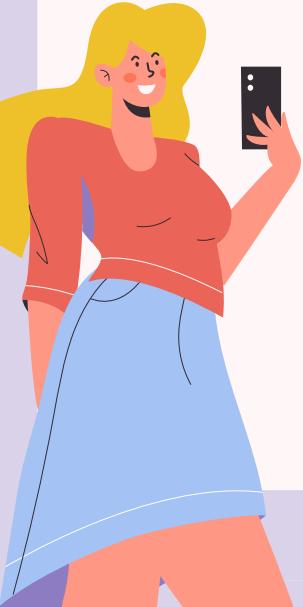


# Enhancing Voice Messages: Highlighting Important Content with Pop-up Text or Emojis



Exploring a new way of mobile communication



Demetra Hadjicosti, Ioanna Vounzoulaki,  
Eleni Mouzaki, Samin Asnaashari,  
Michalina Modzelewska, Veronica Dell'Aera

# Problem Introduction

## Problem

- Voice messages are **convenient**
- Low **comprehension**

## Contribution

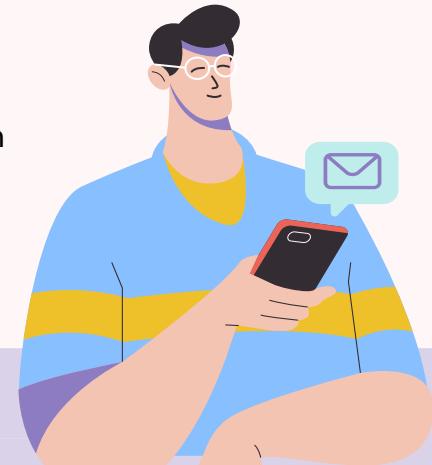
Introducing **two novel approaches** for **messaging communication** to check their potential

## Motivation

- Combining the **benefits** of voice and written messages
- Revolutionary way of mobile communication

## Measurement

- Comprehension
- Usability





# Novel Approaches

1

## Voice & Text

**Highlighting important words using pop-up text** on screen that are derived from the voice message.

2

## Voice & Emojis

**Highlighting important words through emojis** on screen that are derived from the voice message.





# Research Question

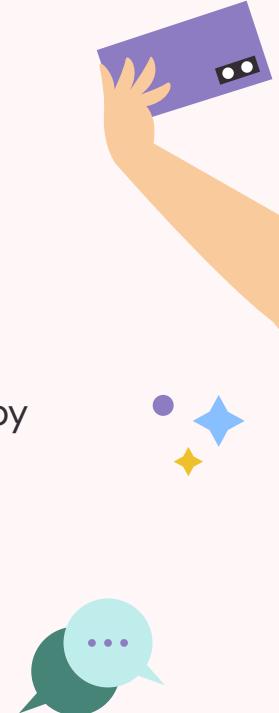
"How do two novel approaches for mobile communication, one combining **text and voice**, and the other combining **emojis and voice**, compare in comprehension and usability scores?"





# Hypotheses

1. The novel combinations will be deemed “acceptable” in terms of usability.
2. The novel approaches will outperform standard voice messages in comprehension.
3. The novel approaches will be favored over standard voice messages by users.





# Methodology

## Empirical Research

- Control group: **conventional voice messages.**
- 2nd group: **voice & text** – important words
- 3rd group: **voice & emojis** – important words to emojis



## Experiment

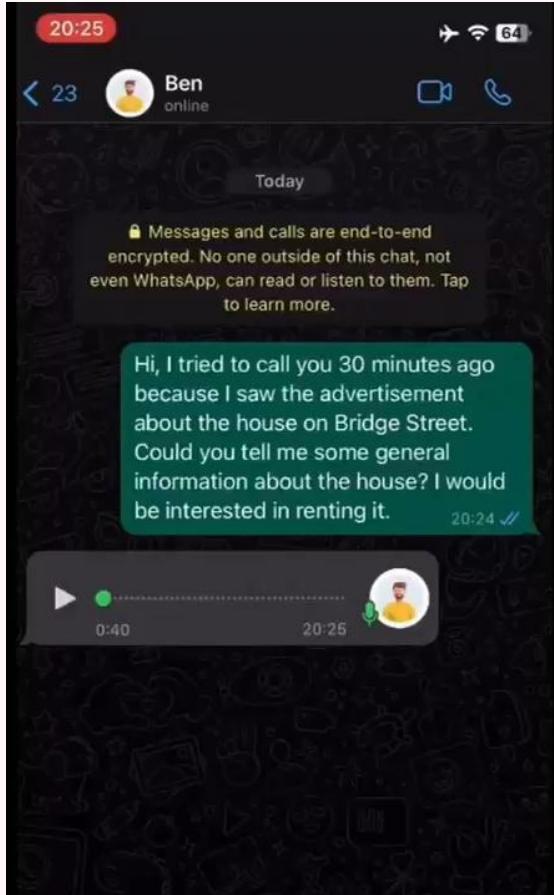
- Between subject (66 participants)
- Video → realistic
- Participant listens to the modified or conventional voice messages
- Afterwards completes a SUS and Comprehension questionnaire



## Data collected

- System Usability Scale
- Comprehension question answers
- Participant Information





# Participants

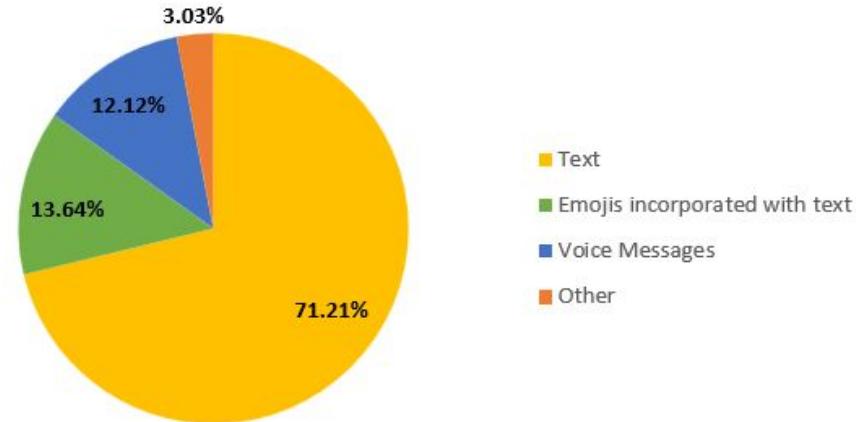
## Demographic Data

- 66 participants, with 22 for each group
- Age Range: 18–74
- Gender: 30 Male, 35 Female, and 1 PNS

## Other Information

- English Fluency
  - 68.18% Advanced
  - 19.70% Intermediate
  - 12.12% Native

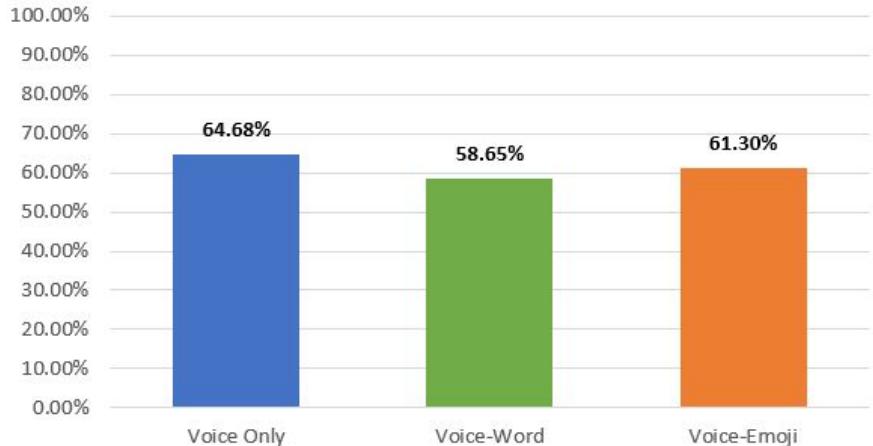
Preferred Method of Mobile Communication



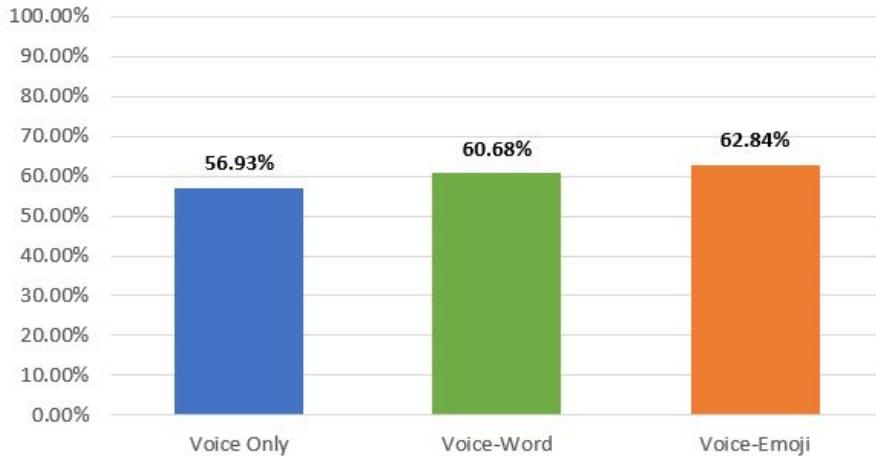
# Results



Comprehension Scores



System Usability Scale (SUS)





# Conclusions

## Comprehension:

- Novel approaches **did not surpass** conventional voice messages
- Traditional method (voice messages) remains highly effective
- Both VW and VE showed potential for enhancing comprehension

## Usability:

- Novel approaches considered **acceptable, but not significantly better** than traditional method
- Voice messages had highest comprehension score but **lowest system usability score**



# Discussion



## Limitations



- Sample bias
- Reliance on artificial video clips depicting WhatsApp chat screens
- Long-term effects and differences in user experiences not explored



## Future Work

- Diverse samples
- Field study (e.g walking, multitasking)
- Explore the best way of presenting words and emojis
- Methods for fast reading (Spritz)





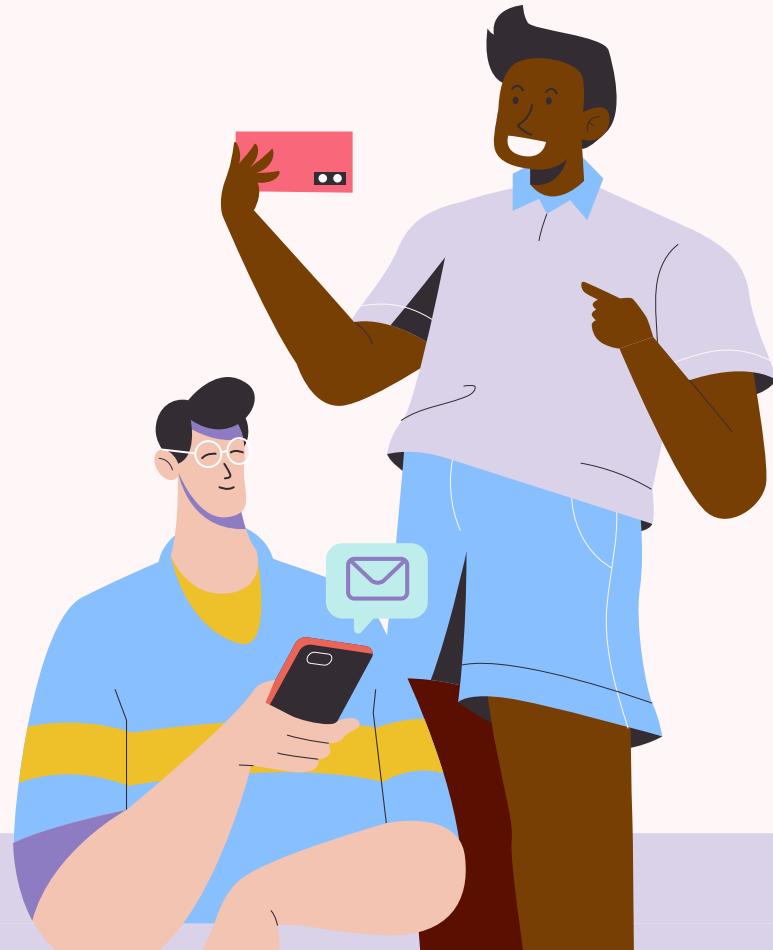
# THANKS!

DO YOU HAVE ANY QUESTIONS?

Mobile Interaction

Group 9 – Final Presentation  
28/06/2023

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# "I can't listen right now"

Exploring a new way of mobile communication

## Group 9

Demetra Hadjicosti, Ioanna Vounzoulaki,  
Eleni Mouzaki, Samin Asnaashari,  
Michalina Modzelewska, Veronica Dell'Aera





# Problem Introduction



## What is the problem?

Venus has a beautiful name and is the second planet from the Sun. It's terribly hot, even hotter than Mercury, and its atmosphere is extremely poisonous. It's the second-brightest natural object in the night sky after the Moon



## JUPITER

Mercury is the closest planet to the Sun and the smallest one in the entire Solar System. This planet's name has nothing to do with the liquid metal, since Mercury was named after the Roman messenger god





# INTRODUCTION

Mercury is the closest planet to the Sun and the smallest one in the Solar System—it's only a bit larger than our Moon. The planet's name has nothing to do with the liquid metal since it was named after the Roman messenger god, Mercury





01

# ABOUT PHONE ADDICTION

You can enter a subtitle here if you need it



# ABOUT THE DISEASE

## PHASES

### PHASE 1

#### MERCURY

Mercury is the smallest planet of them all

### PHASE 2

#### VENUS

Venus is the second planet from the Sun

### PHASE 3

#### SATURN

Saturn is a gas giant and has several rings



# CONCEPTS AND TYPOLOGY



## TYPE A



Venus has a beautiful name and is the second planet from the Sun. It's terribly hot

## TYPE C

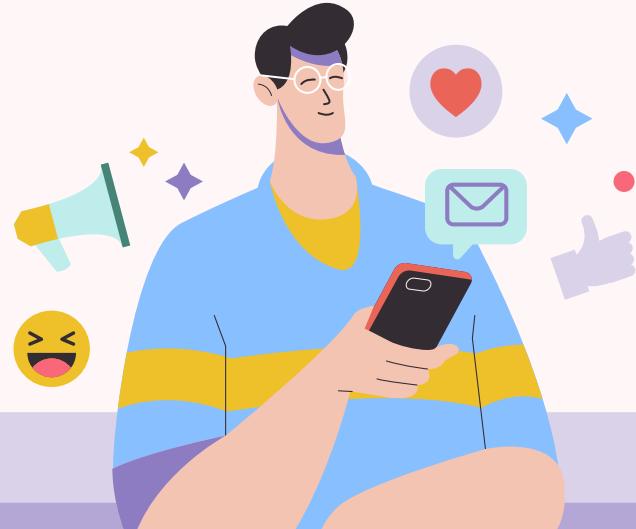


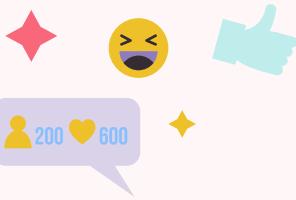
Earth is the third planet from the Sun and the only one that harbors life in the Solar System

## TYPE B



Mars is a very cold planet. It's full of iron oxide dust, which gives the planet its reddish cast





# AWSOME WORDS



# PATHOLOGY

## MERCURY

Mercury is the closest planet to the Sun and the smallest one in the Solar System

## MARS

Earth is the third planet from the Sun and the only one that harbors life in the Solar System

## NEPTUNE

Neptune is the farthest planet from the Sun. It's also very far away from all of us

## SATURN

Saturn is a gas giant and has several rings. It's composed mostly of hydrogen and helium





# SYMPTOMS OF THE DISEASE

## Sleep deficit

Mercury is the smallest planet of them all

## Anxiety

Venus is the second planet from the Sun

## Headache

Despite being red, Mars is a cold planet

## Stress

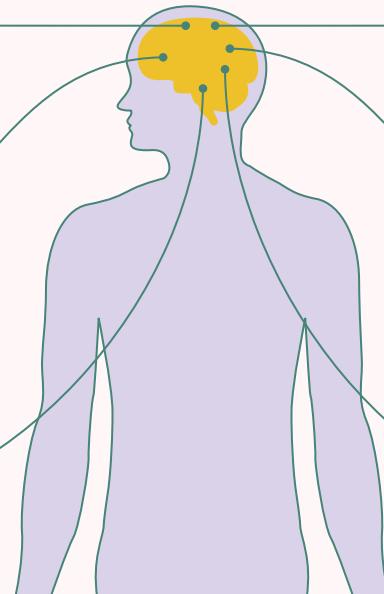
Jupiter is the biggest planet of them all

## Insecurity

It's composed of hydrogen and helium

## Loneliness

Neptune is the farthest planet from the Sun





A PICTURE IS  
WORTH A  
THOUSAND WORDS

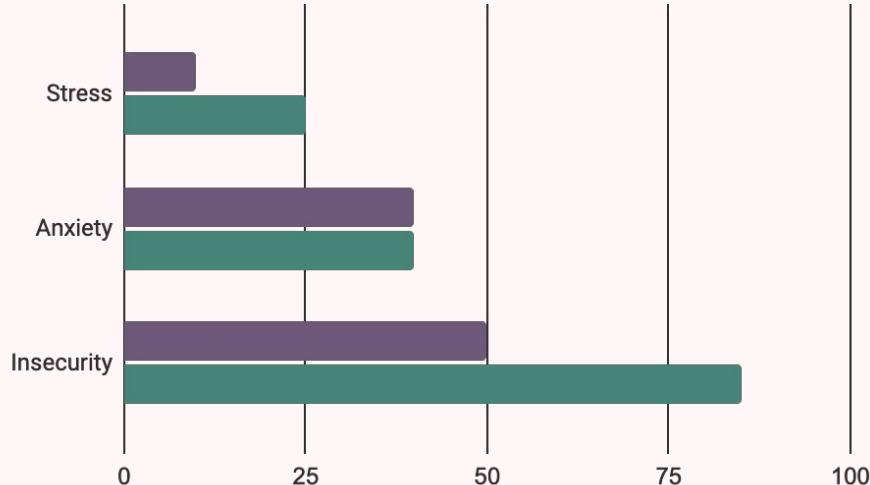


200 600





# RISK FACTORS



## UNDER 18 YEARS

Mercury is the closest planet to the Sun and a very small planet

## UP TO 18 YEARS

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

Follow the link in the graph to modify its data and then paste the new one here. [For more info, click here](#)



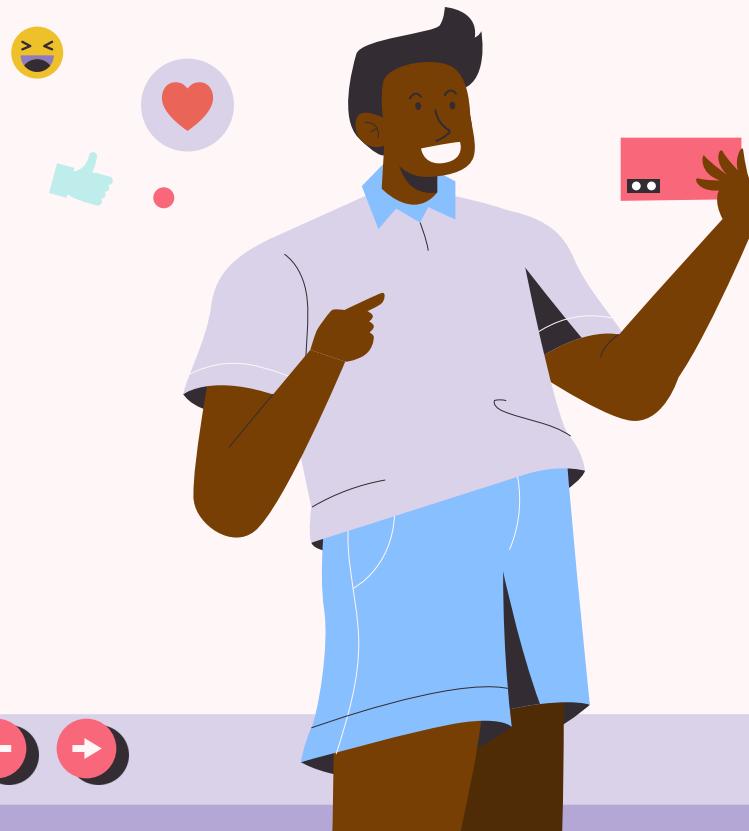


# 120 MINUTES

This is the maximum time we should use the cell phone each day



# KEY NUMBERS



**5,320 MILLION**

People worldwide who use a cell phone

**6 out of 10**

People are addicted to cell phones

**7,700 MILLION**

Worldwide purchase of cell phones

•  ⚡

“This is a quote, words full of wisdom that someone important said and can make the reader get inspired.”

—**SOMEONE FAMOUS**



# DIAGNOSIS



## VENUS

Venus is the second planet from the Sun



## MARS

Mars is actually a very cold planet



## MERCURY

Mercury the closest planet to the Sun



## JUPITER

Jupiter is the biggest planet of them all



## SATURN

Saturn is composed of hydrogen and helium



## NEPTUNE

Neptune is very far away from the Sun



# RECOMMENDATIONS



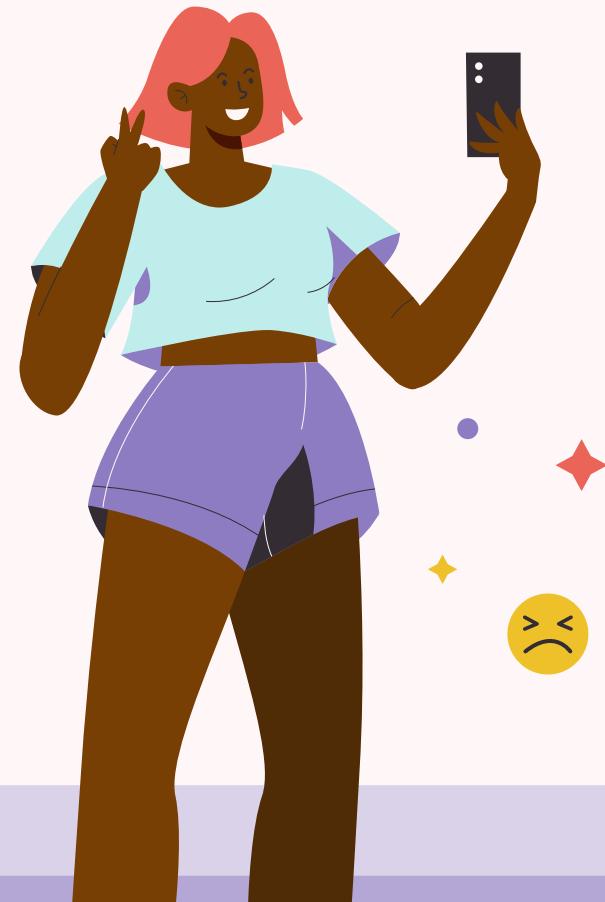
## WHAT TO DO

- You can describe what the patient should do here
- You can describe what the patient should do here
- You can describe what the patient should do here

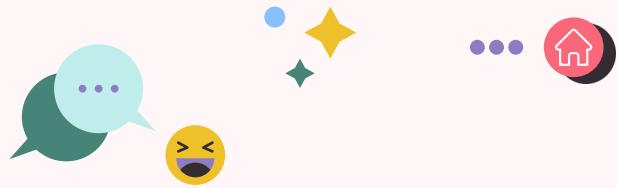


## WHAT NOT TO DO

- You can describe what the patient should not do here
- You can describe what the patient should not do here
- You can describe what the patient should not do here



# PREVENTION



| HABITS  | MARS | MERCURY | VENUS |
|---------|------|---------|-------|
| HABIT 1 | ✓    | ✗       | ✓     |
| HABIT 2 | ✗    | ✓       | ✗     |
| HABIT 3 | ✗    | ✓       | ✗     |





# TREATMENT

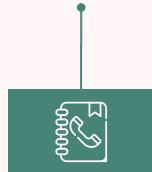


## WEEK 01

Saturn is a gas giant and has rings. It's composed of hydrogen and helium as well



Mercury is the closest planet to the Sun and the smallest one in the Solar System



## WEEK 02

Venus has a beautiful name and is the second planet from the Sun. It's terribly hot



## WEEK 03

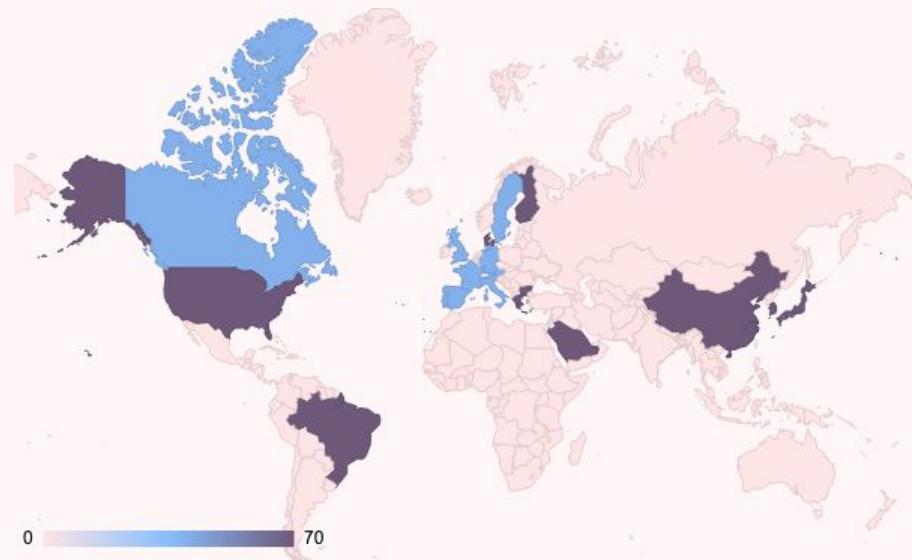


Earth is the third planet from the Sun and the only one that harbors life in the Solar System

## WEEK 04



# **PREVALENCE**



Follow the link in the graph to modify its data and then paste the new one here. [For more info, click here](#)



**MERCURY**

Mercury is the closest planet to the Sun and a very small object

# JUPITER

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

# NEPTUNE

Neptune is the fourth-largest planet in the Solar System



# CONCLUSIONS

Do you know what helps you make your point clear?

Lists like this one:

- They're simple
- You can organize your ideas clearly
- You'll never forget to buy milk!

And the most important thing: the audience won't miss the point of your presentation





# OUR TEAM



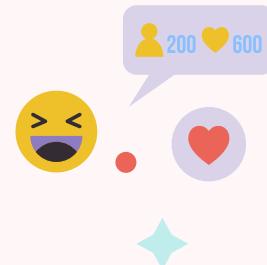
## JOHN WONG

You can replace the image on the screen with your own



## SARAH JAMES

You can replace the image on the screen with your own



# COMPUTER MOCKUP

You can replace the image on the screen with your own work. Just right-click on it and select "Replace image"



# REFERENCES

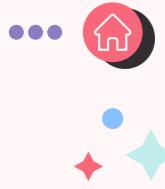
- AUTHOR (YEAR). *Title of the publication*. Publisher





# ICON PACK





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Here's an assortment of alternative resources whose style fits the one of this template:

## VECTORS

- Young people using smartphones collection
- People taking selfies with phone





# RESOURCES

## VECTORS

- Young people using smartphones collection
- People taking selfies with phone
- Flat people taking selfies with phone
- Flat illustration influencer marketing



## PHOTOS

- Man checking his phone even in his bathroom
- Side view sad girl without phone
- Front view smiley man at table
- Close up portrait of senior woman

## ICON PACK

- Icon Pack: Phone | Lineal



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#88bfff

#bfedeb

#468478

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Pana



Amico



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Rafiki



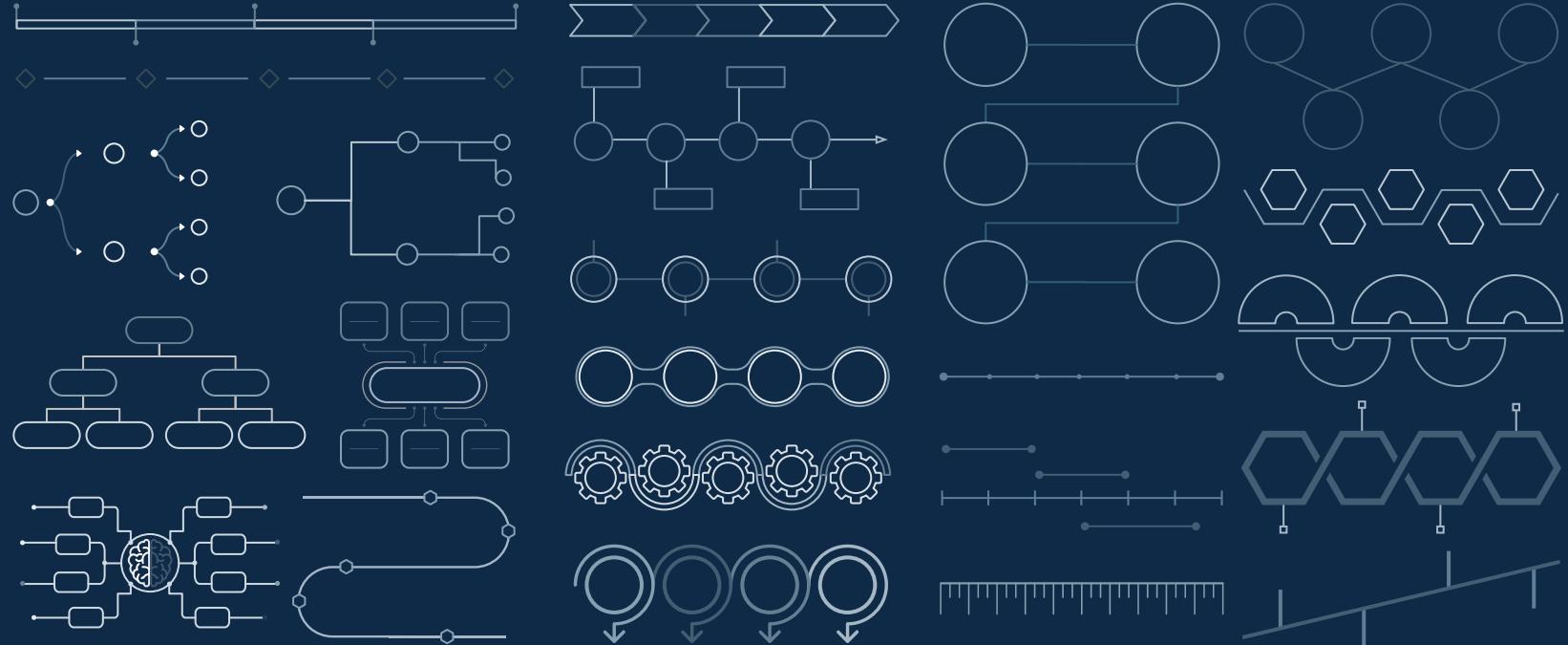
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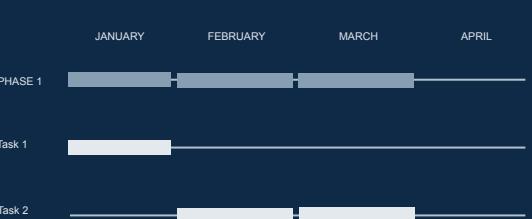
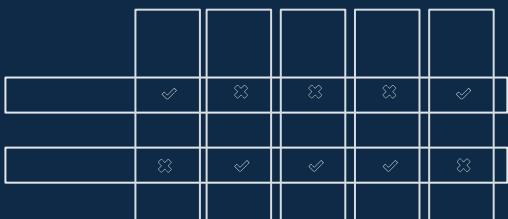
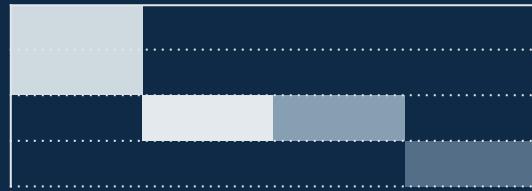
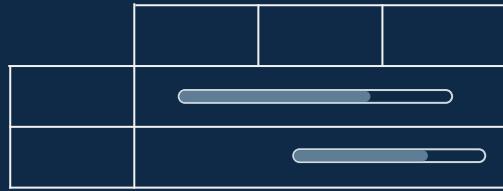
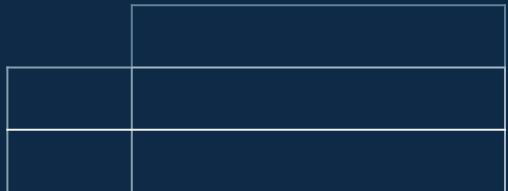
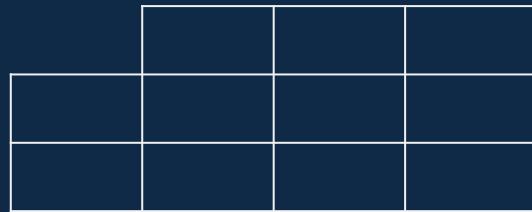
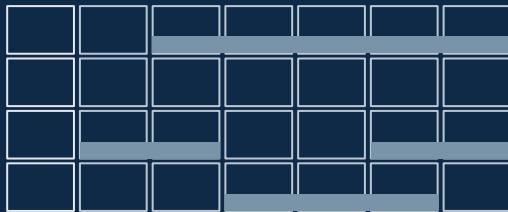
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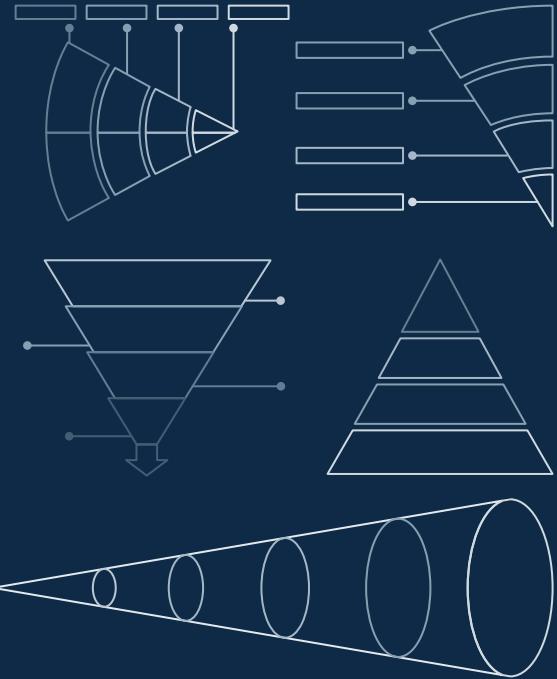
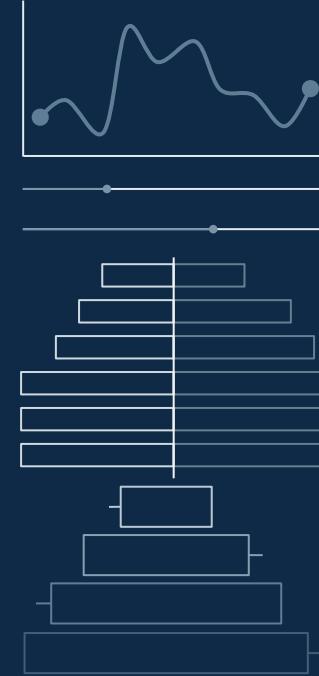
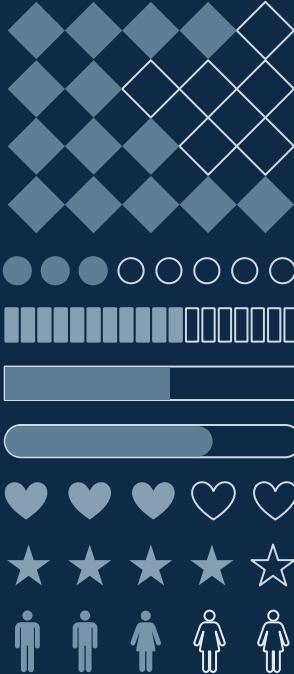
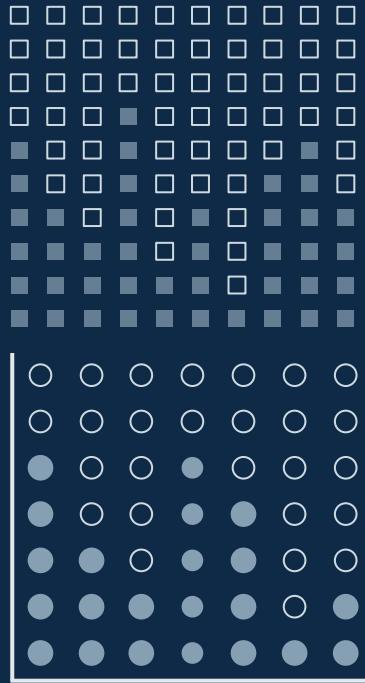












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# Medical Icons



# Business Icons



# Teamwork Icons



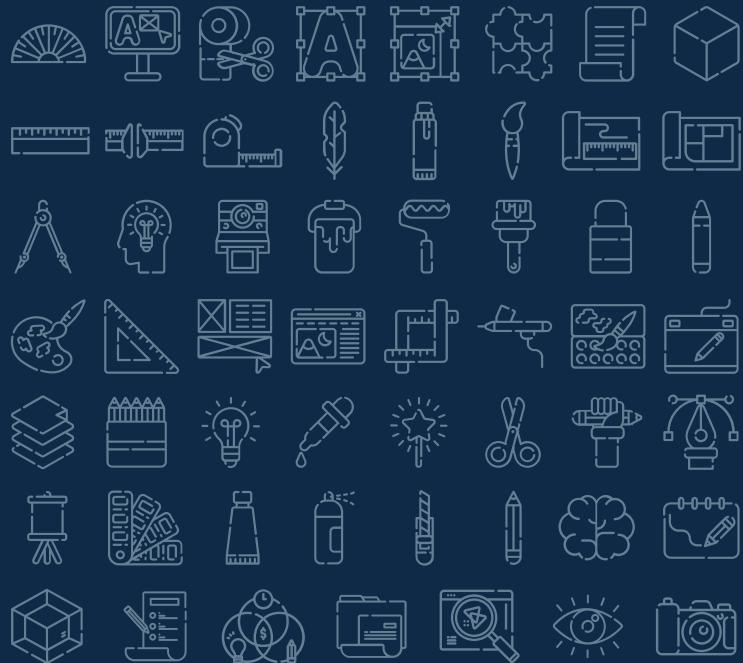
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# Avatar Icons



# Creative Process Icons



# Performing Arts Icons



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