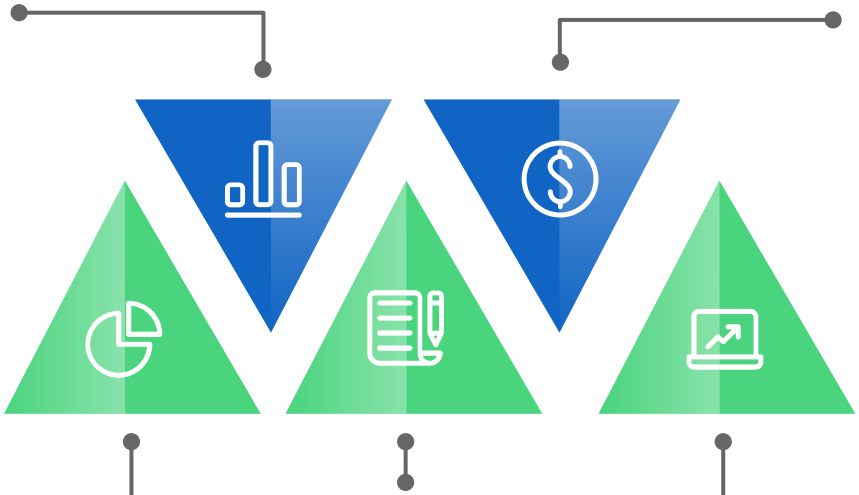
MONTH 2

Venus has a beautiful name and is the second planet

MONTH 4

Neptune is the farthest planet from the Sun and the fourth-largest



MONTH 1

Mercury is the closest planet to the Sun and the smallest

MONTH 3

Despite being red, Mars is actually a very cold place

MONTH 5

Jupiter is a gas giant and the biggest planet in the Solar System

Budget Infographics

MARS

Despite being red, Mars is actually a cold place

JUPITER

Jupiter is a gas giant and the biggest planet of them all

MERCURY

Mercury is the closest planet to the Sun and the smallest one

VENUS

Venus has a beautiful name and is the second planet

Budget Infographics

MARS

Despite being red, Mars is actually a very cold place

VENUS

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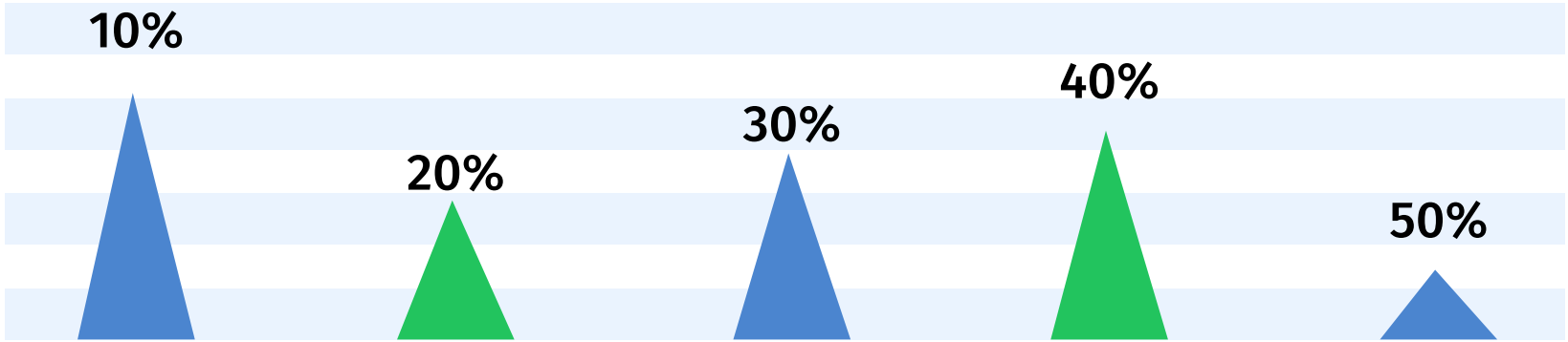
Budget Infographics



MONTH 1

Saturn has several rings

MONTH 2

Mars is a very cold place

MONTH 3

Mercury is the smallest planet

MONTH 4

Jupiter is a gas giant

MONTH 5

Earth is the third planet

Budget Infographics

Budget Infographics

10%

20%

30%

40%

Neptune is the farthest planet from the Sun

Venus is the second planet from the Sun

Jupiter is the biggest planet in the Solar System

Mercury is the closest planet to the Sun

Budget Infographics

SATURN

Saturn is a gas giant and has several rings

10%

JUPITER

It’s a gas giant and the biggest planet of them all

20%

MERCURY

Mercury is the smallest planet in the Solar System

30%

MARS

Despite being red, Mars is actually a very cold place

40%

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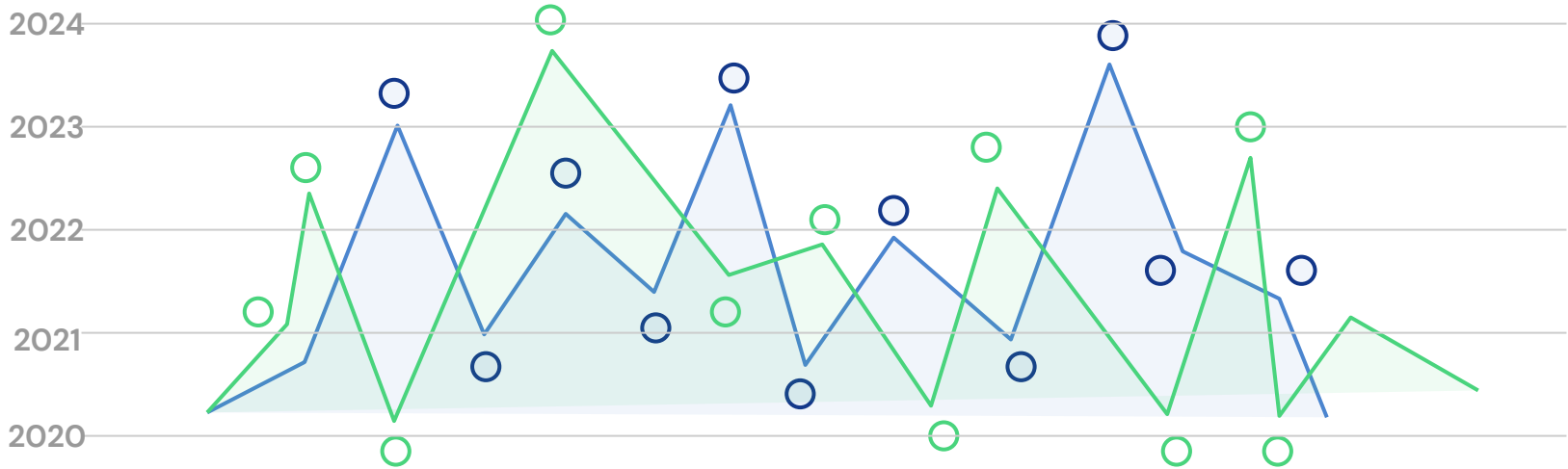


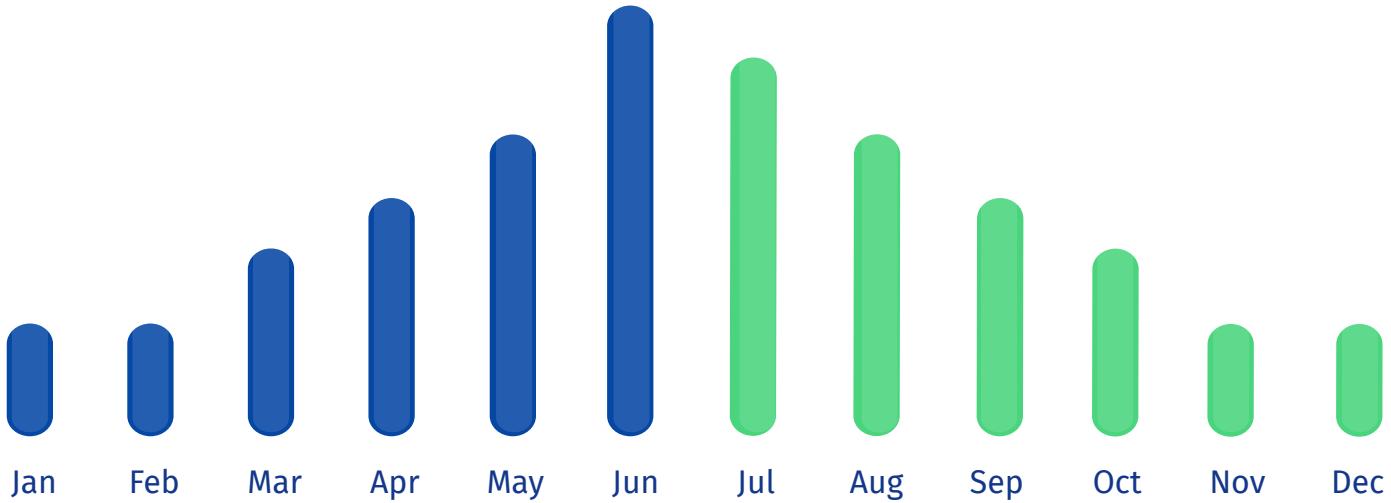
MERCURY

Mercury is the closest planet to the Sun and the smallest one

MARS

Despite being red, Mars is actually a cold place place

Budget Infographics



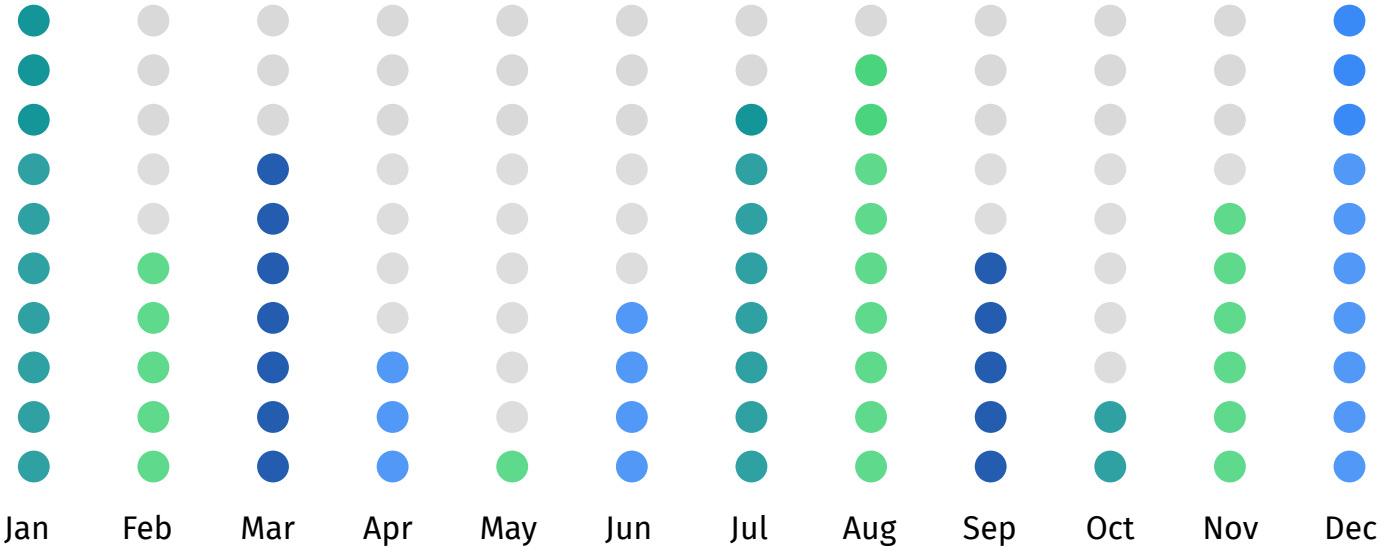
MERCURY

Mercury is the closest planet to the Sun and the smallest one

NEPTUNE

Neptune is the fourth-largest planet in the Solar System

Budget Infographics



MERCURY

Mercury is the closest planet to the Sun

MARS

Despite being red, Mars is a cold place

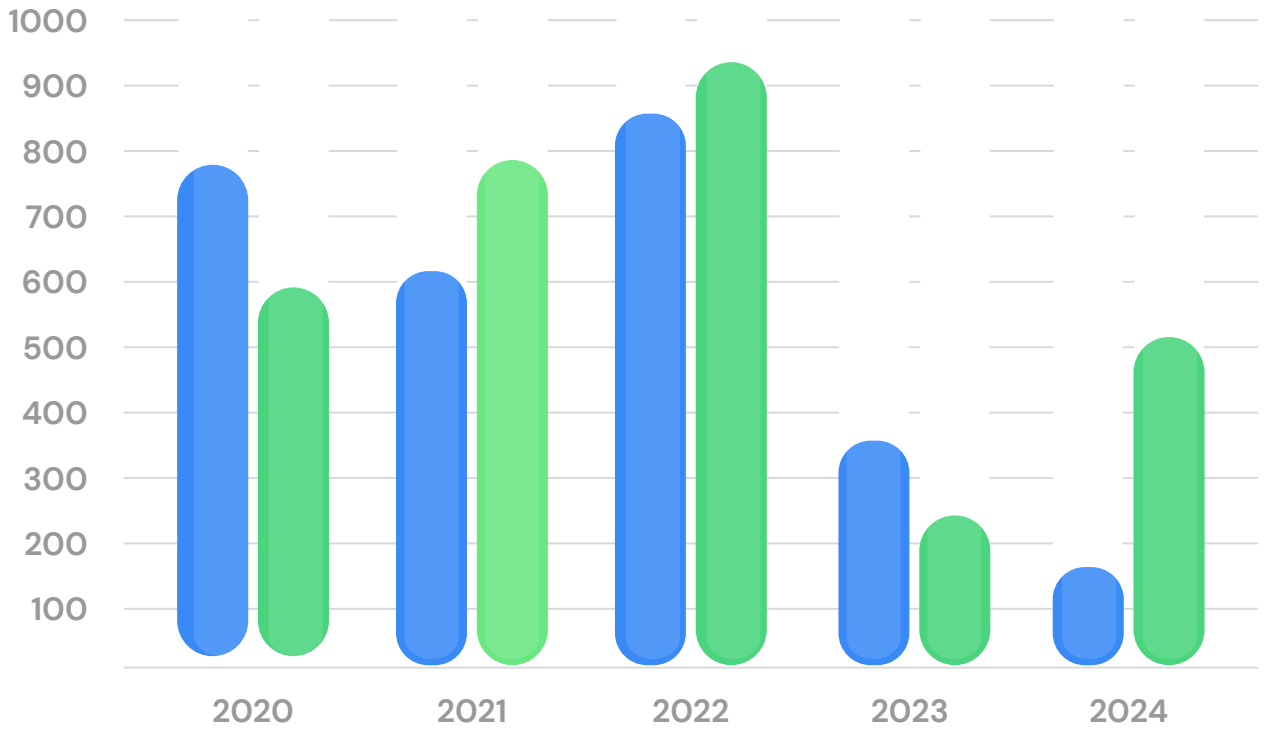
JUPITER

Jupiter is a gas giant and the biggest planet

NEPTUNE

Neptune is the farthest planet

Budget Infographics



MERCURY

Mercury is the closest planet to the Sun and the smallest one

MARS

Despite being red, Mars is actually a cold place

Budget Infographics

VENUS

Venus has a beautiful name and is the second one from the Sun

MARS

Neptune is the fourth-largest planet in the Solar System

JUPITER

Jupiter is a gas giant and the biggest planet in the Solar System

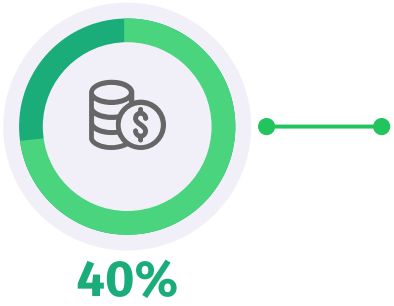
Budget Infographics

MARS

Despite being red, Mars is actually a very cold place

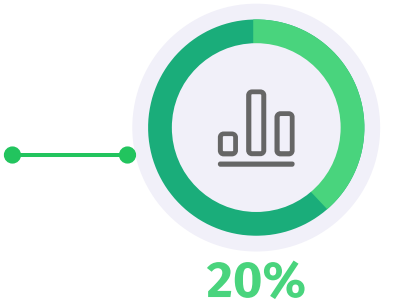
JUPITER

Jupiter is the biggest planet in the Solar System



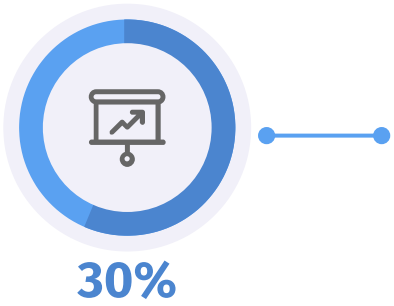
MERCURY

Mercury is the closest planet to the Sun and the smallest



SATURN

Saturn is composed of hydrogen and also helium



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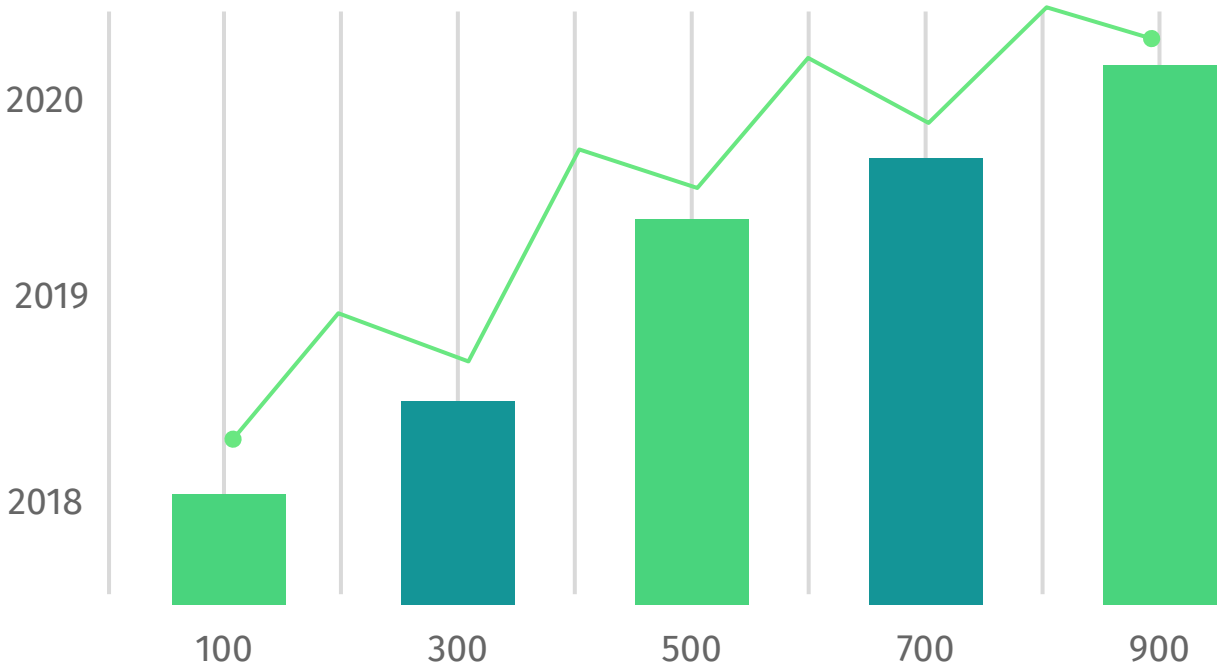


MERCURY

Mercury is the smallest planet of all of them

MARS

Despite being red, Mars is actually a cold place

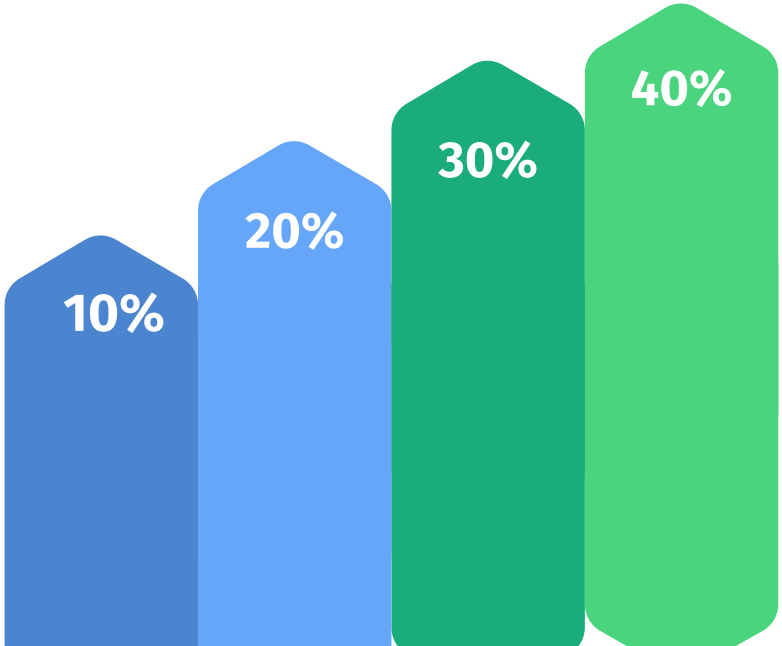
Budget Infographics

MERCURY

Mercury is the closest planet to the Sun and the smallest one

MARS

Despite being red, Mars is a very cold place full of iron oxide dust



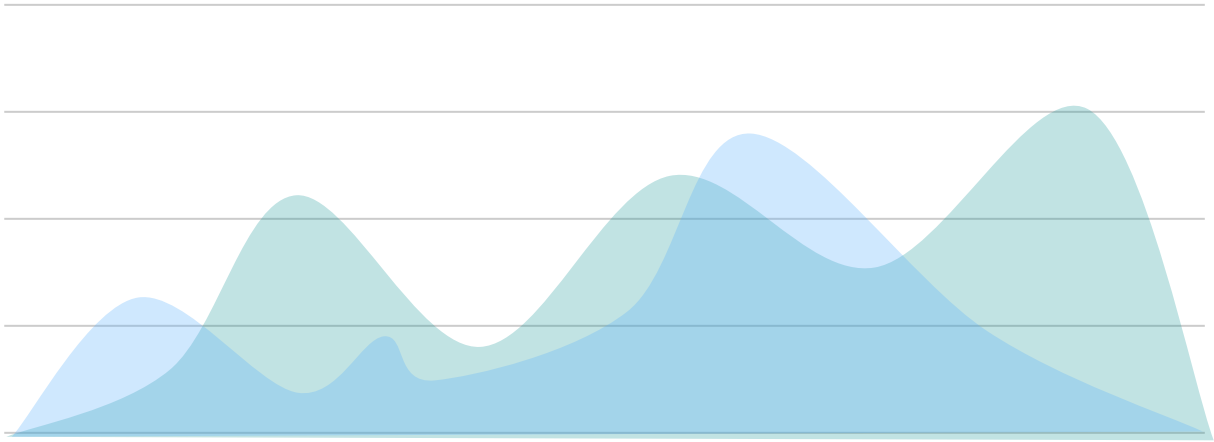
SATURN

Saturn is composed mostly of hydrogen and helium

VENUS

Venus has a beautiful name and is the second planet from the Sun

Budget Infographics



MERCURY

Mercury is the closest planet to the Sun

MARS

Despite being red, Mars is a cold place

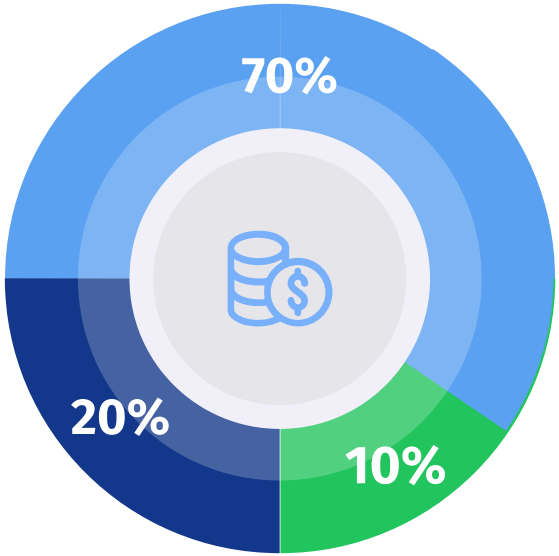
NEPTUNE

Neptune is the farthest planet

Budget Infographics

MERCURY

Mercury is the closest planet to the Sun and the smallest



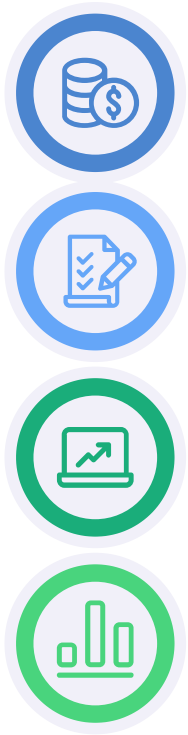
JUPITER

Jupiter is a gas giant and the biggest planet of them all

VENUS

Venus has a beautiful name and is the second planet

Budget Infographics



MARS

Despite being red, Mars is a very cold place full of iron

MERCURY

Mercury is the closest planet to the Sun and the smallest

VENUS

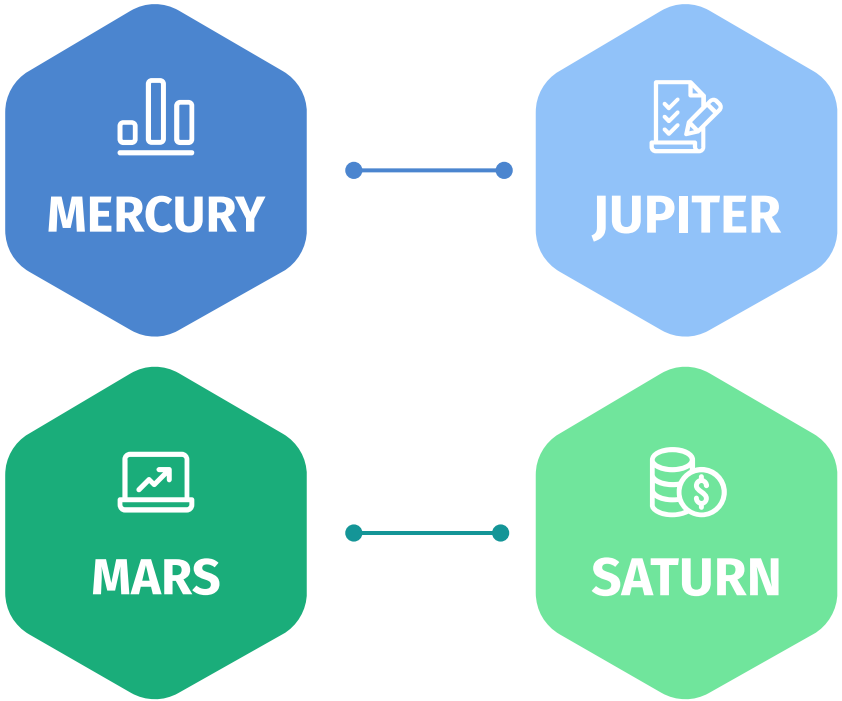
Venus has a beautiful name and is the second

JUPITER

Jupiter is a gas giant and the biggest planet

Budget Infographics

Mercury is the closest planet to the Sun and the smallest



Jupiter is the biggest planet in the Solar System

Despite being red, Mars is actually a very cold place

Saturn is composed of hydrogen and also helium

Budget Infographics

MARS

Despite being red, Mars is actually a very cold place

VENUS

Venus is the second planet from the Sun

JUPITER

Jupiter is a gas giant and the biggest planet

Budget Infographics

SATURN

Saturn is a gas giant and has several rings

MERCURY

Mercury is the closest planet to the Sun

VENUS

Venus is the second planet from the Sun

JUPITER

Jupiter is a gas giant and the biggest planet

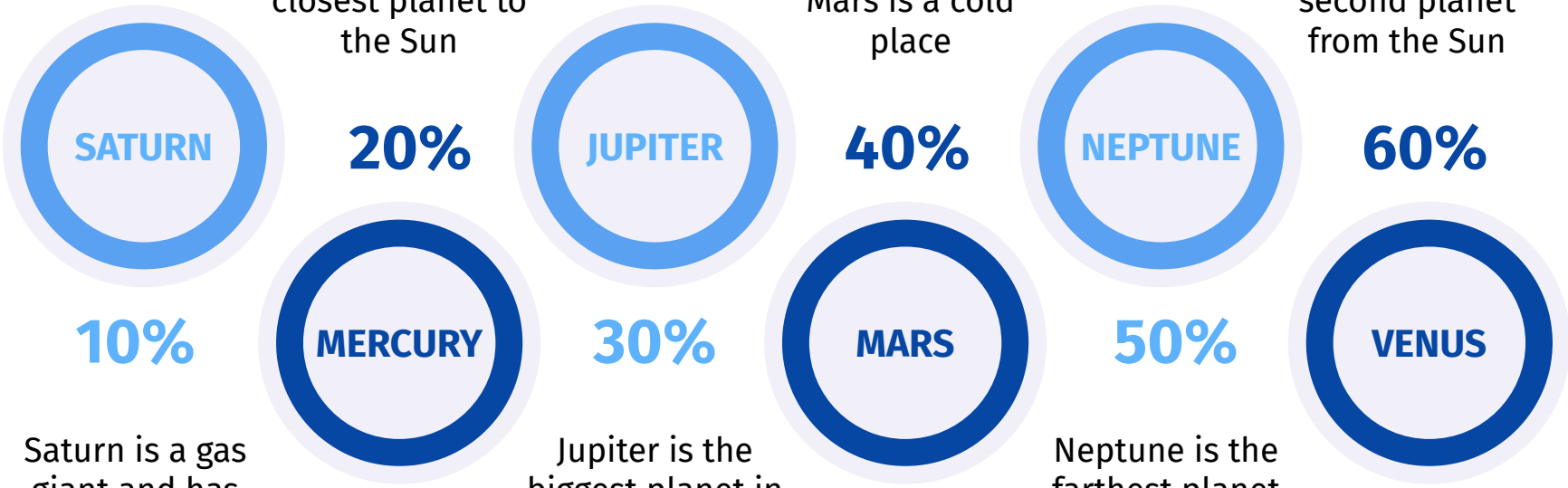
SATURN

Despite being red, Mars is actually a cold place

NEPTUNE

Neptune is the farthest planet from the Sun

Budget Infographics



Budget Infographics

MARS

Despite being red, Mars is actually a cold place

MERCURY

Mercury is the closest planet to the Sun

SATURN

It’s composed of hydrogen and helium

VENUS

Venus is the second planet from the Sun

JUPITER

Jupiter is the biggest planet of them all

NEPTUNE

Neptune is the farthest planet from the Sun

Budget Infographics

SATURN

It’s composed of hydrogen and helium

JUPITER

Jupiter is the biggest planet of them all

NEPTUNE

Neptune is the farthest planet from the Sun

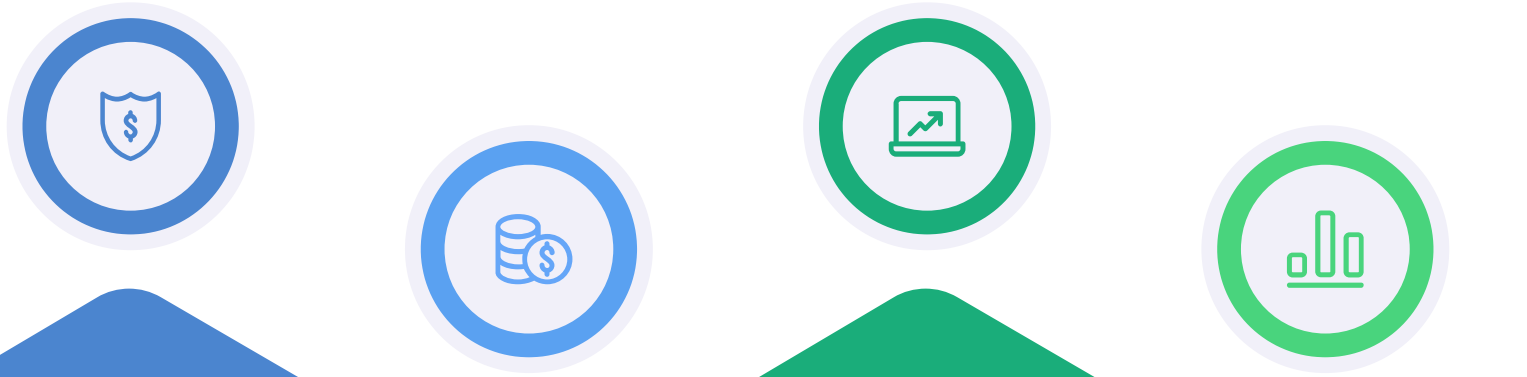
MERCURY

Mercury is the closest planet to the Sun

MARS

Despite being red, Mars is a cold place

Budget Infographics



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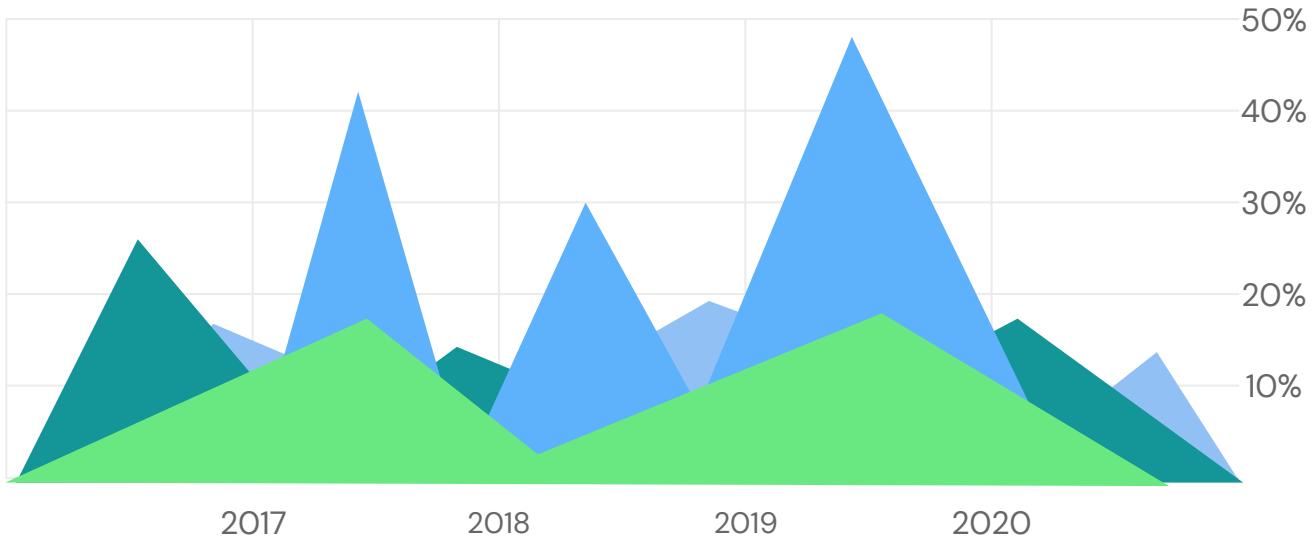

MERCURY

Mercury is the closest planet to the Sun

MARS

Despite being red, Mars is a cold place

SATURN

It’s the only one with rings of all of them

NEPTUNE

It’s the farthest one from the Sun

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- **Change the color** by clicking on the paint bucket.
- Then **resize** the element by clicking and dragging one of the square-shaped points of its bounding box (the cursor should look like a double-headed arrow). Remember to hold Shift while dragging to keep the proportions.
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