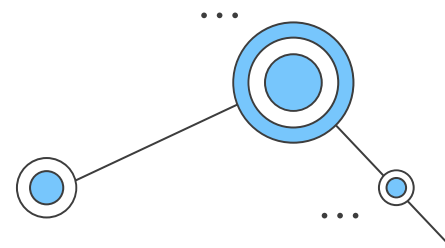


...

CAREER AND TECHNICAL EDUCATION (CTE)

Informational Webinar for Rising 9th Grade Students



Welcome!

Thank you for joining us.

...

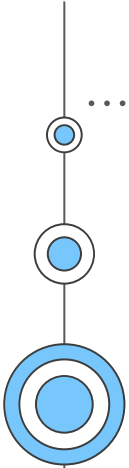
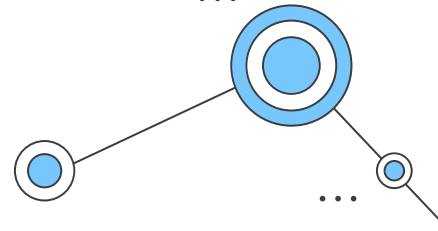
We will begin at 6:34pm to allow everyone time to get logged in and join.
Cameras and microphones are disabled for this webinar.



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CAREER AND TECHNICAL EDUCATION (CTE)

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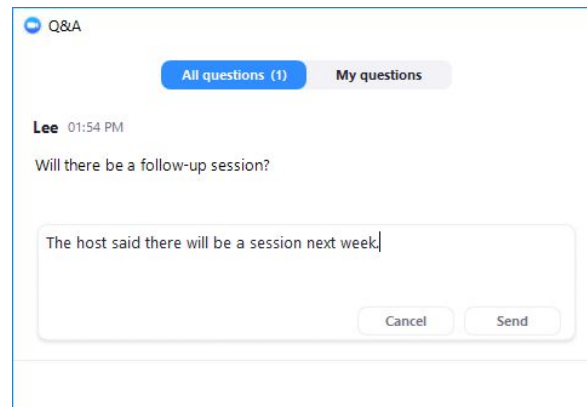
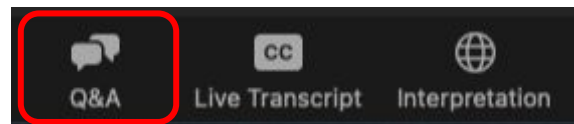


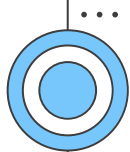
WEBINAR TOOLS

Submitting Questions (Q&A)

Select the Q&A icon on the toolbar >
Enter the question > select Send

Questions will appear in the window
once they have been answered





WEBINAR PARTICIPANTS

- Will gain an understanding of
 - The importance of planning ahead for course selections in high school
 - How to maximize on all potential academic opportunities and experiences in high school
 - CTE graduation requirements and completion options
 - CTE Course Options and Career Academy Pathways
 - The importance of students earning industry credentials through CTE coursework
 - The Applications and Research Laboratory (ARL)
 - Apprenticeship Maryland

...



OUR GOALS





CTE IN MIDDLE SCHOOL



6

6th Grade

Technology Education



7

7th Grade

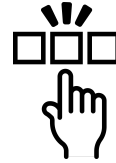
Financial Literacy



8

8th Grade

Careers



CHOICE ELECTIVES

FACS

7th and 8th Grade ONLY:

- Foundations of Technology (FoT)*
- Exploring Computer Science (ECS)*

*Both of these courses meet the Computer Science, Engineering & Technology Education requirement for graduation



What Graduation Requirements do CTE courses fulfill?



Required Computer Science, Engineering & Technology Education (CSET) Credit needed for graduation

- Specific courses only
- Students who took Foundations of Technology or Exploring Computer Science in Middle School have fulfilled their required Technology Education credit needed for graduation

All students are required to have a completer for graduation

- Completion of any CTE career academy pathway fulfills the completer requirement
- (More to come in this presentation about CTE Career Academy Pathways)

COURSES THAT MEET THE CSET GRADUATION REQUIREMENT IN HIGH SCHOOL

Foundations of Technology (FoT)

Focuses on the Engineering Design Process and 6 core technologies

Exploring Computer Science - Honors (ECS)

Focuses on the foundations of Computer Science / Computer Programming

Introduction to Engineering Design (IED) - GT

This is the first course in the Project Lead the Way (PLTW) Engineering Academy

Focuses on Computer Animated Design (CAD)

Computer Science Principles (SCP) - AP

Focuses on the foundations of Computer Science / Computer Programming but moves quicker than ECS - Honors and cover more content throughout the year



HOW IS CTE DIFFERENT IN HIGH SCHOOL



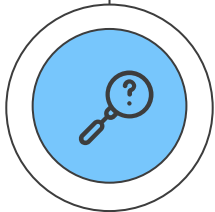
Full Year

Students take CTE courses for the entire year

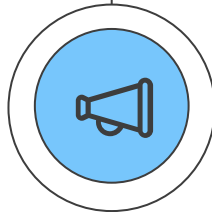


Pathway

Are a part of a Career Academy Pathway



Career Focused
Curriculum and Student Experiences



Industry Credentials
Provide the opportunity for Industry Credential where appropriate



Hands on Experiences
Can lead to Work Based Learning or Apprenticeship opportunities

FRESHMAN SCHEDULE



Freshman Year



English

Math

Science

Social Studies

Health/Lifetime Fitness


Course Selection Option #1

Course Selection Option #2



BENEFITS OF TAKING CTE IN HIGH SCHOOL

Students taking multiple CTE courses in High School are more likely to:

- Identify possible career interests and career pathways
 - Earn industry credentials
 - Move on to post secondary educational opportunities
 - Even if not a 4- year college program
 - Improves college readiness
 - Improves likelihood of a job for students that do not go immediately to college
 - Maximize on course experiences available in High School
- 

WHAT IS AN INDUSTRY CERTIFICATION?

A credential recognized by business and industry at the local, state, and/or national level

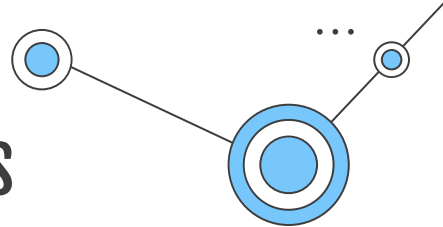
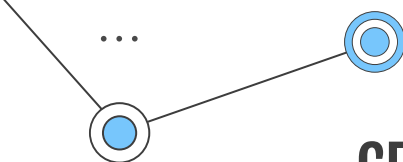
Can add it to a
resume when
applying for jobs

Requires taking and
passing an assessment
or examination upon
conclusion of a course

Is a stepping
stone to more
\$\$ in a specified
career pathway

May include
licensure in a
specified area

Can increase
wages/earning at
entry level



CTE CAREER ACADEMIES CERTIFICATIONS/CREDENTIALS AT HOME SCHOOLS

Accounting Business Management Marketing A*S*K* Fundamentals of Business Concepts	Computer Programming TBD-Python	Junior Reserve Officers' Training (JROTC) ASVAB
Apprenticeship Maryland Certification varies by industry employment	Culinary Science ServSafe Food Manager Prostart COA	Teacher Academy of Maryland (TAM) Parapro
Career Research and Development ASVAB	Engineering PLTW Autodesk 360 Fusion	

CTE COURSES AND CAREER ACADEMIES AT HOME SCHOOLS

What they look like:

- An opportunity to explore, connect, and discover interests
- A series of courses that gradually expose students to a specified content and career path
- It is equally important to find what you don't like, as it is to find what you do like
- Students DO NOT have to take classes in a specific order for most academies



The Applications and Research Laboratory (ARL)





CTE Courses and Career Academies at the ARL

Two Year Program

Work on advanced skills
at the ARL and/or
participate in a worksite
experience

Teacher
mentors/advisors who
have industry knowledge
and experience

CAREER
HOWARD COUNTY PUBLIC SCHOOLS
ACADEMIES
APPLICATIONS & RESEARCH LABORATORY

Extraordinary Learning Through Experience



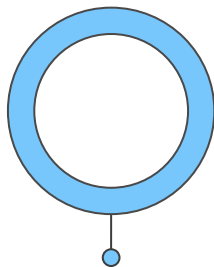
CTE CAREER ACADEMIES CERTIFICATIONS/CREDENTIALS AT ARL



Aerospace Engineering (PLTW) Autodesk 360 Fusion	Automotive Technology NATEF ASE Student Certifications	Cybersecurity Networking CompTIA ITF, A+, Net+, Sec + CISCO CCNA
Agricultural Science NOCTI CASE	Biotechnology BACE	Finance NAF
Animation and Interactive Media Adobe Premiere Pro	Civil Engineering (PLTW) Autodesk 360 Fusion	Graphic Design PrintED
Architectural Design Autodesk Revit	Construction NCCER Core & Carpentry I	Health Professions CNA, EMT, CCMA
		HVAC NCCER Core & HVAC I



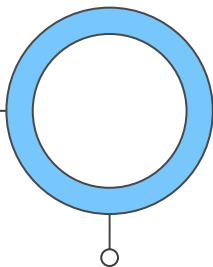
HOW TO PLAN FOR AND ENROLL TO ATTEND ARL



DISCUSS

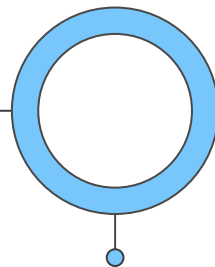
Discuss with your
school counselor

<https://www.hcpss.org/academics/career-technical-education/>



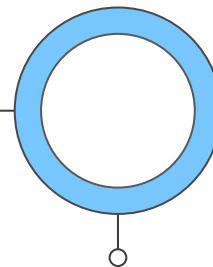
WEBSITE

Visit the
Academies
Website:



CALL

Call our office -
410-313-6629



REGISTRATION

During High School
Registration, choose the
junior level (11th grade)
academy course- use
courses listed in Catalog of
High School Courses
2023-2024

APPRENTICESHIP



SENIOR YEAR

Good standing



4 HIGH SCHOOL CREDITS

1 credit
related
instruction



PAID EMPLOYMENT

450 Hours

HOW DOES CTE CONNECT TO OTHER CURRICULAR AREAS?

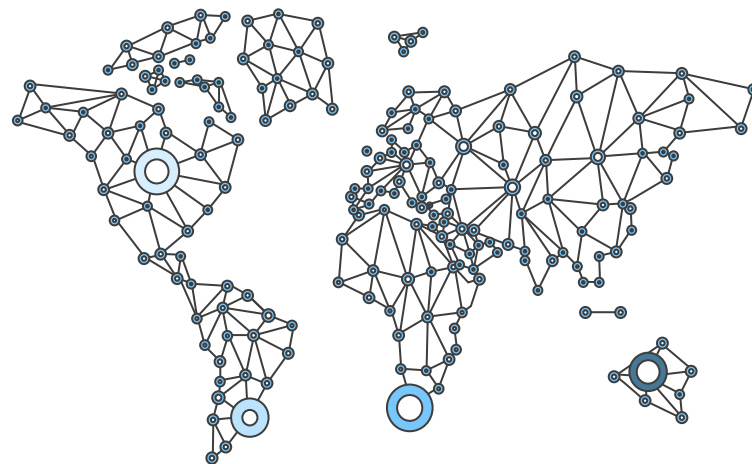
ALL AREAS CONNECT TO CTE

English - Research, writing, communication

Math - The foundation of many Career Pathways (Computer Science, etc.)

Science - We are often the same (Biotechnology, Health Professions, Agriculture, etc.)

Art - Graphic Design, Teaching (TAM), Animation



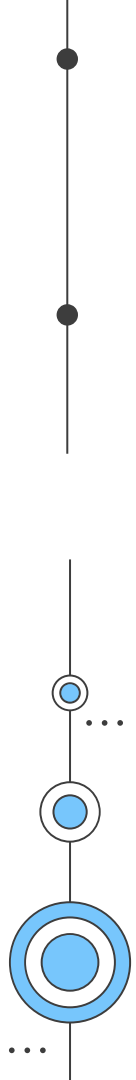
SO MANY MORE!

GT, HONORS, AP – IS CTE FOR ME?





WHAT TO DO NEXT

- Review the Approved Catalog of High School Course
 - Come up with a plan
 - Not just for freshman year
 - Take advantage of all opportunities in High School, leave nothing on the table
 - Make informed decisions and course selections
- 

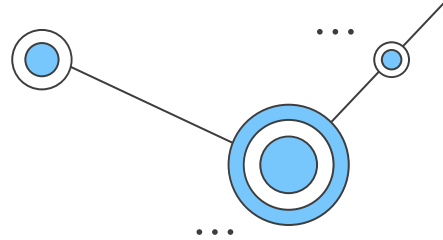
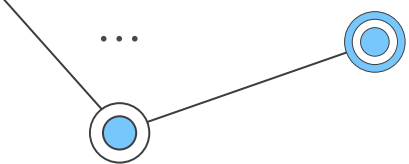


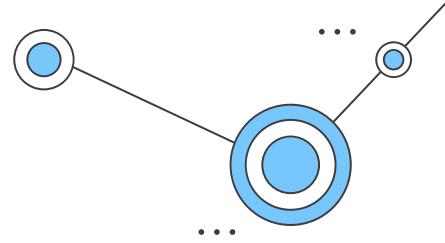
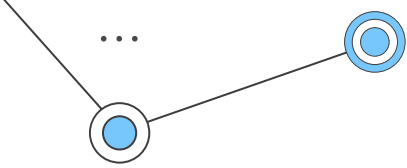
ANY QUESTIONS?



Contact Information:

- [Daniel Rosewag](#), Coordinator, Career and Technical Education – 410-313-6797
- [Natalie Belcher](#), Instructional Facilitator, Career Academies and FACS – 410-313-6636
- [Tonia Ziegler](#), Instructional Facilitator, Engineering and Technical Education – 410-313-6777
- [Colleen Cotton](#), Instructional Facilitator, Business and Computer Management Systems, 410-313-8136
- [Amanda Malone](#), Resource Teacher, Work-Based Learning – 410-313-6627
- [Stephanie Discepolo](#), Resource Teacher, Apprenticeship Maryland – 410-313-7493
- [Stephanie Bateman](#), Specialist– 410-313-6629





Next slides are templates only –not for presentation – will delete after slides are reviewed

Technology consulting infographics

Consulting

Despite being red, Mars is actually a cold place

Deliberate

Earth is the only planet that harbors life

Resume

Jupiter is the biggest planet in the Solar System



OUR GOALS

True

Despite being red, Mars is actually a cold place

Venus is extremely hot, even more than Mercury

Earth is the only planet that harbors life

False

Ceres is located in the main asteroid belt

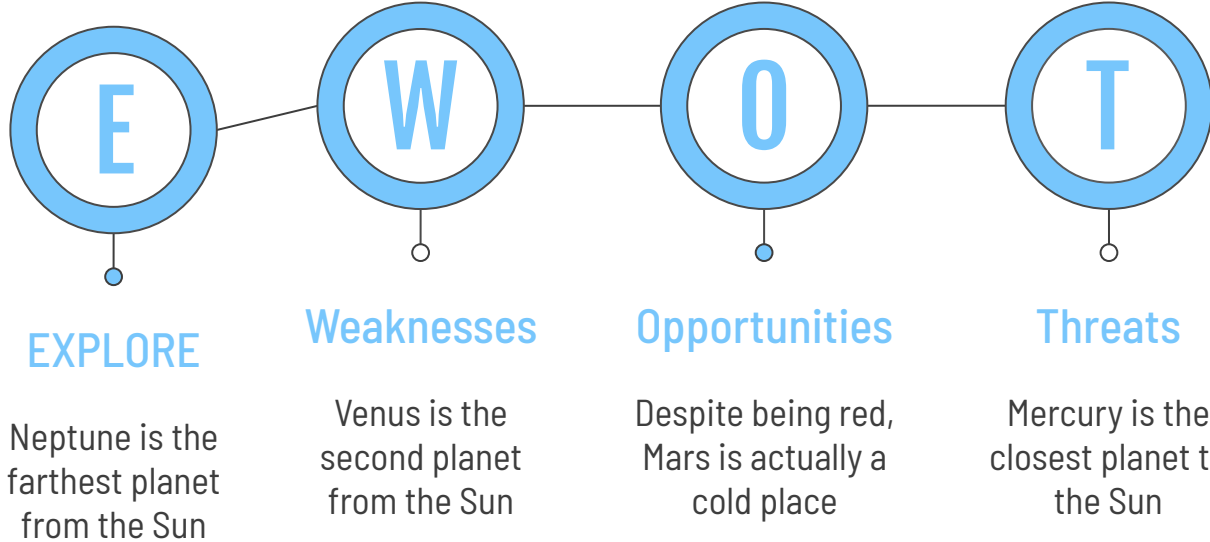
Jupiter is the biggest planet of them all

Saturn is the second-largest planet in the Solar System

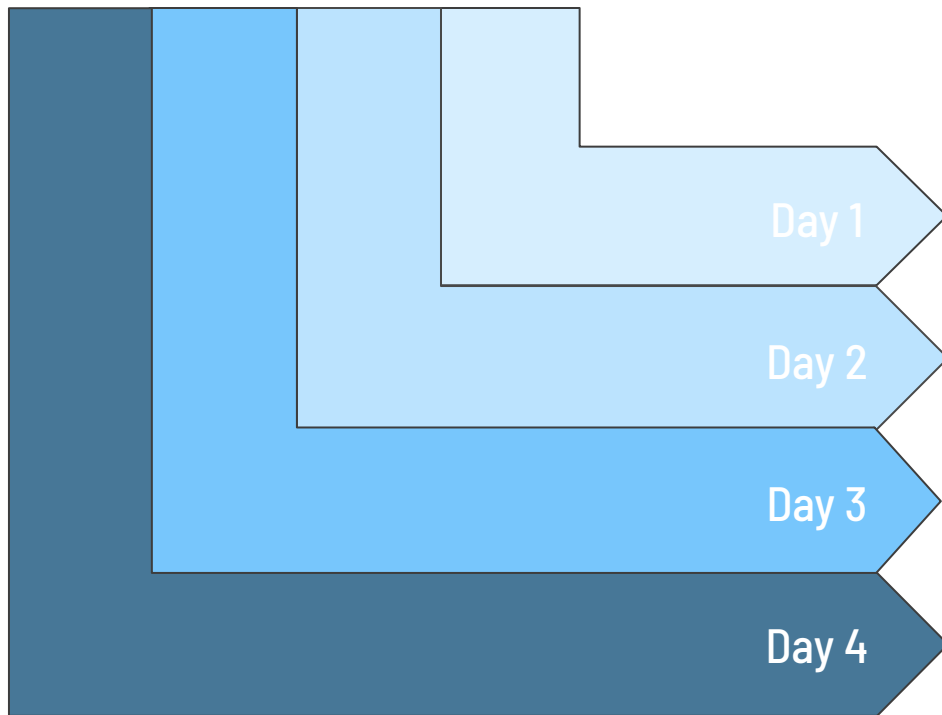




OUR GOALS



Technology consulting infographics



Jupiter is the biggest planet in the Solar System



Mercury is the closest planet to the Sun



Venus is the second planet from the Sun



Neptune is the farthest planet from the Sun

Technology consulting infographics



Task 1



Task 2



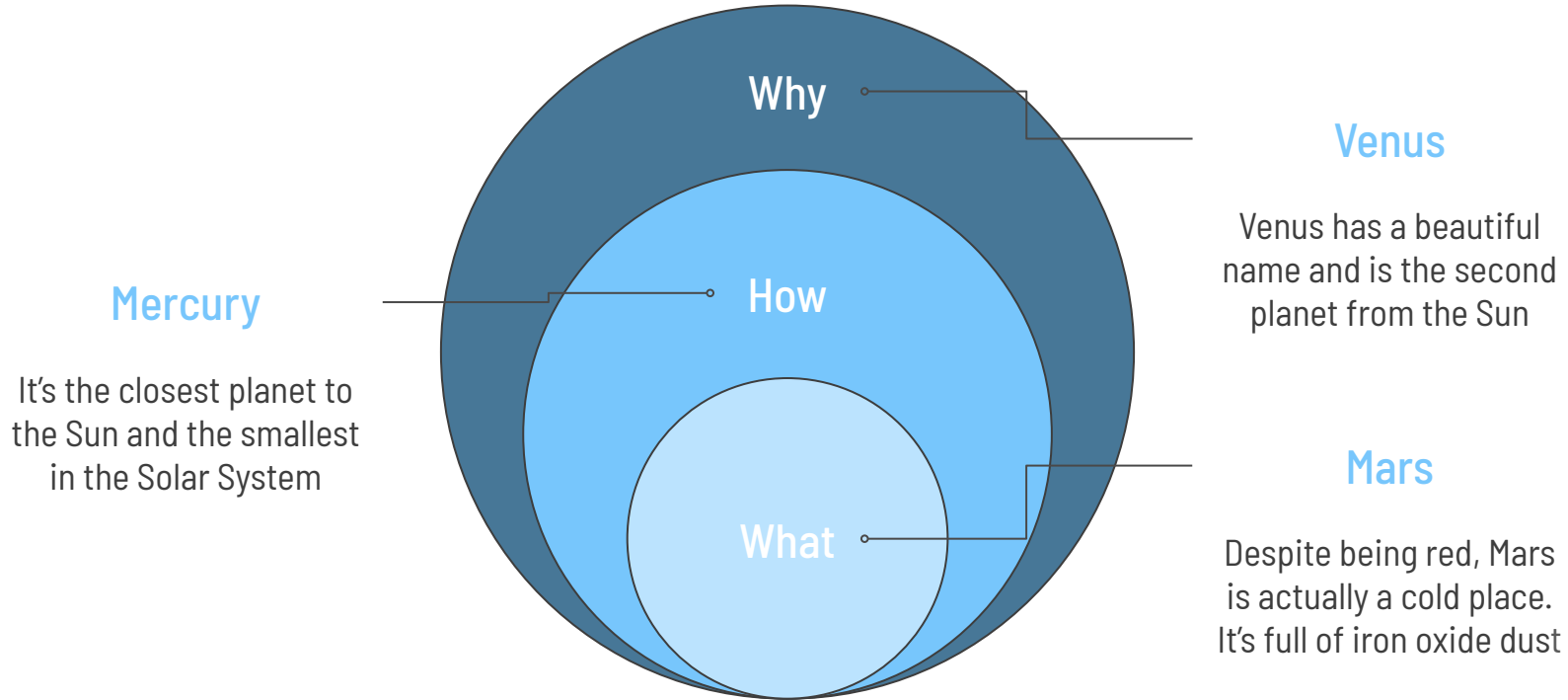
Task 3



Task 4

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					01	02
03	04	05	06	07	08	09
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Technology consulting infographics



Technology consulting infographics

30%

Neptune is the farthest planet from the Sun

25%

Venus is the second planet from the Sun



30%

Despite being red, Mars is actually a cold place

15%

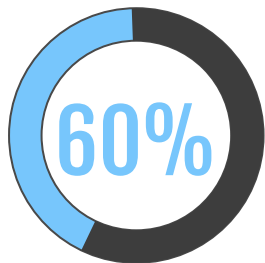
Mercury is the closest planet to the Sun

● Product 1 ● Product 2 ● Product 3 ● Product 4

Technology consulting infographics

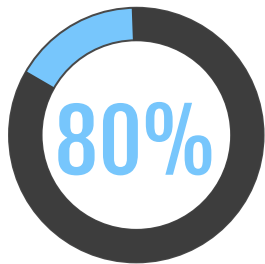
Earth

Earth is the third planet from the Sun



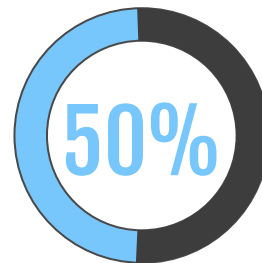
Venus

Venus is the second planet from the Sun



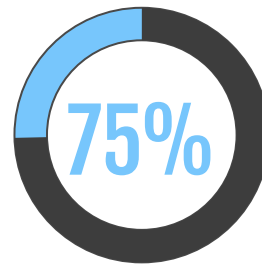
Mars

Despite being red, Mars is a cold place



Mercury

Mercury is the closest planet to the Sun



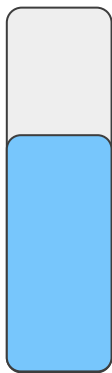
Technology consulting infographics



25%

Earth

Earth is the third planet
from the Sun



65%

Venus

Venus is the second
planet from the Sun



80%

Mars

Despite being red, Mars
is a cold place







40%

Neptune

It's the farthest planet
from the Sun

Technology consulting infographics

	Product 1	Product 2	Product 3	Product 4
Description	Neptune is the farthest planet from the Sun	Venus is the second planet from the Sun	Jupiter is the biggest planet of them all	Mercury is the closest planet to the Sun
Review	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>
Type				
Price	\$10	\$5	\$15	\$20

Technology consulting infographics

2022

Earth is the third planet
from the Sun

Price

Mercury is the smallest
planet of them all

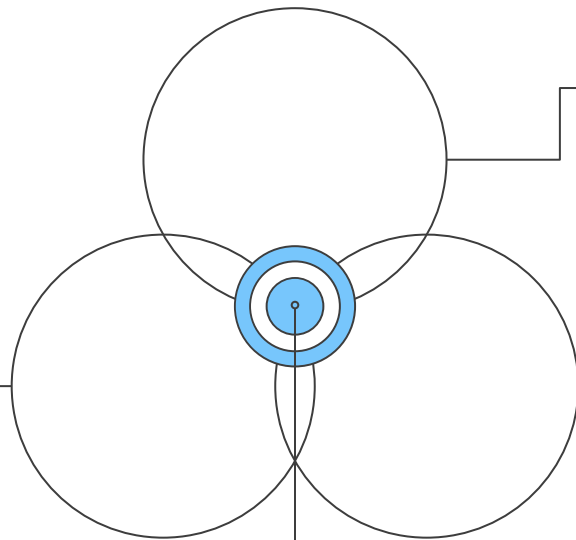
Sweet spot

Accessibility

Venus is the second planet
from the Sun

Quality

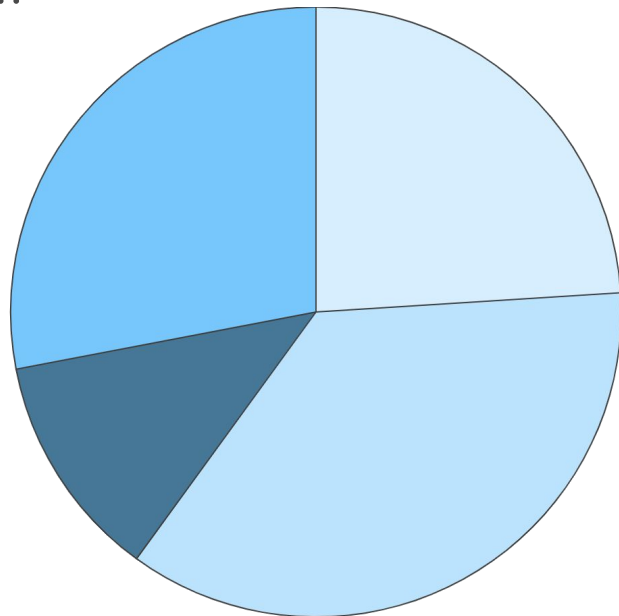
Despite being red, Mars is a
cold place



Technology consulting infographics

150000

Earth is the planet with life



Follow the link in the graph to modify its data and then paste the new one here. **For more info, click here**

36%

Venus is very hot

28%

Mercury is small

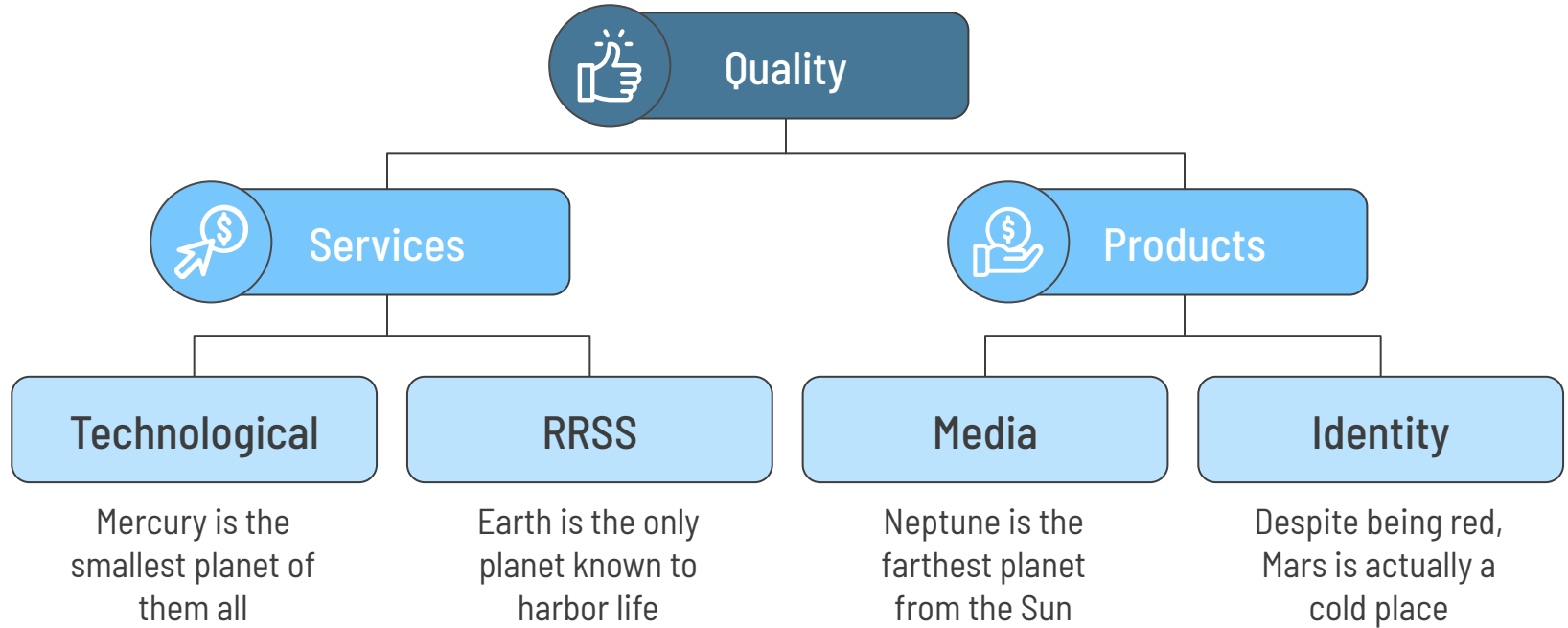
24%

Mars is cold

12%

Jupiter is big

Technology consulting infographics



Technology consulting infographics



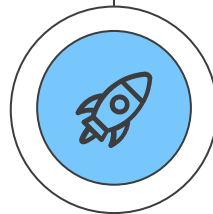
Venus

Venus is the second planet from the Sun



Mercury

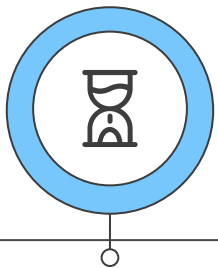
Mercury is the closest planet to the Sun



Neptune

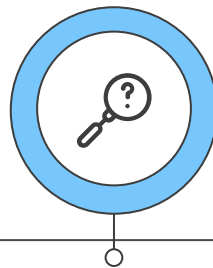
Neptune is the farthest planet from the Sun

Technology consulting infographics



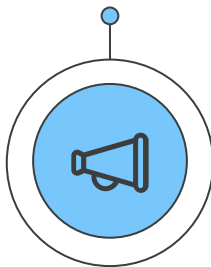
Jupiter

Jupiter is the biggest planet in the Solar System



Ceres

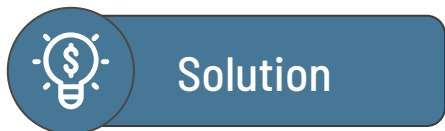
Ceres is located in the main asteroid belt



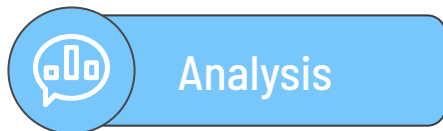
Moon

The Moon is Earth's only natural satellite

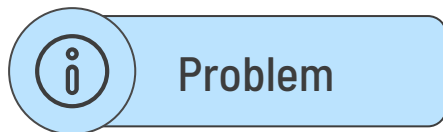
Technology consulting infographics



Mercury is the closest planet to the Sun and the smallest of them all



Earth is the beautiful planet where we all live



Despite being red, Mars is actually a cold place



Saturn is the second-largest planet in the Solar System

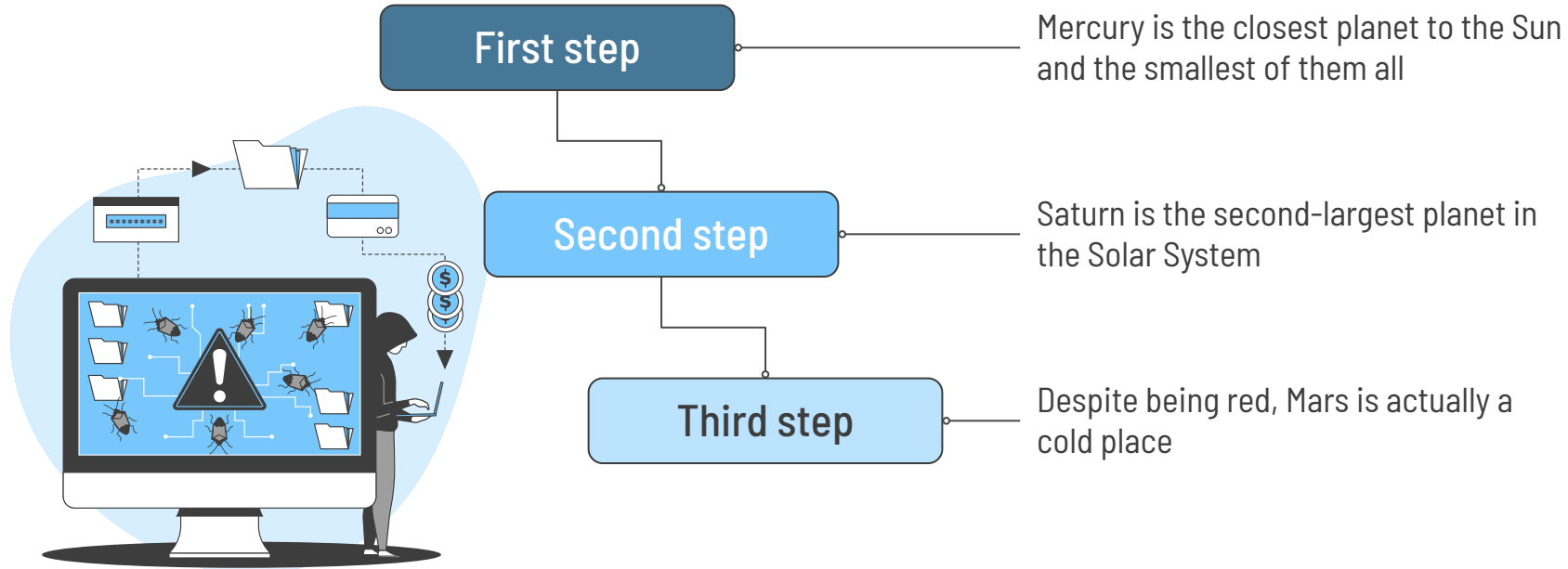


Technology consulting infographics



Characteristics	Product 1	Product 2	Product 3	Product 4
Venus	✓	✗	✗	✓
Mars	✓	✗	✓	✗
Jupiter	✗	✗	✓	✗
Saturn	✓	✓	✓	✓

Technology consulting infographics



Technology consulting infographics

Problem solving



Venus

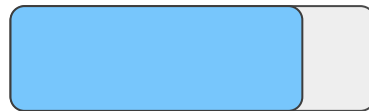
Venus is the second planet from the Sun



50%

Mars

Despite being red, Mars is actually a cold place



80%

Jupiter

Jupiter is the biggest planet in the Solar System



40%

Technology consulting infographics



Earth is the beautiful planet where we all live on

Earth



Jupiter is the biggest planet in the Solar System

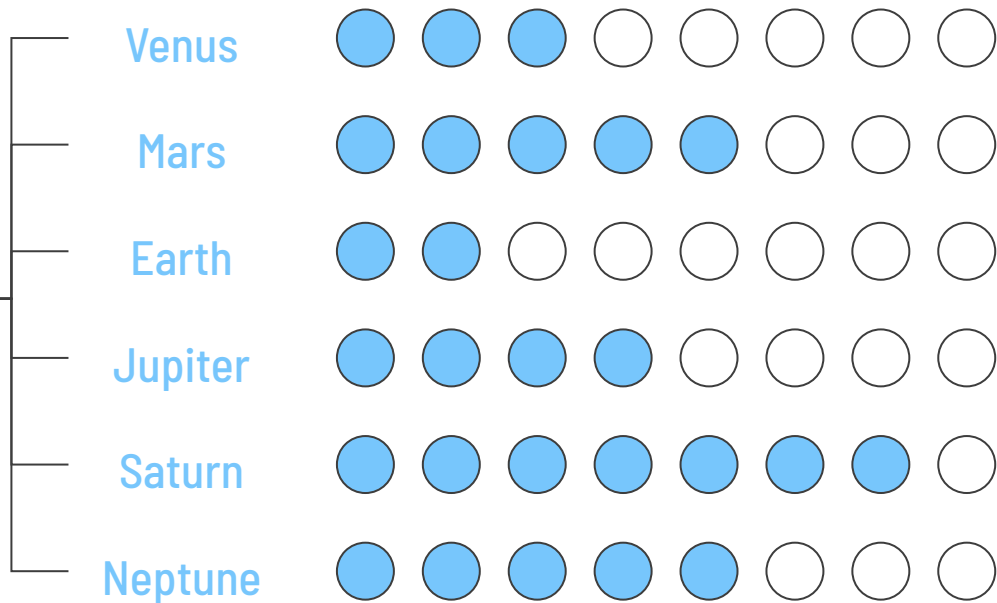
Jupiter



Saturn is the second-largest planet in the Solar System

Saturn

Technology consulting infographics



Technology consulting infographics

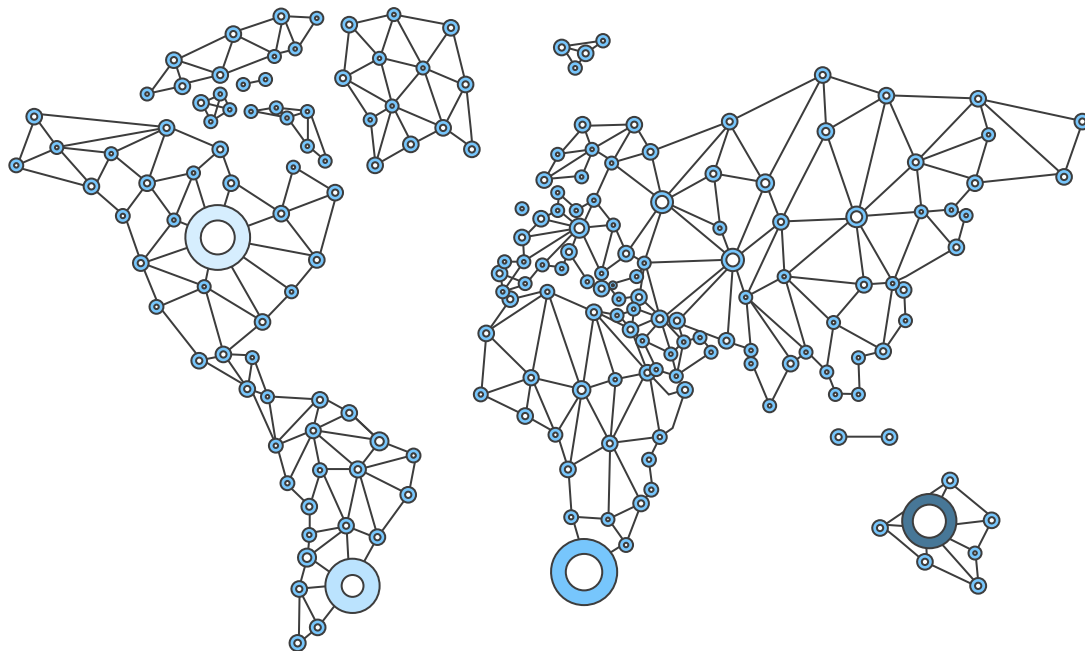
Tech capitals

Despite being red, Mars is actually a cold place

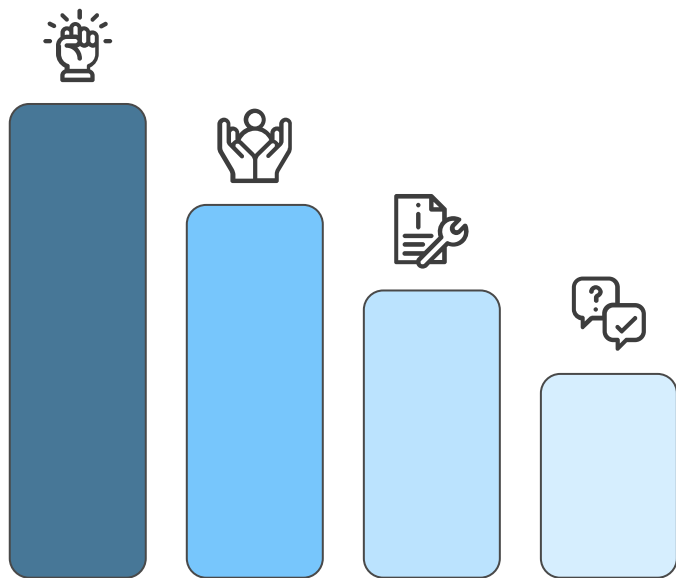
Venus is extremely hot, even more than Mercury

Earth is the only planet that harbors life

Jupiter is the biggest planet of them all



Technology consulting infographics



Earth is the only planet known to harbor life

Communicate

Despite being red, Mars is actually a cold place

Detect problem

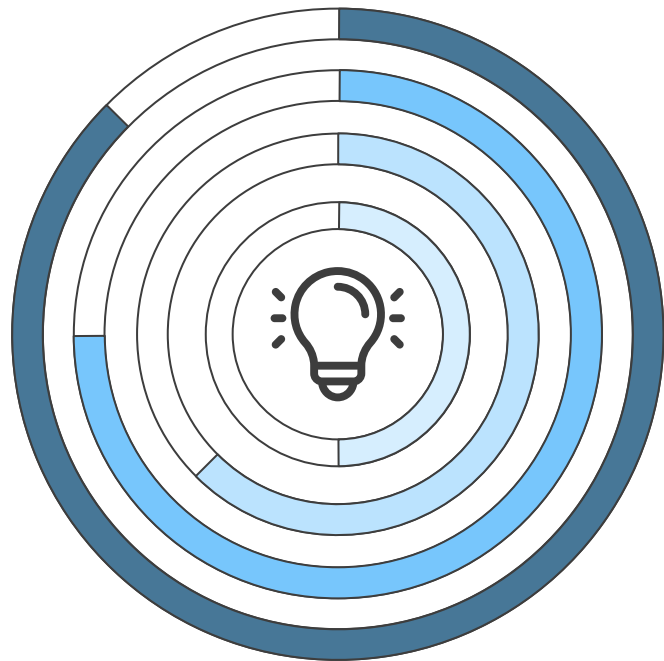
Jupiter is the biggest planet in the Solar System

Support

Saturn is not the only planet with rings

Resolve

Technology consulting infographics



50%

Earth

Earth is the third planet from the Sun

75%

Venus

Venus is the second planet from the Sun

62.5%

Mars

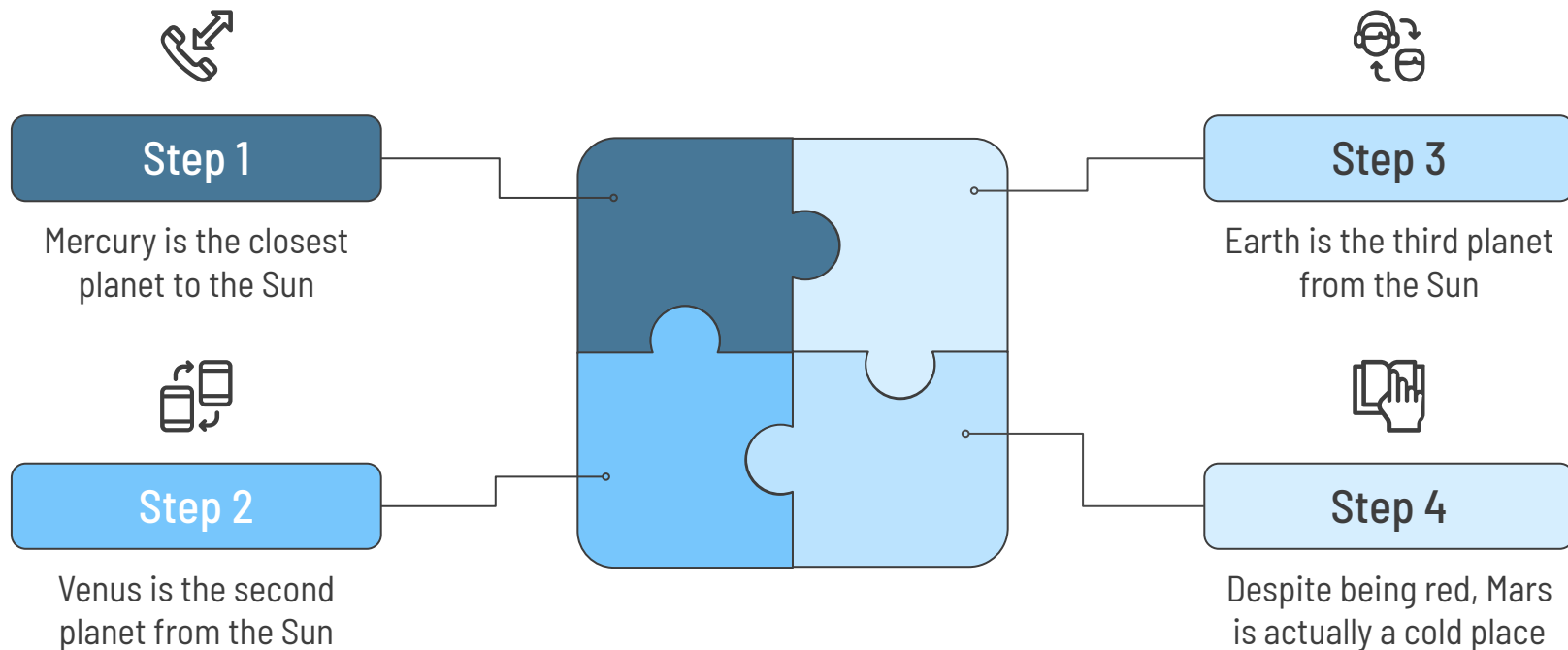
Despite being red, Mars is a cold place

82.5%

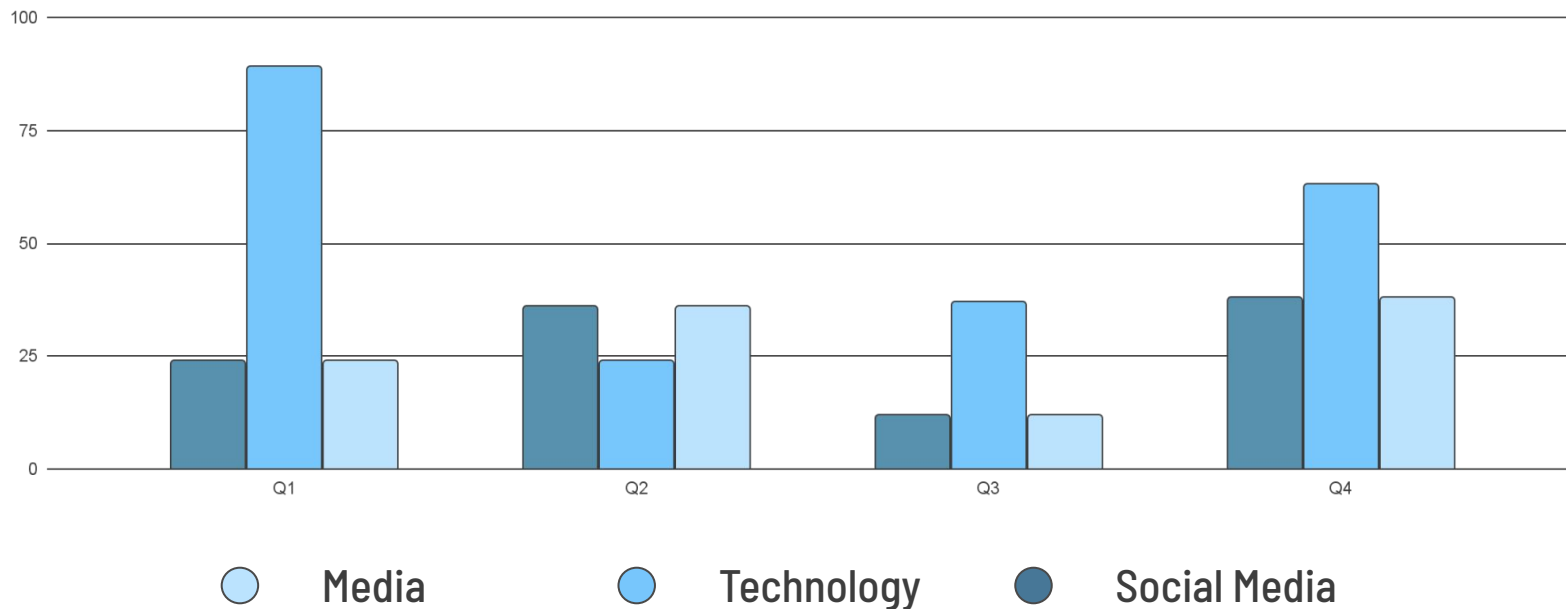
Mercury

Mercury is the closest planet to the Sun

Technology consulting infographics



Technology consulting infographics



Follow the link in the graph to modify its data and then paste the new one here. **For more info, click here**



Technology consulting infographics

01

First step

Mercury is the smallest planet of them all

- Jupiter is big
- Jupiter is the biggest planet of them all

02

Second step

Venus is the second planet from the Sun

- Mars is very cold
- Despite being red, Mars is a very cold place

03

Third step

Earth is the third planet from the Sun

- Saturn has rings
- Saturn is mostly composed of hydrogen