

# Статический анализ для всех и для каждого

## **Артемий Сартаков**

Закончил ФИТ НГУ в 2017

5 лет в статическом  
анализе

Преподаю ООП на ФИТе



## Что с этим методом не так?

3

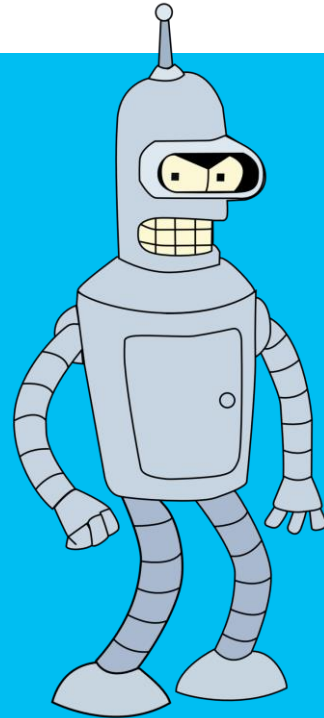
```
protected void makePuzzle() {  
    for (int i = 0; i < rows; i++) {  
        for (int j = 0; j < cols; j++) {  
            if (!generatedPuzzle[i * rows + j].equals("0")) {  
                mark[i * rows + j] = true;  
            } else {  
                mark[i * rows + j] = false;  
            }  
        }  
    }  
}
```

## Что с этим методом не так?

4

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        }  
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}
```

Я,  
статический  
анализатор





***Статический анализ – это автоматический анализ компьютерных программ, который производится без их запуска.***

```
protected void makePuzzle() {  
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```

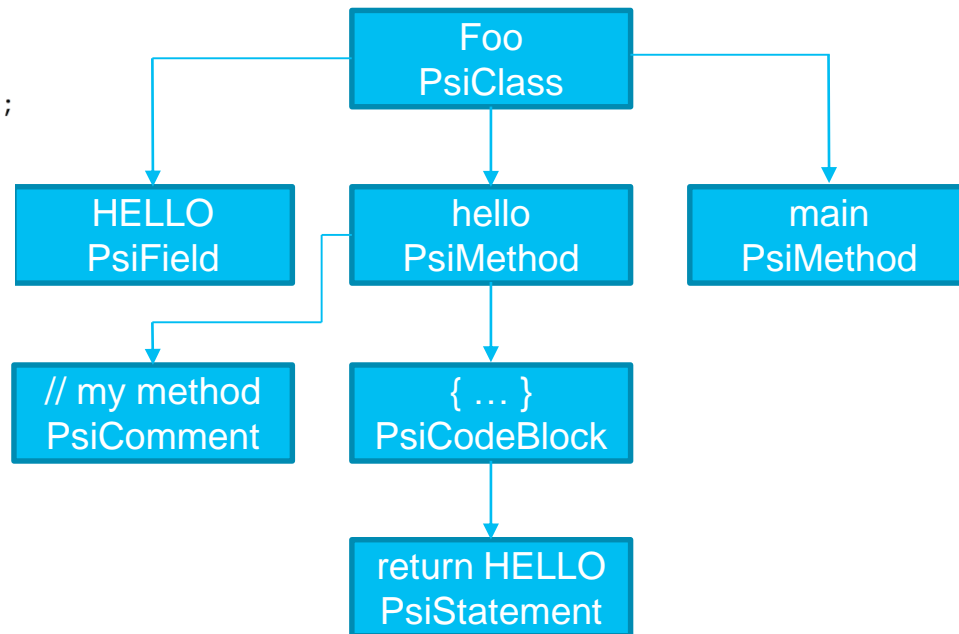
- » В коде есть `if-else`
- » В обеих ветках только одна инструкция – присваивание
- » Присваивается к одной и той же переменной типа `boolean`



## Класс – это дерево

9

```
class Foo {  
    1 usage  
    private static final String HELLO = "hello";  
  
    public static void main(String[] args) {  
        String hello = Foo.hello();  
        System.out.println(hello);  
    }  
  
    // my method  
    1 usage  
    private static String hello() {  
        return HELLO;  
    }  
}
```



- » Обходят дерево (PsiFile) с помощью паттерна визитор
- » Помечают проблемный элемент и предлагают фиксы, которые чинят проблему
- » На основе пометок подсвечивается код в редакторе

# Пишем инспекцию

# 1.

## TRANSITION HEADLINE

Let's start with the first set of slides



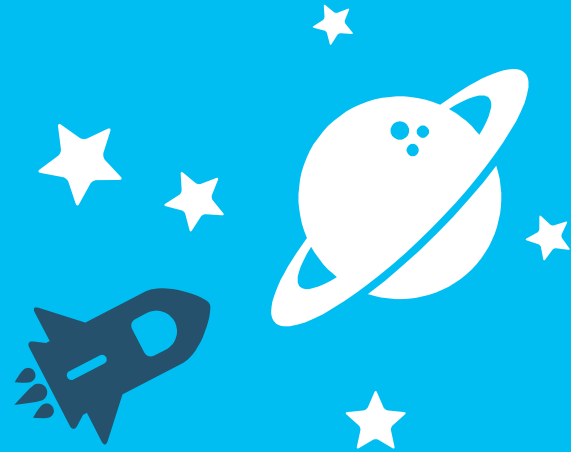
*Quotations are commonly printed as a means  
of inspiration and to invoke philosophical  
thoughts from the reader.*

- » Here you have a list of items
- » And some text
- » But remember not to overload your slides with content

Your audience will listen to you or read the content, but won't do both.

# BIG CONCEPT

Bring the attention of your audience over  
a key concept using icons or illustrations



### White

Is the color of milk and fresh snow, the color produced by the combination of all the colors of the visible spectrum.

### Black

Is the color of ebony and of outer space. It has been the symbolic color of elegance, solemnity and authority.



### Yellow

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

### Blue

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

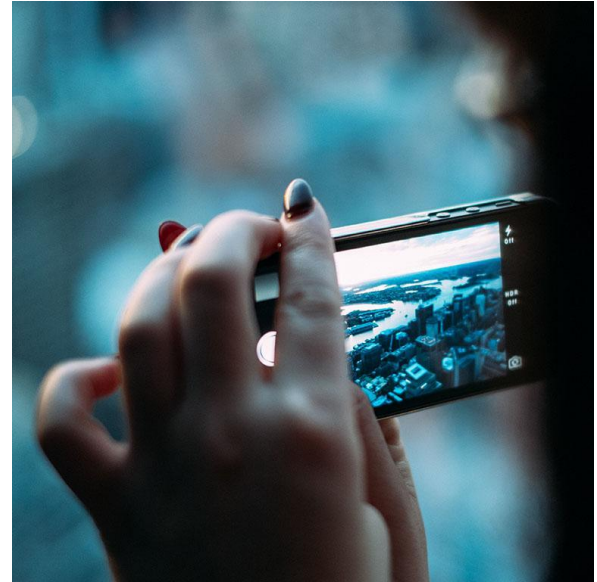
### Red

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

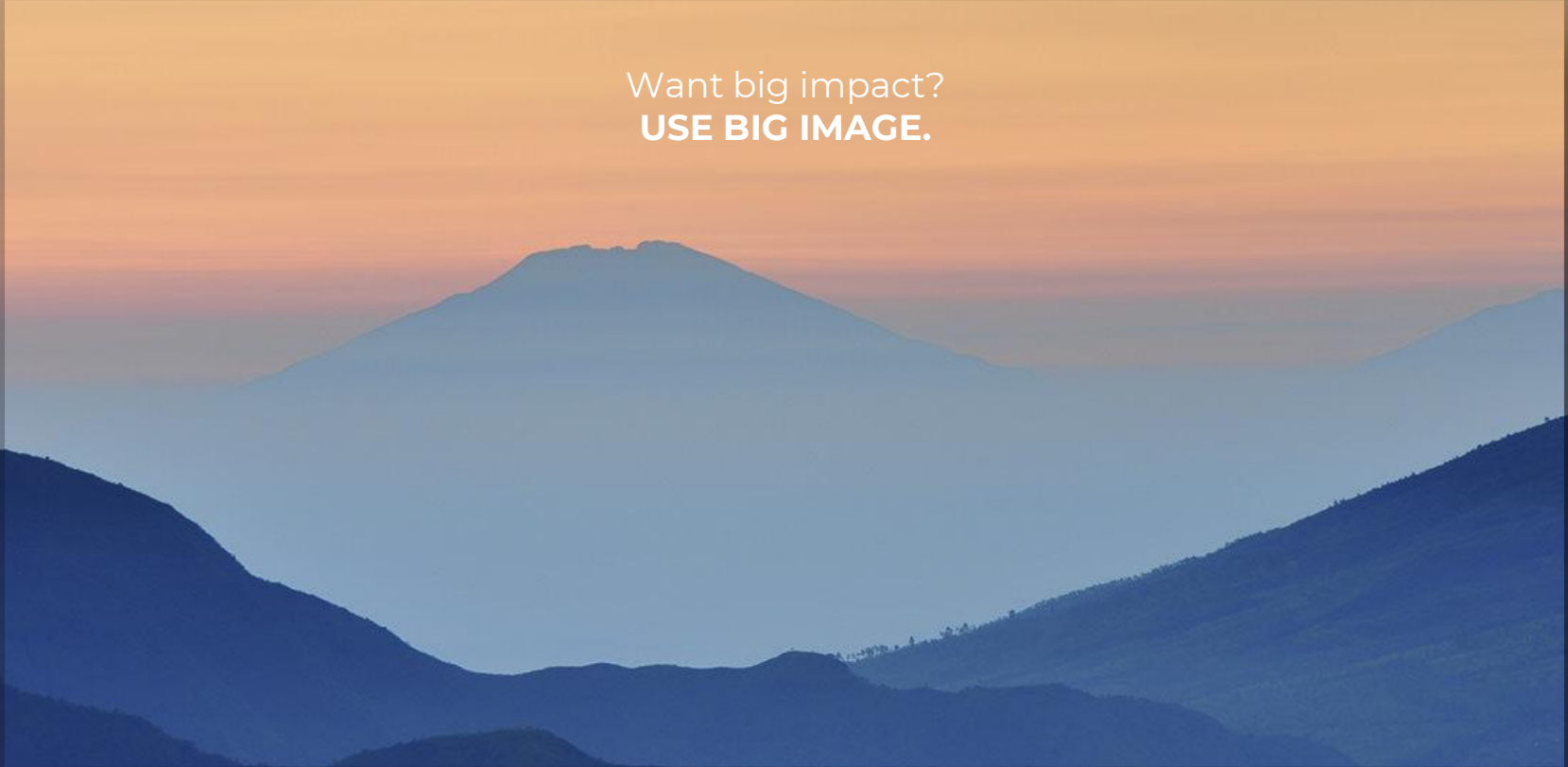
## A PICTURE IS WORTH A THOUSAND WORDS

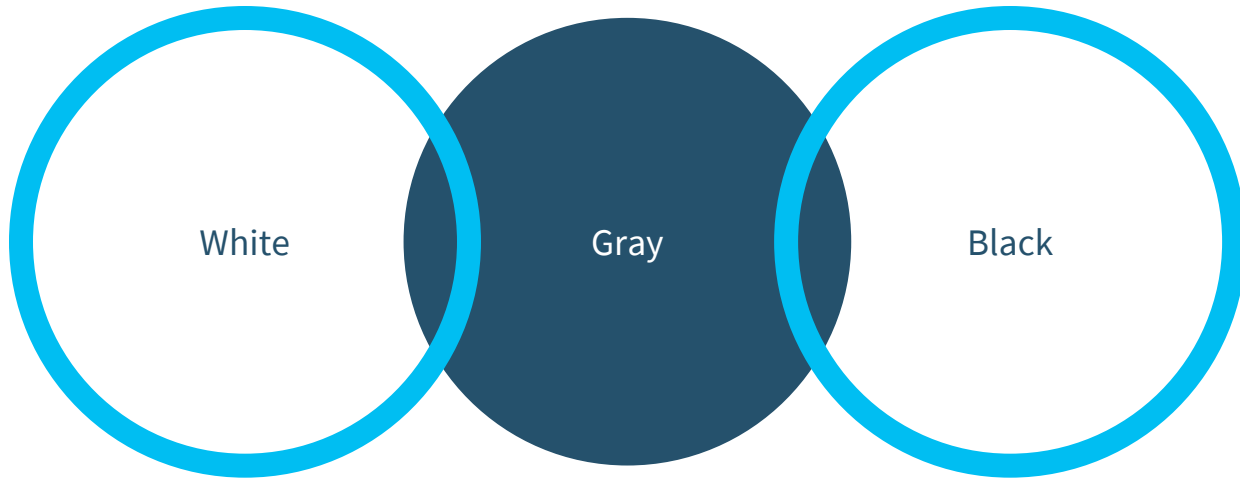
18

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



Want big impact?  
**USE BIG IMAGE.**





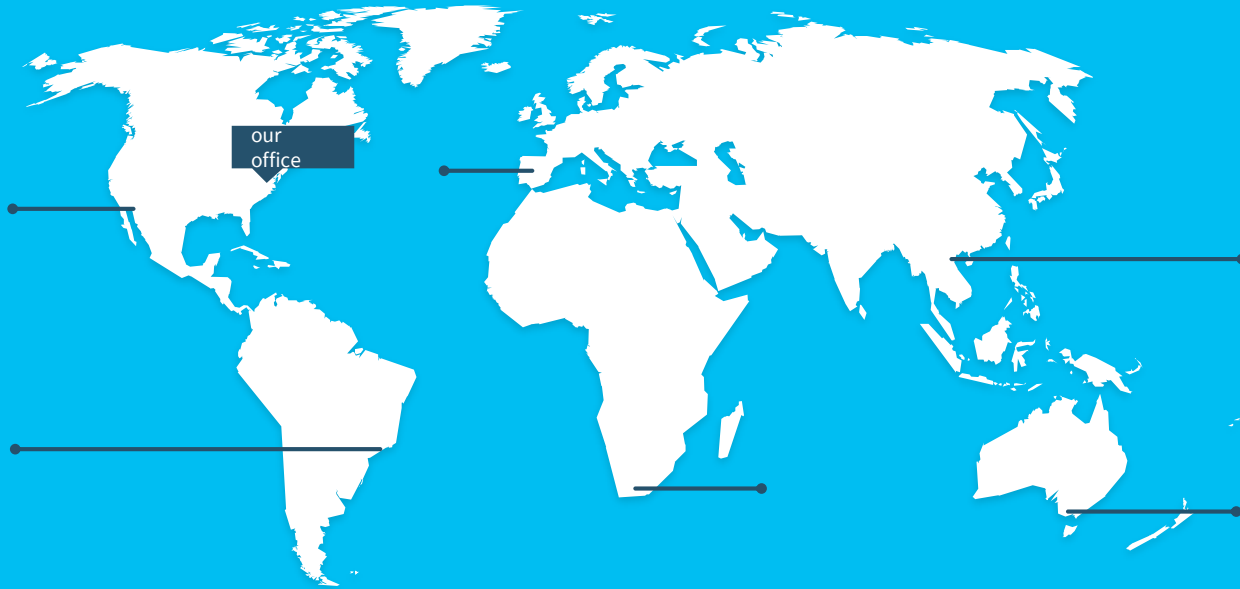
## AND TABLES TO COMPARE DATA

21

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

## MAPS

22



# 89,526,124

Whoa! That's a big number, aren't you proud?

**89,526,124\$**

That's a lot of money

**185,244 users**

And a lot of users

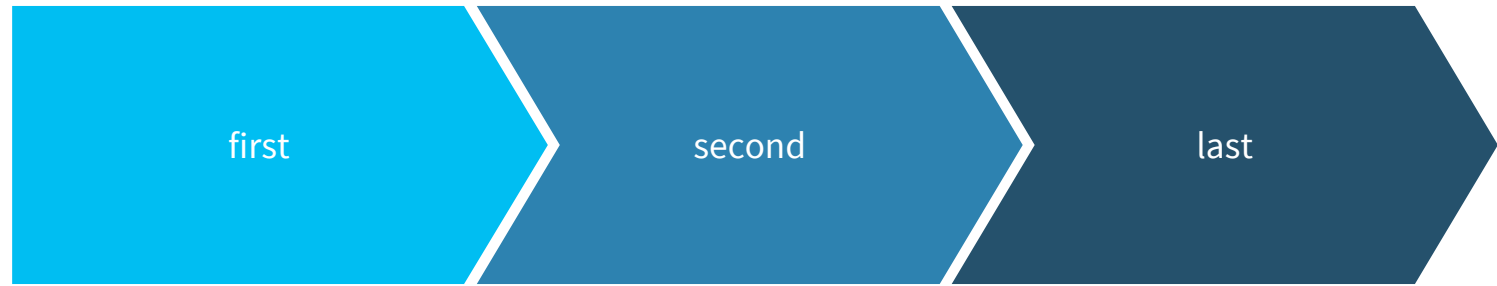
**100%**

Total success!



## OUR PROCESS IS EASY

25



## Let's review some concepts

26

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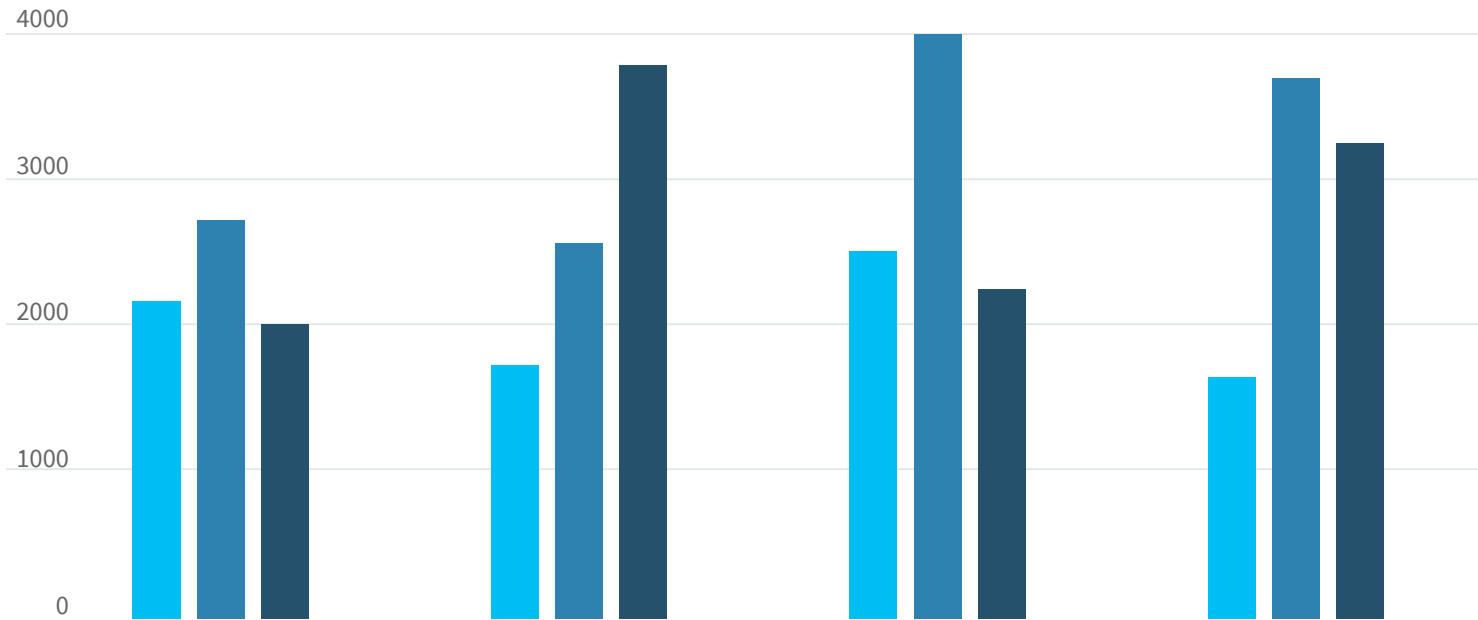
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### Red

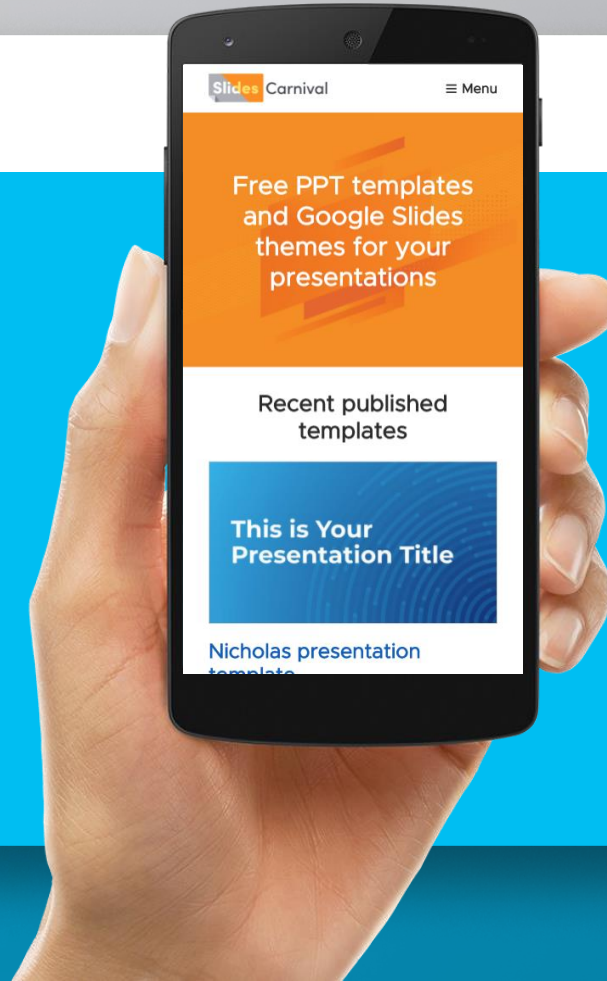
Is the color of blood, and because of this it has historically been associated with sacrifice, danger and courage.



You can insert graphs from Excel or Google Sheets

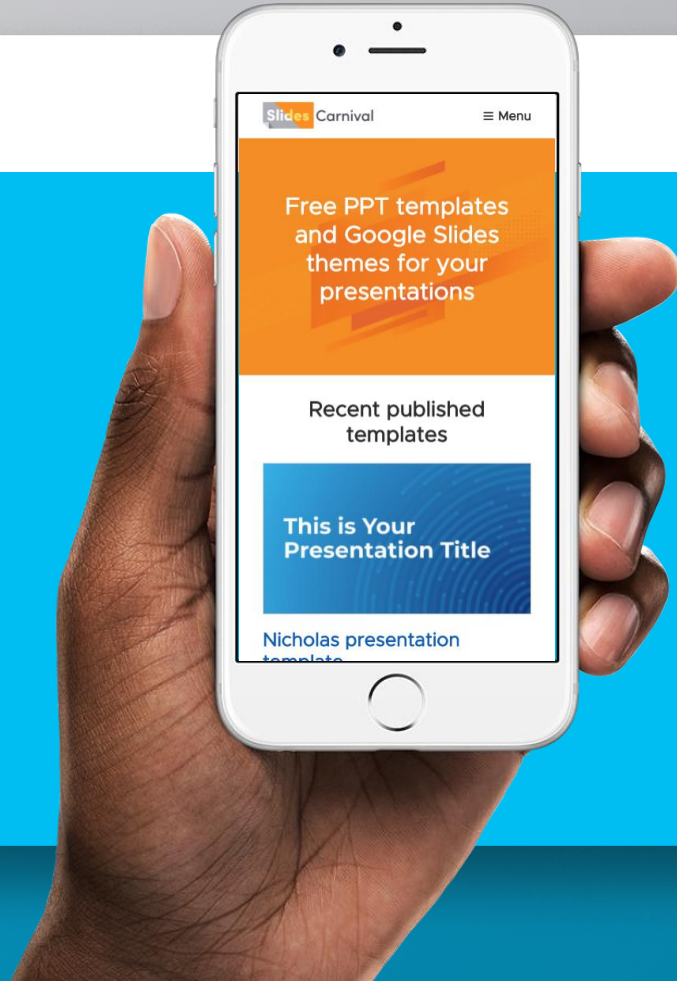
## ANDROID PROJECT

Show and explain your web, app or software projects using these gadget templates.



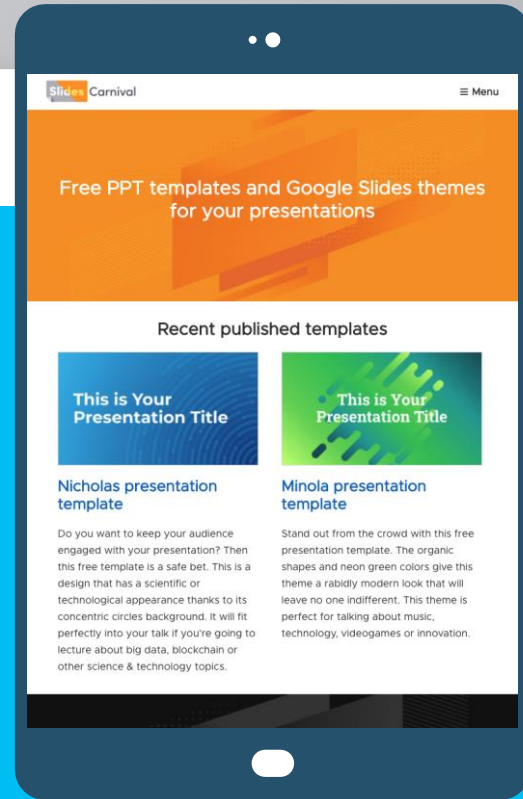
## iPHONE PROJECT

Show and explain your web, app or software projects using these gadget templates.



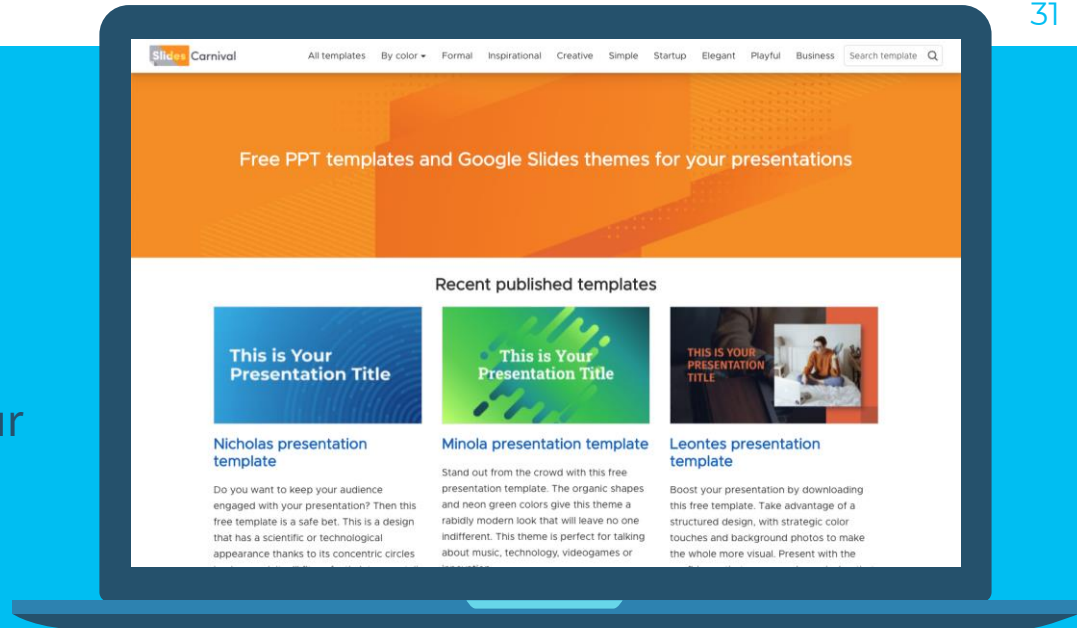
## TABLET PROJECT

Show and explain your web, app or software projects using these gadget templates.



## DESKTOP PROJECT

Show and explain your web, app or software projects using these gadget templates.



THANKS!

32

# Any questions?

You can find me at:

- » @username
- » user@mail.me





Special thanks to all the people who made and released these awesome resources for free:

- » Presentation template by [SlidesCarnival](#)
- » Photographs by [Unsplash](#)
- » Diverse device hand photos by [Facebook Design Resources](#)

This presentation uses the following typographies and colors:

- » Titles: **Montserrat**
- » Body copy: **Source Sans Pro**

You can download the fonts on these pages:

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<https://www.fontsquirrel.com/fonts/source-sans-pro>

- » Sky Blue **#00bef2** / Navy Blue **#25516c**

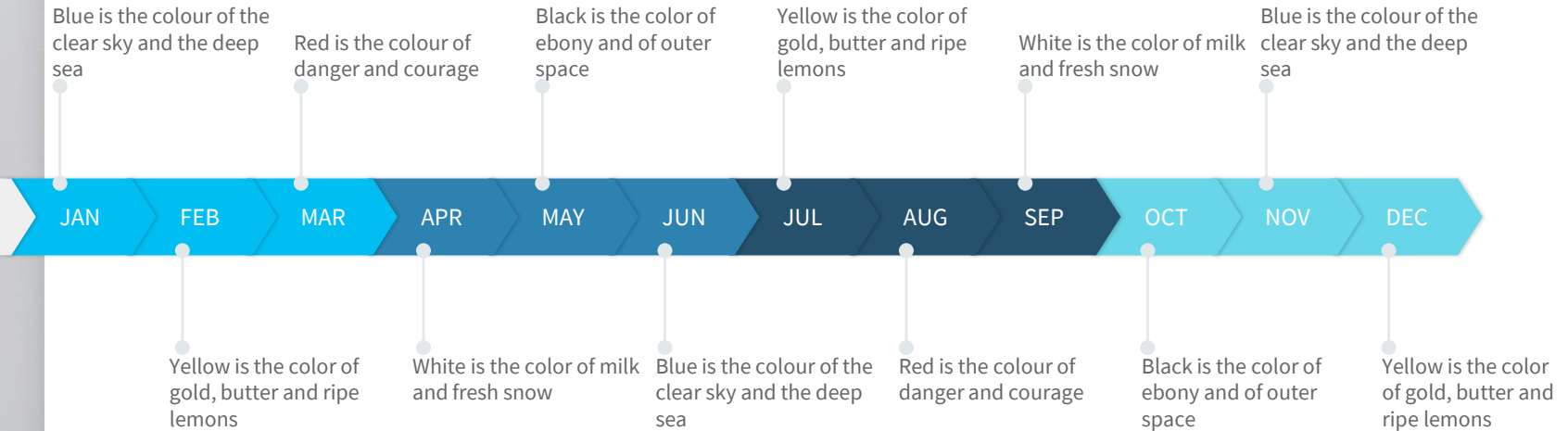
# 2.

## **EXTRA RESOURCES**

For Business Plans, Marketing Plans, Project Proposals, Lessons, etc

## TIMELINE

36



## ROADMAP

37

Blue is the colour of the  
clear sky and the deep sea



Red is the colour of danger  
and courage



Black is the color of ebony  
and of outer space



Yellow is the color of gold,  
butter and ripe lemons



White is the color of milk  
and fresh snow

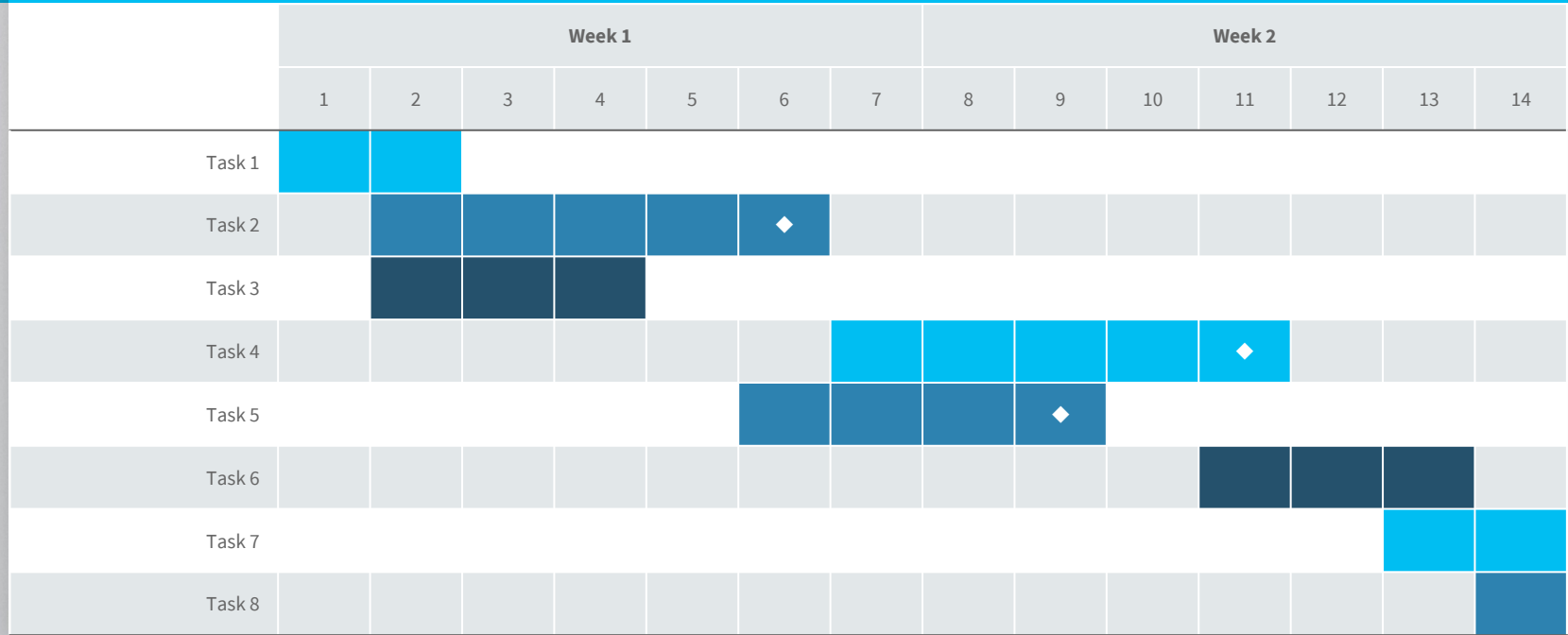


Blue is the colour of the  
clear sky and the deep sea



## GANTT CHART

38



## SWOT ANALYSIS

39

### STRENGTHS

Blue is the colour of the clear sky and the deep sea

### WEAKNESSES

Yellow is the color of gold, butter and ripe lemons



Black is the color of ebony and of outer space

### OPPORTUNITIES

White is the color of milk and fresh snow

### THREATS

# BUSINESS MODEL CANVAS

## Key Partners

Insert your content



## Key Activities

Insert your content



## Value Propositions

Insert your content



## Customer Relationships

Insert your content



## Customer Segments

Insert your content



## Key Resources

Insert your content



## Channels

Insert your content



## Cost Structure

Insert your content



## Revenue Streams

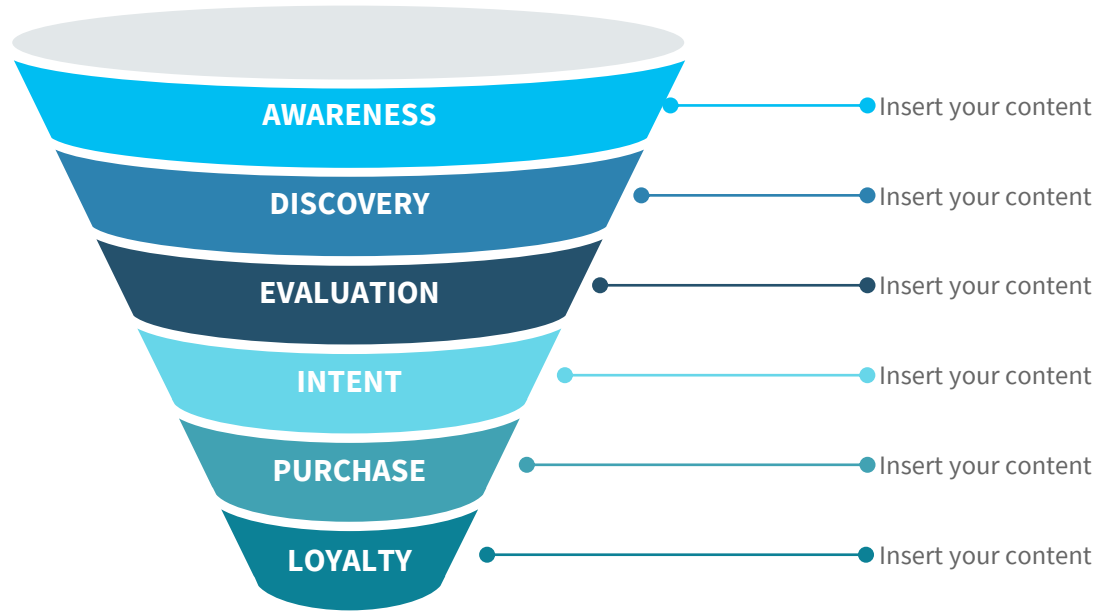
Insert your content





# FUNNEL

41



## TEAM PRESENTATION

42



**Imani Jackson**

JOB TITLE

Blue is the colour of the clear  
sky and the deep sea



**Marcos Galán**

JOB TITLE

Blue is the colour of the clear  
sky and the deep sea



**Ixchel Valdía**

JOB TITLE

Blue is the colour of the clear  
sky and the deep sea

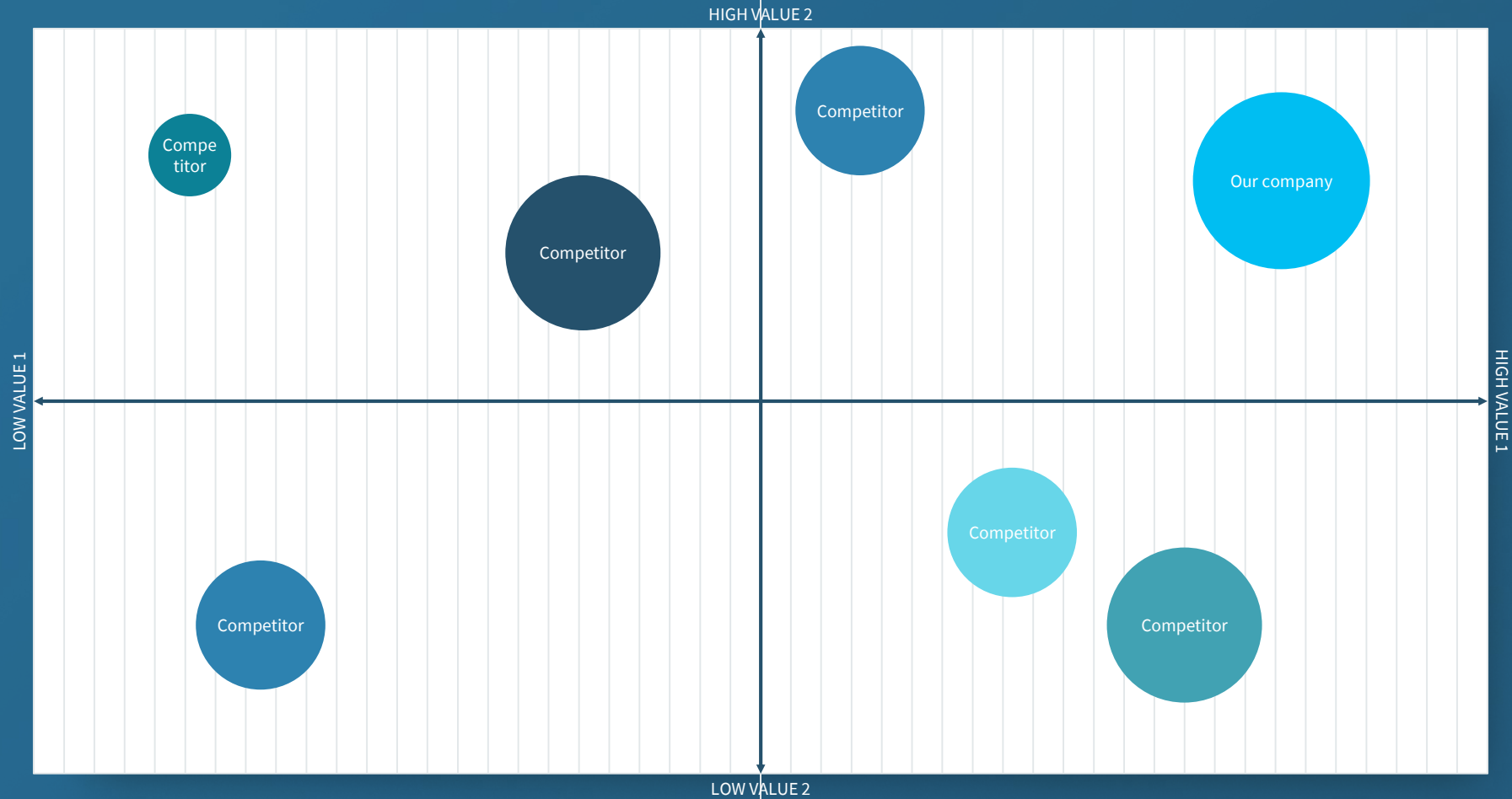


**Nils Årud**

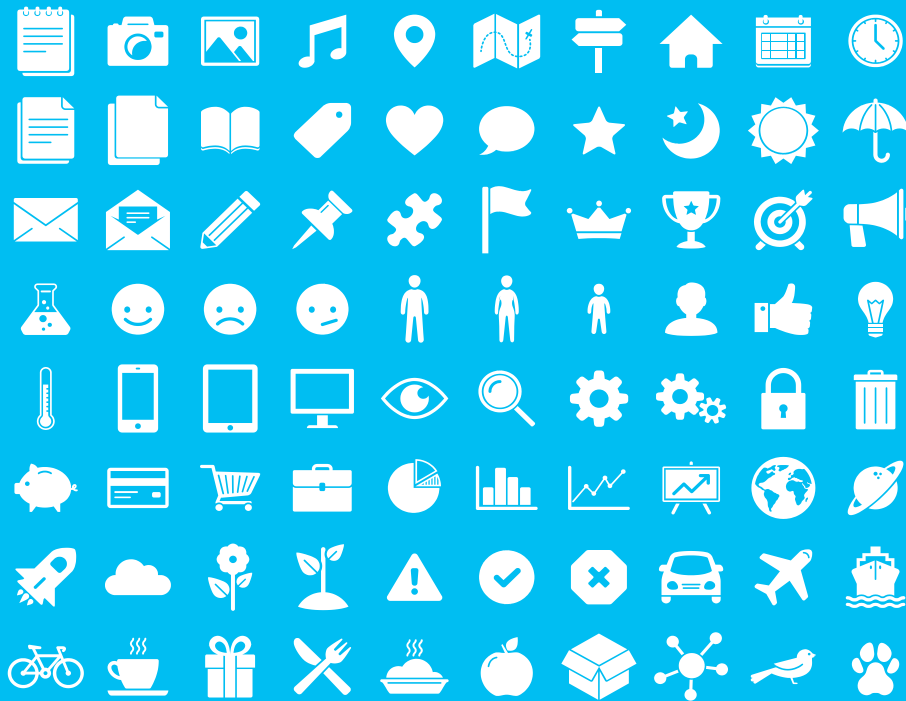
JOB TITLE

Blue is the colour of the clear  
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# COMPETITOR MATRIX







## SlidesCarnival icons are editable shapes.

45

This means that you can:

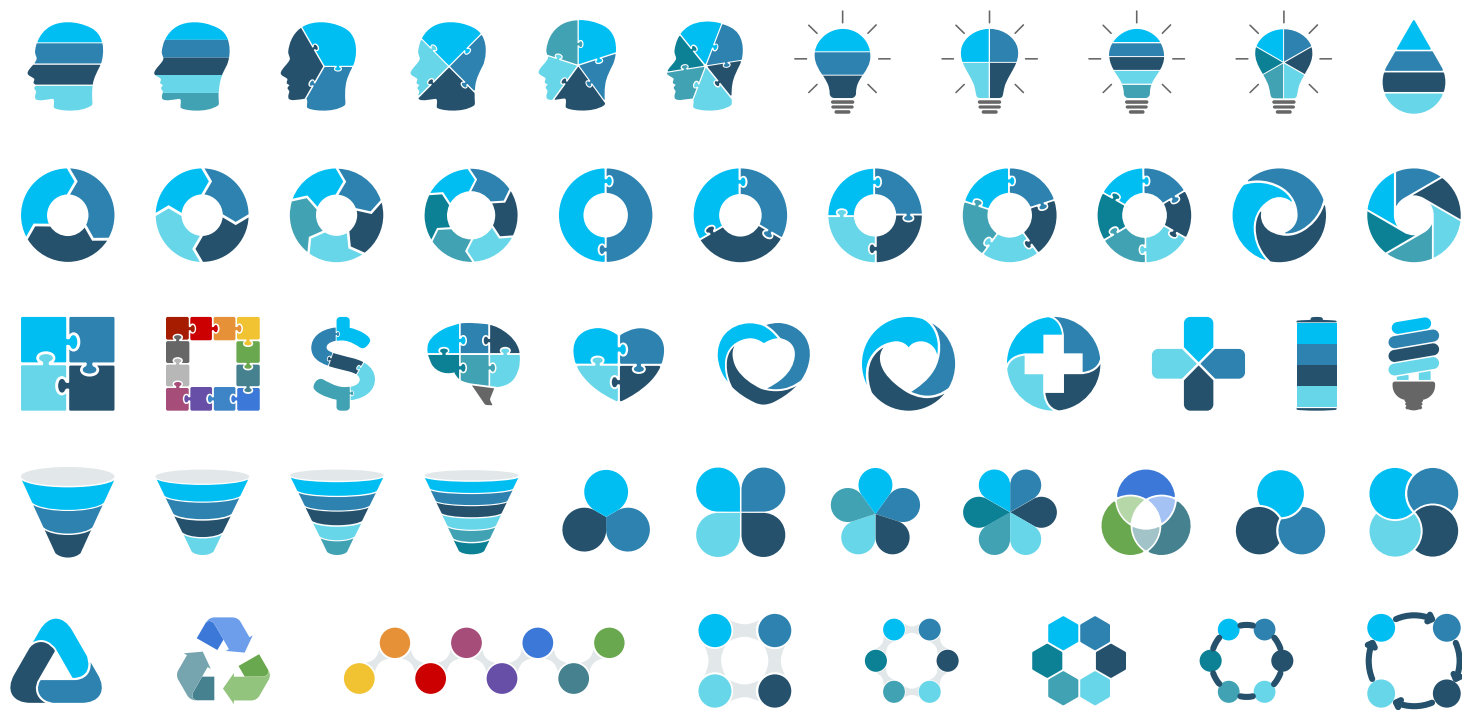
- Resize them without losing quality.
- Change fill color and opacity.
- Change line color, width and style.

Isn't that nice? :)

Examples:



# Diagrams and infographics



**You can also use any emoji as an icon!**

And of course it resizes without losing quality.

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





## Free templates for all your presentation needs



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Google Slides



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or commercial use



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professional and  
customizable



Blow your audience  
away with attractive  
visuals