Training and innovation: a how-to guide

WorldSkills Conference 2019

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Sales in ~200 countries

93,000 3Mers globally

Laboratory in 50 countries

Manufacturing in 35 countries

Marketing operations in 69 countries

By 2050, world population is expected to surpass 9 billion

Reimagining natural resources

Supply and demand of natural resources, including fossil fuels, minerals, renewables, water, and food will experience a powerful transformation.

Shifting demographics

A gradual but powerful shift in the composition, location, and sheer size of the Earth's population is at the core of nearly all observable global trends.

Digital transformation

Digitization is fundamentally changing how businesses and individuals interact, make decisions, and conduct daily operations.

Evolving economic landscape

The center of world economic influence is transitioning from dominance of developed countries towards an increasingly multipolar environment.

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Leading and innovating for a more sustainable future

Applying our science to improve every life

| Focus areas:	Science for Circular	Science for Climate	Science for Community
Aspirations:	Design solutions that do more with less material, advancing a global circular economy.	Innovate to decarbonize industry, accelerate global climate solutions and improve our environmental footprint.	Create a more positive world through science and inspire people to join us.
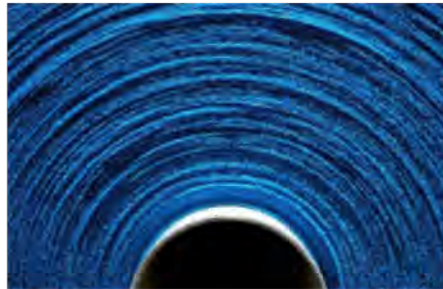
Actions:	Every new 3M product that enters our new product commercialization process must have a Sustainability Value Commitment.	We're committed to renewable energy. We power our headquarters with 100% renewable electricity and aim for 50% globally by 2025.	We are making a difference in the world through STEM education, science advocacy, skills-based volunteerism and training the workforce of the future.

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3M Science. Applied to Life.™

Our Vision
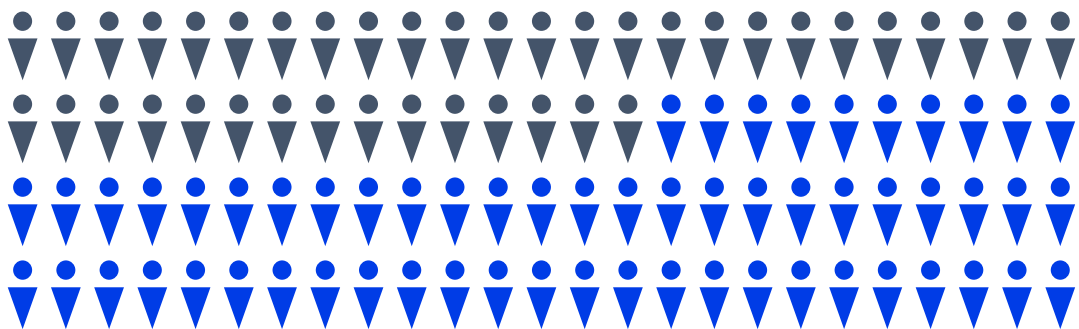
3M Technology Advancing Every Company
3M Products Enhancing Every Home
3M Innovation Improving Every Life

The image of science is complicated

Nearly 40% of people say that if science didn't exist, their everyday lives wouldn't be that different...

Pressure is on the next generation to push science forward

92%
of parents want their kids to know more about science

82%
of adults would encourage kids to pursue a career in science

Science Advocacy: Themes

A	**Awareness & Appreciation** for science and the role it plays – in our daily lives
B	**Breaking down Barriers** – not just for geniuses or a gender, also, one can have satisfying science careers
C	**Context, Communication & Championing** –what scientists do, and how science solves problems

Follow me on LinkedIn. Appreciate your feedback.
Listen to our Podcast 3M.com/scienceindex

3M

WorldSkills ✓ @WorldSkills · Jul 18

"Application of science, advancement of skills & empowerment of diverse talent is key to a sustainable future as we face unprecedented challenges and opportunity." Dr. J Seth
Corporate Scientist & Chief Science Advocate
@3M, speaking at #WSConference 2019 worldskillsconference.com

Study the science. Study the art.
## *...study the science of art and art of science...*

Principles for the Development of a Complete Mind: Study the science of art. Study the art of science. Develop your senses - especially learn how to see. Realise that everything connects to everything else.

(Leonardo da Vinci)

izquotes.com

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Know-How and Knowledge...

Gain 'Knowledge', the facts and information. Master 'Know-how', the knowledge of how to do something.

The interaction of knowledge and skills with experience is key to learning.

— John Dewey —
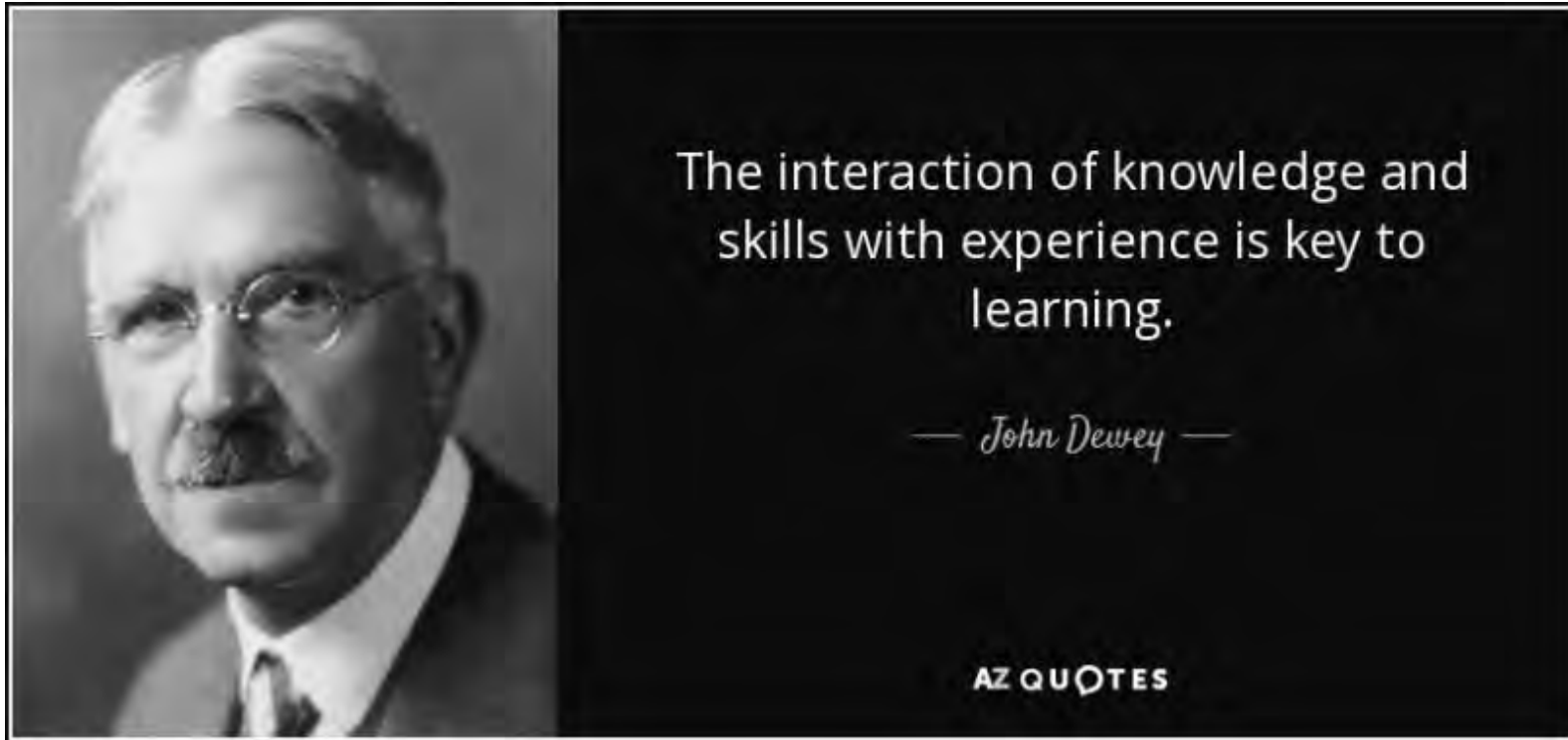
AZ QUOTES

Individual Initiative Imperative
...for Imagination, Innovation and Inspiration

Success depends in a very large measure upon individual initiative and exertion, and cannot be achieved except by a dint of hard work.
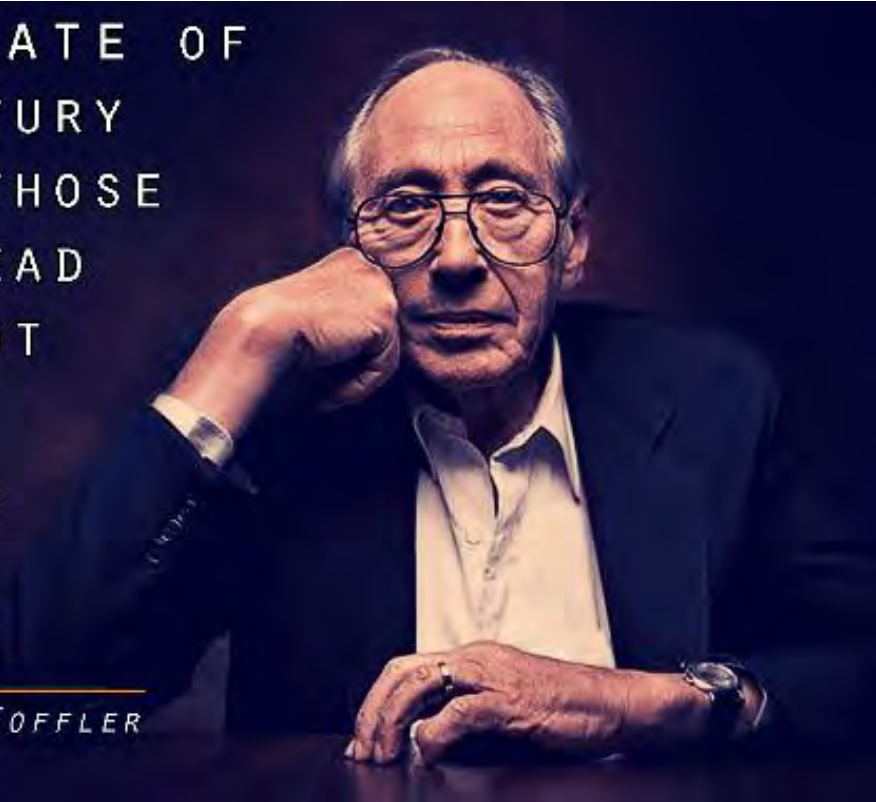
(Anna Pavlova)

izquotes.com

Learning, unlearning, relearning...

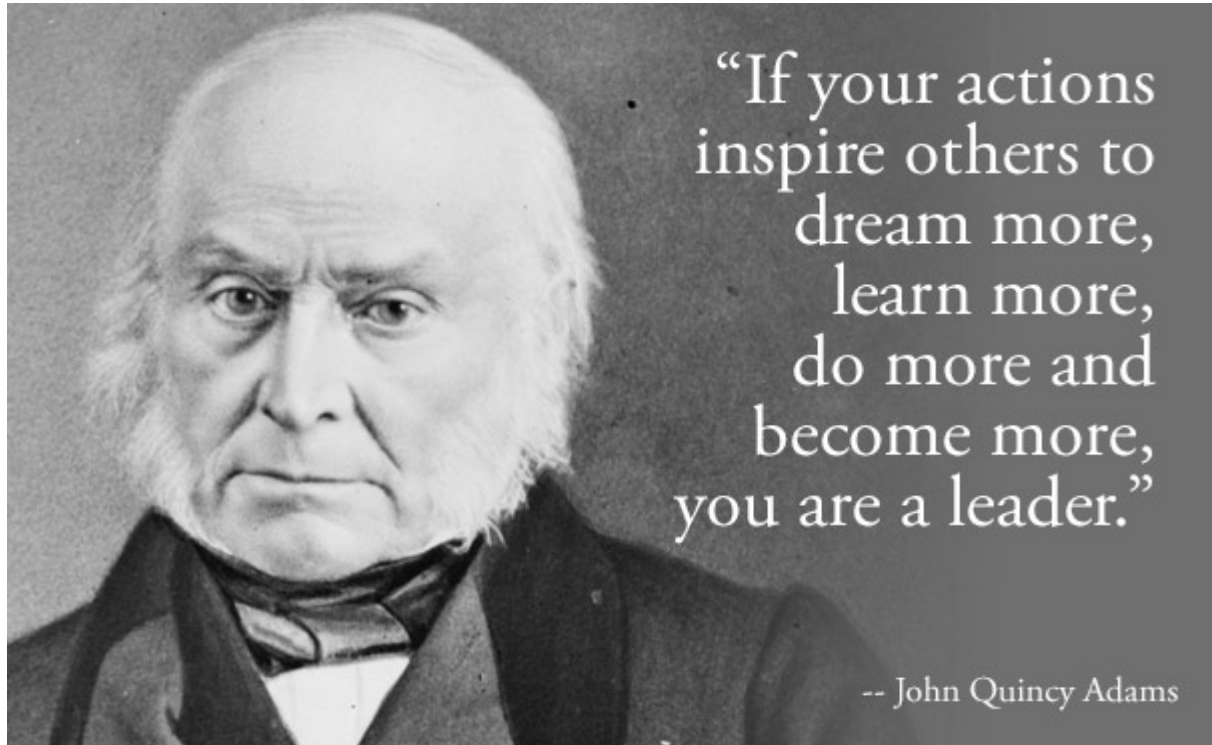## *...Learn that change is the only constant*

"THE ILLITERATE OF THE 21ST CENTURY WILL NOT BE THOSE WHO CANNOT READ AND WRITE, BUT THOSE WHO CANNOT LEARN, UNLEARN, AND RELEARN."

~ALVIN TOFFLER

Lead... from your rung...

Don't have to climb to the top of the ladder to lead...

"If your actions inspire others to dream more, learn more, do more and become more, you are a leader."

-- John Quincy Adams

Society and Sustainability

*See the big picture through a lens of humanity…
in all it's diversity…and it's unity*

What's the real shtick? It's SHTEM!

Jayshree Seth on LinkedIn
April 23, 2019

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"Right" SKILLS for the future?

✓ *Studying art of science and science of art*

✓ *Know-how & knowledge*

✓ *Individual initiative*

✓ *Learning, unlearning, relearning*

✓ *Leading from your rung*

✓ *Society & Sustainability in the fore-front*

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"Right" SKILLS for the future?

- ✓ **S**tudying art of science and science of art
- ✓ **K**now-how & knowledge
- ✓ **I**ndividual initiative
- ✓ **L**earning, unlearning, relearning
- ✓ **L**eading from your rung
- ✓ **S**ociety & Sustainability in the fore-front

Thank you

Спасибо большое ☺

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STEVE BAKER

Facilitator and Coach
Treehouse Innovation

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Welcome to...

Tackling big world problems, using Design Thinking

Steve Baker

TREEHOUSE
INNOVATION

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What is design thinking? One definition...

*"Design thinking is about accelerating innovation
to create better solutions to the challenges facing business
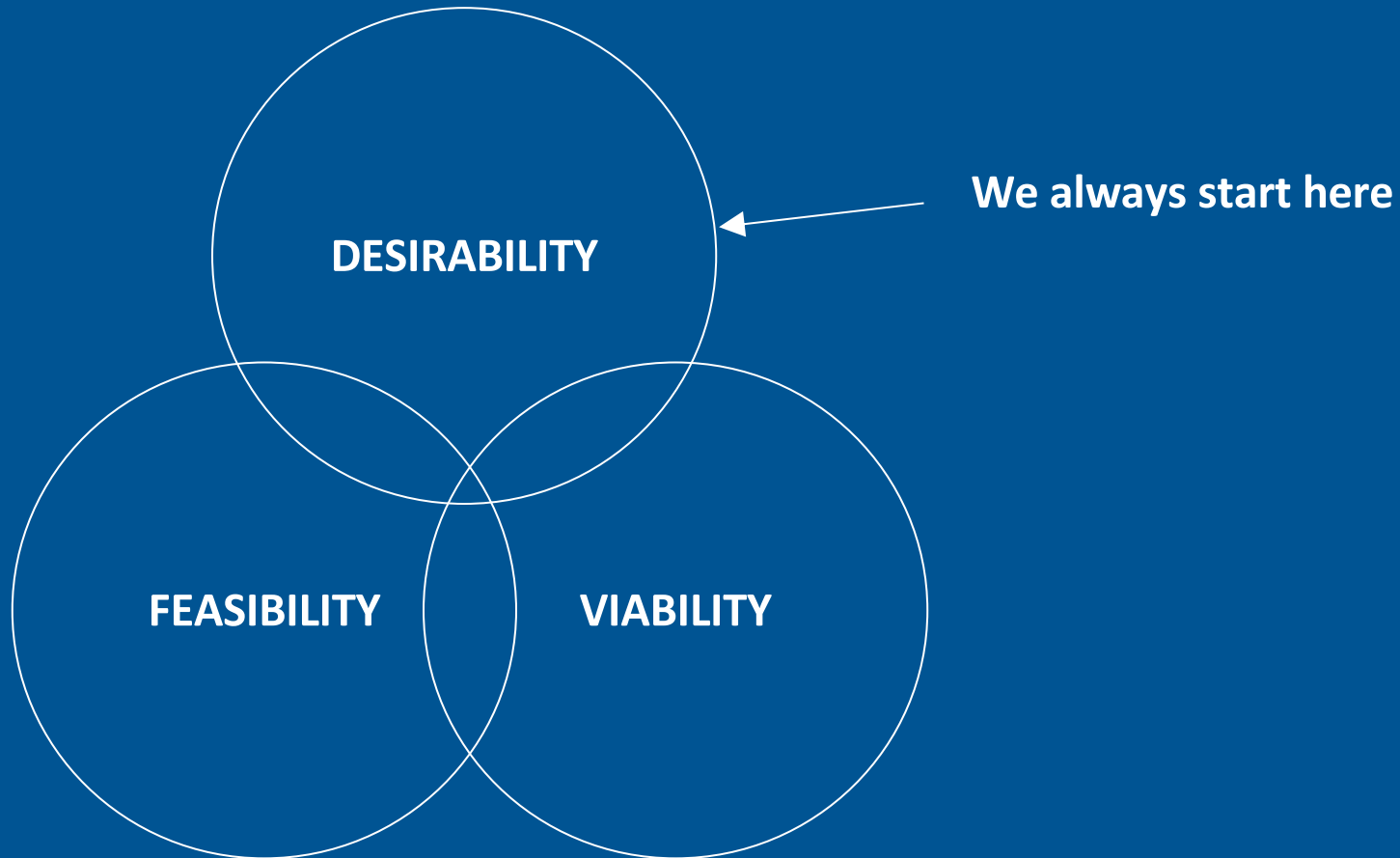and society.*

*It starts with people – what we call human centred
design – and applies the creative tools of design,
like storytelling, prototyping, and experimentation
to deliver new breakthrough innovations."*

Tim Brown, CEO, IDEO
Change by Design 2009

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The Design Thinking Framework

We'll be working at a <u>fast pace</u> in a <u>highly collaborative way</u>, to allow you to experience the value of an accelerated approach to finding solutions.

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Each table will have one person who will:

Keep you on time

Record your decisions

Make a decision if you can't agree

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Let's have some fun!

Focusing our challenge

15 Minutes

You'll be working as a design team to consider the following....

How might we help employees within our workforces to get the right skills at the right time, so that they remain productive and fulfilled in their chosen field of work?

5 minutes

We'll start by considering 'What's the biggest skills shortage in your industry?

Step 1: <u>Working in pairs</u> have a 5 minute conversation to discuss the question and write your answer on a sticky note

Step 2:

On your table each pair share what you wrote on your sticky notes

5 minutes

Step 3:

<u>As a table</u> pick one key challenge or issue

Building Empathy

20 Minutes

5 minutes

Step1: On your table make a quick list of 3 or 4 types of employee affected by this challenge and select the one you most want to focus on.

Bring them to life with a name, a job title and a their core skill.

Step 2: On your own, spend 2 minutes thinking about what it might be like for this person and how the challenge affects them.

5 minutes

Step 3: <u>As a table, divide in two</u>.

Half of you, write down what the pain/or obstacles are for this person

Half of you write down what the gains/opportunities might be for them

Now choose 1 to focus on.

First, have 2 minutes to stand up/sit down and stretch!

Generate Ideas

40 Minutes

Step1: Focus the opportunity: Now, frame this obstacle as a new "How might We,," question

"How might we help, ………to………….so that they can……?"

| help/ support/ enable | the employee you just brought to life on your flip chart | overcome the obstacle that you just identified | do something they can do better in the future |

Example

 "**How might we help, our railroad maintenance team to be seen when working alone so that they can stay safe?**"

| help/ support/ enable | the employee you just brought to life on your flip chart | overcome the obstacle that you just identified | do something they can do better in the future |

The Rules
for idea generation

NO JUDGMENTS

CRAZY IDEAS WELCOME

USE VISUALS

GO FOR QUANTITY

BUILD ON THE IDEAS
OF OTHERS

STAY FOCUSSED!

ONE SPEAKER AT A TIME

10 minutes

Step 2: Think of ideas for ways to solve the problem.
For 1 minute individually…
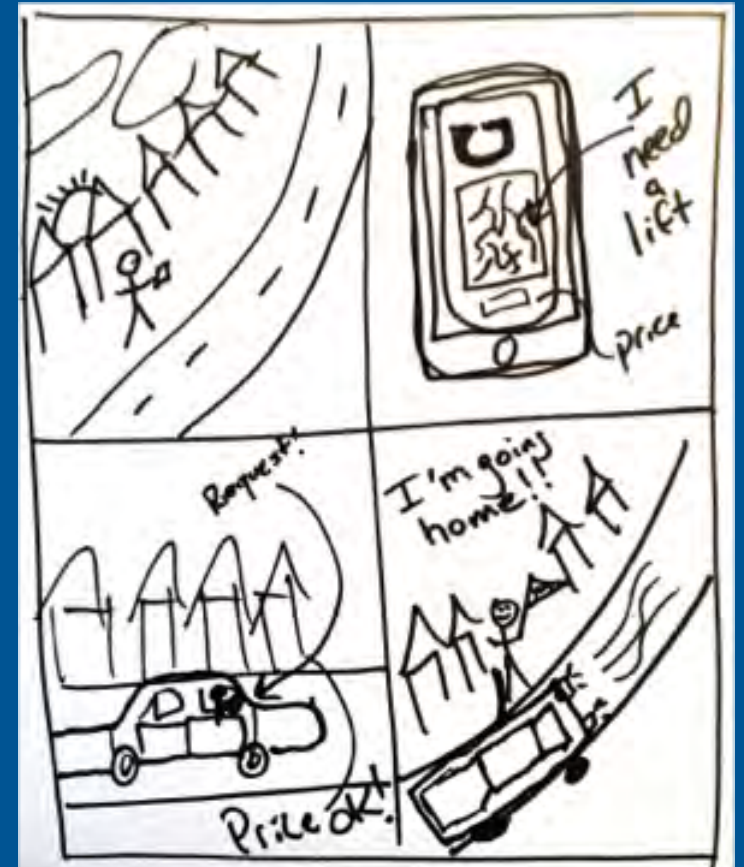**capturing ideas on post- it notes**
Then stand up and as a team…
Each person in turn, puts one of their ideas on the flip chart

5 minutes

Step 3: <u>As a team s</u>elect your most promising idea.

Discuss and decide which idea would best help solve the problem

5 minutes

Step 4: Create a storyboard as your working prototype

Working as two groups one group to draw the story board and the other to write the story

Step 5: Take a photo of your storyboard and upload to twitter or LinkedIn using #WorldSkills

Thank you for your participation

We are Treehouse Innovation

Please get in touch if you'd like more support around Design Thinking

contact@treehouseinnovation.com
+44 (0) 203 3030 683

Treehouse Innovation is proud to have worked with great organizations including:

Session Exercises	Timing (mins)
Welcome and Overview of Design Thinking	**5**
Exercise 1: Focusing the challenge: What are the biggest issues in your industry (preset question for each challenge)	
What are the biggest issues in your industry *(insert question for each challenge)* Talk about the challenge and best and worst experiences	**15**
Exercise 2: Exploring our users or employees experience and potential issues they face	
Focus on a user: Describe the typical person you have in mind when who is facing this challenge and then bring them to life with a "persona". As a team give them a name, a job title. What skills do they have or lack ?	**5**
Identify their pains/gains: What obstacles do they face that stop progress on this challenge. What would they value? What is most important? Discuss and agree among yourselves	**15**
Exercise 3: Exploring the opportunity and potential solutions	
Stretch, stand up….sit down	**5**
Focus the opportunity: Frame this obstacle as a new "How might We…." question	**5**
Generate ideas: Generate ideas in your teams	**10**
Select : Choose your most promising idea	**5**
Prototype: Create a storyboard prototype	**5**
Pitch as a team on video	**5**