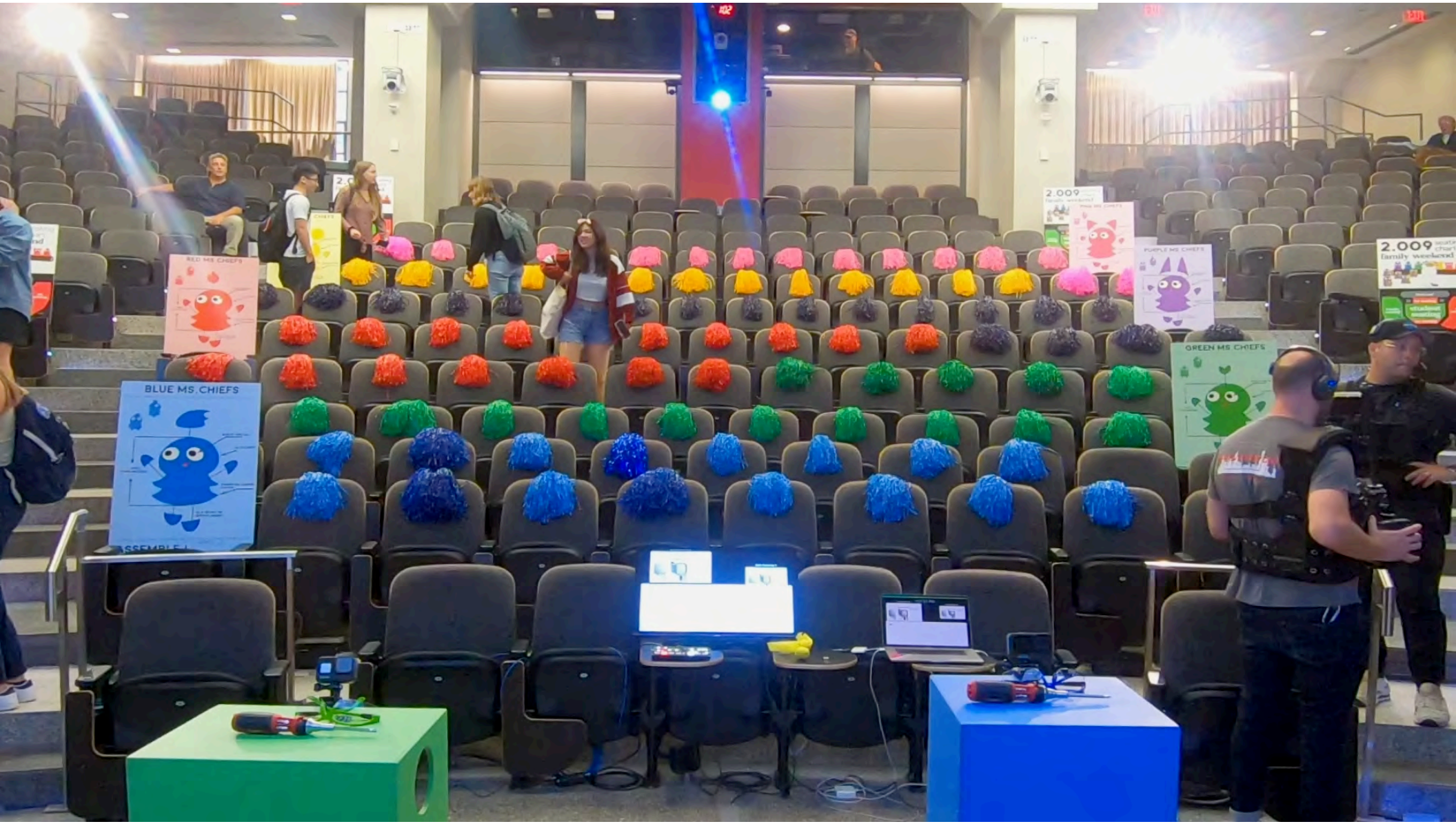
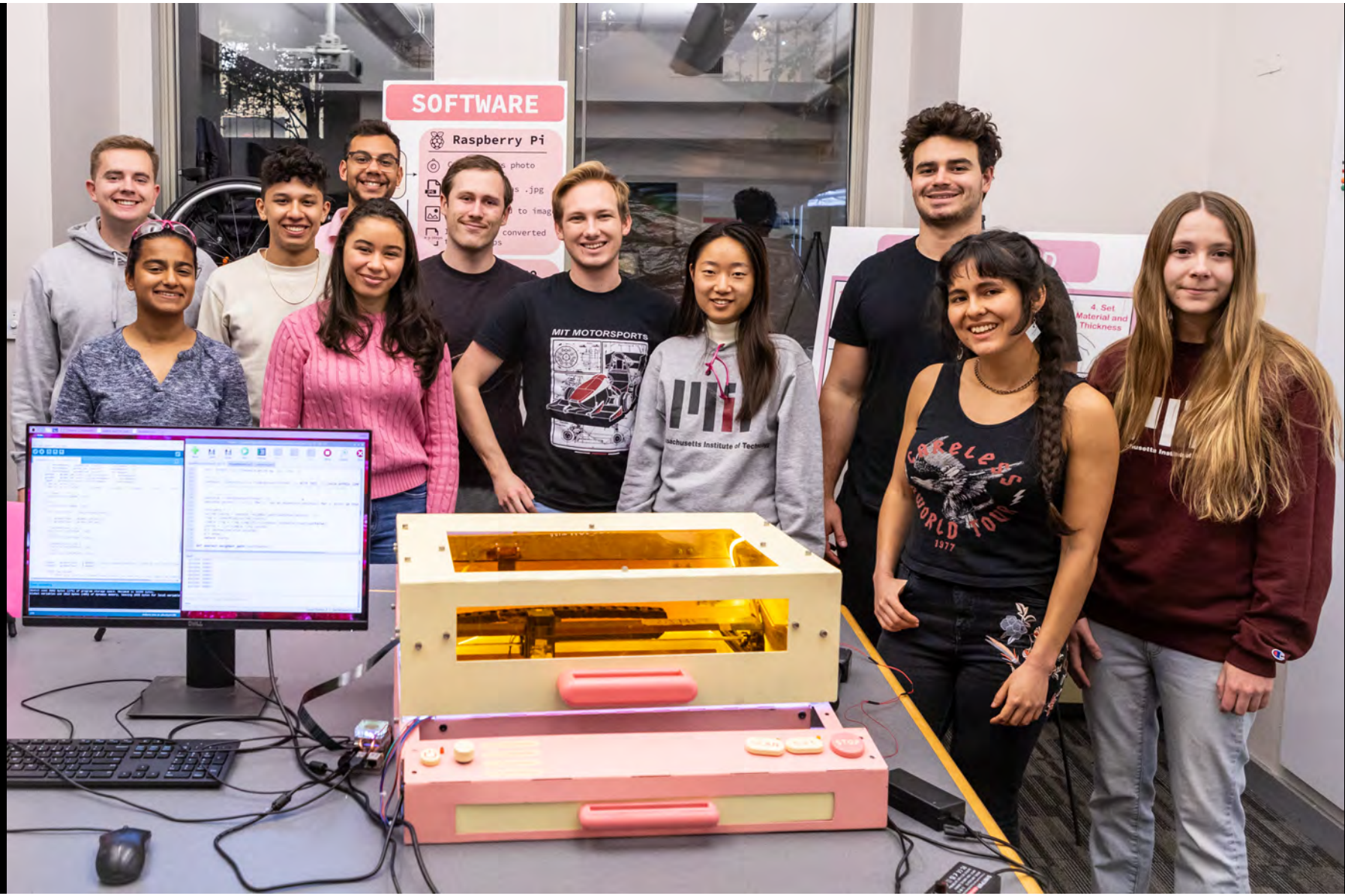

lift up someone else
Booker T. Washington 1856-1915
if you want to lift yourself up


BLUE MS. CHIEFS
GREEN MS. CHIEFS

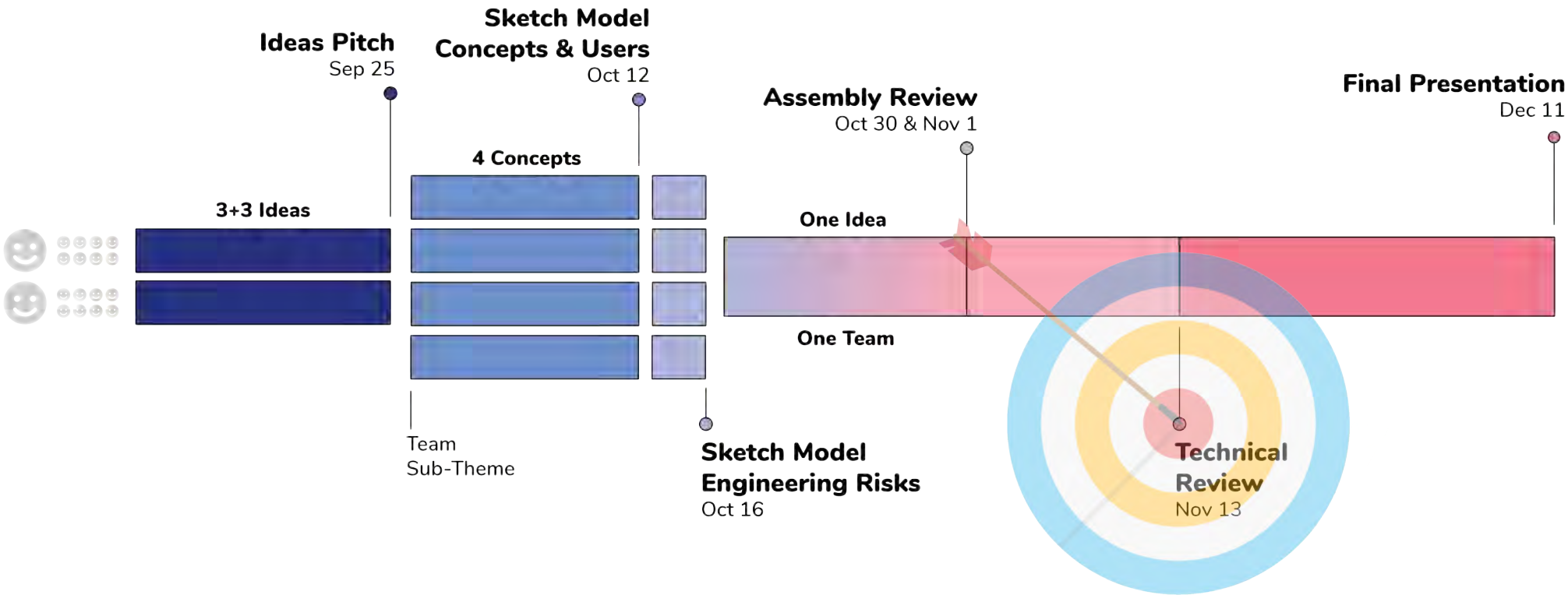

BLITZU

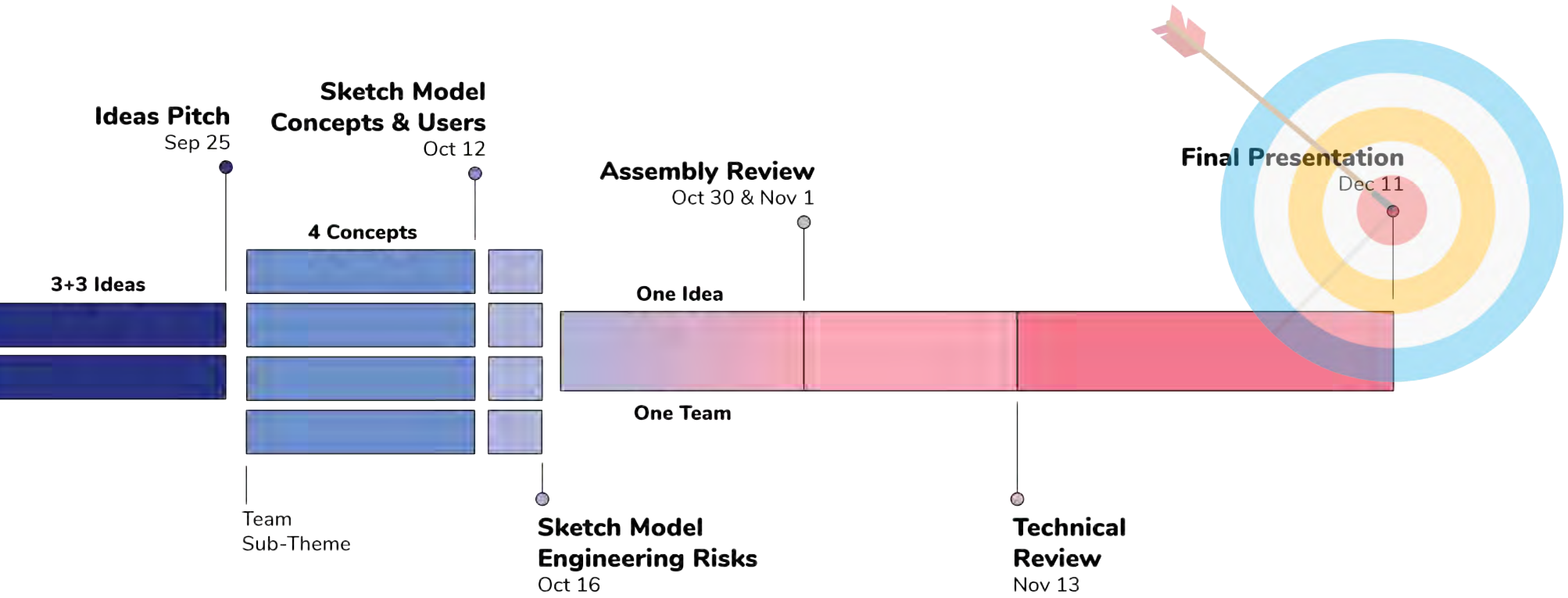

SOFTWARE
Raspberry Pi
MIT MOTORSPORTS
4. Set Material and Thickness


StairSteady
AutoSketch
PRODUCT
MIT
TRACK & FIELD
CROSS COUNTRY
2024
STAY
Amazed


HOUSE LARRY
LEARNING LUKE
Handle Grip Samples
Monitor Housing
Rendering
B


PIROU
Mobility-Impaired Person and Nurse
PURPLE MS. CHIEFS


Ideas Pitch
Sep 25
Sketch Model
Concepts & Users
Oct 12
Assembly Review
Oct 30 & Nov 1
Final Presentation
Dec 11
3+3 Ideas
4 Concepts
One Idea
One Team
Team
Sub-Theme
Sketch Model
Engineering Risks
Oct 16
Technical
Review
Nov 13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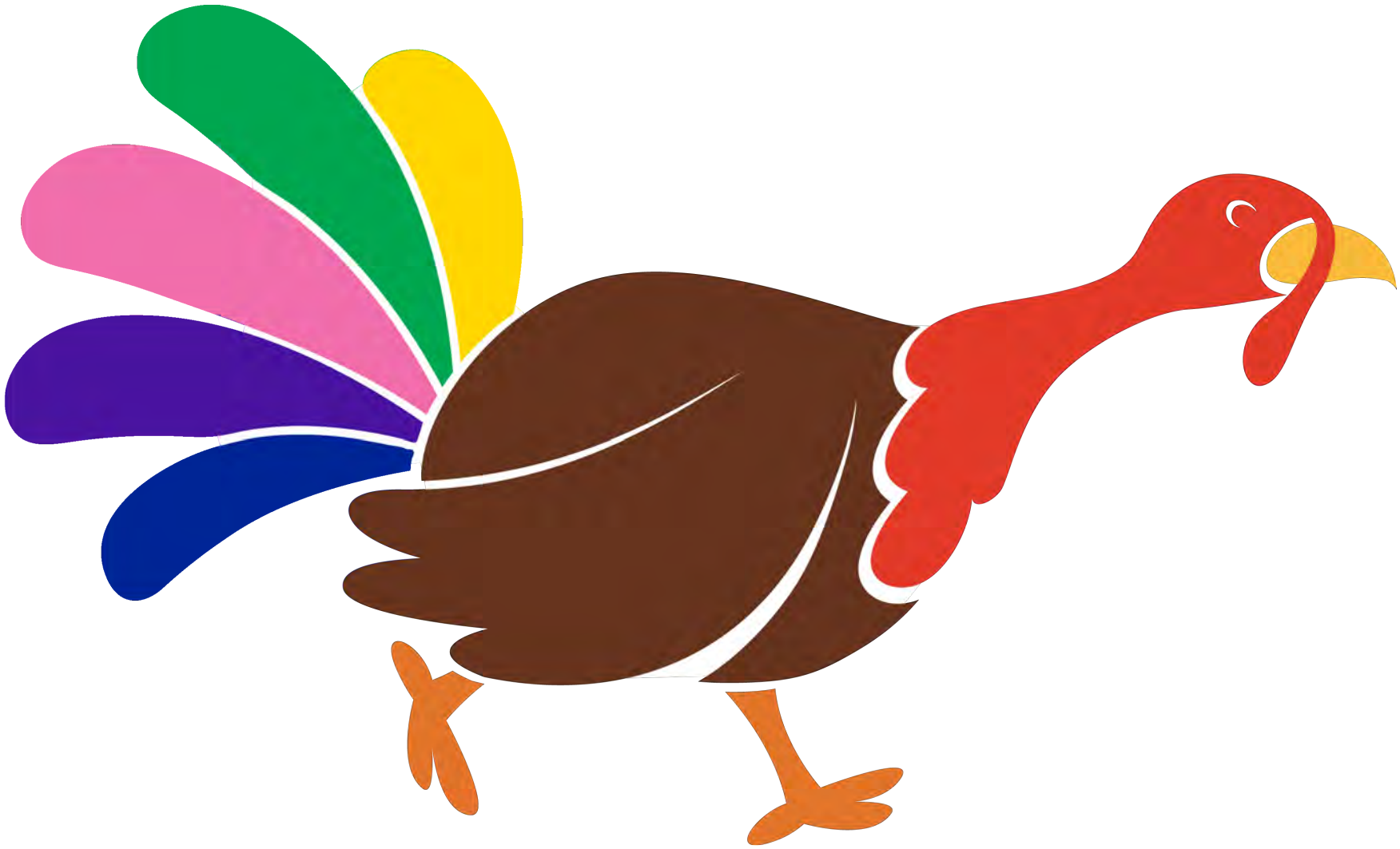
Steve Jobs, 1955-2011

work hard to get your thinking clean to
make it simple



final design consultation

Monday 1-5 PM

30 minutes

industrial design consultation

Thursday 4:30-5 PM
30 minutes

final design consultation

Monday 3:30-5 PM
30 minutes

industrial design consultation

Thursday 6:30-9:30 PM

30 minutes

Thursday 6:30-9:30 PM
3-5 PM Friday
30 minutes

confident presenting tutorial

3-5 PM Friday

Thursday 2-5 PM
3-5 PM Friday
20 minutes in team area

set design consultation

Thursday 2-5 PM

20 minutes in team area

set fäeslgnroodustlhotioe

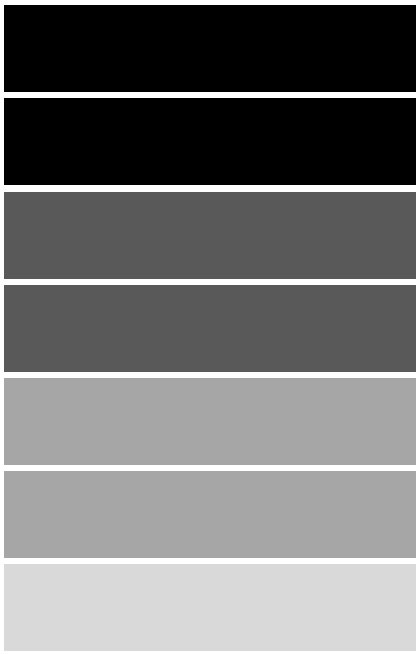
Thursdayd2e5MPMday by 5 PM

20 minutes in team area

final product name

due Monday by 5 PM

7 minute presentation



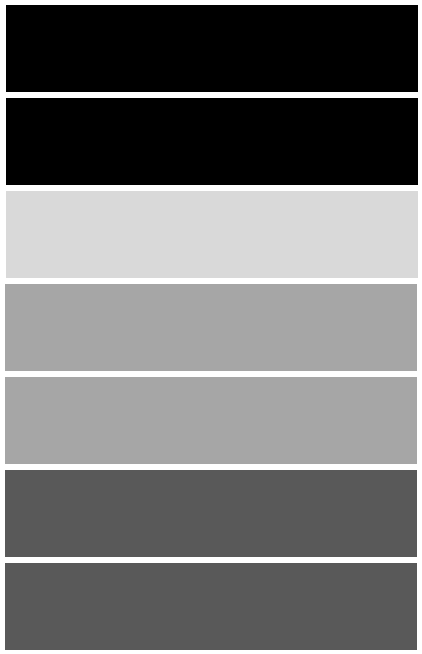
the product, where and how it is used, use experience

who it is for and why should we care

how it works, design rationale

market and preliminary business model

7 minute presentation



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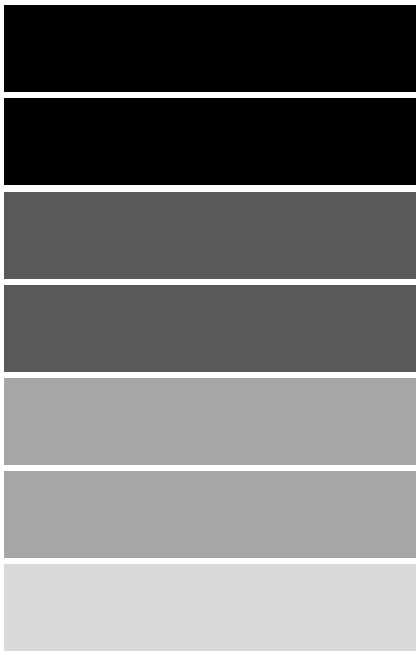


the product, where and how it is used, use experience

who it is for and why should we care

how it works, design rationale

market and preliminary business model

business model **concept**

Thursday 7-10 PM

30 minutes

business models

hand it over. voluntarily please!

business model concept

Thursday 7-10 PM

30 minutes

business models

hand it over. voluntarily please!

A proposition

I will give you $1000 today!

or

I will give you $1200 next year!

factors in making your decision?

current financial/life circumstances

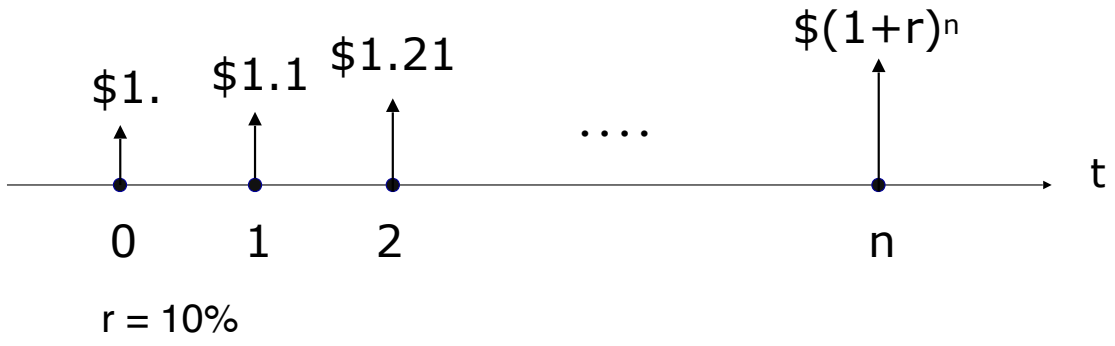
trust in the monetary source

Concept 1 the time value of money

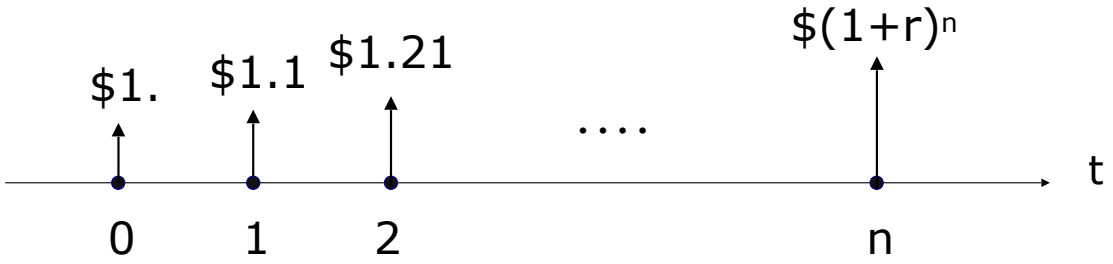
a dollar now is worth more to you than a dollar in the future

interest rate r = % per period n

future value = present value x $(1+r)^n$



Concept 1 discount rate



your personal, discount rate ***r*** per period ***n*** is …

$(1+r)^n$ = future value/present value

that's when you perceive present and future value to be equivalent

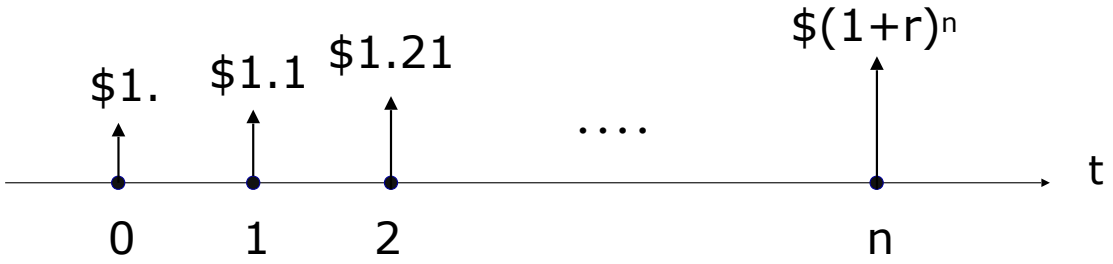
so, if you decided to:

take $1000 from me now, your ***r*** per year is > 0.2 (n=1)

wait for $1200, your ***r*** per year is ≤ 0.2 (n=1)

personal discount rates tend to be high!

Concept 1 discount rate



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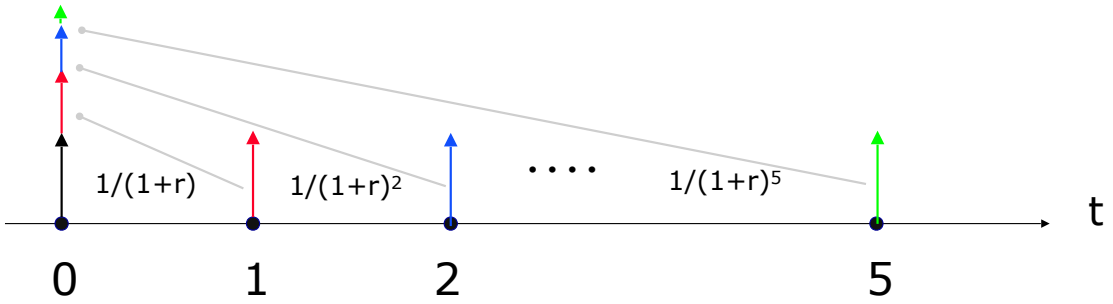
Concept 2 net present value (NPV)

Future cash flows can be converted into a present day value using an appropriate discount rate



c_n is cash flow in period n
r is discount rate per period n
m is total number of periods
(3-5 years typical)

$$NPV = \sum_{n=1}^{m} \frac{c_n}{(1+r)^n}$$

Another proposition

please give me $1000 today

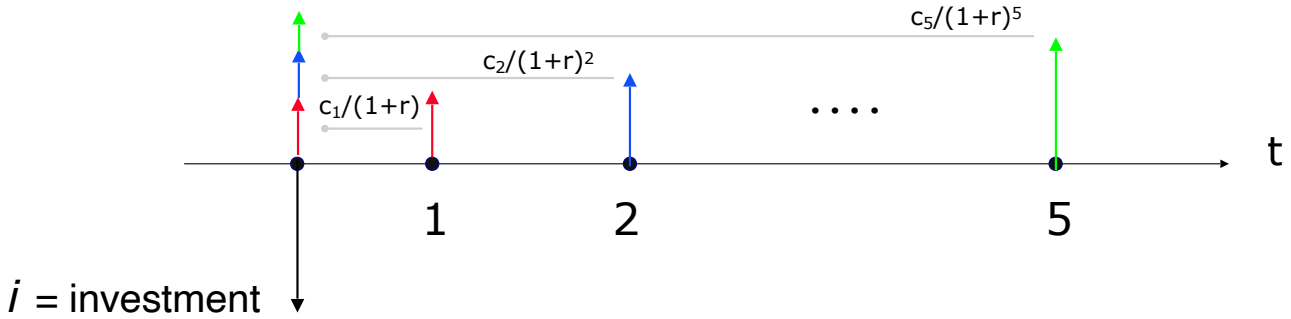
and I promise…

I will give you $1300 next year!

…at least I am quite sure that I will pay you but there is some chance that I might lose it and won't pay you back at all.

Concept 3 internal rate of return (IRR) return on investment (ROI)

At what discount rate will future cash flows have the same NPV as your initial investment?



c_n is cash flow in period n
m is total number of periods

r is the IRR

$$i = \sum_{n=1}^{m} \frac{c_n}{(1+r)^n}$$

Concept 3 IRR a.ka. ROI

If you gave me $1000 now expecting $1300 next year,
an expected ROI of 30% was enough for you to invest

$$1000 = \frac{1300}{(1+r)^1}$$

If you did not give me $1000 now,
an expected ROI of 30% was not enough

Return expectations ROI and investment risk

30++%	for risky new ventures
20 %	for new products
15 %	for extensions/improvements to existing product
10 %	for cost improvement to an existing product

risk-free rate-of-return

5% for short term government bonds

Return expectations depend on investor type

venture invester
strategic partner

angel invester
crowd funder

Return expectations depend on investor type

a business proposal

venture invester
strategic partner

angel invester
crowd funder

a business proposal

a clear value proposition

a plan to get your product out the door

business concepts

a clear value proposition

a plan to get your product out the door

business proposal concepts

patent & license	(company, NGO)
joint development	
toll manufacture	(provide materials/components for a fee)
contract manufacture	(your label on product someone else makes)

business proposal concepts

business model **concept**

patent & license (company, NGO)

joint development

Thursday 7-10 PM

toll manufacture (provide materials/components for a fee)

30 minutes

contract manufacture (your label on product someone else makes)

business model **concept**

Thursday 7-10 PM

30 minutes

final presentations!

December 11


2009


2.009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