



Capstone Design: Prototyping (09/14/20)

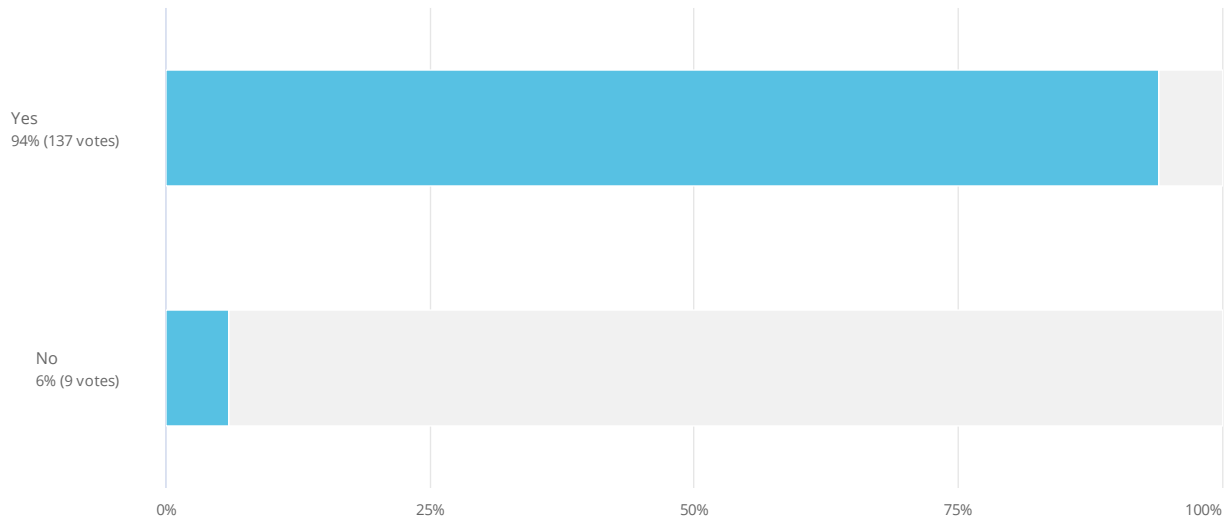
Question 1 of 6

Are the items shown on the left considered a prototype for the Excavator shown on the right?

Sep 14, 2020 - Sep 14, 2020

BREAKDOWN

TOP CHOICE Yes



TOP 5

 No comments yet.

OVERVIEW, USAGE BY DEVICE



IEWS

158

146 PARTICIPANTS

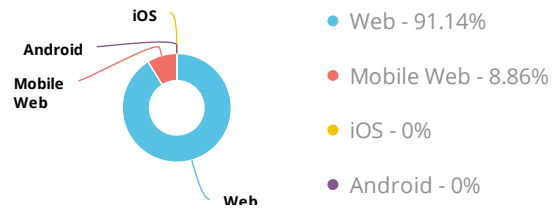


CONTRIBUTIONS

146

0 COMMENTS
By 0 people

0 VOTES
By 0 people



SENTIMENT



0%

POSITIVE

0 comments



0%

NEUTRAL

0 comments



0%

NEGATIVE

0 comments



Capstone Design: Prototyping (09/14/20)

Question 2 of 6




What type of prototype(s) do you think you would need for your Capstone Design project?

Sep 14, 2020 - Sep 14, 2020

Amit Jariwala
Georgia Institute of Technolo...
Exported Sep 14, 2020 at 03:14 PM EDT



TOP 5

| | |  |  |  |
|----------|--|---|---|---|
| 1 | Anonymous Demonstrates the function | 12 | 0 | 0 |
| 2 | Anonymous Showing the basic function | 10 | 0 | 0 |
| 3 | Anonymous Showing the basic form | 8 | 0 | 0 |
| 4 | Anonymous Small scale | 3 | 0 | 0 |
| 5 | Anonymous proof of concept and simulations | 2 | 0 | 0 |

OVERVIEW, USAGE BY DEVICE



VEWS

145

89 PARTICIPANTS



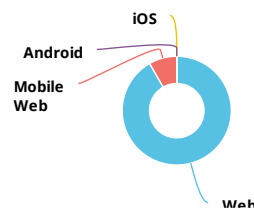
CONTRIBUTIONS

138

80 RESPONSES
By 72 people

0 COMMENTS
By 0 people

58 VOTES
By 27 people



- Web - 91.72%
- Mobile Web - 8.28%
- iOS - 0%
- Android - 0%

SENTIMENT



10% POSITIVE

8 responses and comments



88% NEUTRAL



70 responses and comments



3% NEGATIVE

2 responses and comments

MOST POPULAR

| |  |  |
|--|---|---|
| Anonymous Demonstrates the function | 12 | 0 |
| Anonymous Showing the basic function | 10 | 0 |

| | | | |
|-----------|---|---|---|
| Anonymous | Showing the basic form | 8 | 0 |
| Anonymous | Small scale | 3 | 0 |
| Anonymous | proof of concept and simulations | 2 | 0 |
| Anonymous | functional | 2 | 0 |
| Anonymous | Small scale model and simulation of drivetrain | 2 | 0 |
| Anonymous | prototypes to test functionality and user needs | 2 | 0 |
| Anonymous | a looks like prototype and/or a works like prototype | 2 | 0 |
| Anonymous | function | 1 | 0 |
| Anonymous | functional prototype | 1 | 0 |
| Anonymous | demonstrate the function | 1 | 0 |
| Anonymous | as many useful, feasible iterations | 1 | 0 |
| Anonymous | basic functionality | 1 | 0 |
| Anonymous | Proof of concept | 1 | 0 |
| Anonymous | functional | 1 | 0 |
| Anonymous | Prototype to demonstrate lock & seal mechanism | 1 | 0 |
| Anonymous | proof of concept | 1 | 0 |

| | | | |
|-----------|---|---|---|
| Anonymous | Physical and digital prototypes, from low to high fidelity | 1 | 0 |
|-----------|---|---|---|

| | | | |
|-----------|-------------------------------------|---|---|
| Anonymous | Cad modeling, physical model | 1 | 0 |
|-----------|-------------------------------------|---|---|

| | | | |
|-----------|-------------------|---|---|
| Anonymous | Simplified | 1 | 0 |
|-----------|-------------------|---|---|

| | | | |
|-----------|-----------------------------|---|---|
| Anonymous | functional prototype | 1 | 0 |
|-----------|-----------------------------|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | Proof of Concept | 1 | 0 |
|-----------|-------------------------|---|---|

| | | | |
|-----------|---|---|---|
| Anonymous | proof of concepts for different subsystems | 1 | 0 |
|-----------|---|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | proof of concept | 0 | 0 |
|-----------|-------------------------|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | Proof of Concept | 0 | 0 |
|-----------|-------------------------|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | Proof of concept | 0 | 0 |
|-----------|-------------------------|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | Proof of Concept | 0 | 0 |
|-----------|-------------------------|---|---|

| | | | |
|-----------|----------------------|---|---|
| Anonymous | Functionality | 0 | 0 |
|-----------|----------------------|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | Proof of concept | 0 | 0 |
|-----------|-------------------------|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | proof of concept | 0 | 0 |
|-----------|-------------------------|---|---|

| | | | |
|-----------|-----------------|---|---|
| Anonymous | Function | 0 | 0 |
|-----------|-----------------|---|---|

| | | | |
|-----------|-------------------------|---|---|
| Anonymous | proof of concept | 0 | 0 |
|-----------|-------------------------|---|---|

| | | |
|--|---|---|
| Anonymous | | |
| works like | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Proof of concept | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| displays the basic form and is functional | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Proof of concept | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Proof of Concept | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Demonstrate general size and function | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| proof of concept | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| a prototype that is able to complete the given goal | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Works like | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Functional | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| show function and how it looks | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Proof of Concept | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| proof of concept | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| proof of concept of selected design | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| We will need a somewhat functional prototype | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Basic proof of concept | 0 | 0 |

| | | | |
|-----------|---|---|---|
| Anonymous | Proof of Concept | 0 | 0 |
| Anonymous | multiple | 0 | 0 |
| Anonymous | proof of concept highlighting form | 0 | 0 |
| Anonymous | Proof of Concept | 0 | 0 |
| Anonymous | Proof of concept | 0 | 0 |
| Anonymous | Proof of concept and ergonomic demonstration | 0 | 0 |
| Anonymous | proof of concept and function | 0 | 0 |
| Anonymous | iterative, functional, designed with stresses analysis, etc | 0 | 0 |
| Anonymous | Small scale prototype to test functionality and performance | 0 | 0 |
| Anonymous | proof of concept | 0 | 0 |
| Anonymous | function | 0 | 0 |
| Anonymous | Functional prototypes mostly | 0 | 0 |
| Anonymous | One that provides actual load demonstration and allows actual testing in the heated furnace | 0 | 0 |
| Anonymous | our project is about the rocket cooling, with the condition right now we will not be able to make any prototype. | 0 | 0 |
| Anonymous | simple layout of design suitable to show concepts | 0 | 0 |

| | | | |
|-----------|--|---|---|
| Anonymous | prototype to demonstrate form | 0 | 0 |
| Anonymous | prove functionality of design concept | 0 | 0 |
| Anonymous | Simple models for analysis and proof of concepts | 0 | 0 |
| Anonymous | PCB demonstrating function | 0 | 0 |
| Anonymous | At least 1 | 0 | 0 |
| Anonymous | Demonstrates function | 0 | 0 |
| Anonymous | Small scale and proves that the design is feasible although it may not function | 0 | 0 |
| Anonymous | Cad models, iterative 3D printing | 0 | 0 |
| Anonymous | Experiment with Function | 0 | 0 |
| Anonymous | demonstrates the functionality of a concept or system | 0 | 0 |
| Anonymous | Proof of Concept and working prototype | 0 | 0 |
| Anonymous | Functional and Variety | 0 | 0 |
| Anonymous | Functional prototype | 0 | 0 |
| Anonymous | Functional | 0 | 0 |
| Anonymous | funcitonal | 0 | 0 |



Capstone Design: Prototyping (09/14/20)

Question 3 of 6




How many prototypes would you need to create for your Capstone Design project?

Sep 14, 2020 - Sep 14, 2020

Amit Jariwala
Georgia Institute of Technolo...
Exported Sep 14, 2020 at 03:14 PM EDT

 **POPIn**

TOP 5

| | |  |  |  |
|----------|--|---|---|---|
| 1 | Anonymous one but with multiple revisions | 8 | 0 | 0 |
| 2 | Anonymous Only as many as necessary to test proof of concept | 3 | 0 | 0 |
| 3 | Anonymous one for each main function | 3 | 0 | 0 |
| 4 | Anonymous as many iterations as needed | 3 | 0 | 0 |
| 5 | Anonymous multiple depending on time | 2 | 0 | 0 |

OVERVIEW, USAGE BY DEVICE



VEWS

137

90 PARTICIPANTS



CONTRIBUTIONS

105

70 RESPONSES

By 69 people

0

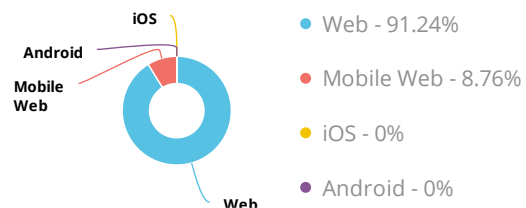
COMMENTS

By 0 people

35

VOTES

By 23 people



SENTIMENT



6%

POSITIVE

4 responses and comments



89%

NEUTRAL

62 responses and comments





6%

NEGATIVE

4 responses and comments

MOST POPULAR

| |  |  |
|--|---|---|
| Anonymous one but with multiple revisions | 8 | 0 |
| Anonymous Only as many as necessary to test proof of concept | 3 | 0 |

| | | | |
|-----------|--|---|---|
| Anonymous | one for each main function | 3 | 0 |
| Anonymous | as many iterations as needed | 3 | 0 |
| Anonymous | multiple depending on time | 2 | 0 |
| Anonymous | Depends on the project | 2 | 0 |
| Anonymous | Depends on your project but hopefully at least 1 | 2 | 0 |
| Anonymous | As many as needed | 1 | 0 |
| Anonymous | Depends on your project, as many as you need | 1 | 0 |
| Anonymous | Proof of concept | 1 | 0 |
| Anonymous | one physical model, multiple computer models | 1 | 0 |
| Anonymous | Enough to converge to and test final design | 1 | 0 |
| Anonymous | As many as we can, time and money permitting | 1 | 0 |
| Anonymous | multiple cad models | 1 | 0 |
| Anonymous | several | 1 | 0 |
| Anonymous | As many as possible | 1 | 0 |
| Anonymous | multiple prototypes for both functionality and design | 1 | 0 |
| Anonymous | n | 1 | 1 |

| | | |
|-----------------------|---|---|
| Anonymous 2 | 0 | 0 |
|-----------------------|---|---|

| | | |
|-----------------------|---|---|
| Anonymous 3 | 0 | 0 |
|-----------------------|---|---|

| | | |
|-----------------------|---|---|
| Anonymous 3 | 0 | 0 |
|-----------------------|---|---|

| | | |
|------------------------------------|---|---|
| Anonymous 2 at the least | 0 | 0 |
|------------------------------------|---|---|

| | | |
|----------------------------------|---|---|
| Anonymous at least one | 0 | 0 |
|----------------------------------|---|---|

| | | |
|----------------------------|---|---|
| Anonymous 1 to 2 | 0 | 0 |
|----------------------------|---|---|

| | | |
|--------------------------------|---|---|
| Anonymous At least 3 | 0 | 0 |
|--------------------------------|---|---|

| | | |
|------------------------|---|---|
| Anonymous 3+ | 0 | 0 |
|------------------------|---|---|

| | | |
|---|---|---|
| Anonymous as many as it takes to work | 0 | 0 |
|---|---|---|

| | | |
|---|---|---|
| Anonymous multiple prototypes | 0 | 0 |
|---|---|---|

| | | |
|-----------------------|---|---|
| Anonymous 3 | 0 | 0 |
|-----------------------|---|---|

| | | |
|----------------------------|---|---|
| Anonymous 3 to 4 | 0 | 0 |
|----------------------------|---|---|

| | | |
|--------------------------------|---|---|
| Anonymous at least 2 | 0 | 0 |
|--------------------------------|---|---|

| | | |
|-------------------------------------|---|---|
| Anonymous approximately 3 | 0 | 0 |
|-------------------------------------|---|---|

| | | |
|---|---|---|
| Anonymous 2 different prototypes but lots of iterations | 0 | 0 |
|---|---|---|

| | | |
|---|---|---|
| Anonymous just one | 0 | 0 |
| Anonymous 2 | 0 | 0 |
| Anonymous 0 | 0 | 0 |
| Anonymous 0 | 0 | 0 |
| Anonymous 1 | 0 | 0 |
| Anonymous 1 | 0 | 0 |
| Anonymous 1 | 0 | 0 |
| Anonymous maybe one, but not necessary | 0 | 0 |
| Anonymous 1 | 0 | 0 |
| Anonymous Various (sub-) prototypes to test different mechanisms | 0 | 0 |
| Anonymous 1 | 0 | 0 |
| Anonymous as many as necessary, materials permitting | 0 | 0 |
| Anonymous One works like | 0 | 0 |
| Anonymous none, because our rocket project does not allow us to do so given pandemic condition. | 0 | 0 |
| Anonymous CAD and 1 proof of concept | 0 | 0 |

| | | | |
|-----------|--|---|---|
| Anonymous | multiple until proof of concept | 0 | 0 |
| Anonymous | At least one but more would help test concept | 0 | 0 |
| Anonymous | Multiple models to flush out concept | 0 | 0 |
| Anonymous | Probably 2 | 0 | 0 |
| Anonymous | 2-3 | 0 | 0 |
| Anonymous | Functional. | 0 | 0 |
| Anonymous | multiple | 0 | 0 |
| Anonymous | functional, aesthetic/spacial and iterate until proof is there | 0 | 0 |
| Anonymous | only as much as necessary | 0 | 0 |
| Anonymous | Depends on functions required of design | 0 | 0 |
| Anonymous | One | 0 | 0 |
| Anonymous | Multiple prototypes, both to revise and improve, but also to show different ways of addressing it | 0 | 0 |
| Anonymous | 2. One for form, one for function | 0 | 0 |
| Anonymous | For our project, one is desired but not necessary | 0 | 0 |
| Anonymous | 4 | 0 | 0 |

Anonymous
2 0 0

Anonymous
One per mechanism used, and then multiple for full system functionality 0 0

Anonymous
3 0 0

Anonymous
i assume 3 is the greatest extent of what would be useful, but not particularly necessary 0 0

Anonymous
1 0 0

Anonymous
A couple for each component so maybe like 6-7 0 0

Anonymous
2 0 0






Capstone Design: Prototyping (09/14/20)

Question 4 of 6

Why do designers prototype?

Sep 14, 2020 - Sep 14, 2020

TOP 5

| | |  |  |  |
|---|---|---|---|---|
| 1 | Anonymous Visualization | 9 | 0 | 0 |
| 2 | Anonymous physical testing | 9 | 0 | 0 |
| 3 | Anonymous To communicate form, to evaluate design effectiveness | 5 | 0 | 0 |
| 4 | Anonymous Testing | 4 | 0 | 0 |
| 5 | Anonymous proof of functionality and for analysis/testing | 3 | 0 | 0 |

OVERVIEW, USAGE BY DEVICE



VEWS

129

85 PARTICIPANTS



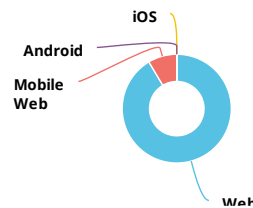
CONTRIBUTIONS

121

71 RESPONSES
By 70 people

0 COMMENTS
By 0 people

50 VOTES
By 22 people



● Web - 91.47%

● Mobile Web - 8.53%

● iOS - 0%

● Android - 0%

SENTIMENT



3% POSITIVE

2 responses and comments



90% NEUTRAL



64 responses and comments



7% NEGATIVE

5 responses and comments

MOST POPULAR

| |  |  |
|--------------------------------------|---|---|
| Anonymous Visualization | 9 | 0 |
| Anonymous physical testing | 9 | 0 |

| | | | |
|-----------|---|---|---|
| Anonymous | To communicate form, to evaluate design effectiveness | 5 | 0 |
| Anonymous | Testing | 4 | 0 |
| Anonymous | proof of functionality and for analysis/testing | 3 | 0 |
| Anonymous | To test ideas, visualize designs | 2 | 0 |
| Anonymous | test functionality and feasibility | 2 | 0 |
| Anonymous | To prove concepts and get price points and perhaps discover better solutions | 2 | 0 |
| Anonymous | test component integration and system functionality | 2 | 0 |
| Anonymous | Proof of concept that closes the gap between idea formalization and actual design evaluation | 1 | 0 |
| Anonymous | for visualizations and feedback | 1 | 0 |
| Anonymous | To test design hypothesis. | 1 | 0 |
| Anonymous | Physical models are more pragmatic | 1 | 0 |
| Anonymous | To validate design choices | 1 | 0 |
| Anonymous | assist in design process | 1 | 0 |
| Anonymous | proof of concept without using excessive resources | 1 | 0 |
| Anonymous | To be able to discover new flaws | 1 | 0 |

| | | | |
|-----------|---|---|---|
| Anonymous | testing and proof of concept | 1 | 0 |
| Anonymous | Proof of Concept | 1 | 0 |
| Anonymous | test the design | 1 | 0 |
| Anonymous | to get feedback on what works | 1 | 0 |
| Anonymous | to have something to show for their work | 0 | 0 |
| Anonymous | Testing | 0 | 0 |
| Anonymous | To experiment with solutions | 0 | 0 |
| Anonymous | Test how it feels/works/looks | 0 | 0 |
| Anonymous | Concept Verification | 0 | 0 |
| Anonymous | Holding something in 3D space is important for functionality and usability | 0 | 0 |
| Anonymous | Validate functionality, viability, desirability | 0 | 0 |
| Anonymous | validation/visualization of design ideas | 0 | 0 |
| Anonymous | Learn unexpected failures | 0 | 0 |
| Anonymous | Validation | 0 | 0 |
| Anonymous | Safety and testing | 0 | 0 |
| Anonymous | If the design is feasible in the real world | 0 | 0 |

| | | |
|--|---|---|
| Anonymous | | |
| feasibility | 0 | 0 |
| Anonymous | | |
| functionality | 0 | 0 |
| Anonymous | | |
| Testing, function, and use | 0 | 0 |
| Anonymous | | |
| TO illuminate assumptions about customer acceptance | 0 | 0 |
| Anonymous | | |
| to save money | 0 | 0 |
| Anonymous | | |
| to test functionality and get an idea of how consumers will interact with the product | 0 | 0 |
| Anonymous | | |
| visualize the concept, testing, etc. | 0 | 0 |
| Anonymous | | |
| validation | 0 | 0 |
| Anonymous | | |
| Marketing | 0 | 0 |
| Anonymous | | |
| To test feasibility, and to see consumer feedback | 0 | 0 |
| Anonymous | | |
| Feasibility and functionality | 0 | 0 |
| Anonymous | | |
| To identify problems and find solutions before production | 0 | 0 |
| Anonymous | | |
| to find mistakes/improvements | 0 | 0 |
| Anonymous | | |
| For feedback on designs/feasibility | 0 | 0 |
| Anonymous | | |
| to test mechanisms | 0 | 0 |

| | | | |
|---|--|---|---|
| Anonymous | | 0 | 0 |
| Attract investors | | | |
| Anonymous | | 0 | 0 |
| break down and evaluate which processes are working as intended | | | |
| Anonymous | | 0 | 0 |
| Test functionality | | | |
| Anonymous | | 0 | 0 |
| test basic functionality | | | |
| Anonymous | | 0 | 0 |
| Optimization of design process | | | |
| Anonymous | | 0 | 0 |
| To prove concepts, aid in testing, discover faults within design | | | |
| Anonymous | | 0 | 0 |
| to evaluate design concepts without fully developing | | | |
| Anonymous | | 0 | 0 |
| to test the functions | | | |
| Anonymous | | 0 | 0 |
| testing purposes | | | |
| Anonymous | | 0 | 0 |
| Testing | | | |
| Anonymous | | 0 | 0 |
| to get more valuable feedback | | | |
| Anonymous | | 0 | 0 |
| to find potential errors | | | |
| Anonymous | | 0 | 0 |
| evaluate performance | | | |
| Anonymous | | 0 | 0 |
| find ideas | | | |
| Anonymous | | 0 | 0 |
| proof of concept | | | |
| Anonymous | | 0 | 0 |
| Find issues | | | |

| | | |
|--|---|---|
| Anonymous | | |
| to quickly test if the design works | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| proof of concept | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| physical testing | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Failure analysis | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Experiments | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| cheaper to fix issues if exists | 0 | 0 |
| <hr/> | | |
| Anonymous | | |
| Validation | 0 | 0 |



Capstone Design: Prototyping (09/14/20)

Question 5 of 6




What are the various factors to consider when Prototyping?

Sep 14, 2020 - Sep 14, 2020

Amit Jariwala
Georgia Institute of Technolo...
Exported Sep 14, 2020 at 03:14 PM EDT

 **POPIn**

TOP 5

| | |  |  |  |
|---|--|---|---|---|
| 1 | Anonymous MVP | 5 | 0 | 0 |
| 2 | Anonymous Specifications, cost, resources, functionality | 5 | 0 | 0 |
| 3 | Anonymous Material selection and factor of scale | 4 | 0 | 0 |
| 4 | Anonymous cost, time, feasibility, skills, tools | 4 | 0 | 0 |
| 5 | Anonymous Resources available | 2 | 0 | 0 |

OVERVIEW, USAGE BY DEVICE



VEWS

126

69

PARTICIPANTS



CONTRIBUTIONS

90

62

RESPONSES

By 57 people

0

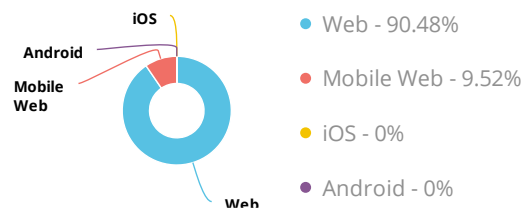
COMMENTS

By 0 people

28

VOTES

By 14 people



SENTIMENT



3%

POSITIVE

2 responses and comments



90%

NEUTRAL

56 responses and comments





6%

NEGATIVE

4 responses and comments

MOST POPULAR

| |  |  |
|--|---|---|
| Anonymous MVP | 5 | 0 |
| Anonymous Specifications, cost, resources, functionality | 5 | 0 |

| | | | |
|-----------|--|---|---|
| Anonymous | Material selection and factor of scale | 4 | 0 |
| Anonymous | cost, time, feasibility, skills, tools | 4 | 0 |
| Anonymous | Resources available | 2 | 0 |
| Anonymous | realistic constraints/differences in prototype and reality | 2 | 0 |
| Anonymous | Scale, form factor, materials waste (cost) | 1 | 0 |
| Anonymous | scale and material use | 1 | 0 |
| Anonymous | Time, cost, and necessity | 1 | 0 |
| Anonymous | scale (physical size and forces), structure, and how manufacturing the prototype relates to how the finished product would be manufactured. | 1 | 0 |
| Anonymous | costs/resources, scale/size, and degree of functionality | 1 | 0 |
| Anonymous | fidelity, scale, manufacturing process, manufacturing instructions, price, tolerances, | 1 | 0 |
| Anonymous | Cost/Time/Value to Design Process | 0 | 0 |
| Anonymous | Resources available | 0 | 0 |
| Anonymous | Machines/materials available to use | 0 | 0 |
| Anonymous | experience and resources available | 0 | 0 |
| Anonymous | What is the goal of the prototype | 0 | 0 |

| | | | |
|-----------|---|---|---|
| Anonymous | Cost, Time, Functionality, Practicality | 0 | 0 |
| Anonymous | Intended market (cost, ease of use, aesthetics, functionality) | 0 | 0 |
| Anonymous | What do you want to learn from the prototype? how will you build it? How much time will you spend on it? how many will you build? With whom and how will you receive feedback? | 0 | 0 |
| Anonymous | safety | 0 | 0 |
| Anonymous | cost,resource | 0 | 0 |
| Anonymous | time, cost, resources | 0 | 0 |
| Anonymous | why am I prototyping, have a goal in mind to learn from the prototyping | 0 | 0 |
| Anonymous | reason for prototyping | 0 | 0 |
| Anonymous | feasibility at scale, tolerances | 0 | 0 |
| Anonymous | cost, time, accuracy | 0 | 0 |
| Anonymous | cost, scale, time, necessity, resources available | 0 | 0 |
| Anonymous | Price, size, accuracy. Most importantly the factors specific to each project | 0 | 0 |
| Anonymous | close representation of product characteristics in your prototype | 0 | 0 |
| Anonymous | Cost, time, materials | 0 | 0 |
| Anonymous | cost, time | 0 | 0 |

| | | |
|---|---|---|
| Anonymous | 0 | 0 |
| Customer req's, Material and cost restraints | | |
| Anonymous | 0 | 0 |
| cost, function, deadlines | | |
| Anonymous | 0 | 0 |
| cheap/fast/comprehensive | | |
| Anonymous | 0 | 0 |
| Scalability | | |
| Anonymous | 0 | 0 |
| material, cost, time, scale | | |
| Anonymous | 0 | 0 |
| cost, time, feasibility, resources | | |
| Anonymous | 0 | 0 |
| cost and time | | |
| Anonymous | 0 | 0 |
| Cost and time | | |
| Anonymous | 0 | 0 |
| Material selection, cost, available tools, experience, specifications, skill, testing procedures | | |
| Anonymous | 0 | 0 |
| time | | |
| Anonymous | 0 | 0 |
| Cost/Time/Material, the metric which is being tested | | |
| Anonymous | 0 | 0 |
| What is being validating | | |
| Anonymous | 0 | 0 |
| Materials, time, scale | | |
| Anonymous | 0 | 0 |
| specifications | | |
| Anonymous | 0 | 0 |
| time, cost, materials | | |

| | | | |
|-----------|---|---|---|
| Anonymous | scale, form factor | 0 | 0 |
| Anonymous | Time constraints, experience | 0 | 0 |
| Anonymous | cost | 0 | 0 |
| Anonymous | scale, form, cost | 0 | 0 |
| Anonymous | Be mindful of process and avoid design fixation | 0 | 0 |
| Anonymous | What fidelity is needed to demonstrate what we are interested in | 0 | 0 |
| Anonymous | Cost, specifications, what you will learn | 0 | 0 |
| Anonymous | cost, ease of production | 0 | 0 |
| Anonymous | Resources available | 0 | 0 |
| Anonymous | uncertainty | 0 | 0 |
| Anonymous | Production delays, user feedback | 0 | 0 |
| Anonymous | Material, function, scale | 0 | 0 |
| Anonymous | Similarity to actual product | 0 | 0 |
| Anonymous | Performance of materials | 0 | 0 |
| Anonymous | cost, accuracy/scale, time frame, ability of prototype to provide meaningful results | 0 | 0 |

Capstone Design: Prototyping (09/14/20)

Question 6 of 6

Imagine that your final design involves a gear. Which of the following option would you pick?

Sep 14, 2020 - Sep 14, 2020

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BREAKDOWN

B: Order gear from a vendor



88%

A: 3D print a gear



12%

TOP 5

| 1 | Anonymous Unless it is an extremely unique gear, standard parts are better for a final design prototype | 4 | 0 | 0 |
|---|---|---|---|---|
| 2 | Anonymous just download the cad from mcmaster and 3d print it | 1 | 0 | 0 |
| 3 | Anonymous evaluate what is cheaper or quicker | 0 | 0 | 0 |
| 4 | Anonymous depends on what functionality you want from the prototype. if a smooth metal gear is vital to the design, a 3d printed gear would defeat the purpose | 0 | 0 | 0 |
| 5 | Anonymous depends on the function/ speed of the gear | 0 | 2 | 0 |

OVERVIEW, USAGE BY DEVICE



VIEWS

125

120

PARTICIPANTS



CONTRIBUTIONS

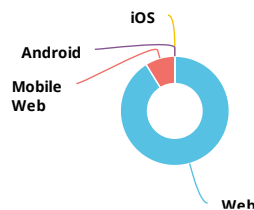
132

5

COMMENTS
By 4 people

7

VOTES
By 6 people



- Web - 91.2%
- Mobile Web - 8.8%
- iOS - 0%
- Android - 0%

SENTIMENT



0% POSITIVE
0 comments



100% NEUTRAL
5 comments



0% NEGATIVE
0 comments

MOST POPULAR

| Anonymous Unless it is an extremely unique gear, standard parts are better for a final design prototype | 4 | 0 |
|--|---|---|
| Anonymous just download the cad from mcmaster and 3d print it | 1 | 0 |
| Anonymous evaluate what is cheaper or quicker | 0 | 0 |
| Anonymous depends on what functionality you want from the prototype. if a smooth metal gear is vital to the design, a 3d printed gear would defeat the purpose | 0 | 0 |
| Anonymous depends on the function/ speed of the gear | 0 | 2 |