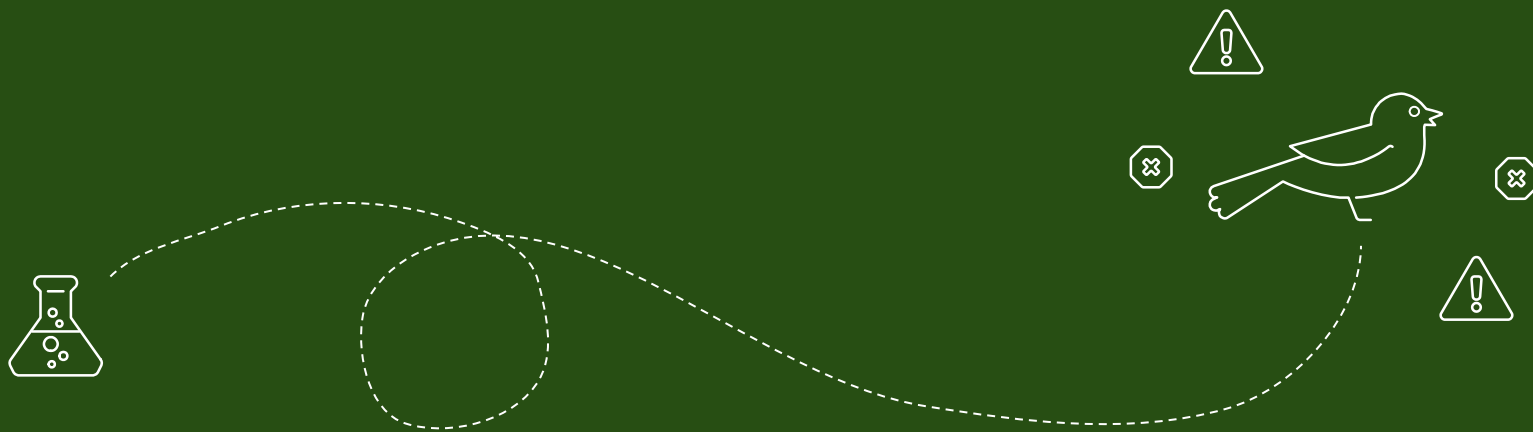# VAST 2017
Mini-Challenge 2
Chemical Monitoring

Overview

- Cidade de Mistford

- A cidade tem uma pequena área industrial com quatro fábricas

- Boonsong Lekagul Nature Preserve

- **Número de ninhos de Rose-Crested Blue Pipit diminuindo!**

SUSPEITA: LANÇAMENTOS QUÍMICOS

As indústrias de Mistford podem ser culpadas do desaparecimento dos pássaros
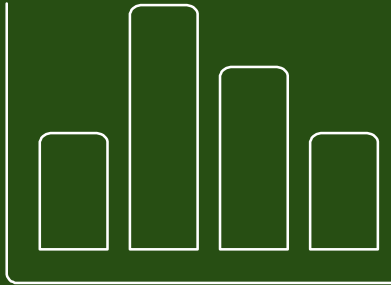
Conjunto de dados

Dados de amostras de ar

- Produto químico
- Nº do Sensor
- Data/Hora
- Valor da Leitura

Dados meteorológicos

- Data/Hora
- Direção do Vento
- Velocidade do vento

Desafios iniciais

Questões:

- Caracterizar a performance dos sensores à procura de mal funcionamentos e padrões inesperados nos dados

- Que substâncias químicas estão sendo detectadas pelo grupo de sensores e qual o seu padrão de dispersão?

- Quais fábricas são responsáveis por quais substâncias?

Questionar → Visualizar → Analisar e relatar
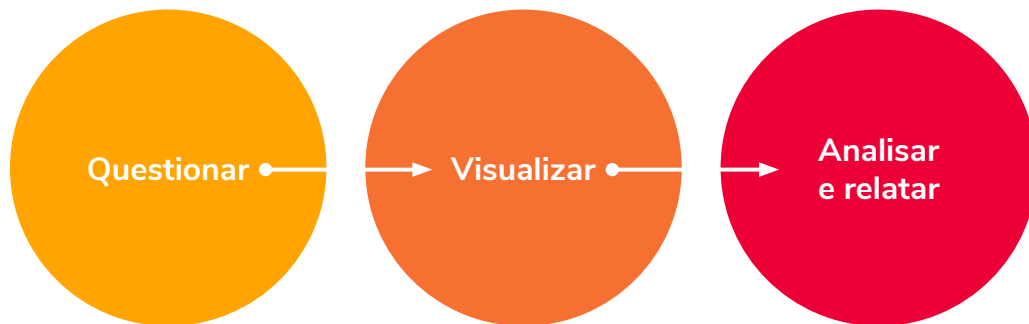
A solução

Descobertas

- *Existem picos de Methylosmolene acontecendo sempre entre as 23h e as 6h.*

- *Não se observam leituras duplas em sensores juntos a esses picos.*

- *Kasio e/ou Roadrunner produz(em) Chlorodinine.*

- *Kasio e/ou Roadrunner produz(em) Methylosmolene.*

- *Kasio e/ou Roadrunner produz(em) AGOC-3A.*

- *Indigo e/ou Radiance produz(em) Chlorodinine.*

Acesse nosso website e veja as soluções

- Link: [Website Chemical Monitoring](#)

VAST 2017 - MC2 Chemical Monitoring

Questões podem ser enviadas para:

- João P. J. V. da Silva (jpjvs)

- Rogério B. Santos (rbs7)

Website:

- https://rbs7.github.io/CHEMICALMONITOR ING-visualizacao-2017-1/

VISUAL ANALYTICS

Para investigar o problema

Porque investigar importa?

Caso de Minamata descoberto em 1959

$ 2.3 bilhões

Em prejuízo para a Chisso Corporation
no Japão pelo caso de Minamata em 2000

12.617 vítimas

Envenenadas por mercúrio através da
ingestão de peixes envenenados em Minamata

Fonte: soshisha.org

Pesticidas tóxicos

O DDT foi amplamente usado como pesticida contra o mosquito transmissor da malária, mas descobriu-se que ele se acumula no ambiente e produz efeitos mutagênicos, cancerígenos e danos ao sistema reprodutor.

Fonte:Cornell University

Jaboatão dos Guararapes
(CEPASA, antiga Portela)

24 h de fumaça
A fumaça era lançada ininterruptamente de 1971 até 2017

200 mil pessoas
Afetadas pelo lançamento de dejetos da fabricação de papel no ar e no rio Jaboatão

Fonte: Jornal Gazeta Nossa

"

Visual analytics is the science of analytical reasoning facilitated by interactive visual interfaces."

Jim Thomas

In two or three columns

Yellow

Is the color of gold, butter and ripe lemons. In the spectrum of visible light, yellow is found between green and orange.

According to surveys in Europe, Canada, and the United States, yellow is the color people most often associate with amusement, gentleness, and spontaneity, but also with duplicity, envy, jealousy, avarice, and, in the U.S., with cowardice.

It plays an important role in Asian culture, particularly in China, where it is seen as the color of happiness, glory, wisdom, harmony, and culture.

Blue

Is the colour of the clear sky and the deep sea. It is located between violet and green on the optical spectrum.

Surveys in the US and Europe show that blue is the colour most commonly associated with harmony, faithfulness, confidence, distance, infinity, the imagination, cold, and sometimes with sadness.

In US and European public opinion polls it is the most popular colour, chosen by almost half of both men and women as their favourite colour.

Red

Is the color of blood, and because of this it has historically been associated with sacrifice, danger and courage.

Modern surveys in the United States and Europe show red is also the color most commonly associated with heat, activity, passion, sexuality, anger, love and joy. Red is also a color widely used for getting attention, such as stop signs or royal dresses.
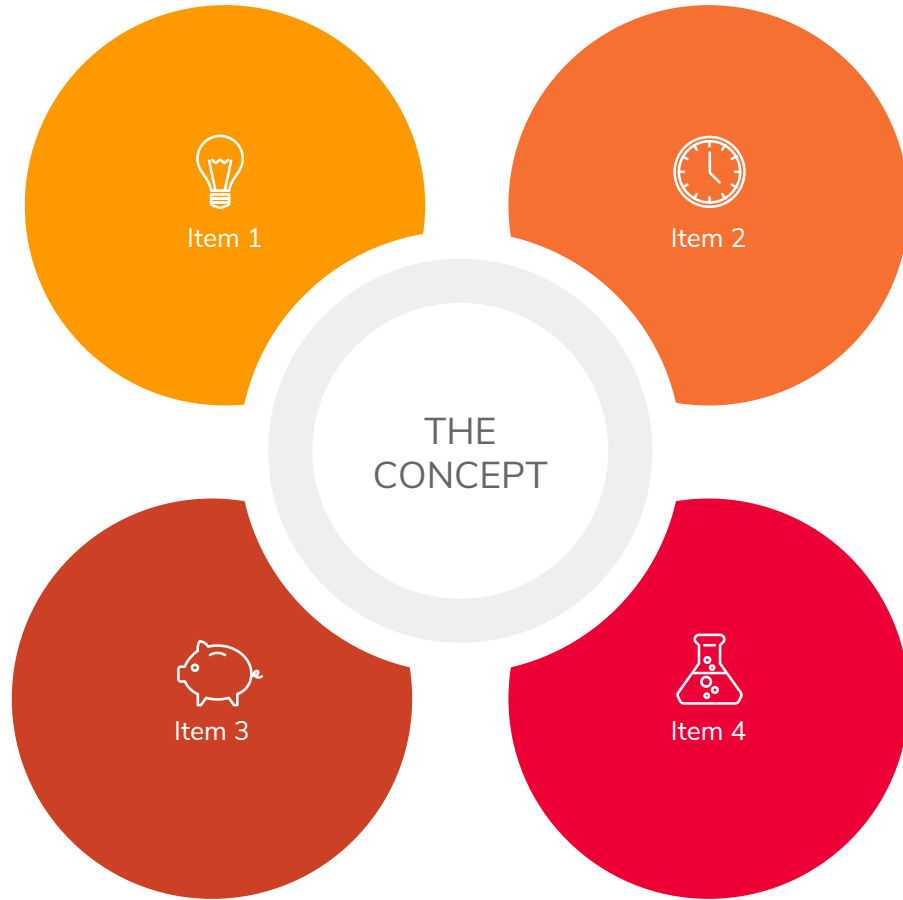
In China, India and many other Asian countries it is the color of symbolizing happiness and good fortune.

A picture is worth a thousand words

A complex idea can be conveyed with just a single still image, namely making it possible to absorb large amounts of data quickly.

Use charts to explain your ideas

Item 1

Item 2

THE
CONCEPT

Item 3

Item 4

And tables to compare data

As a communication tool, a table allows a form of generalization of information from an unlimited number of different social or scientific contexts. It provides a familiar way to convey information that might otherwise not be obvious or readily understood.

	A	B	C
Yellow	**10**	**20**	**7**
Blue	**30**	**15**	**10**
Orange	**5**	**24**	**16**

Maps

The word "map" comes from the medieval Latin Mappa mundi, wherein mappa meant napkin or cloth and mundi the world.

our office

And even more numbers
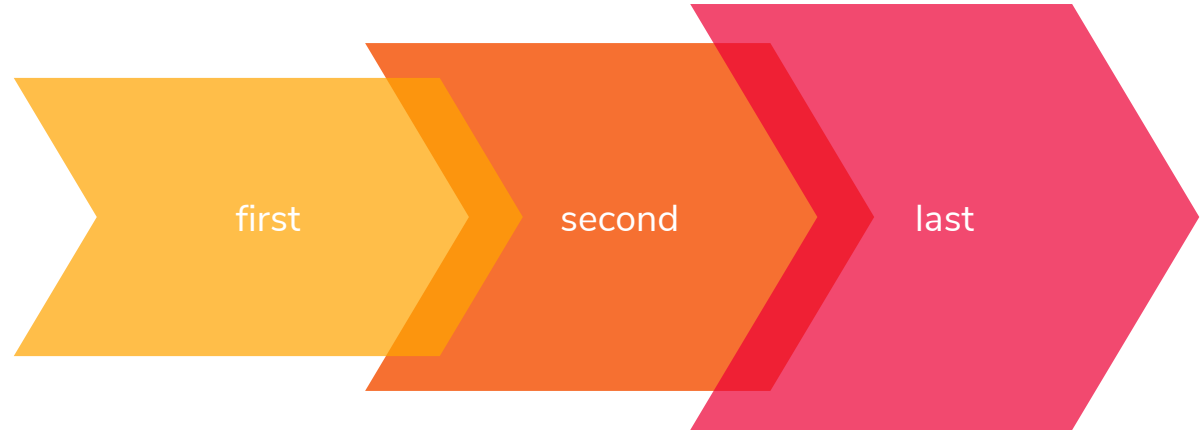
89,526,124$

That's a lot of money

185,244 users

And a lot of users

100%

Total success!

Our process is easy

first

second

last

Let's review some concepts

Yellow

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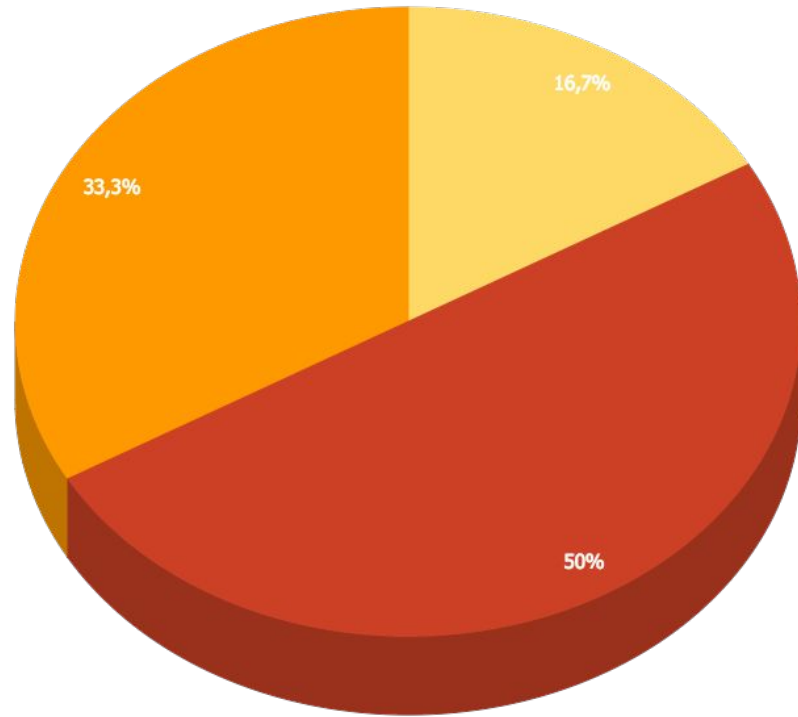
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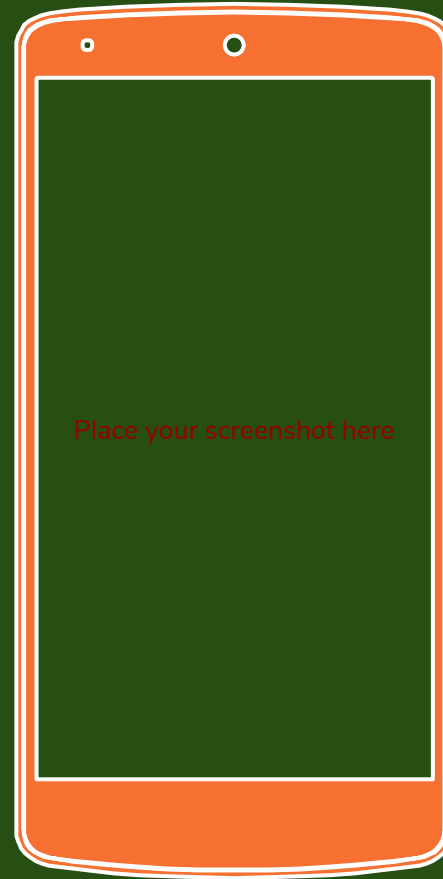
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You can insert graphs from [Google Sheets](#)

Android Project
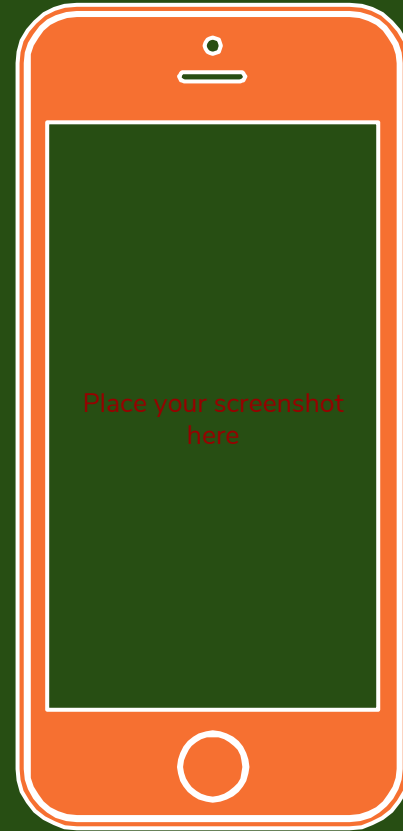
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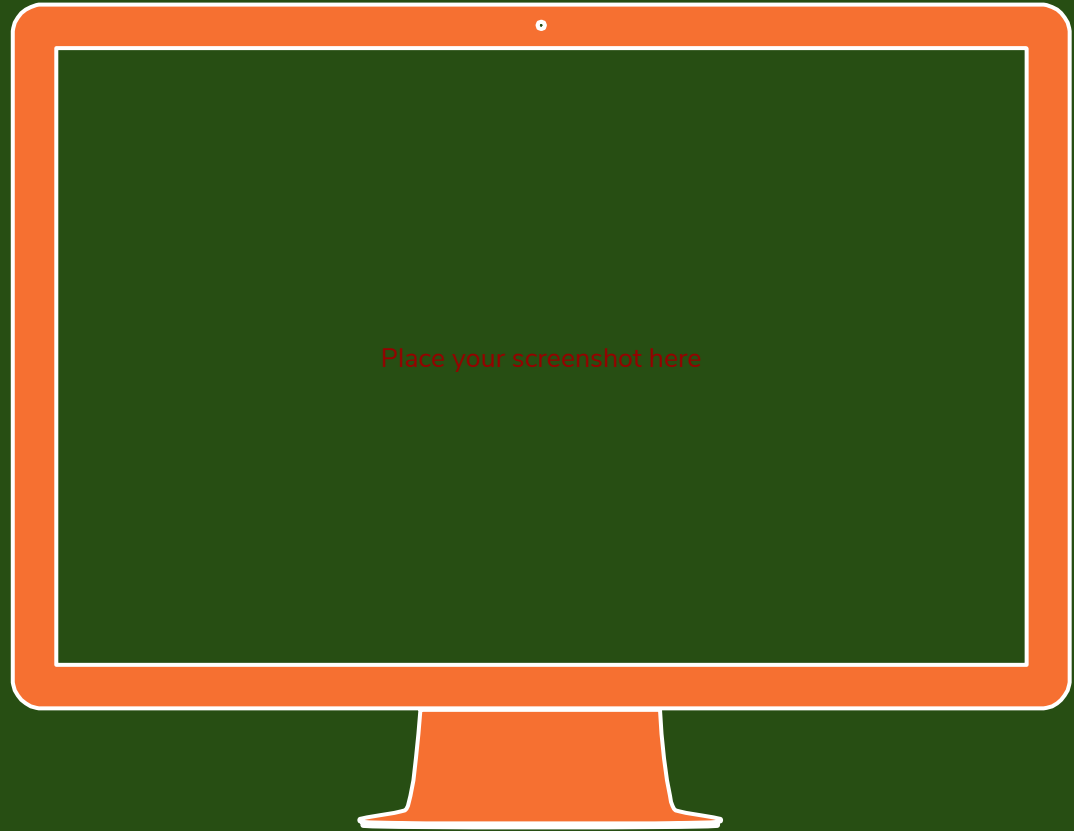
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- Orange **#f67031**
- Yellow **#ffa400**
- Fucsia **#ed0036**

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Examples:

Now you can use any emoji as an icon!
And of course it resizes without losing quality and you can change the color.

How? Follow Google instructions
https://twitter.com/googledocs/status/730087240156643328

and many more...

12.617 vítimas

Envenenadas por mercúrio através da ingestão de peixes envenenados em Minamata

$

2.3 bilhões em prejuízos

Para a Chisso Corporation no Japão pelo caso de Minamata em 2000

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