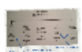
WBT - part 1
Class, class...yes, yes!
+ scoreboard

WBT - 'Teach - OK!"
part 2 As teach Bs

WBT - part 3
Bs teach As
Gestures!

WBT - part 4
"Switch"





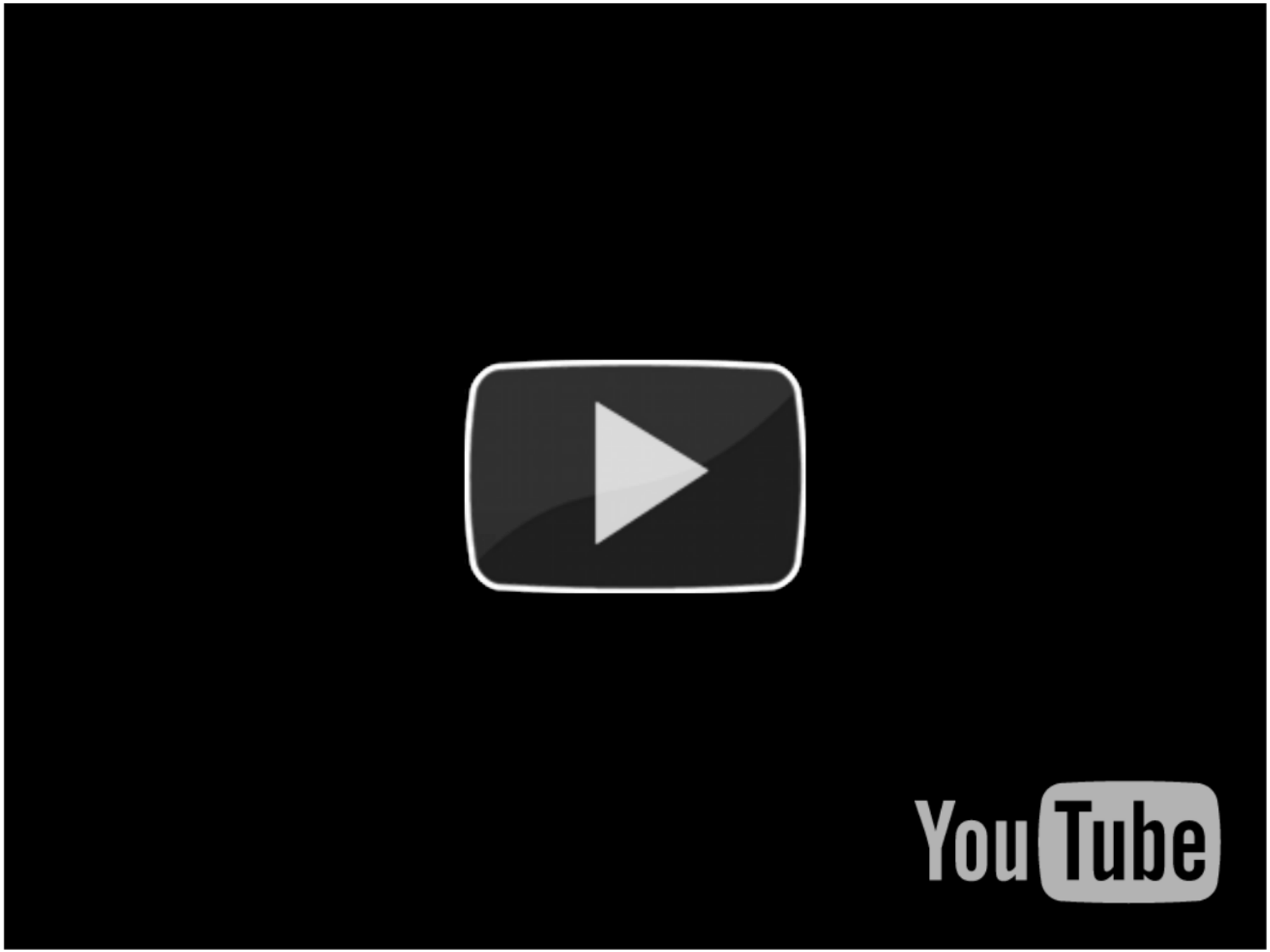




What
Where are the sandboxes in school?






YouTube

Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

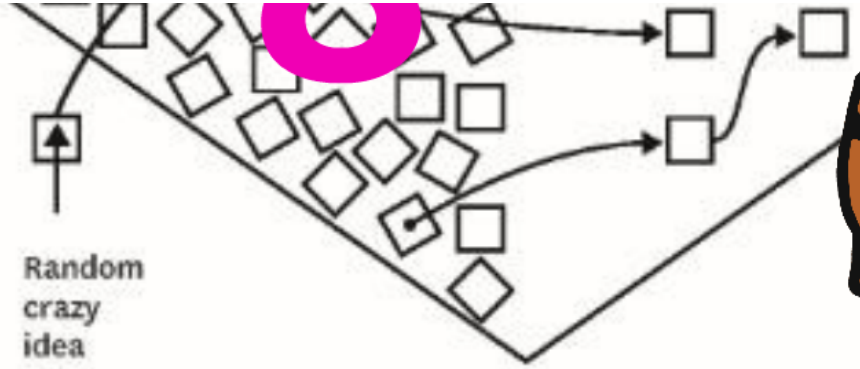
Yr Athrofa
Institute of Education
Addysg i Gymru Education for Wales

ECAD6011

Teaching Creatively...18 mins of marshmallow fun!

Time to make connections and go deeper with some of our previous learning!









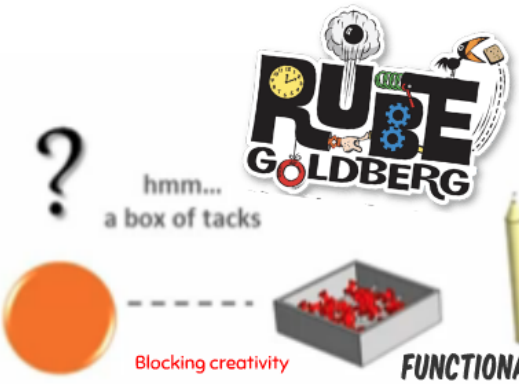
Teaching Creatively

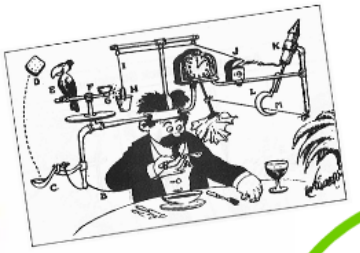
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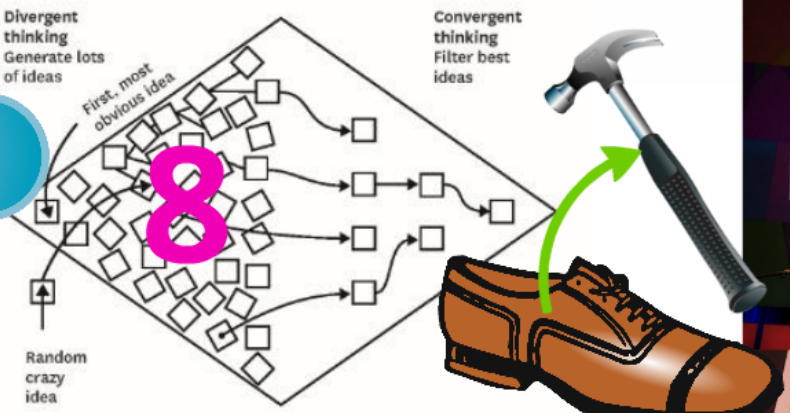






S Substitute
C Combine
A Adapt
M Modify/Distort
P Put to other purposes
E Eliminate
R Rearrange/reverse









Teaching Creatively

'using imaginative approaches to make learning more interesting and effective' (ibid. p. 89).

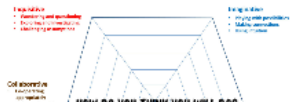
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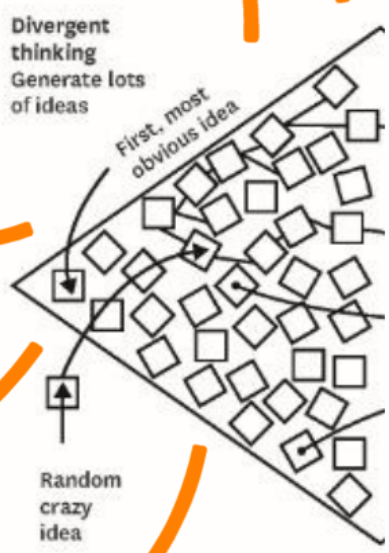
Divergent thinking:

Originality – The skill of coming up with fresh, unusual, unique, extremely different or completely new products or ideas;

Complexity – The capacity to conceptualize difficult, multifaceted, many layered or intricate products or ideas;

Curiosity – The personality characteristic of displaying probing behaviors, searching, asking questions, learning to get more knowledge/information about something, and of being able to go deeper into ideas

Imagination – The capability of dreaming up, inventing, or to think, to see, to conceptualize novel products or ideas, to be original;



Elaboration – The skill of adding to, building off of or embellishing a product or an idea;

Flexibility – The capability of creating varied perceptions or categories where from come a range of different ideas pertaining to the same thing or problem;

Risk-taking – The readiness to be courageous, daring, adventuresome – take risks or experiment with new things so as to stand apart.

Fluency – The skill of engendering many ideas so as to have an increase in the number of potential solutions or associated products;

CAN YOU REMEMBER THE EIGHT ELEMENTS?

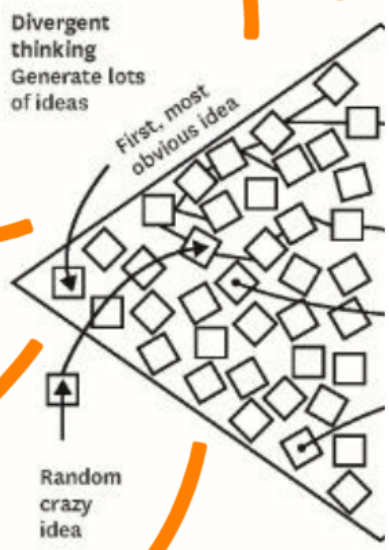
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WHICH FOUR DID TORRANCE MEASURE?

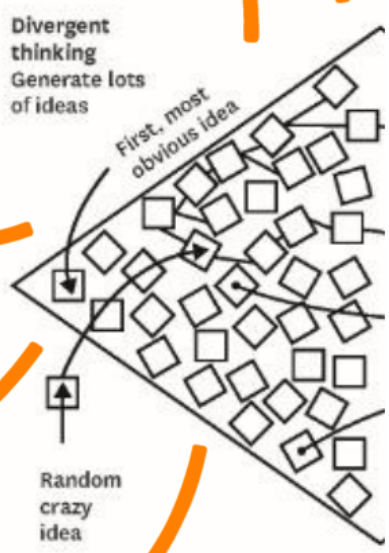
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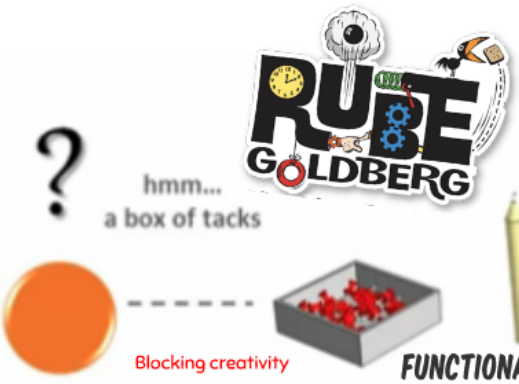
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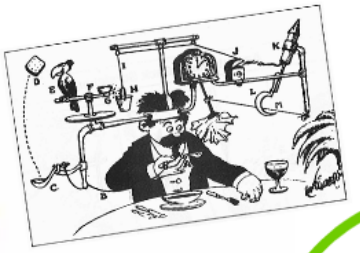
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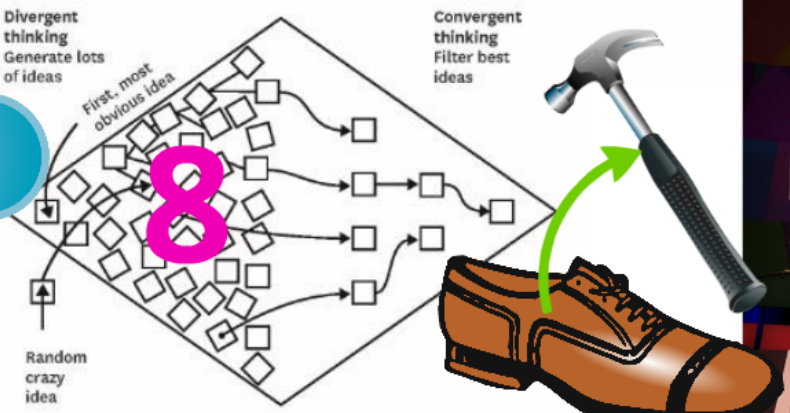






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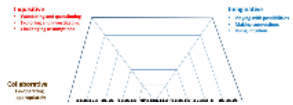
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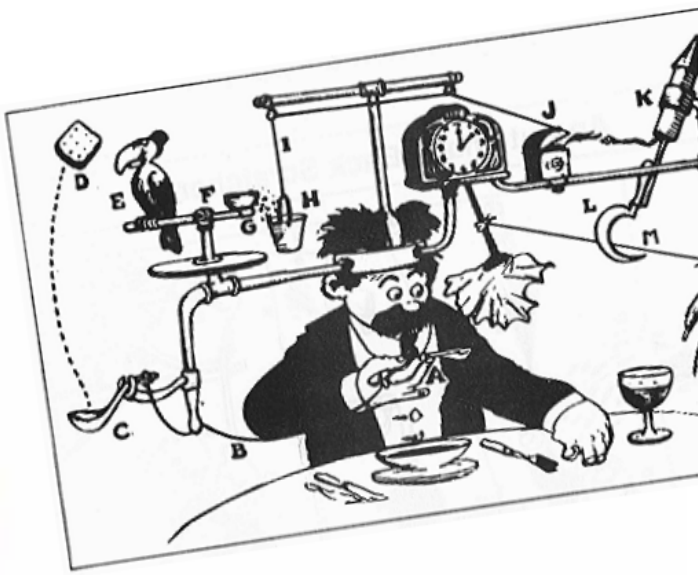




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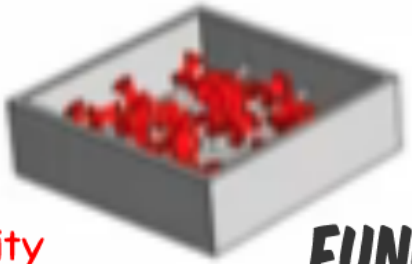




?

hmm...
a box of tacks









Blocking creativity

FUNCTIONAL FIXEDNESS

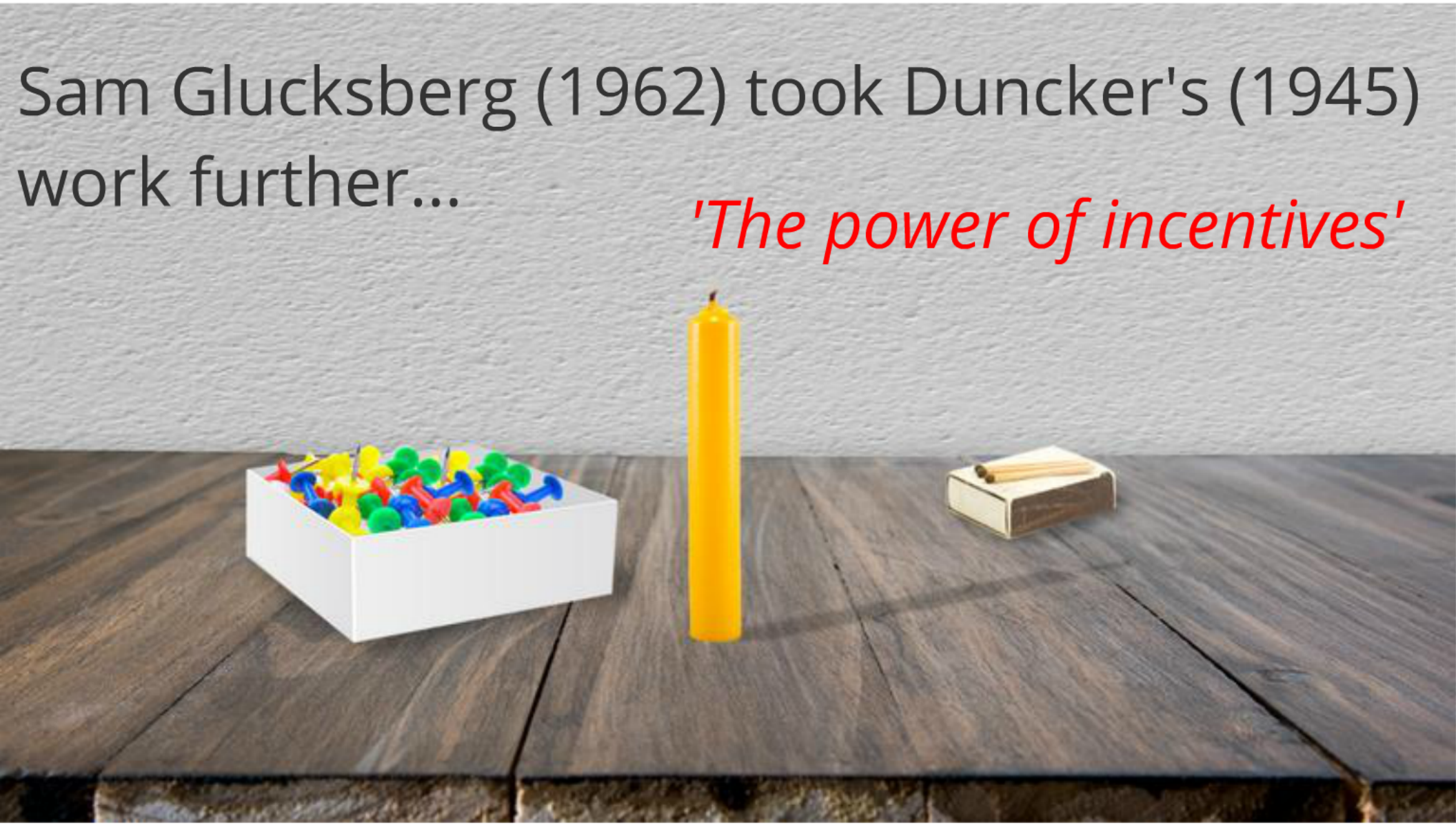




SCAMPU

Sam Glucksberg (1962) took Duncker's (1945) work further...

'The power of incentives'



Group 1



Fastest Time  $150

Top 25%  $40

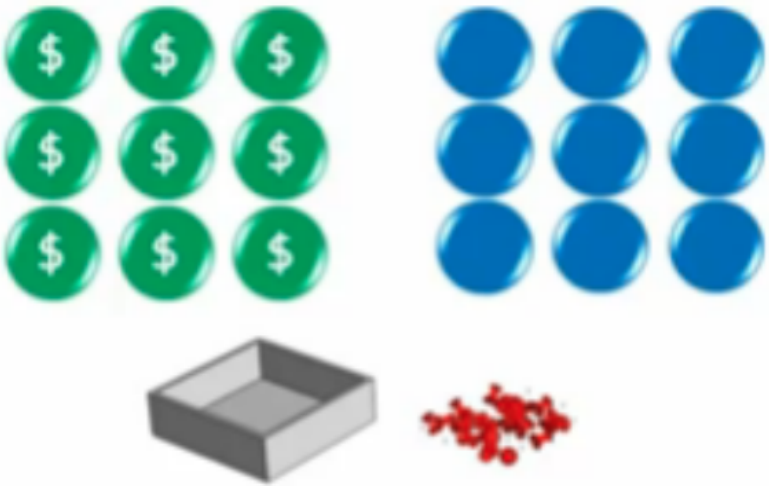
Group 2



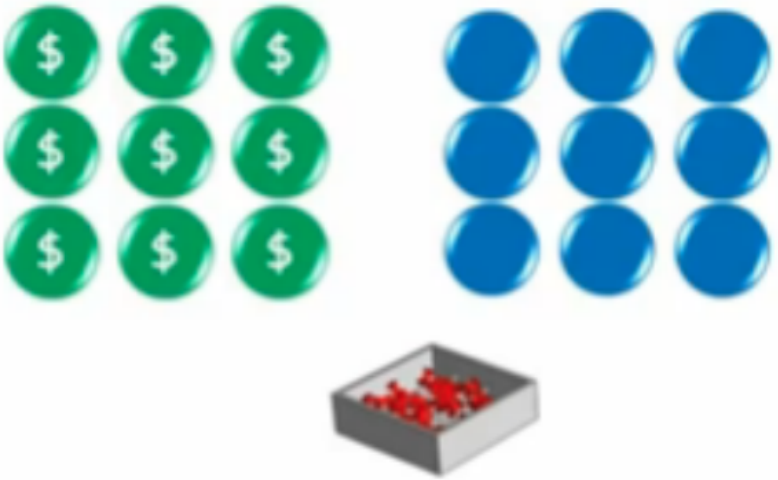
No monetary reward

'The power of incentives'

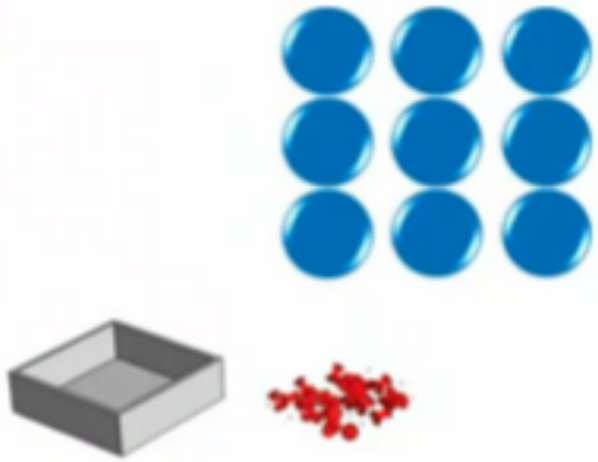
Simple Version



Complex Version

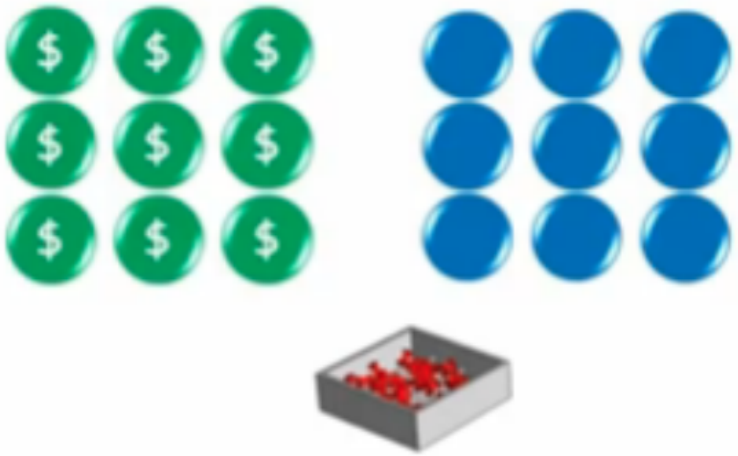


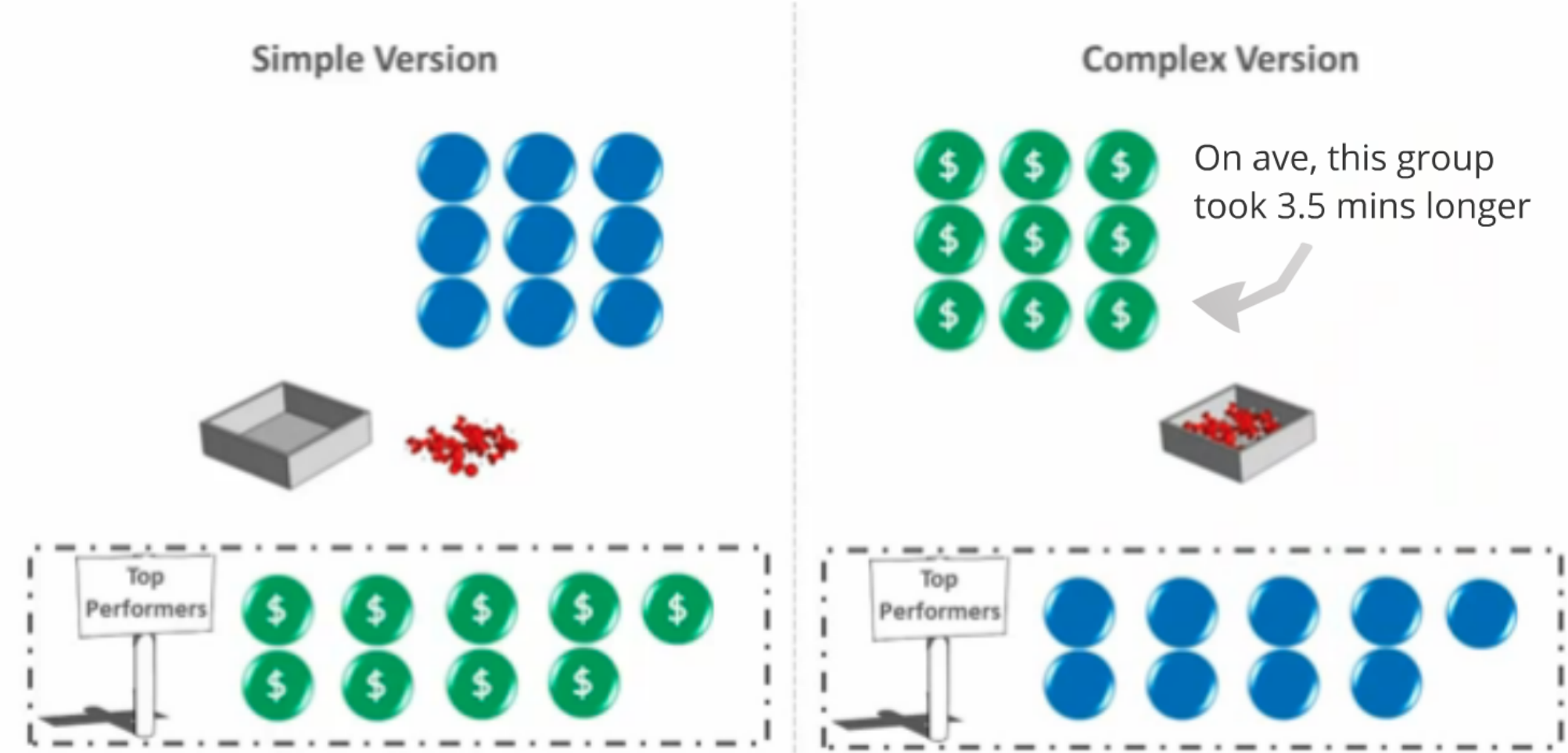
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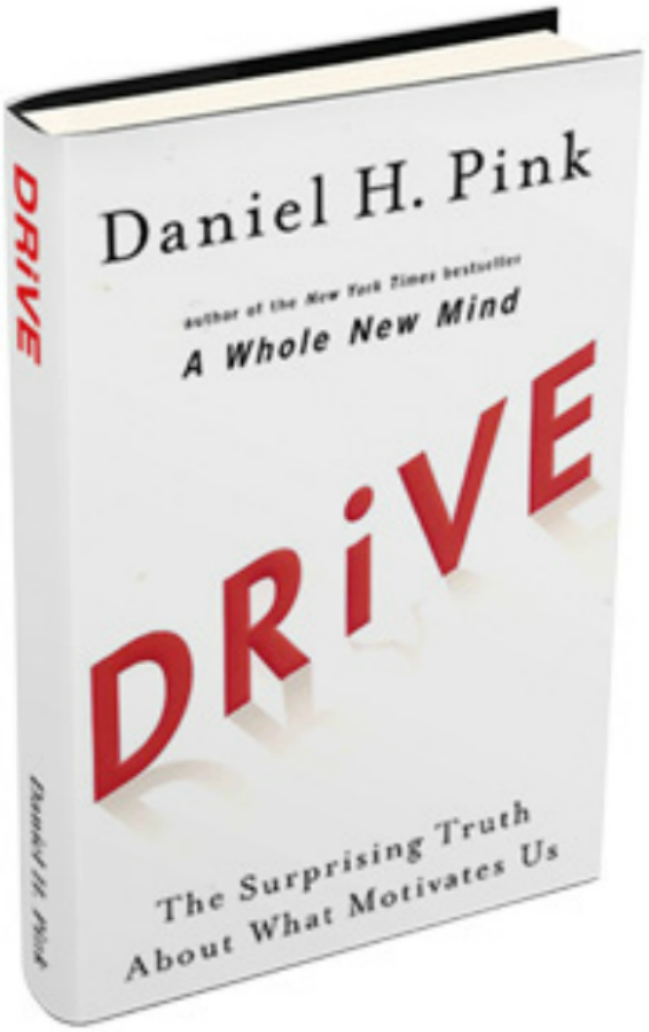




Complex Version




Simple Version
Top Performers
Complex Version
On ave, this group took 3.5 mins longer
Top Performers



"Incentives are designed to sharpen our thinking and accelerate creativity. It does not only NOT work, in fact it does the opposite in some cases. It dulls thinking and blocks creativity."

AUTONOMY

* meaningful choice
* understand why learning/doing
* work at own pace
* control over learning

MASTERY

* mastery is mindset
* learning for life
* not learning for exam
* desire to truely understand

PURPOSE

* "what are we doing this for?"
* higher purpose
* more than just grades

Good ☺



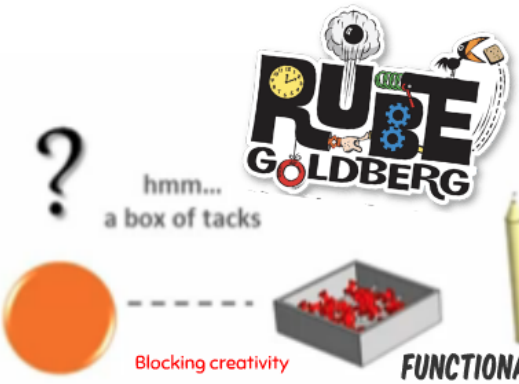
Incentive programs must be a smaller proportion of your influence strategy than ***Autonomy, Mastery, Purpose*** if you want to have motivated, engaged and directed audiences.

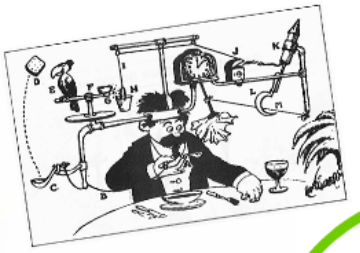


Incentive programs become dangerous tools when they overshadow the true internal motivational needs of the audience.

Bad ☹



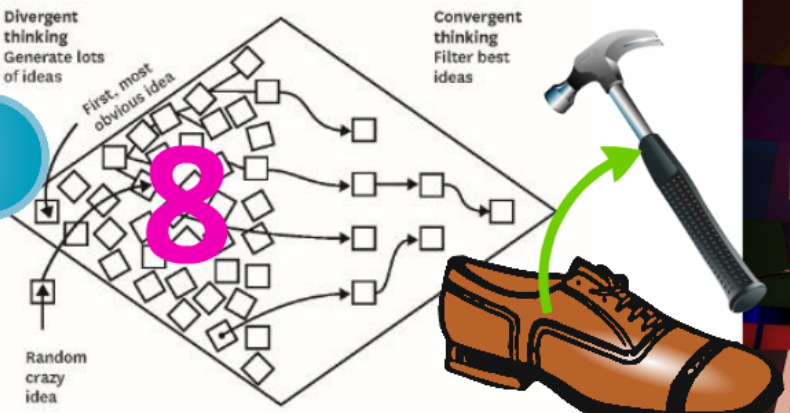






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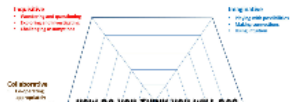
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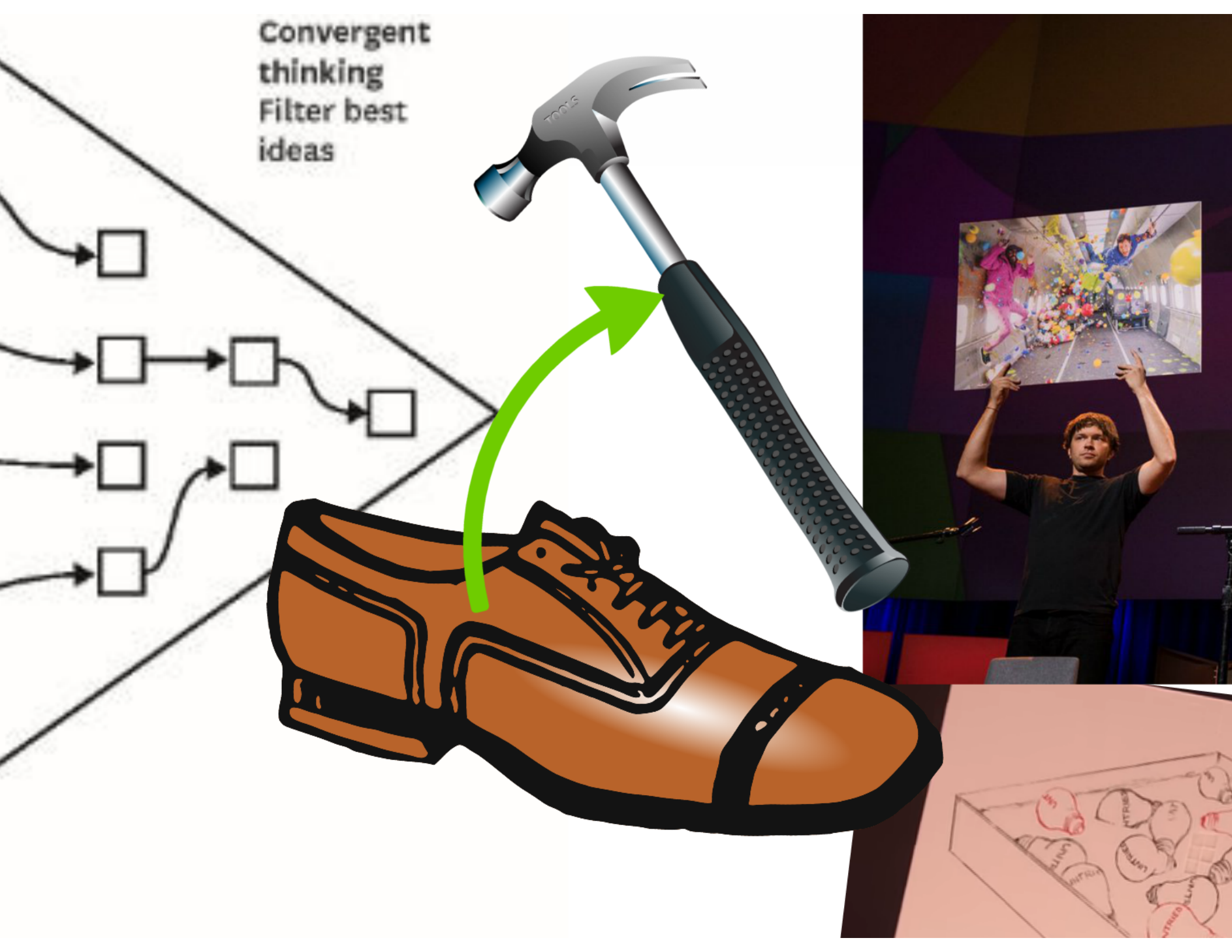




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Convergent thinking
Filter best ideas

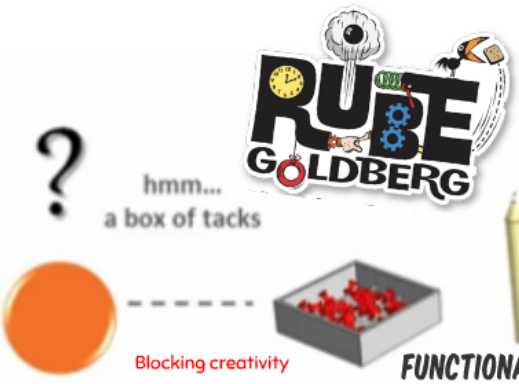


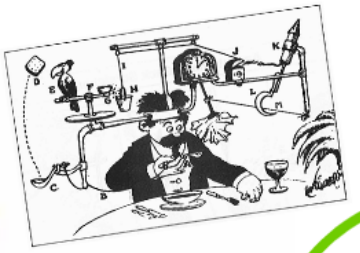
? ideas per min on ave



4



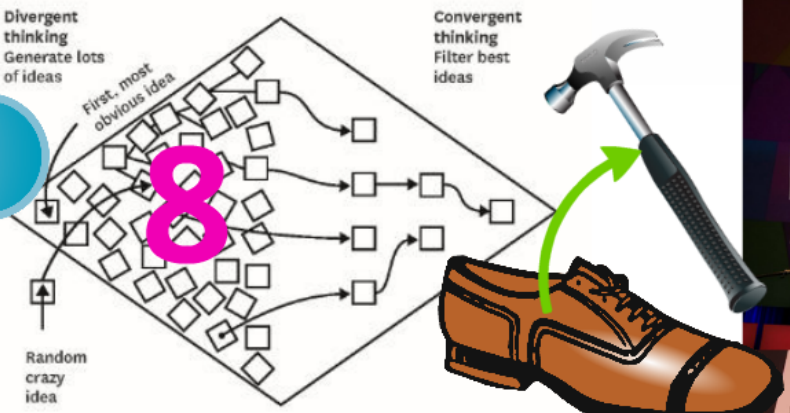






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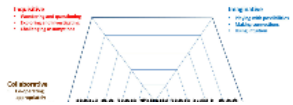
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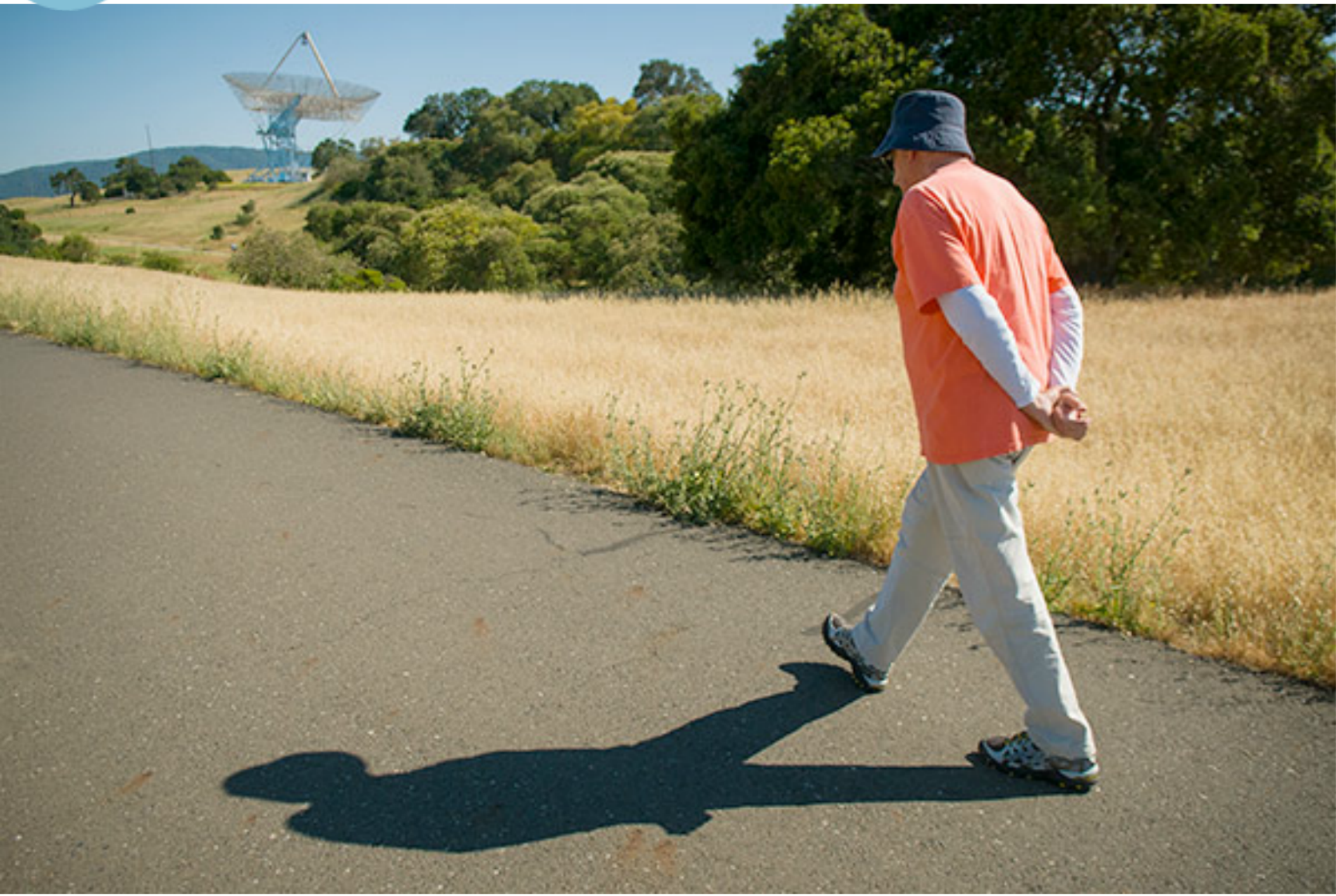
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Just like heartbeat - brain has different frequency depending on level of activity.



GAMMA:
Active Thought



BETA:
Alert, Working



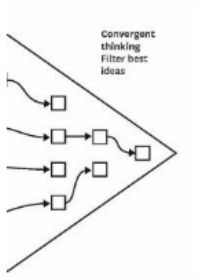
ALPHA:
Relaxed, Reflective



THETA:
Drowsy, Meditative[



DELTA:
Sleepy, Dreaming



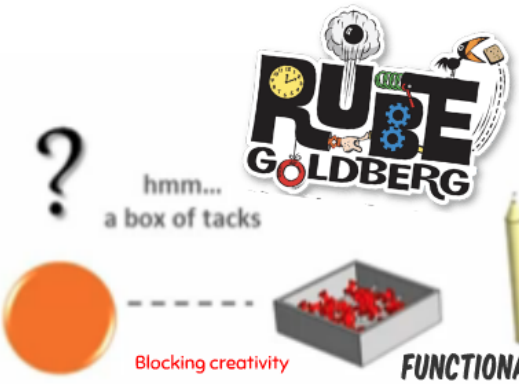
Refine ideas

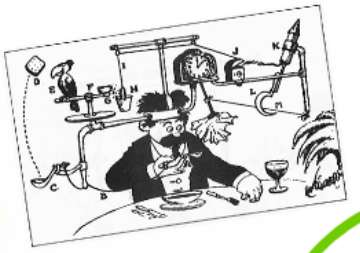
Generating Ideas







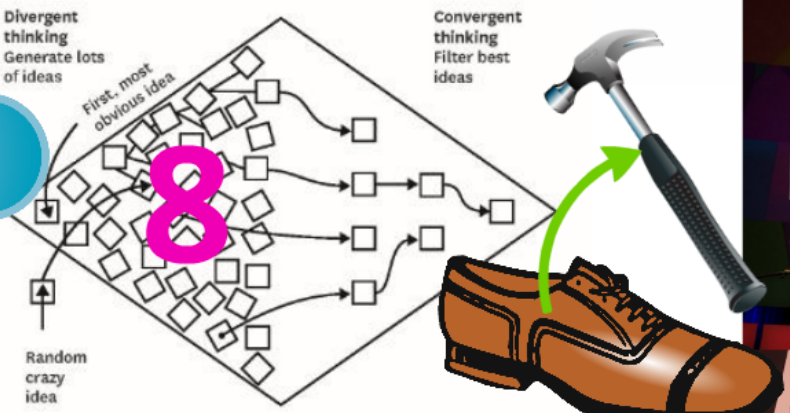






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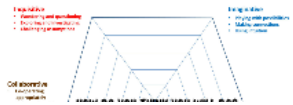
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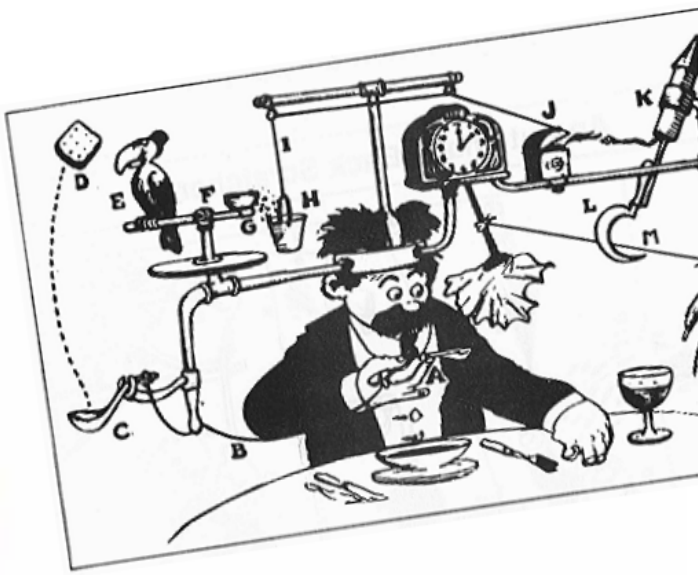




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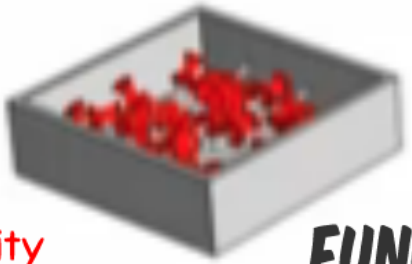




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a box of tacks









Blocking creativity

FUNCTIONAL FIXEDNESS





SCAMPU

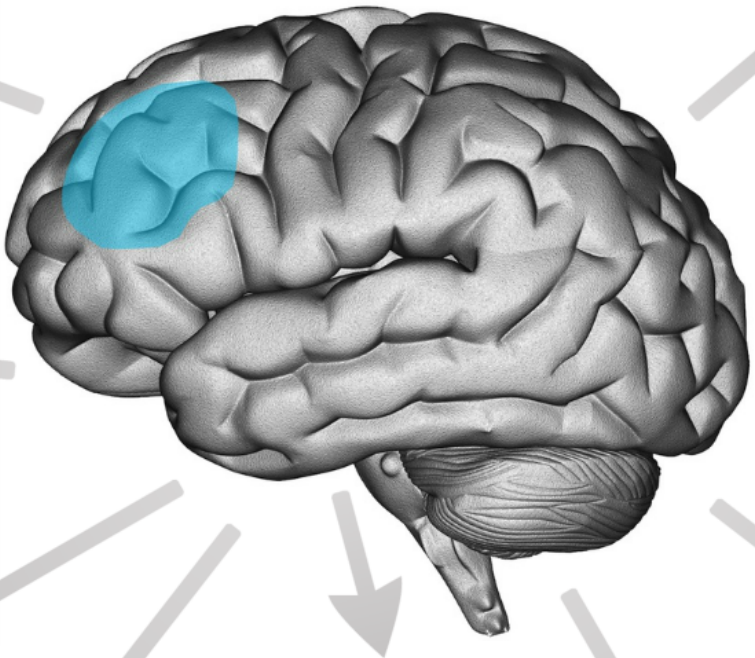
Dorsolateral Prefrontal Cortex (DLPFC)

Planning and action sequencing

Sensory info



Last to develop in adulthood
(20-24yrs)

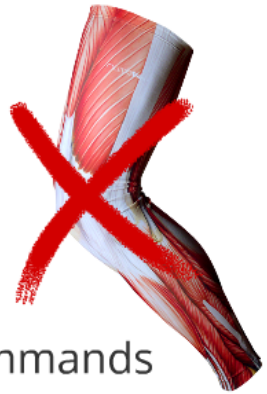


Holding information in
mind aka Working Memory,
(Goldman-Rakic 2006)

Can we learn to control this?

Charles Limb - Jazz/ Rap /
MRI scanner found DLPFC
becomes deactivated
during improvisation!

Filters, prevents
ideas from surfacing!

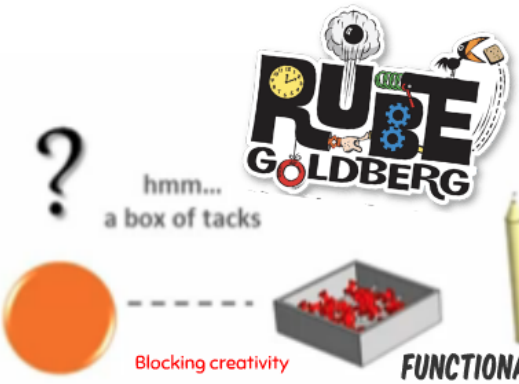


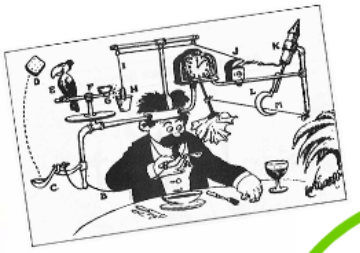
Impulse control - prevents you
from doing rash things.

Motor commands

Involved with 'pausing' and
'choosing actions' (Fuster 1990)



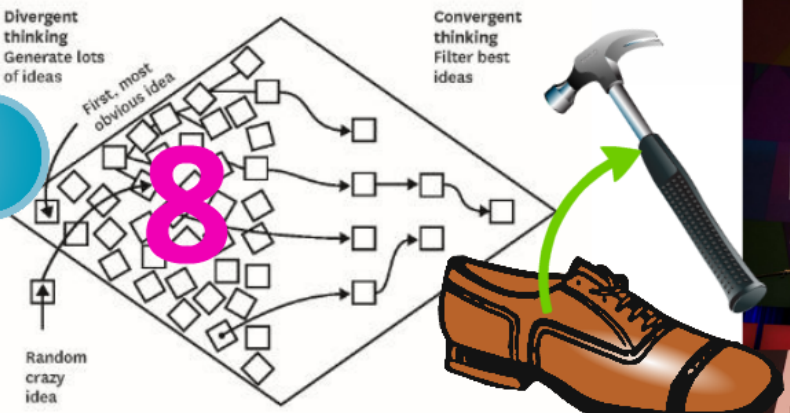






S Substitute
C Combine
A Adapt
M Modify/Distort
P Put to other purposes
E Eliminate
R Rearrange/reverse









Teaching Creatively

'using imaginative approaches to make learning more interesting and effective' (ibid. p. 89).

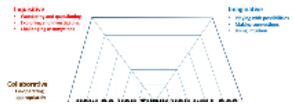
National Advisory Committee on Creative and Cultural Education (NACCCE, 1999)

N.A.C.C.C.E. (1999) All our futures: creativity, culture and education (London, DfEE).





In 2011, the Centre for Real-World Learning (CRL) undertook a review of creativity and an



The 16 Habits of Mind

1. Persisting



2. Managing Impulsivity



3. Listening with understanding & empathy



4. Thinking Flexibly



5. Thinking about thinking (metacognition)



6. Striving for accuracy



7. Questioning and posing problems



8. Applying past knowledge to new situations



9. Thinking & communicating with clarity and precision



10. Gathering data through all senses



11. Creating, imagining, innovating



12. Responding with wonderment and awe



13. Taking responsible risks



14. Finding humour



15. Thinking interdependently



16. Remaining open to continuous learning





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ng

CE, 1999)

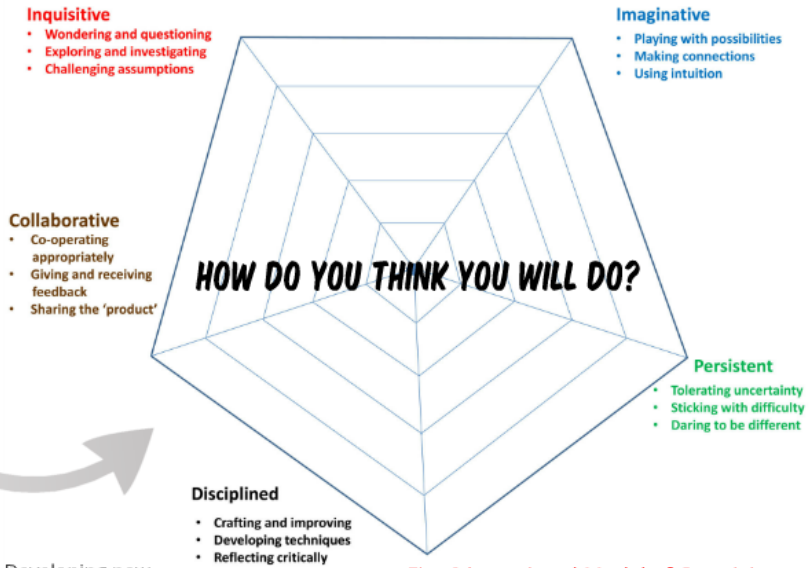
don, DfEE).







In 2011, the Centre for Real-World Learning (CRL) undertook a review of creativity and an examination of the literature relating to the assessment of creativity in schools (Spencer, Lucas, & Claxton, 2012). CRL went on to develop a five-dimensional model of creativity



Five Dimensional Model of Creativity

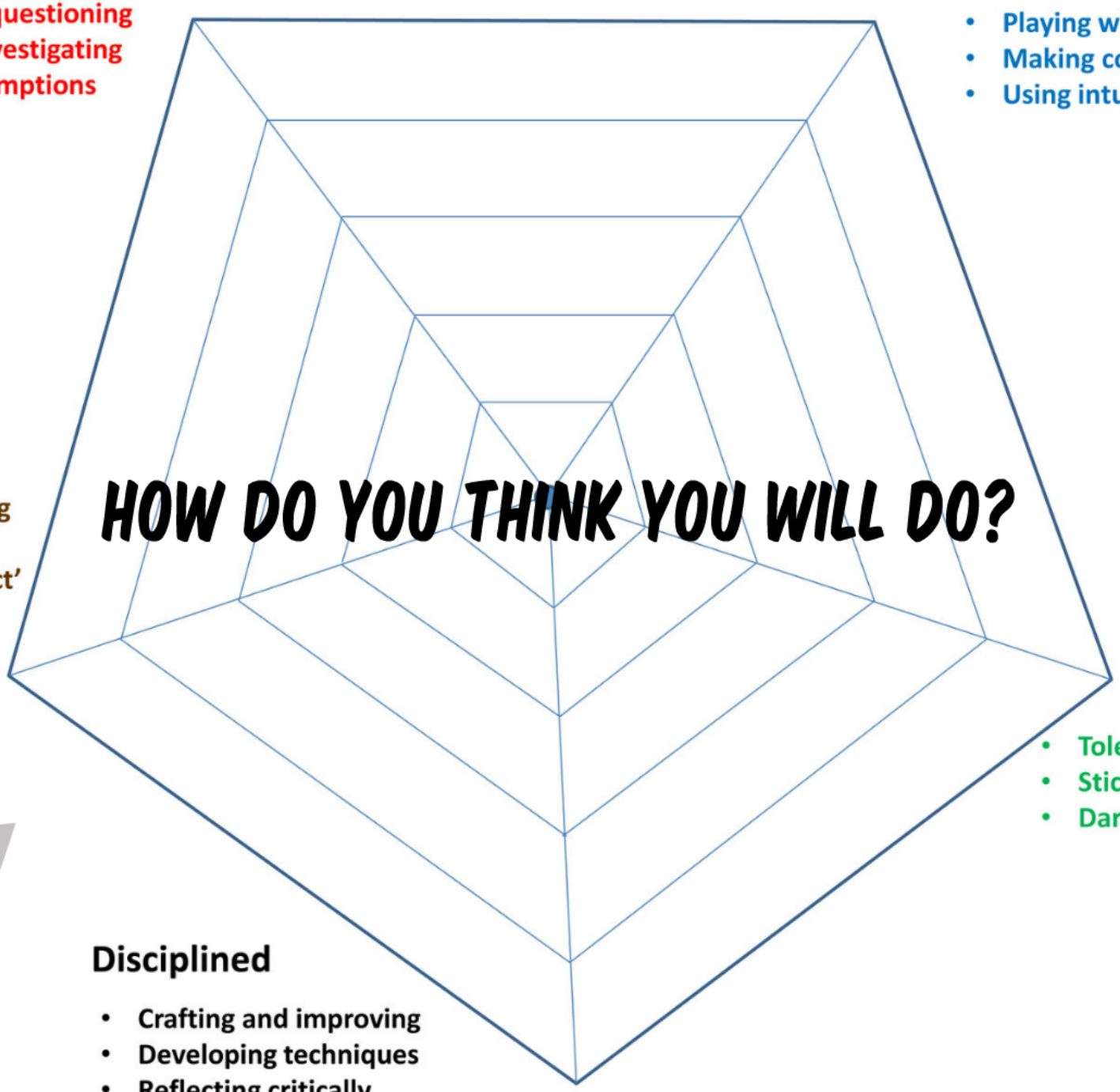
Spencer, E., Lucas, B., & Claxton, G. (2012). Progression in creativity—Developing new forms of assessment: A literature review. Newcastle: CCE.

Inquisitive

- Wondering and questioning
- Exploring and investigating
- Challenging assumptions

Imaginative

- Playing with possibilities
- Making connections
- Using intuition



Collaborative

- Co-operating appropriately
- Giving and receiving feedback
- Sharing the 'product'

Persistent

- Tolerating uncertainty
- Sticking with difficulty
- Daring to be different

Disciplined

- Crafting and improving
- Developing techniques
- Reflecting critically

Developing new

Five Dimensional Model of Creativity

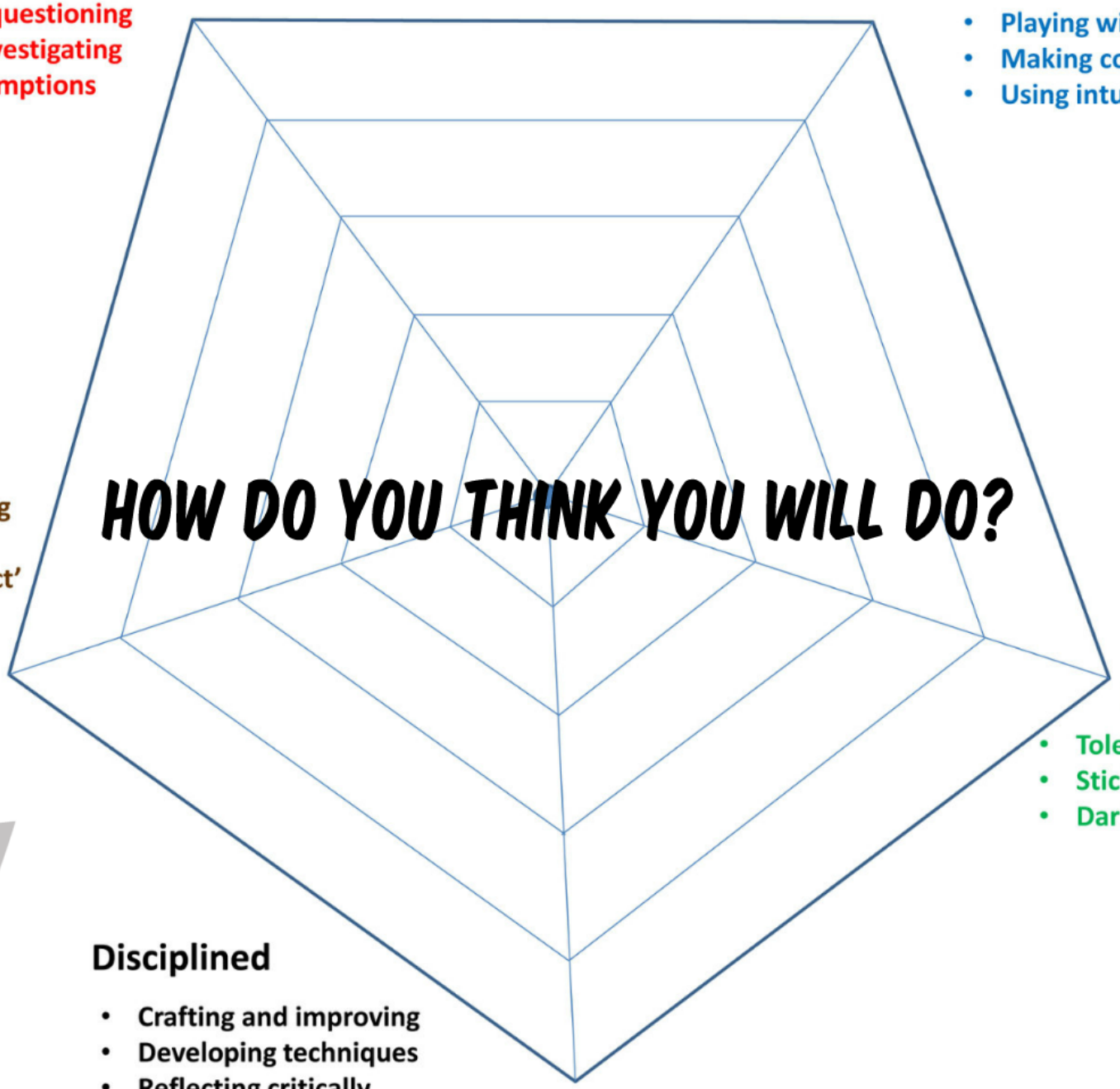
The Marshmallow Challenge

Inquisitive

- Wondering and questioning
- Exploring and investigating
- Challenging assumptions

Imaginative

- Playing with possibilities
- Making connections
- Using intuition



Collaborative

- Co-operating appropriately
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–Developing new

Five Dimensional Model of Creativity


The
Marshmallow
Challenge

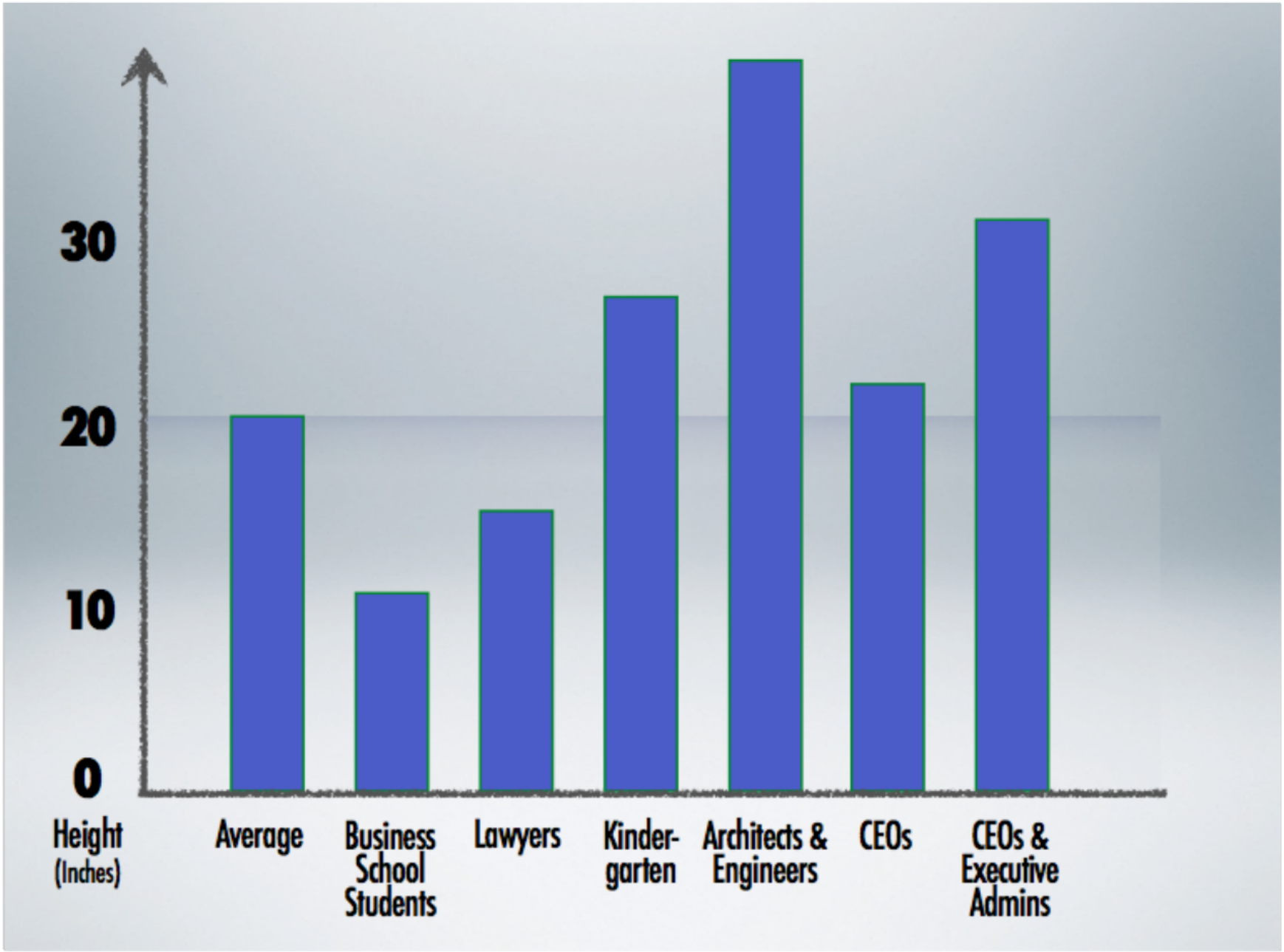



0
Orient
Plan
Build
Oh-Oh!
18
Minutes

Who Consistently

Performs

Poorly?


30
20
10
0
Height
(Inches)
Average
Business School Students
Lawyers
Kinder-garten
Architects & Engineers
CEOs
CEOs & Executive Admins

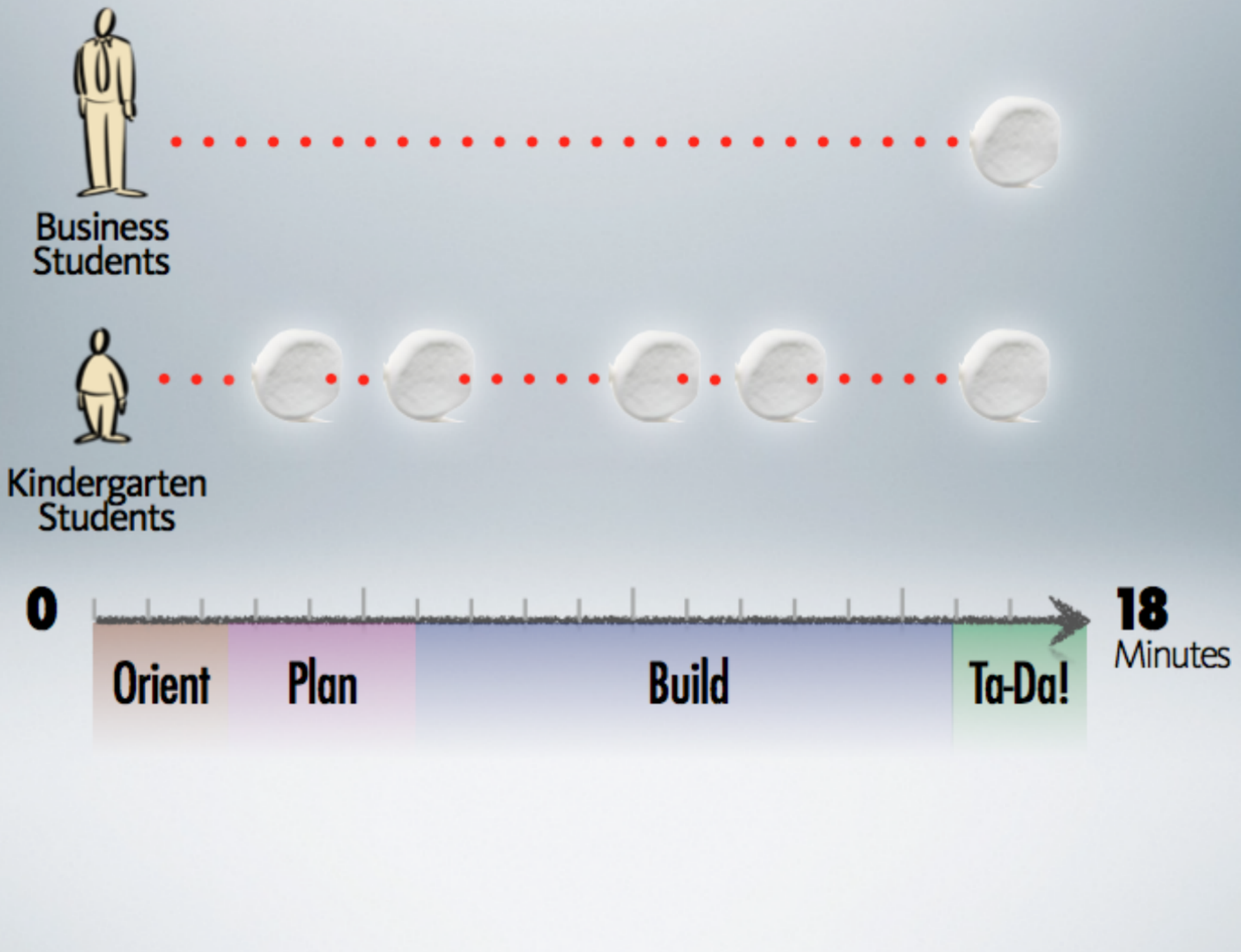

Lesson One:
Prototyping
Matters

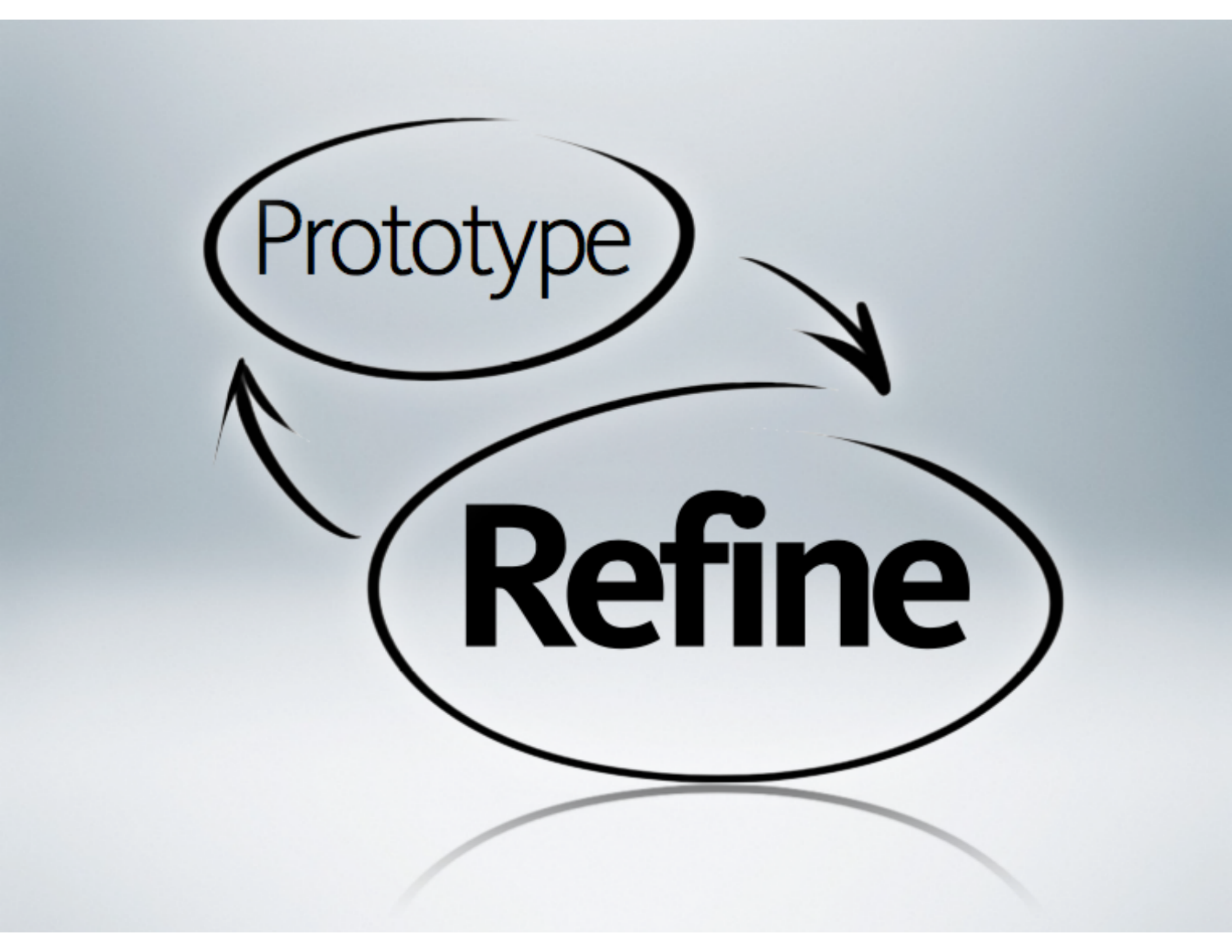


Business Students

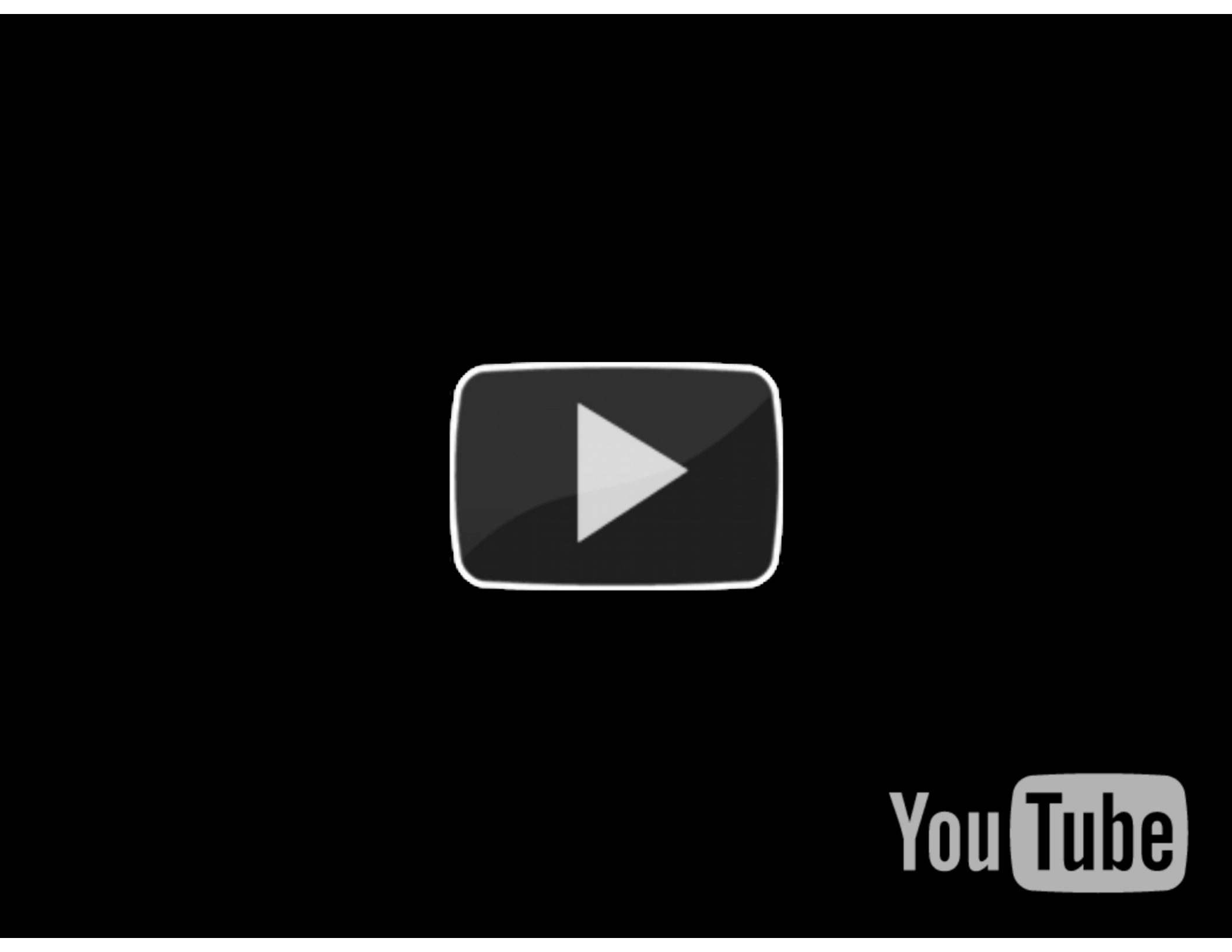





Business Students
Kindergarten Students
0
Orient
Plan
Build
Ta-Da!
18
Minutes


Prototype
Refine

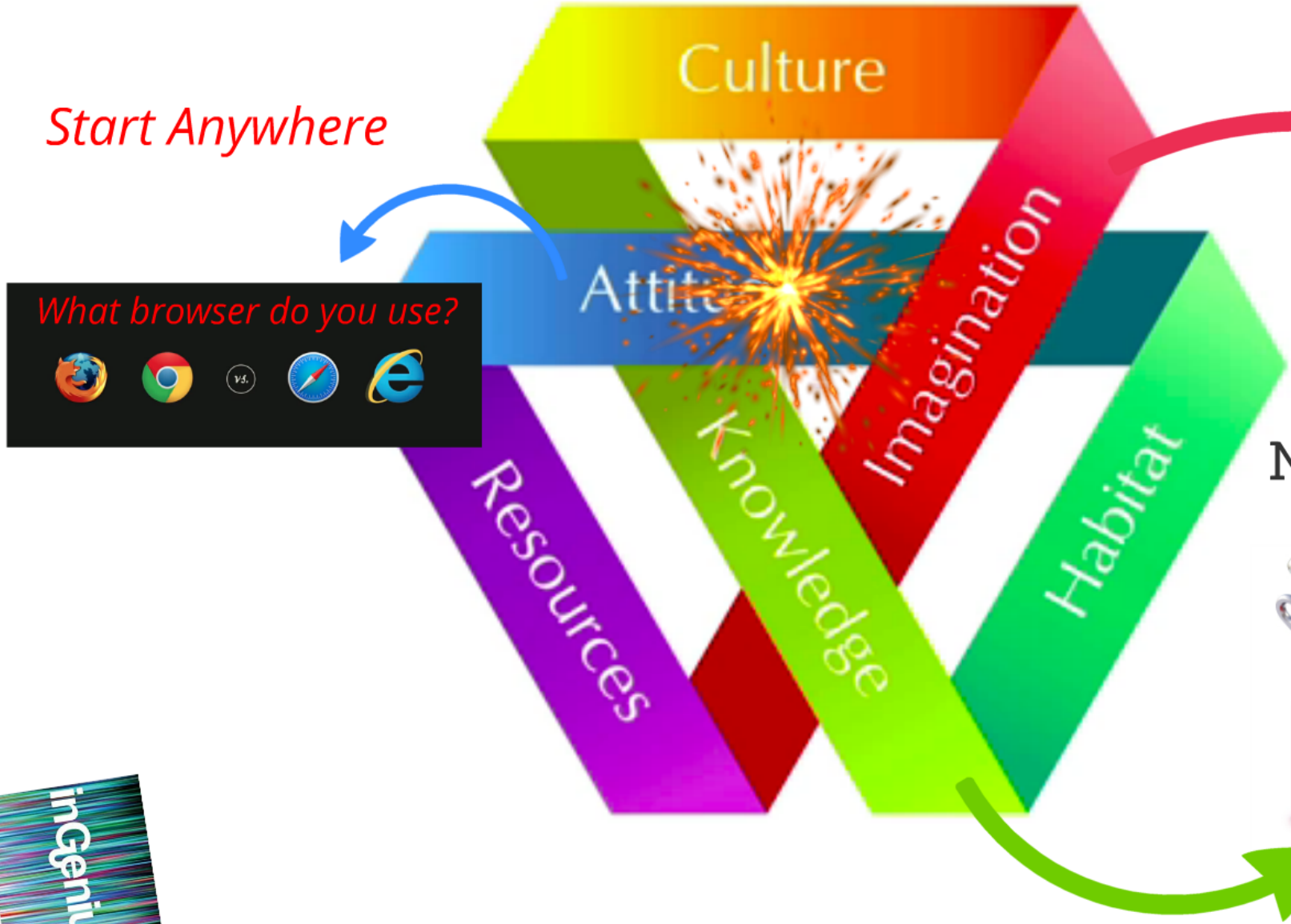



YouTube

INNOVATION ENGINE

Background music of the environment

Start Anywhere



What browser do you use?

CATALYST FOR THE TRANSF
OF KNOWLEDGE INTO NEW

Not enough!



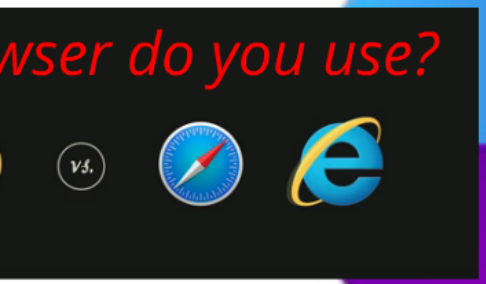
Everything you need to unlock creativity. Tina Seelig (2012)

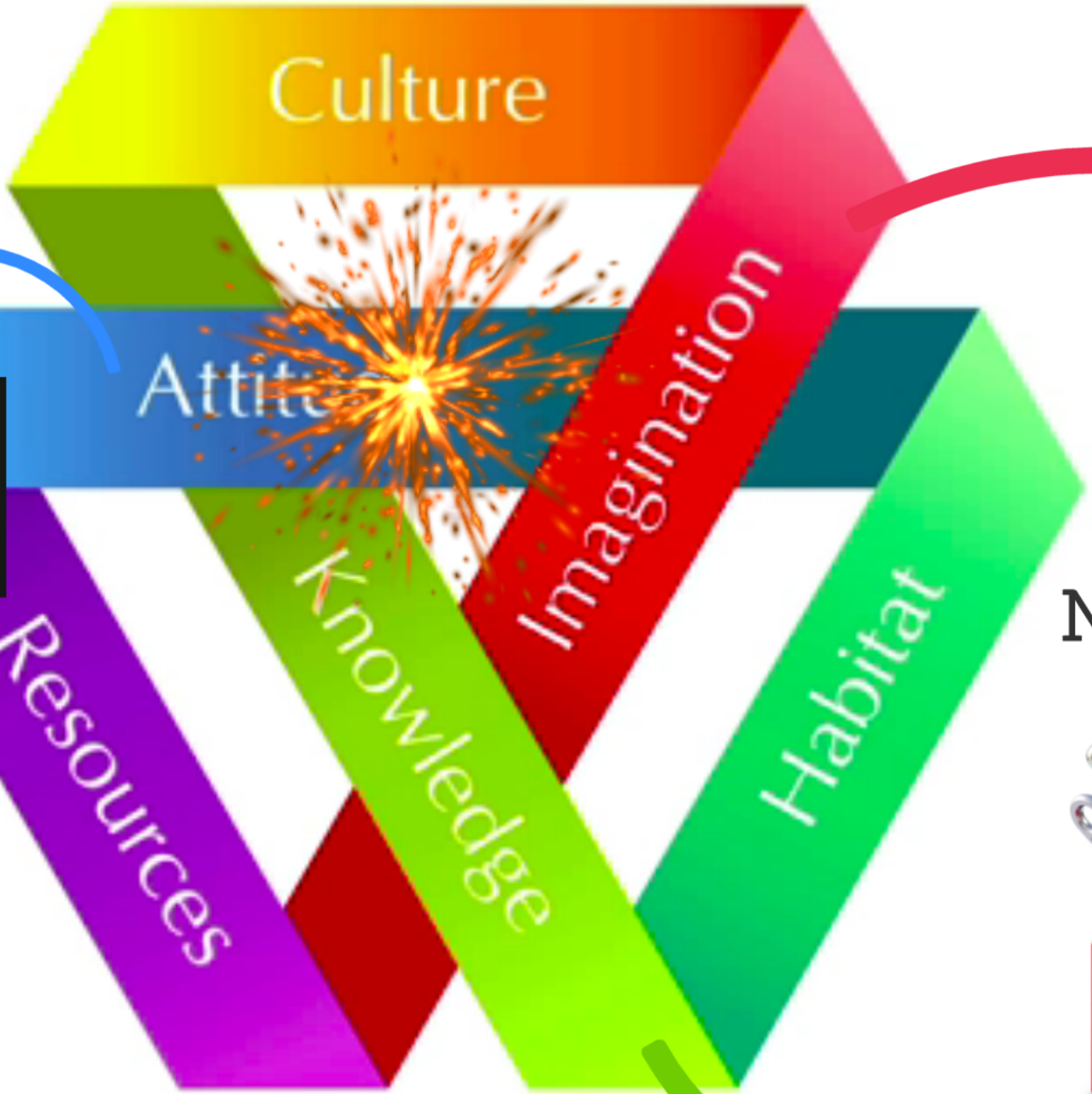

?
Attitude
Imagination
Knowledge
Habitat
Resources

Background music of the envi

nywhere

wser do you use?

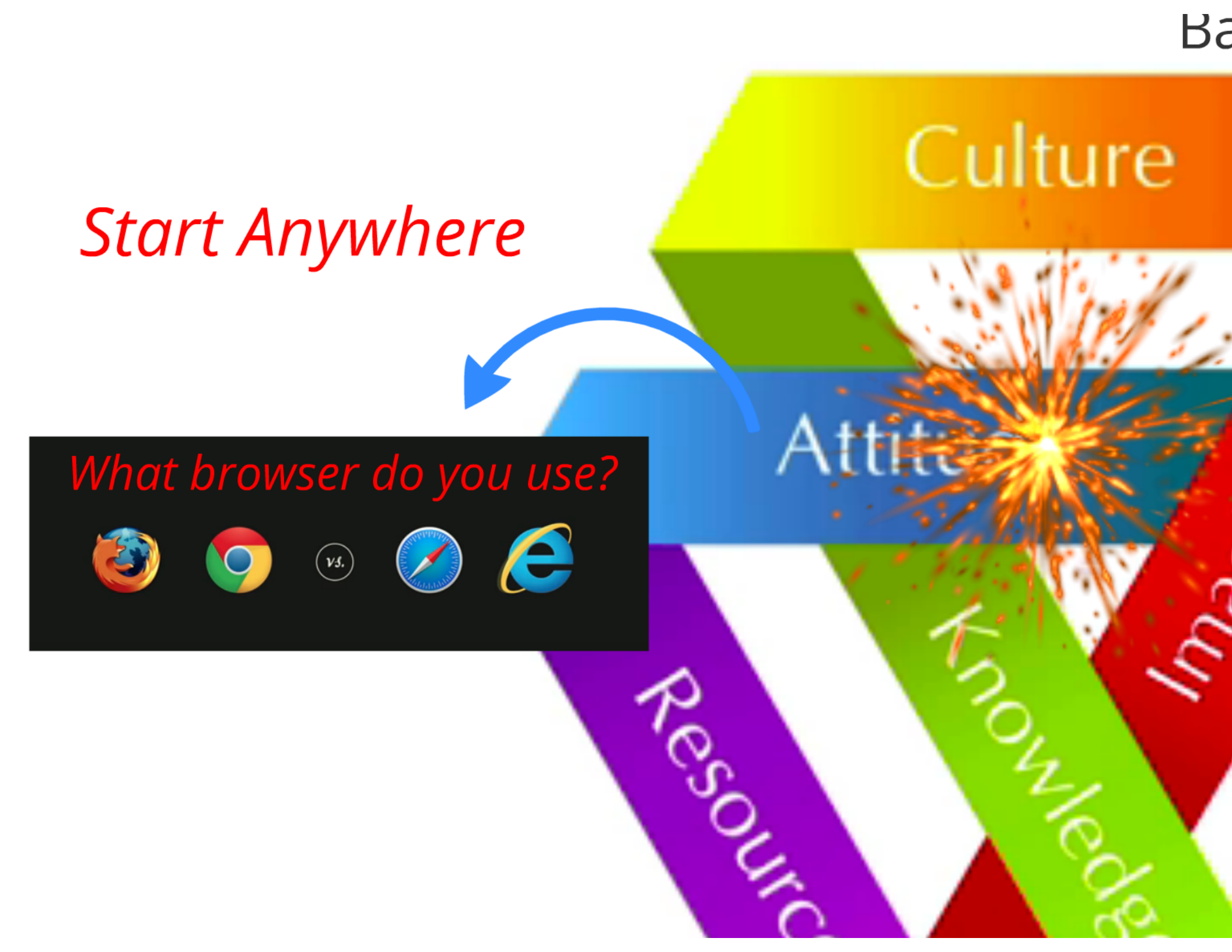




CATALYST
OF KNOWL

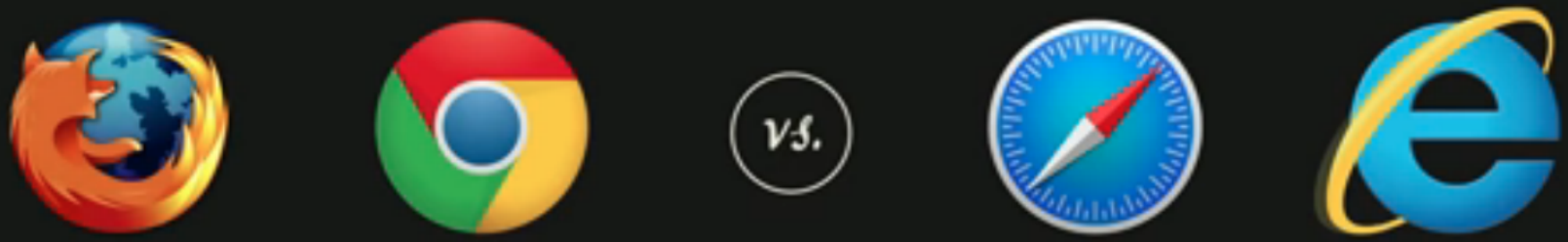
Not enou




Start Anywhere
What browser do you use?
vs.
Culture
Attitude
Knowledge
Resources

I can predict your performance and commitment

It's not technical...it's about how you got the browser!



Questioned the default
- resourceful

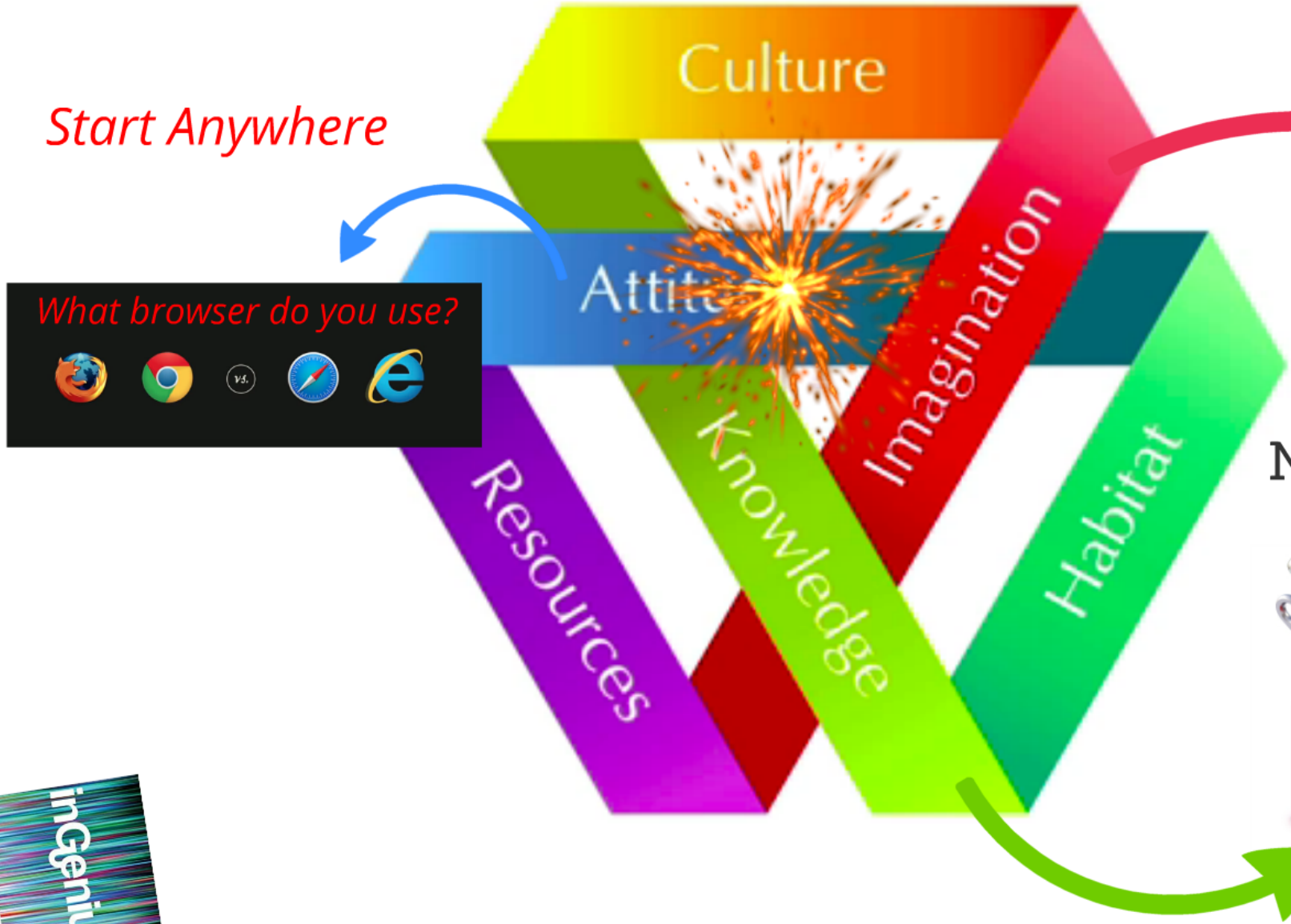
Pre-installed
(Accepted Default)

Who out performs who? Who stays in work 15% longer?

INNOVATION ENGINE

Background music of the environment

Start Anywhere



What browser do you use?

CATALYST FOR THE TRANSF
OF KNOWLEDGE INTO NEW

Not enough!



Everything you need to unlock creativity. Tina Seelig (2012)

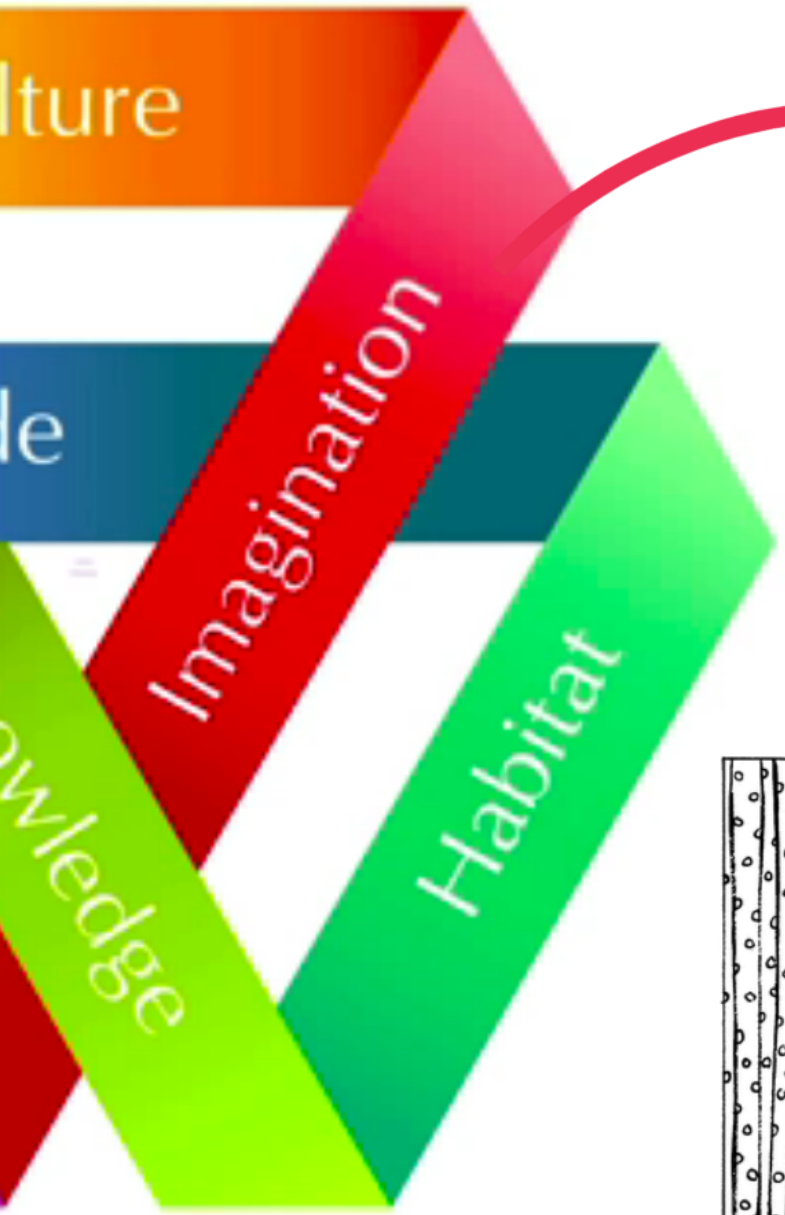
Develop by

Re-framing questions

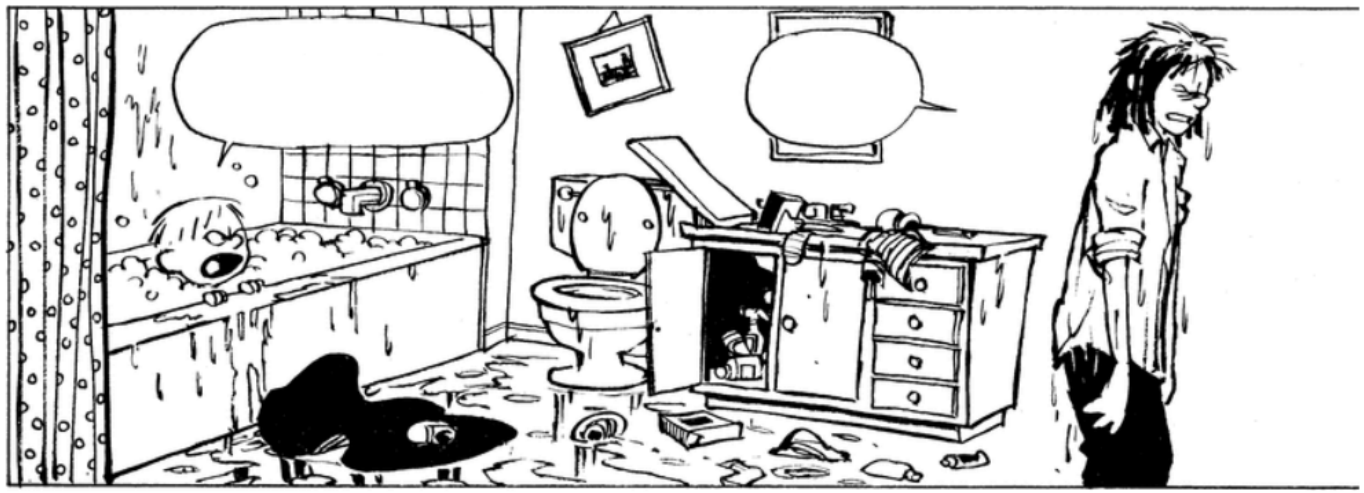




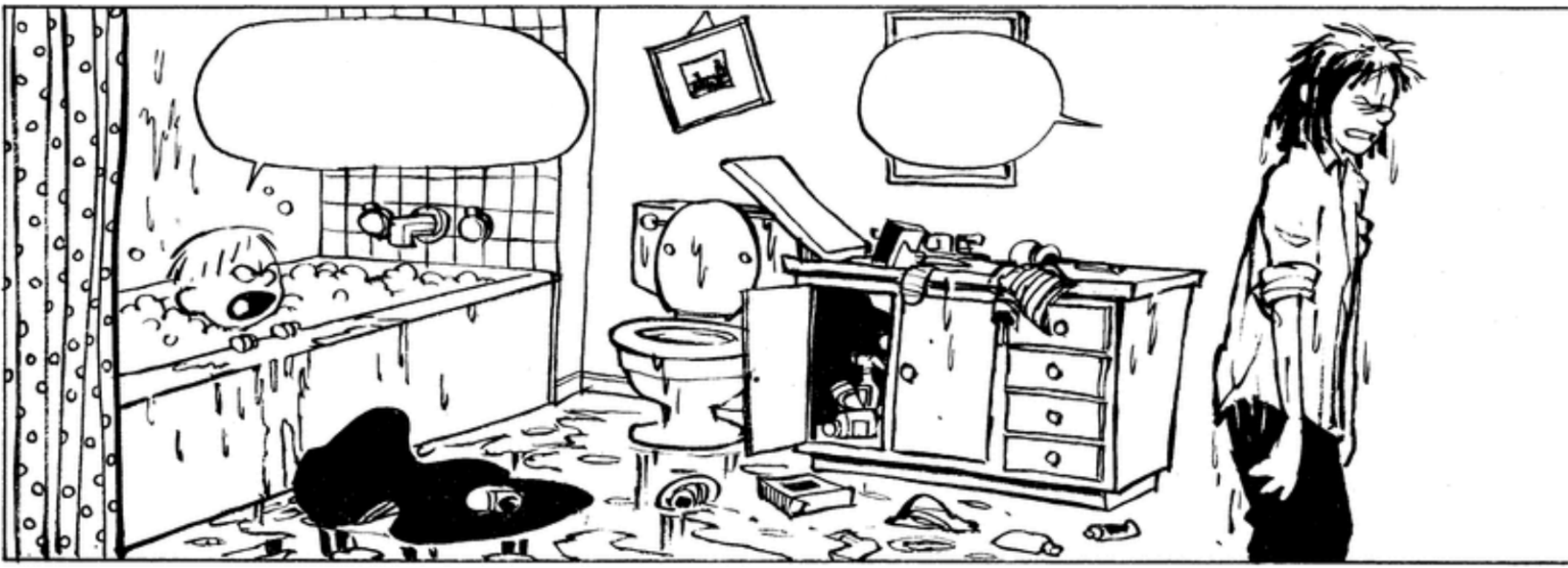
Connect and combine



CAPTIONS



CAPTIONS





CATALYST FOR THE TRANSFORMATION OF KNOWLEDGE INTO NEW IDEAS!

Not enough!





People don't fulfill creative potential because they are not in environments where creativity is fostered, stimulated and encouraged!

need to unlock creativity. Tina Seelig (2012)



Constraints

Incentives

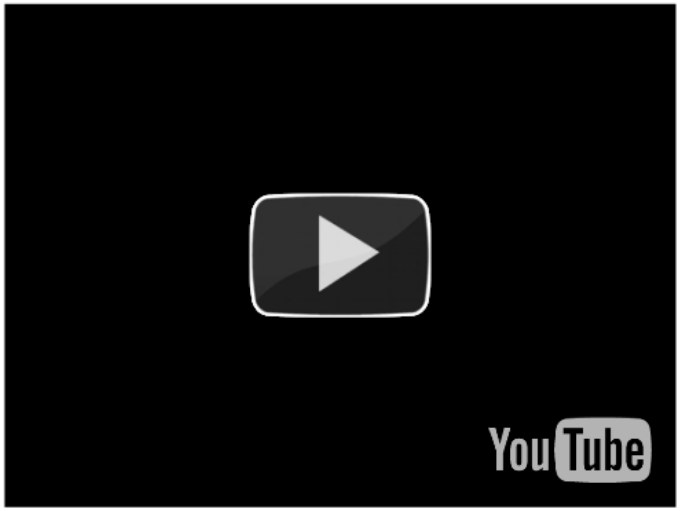
People

Rewards

Rules

Physical environment

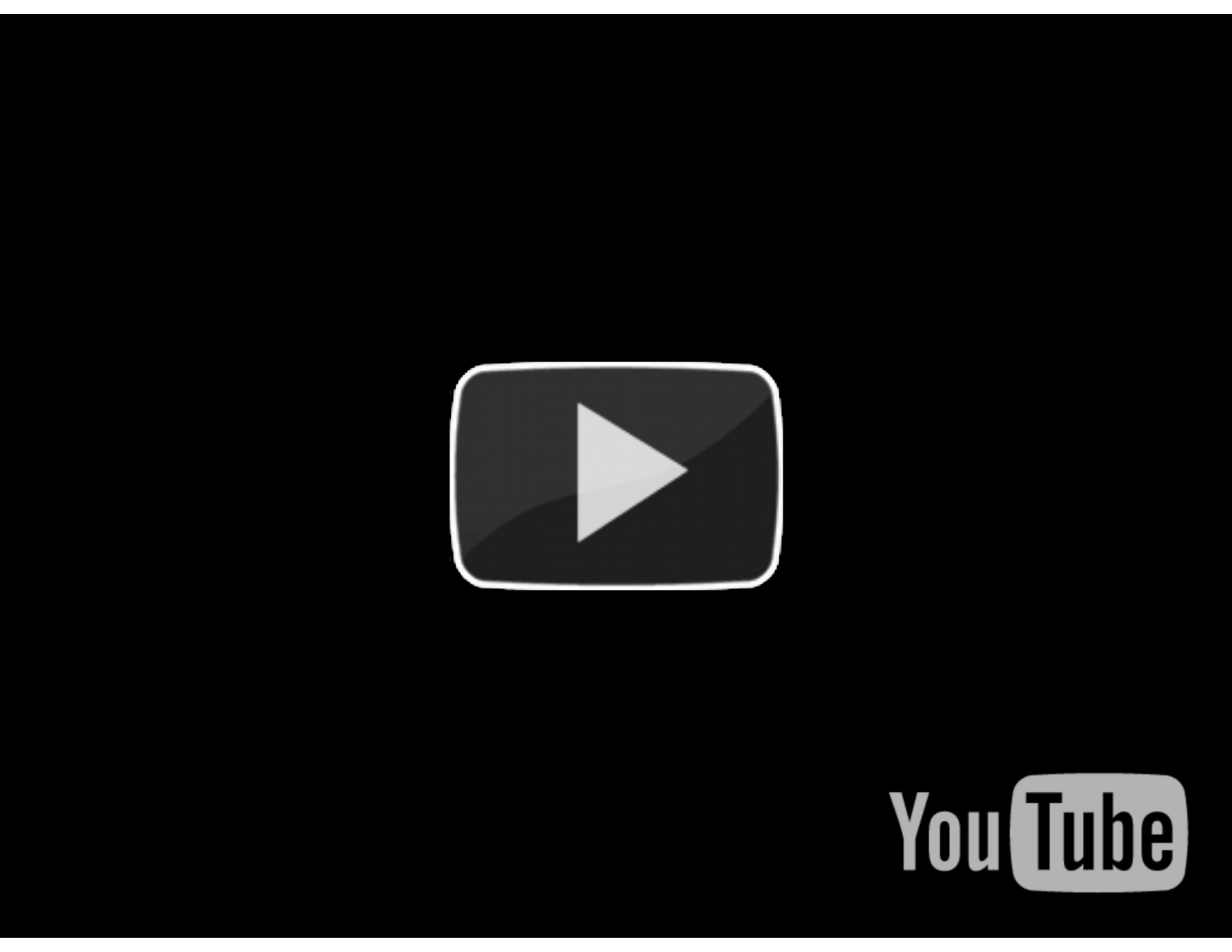

YouTube

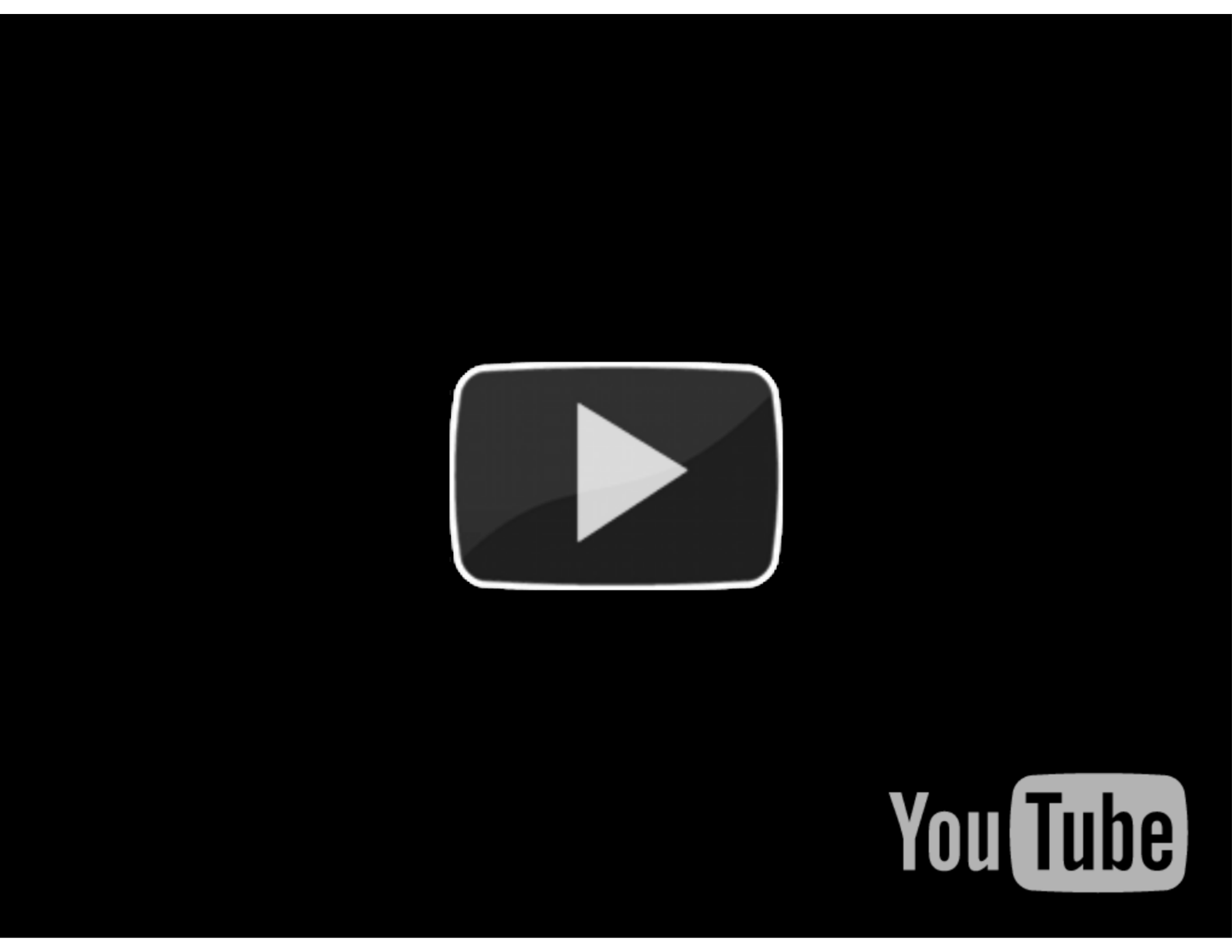

YouTube

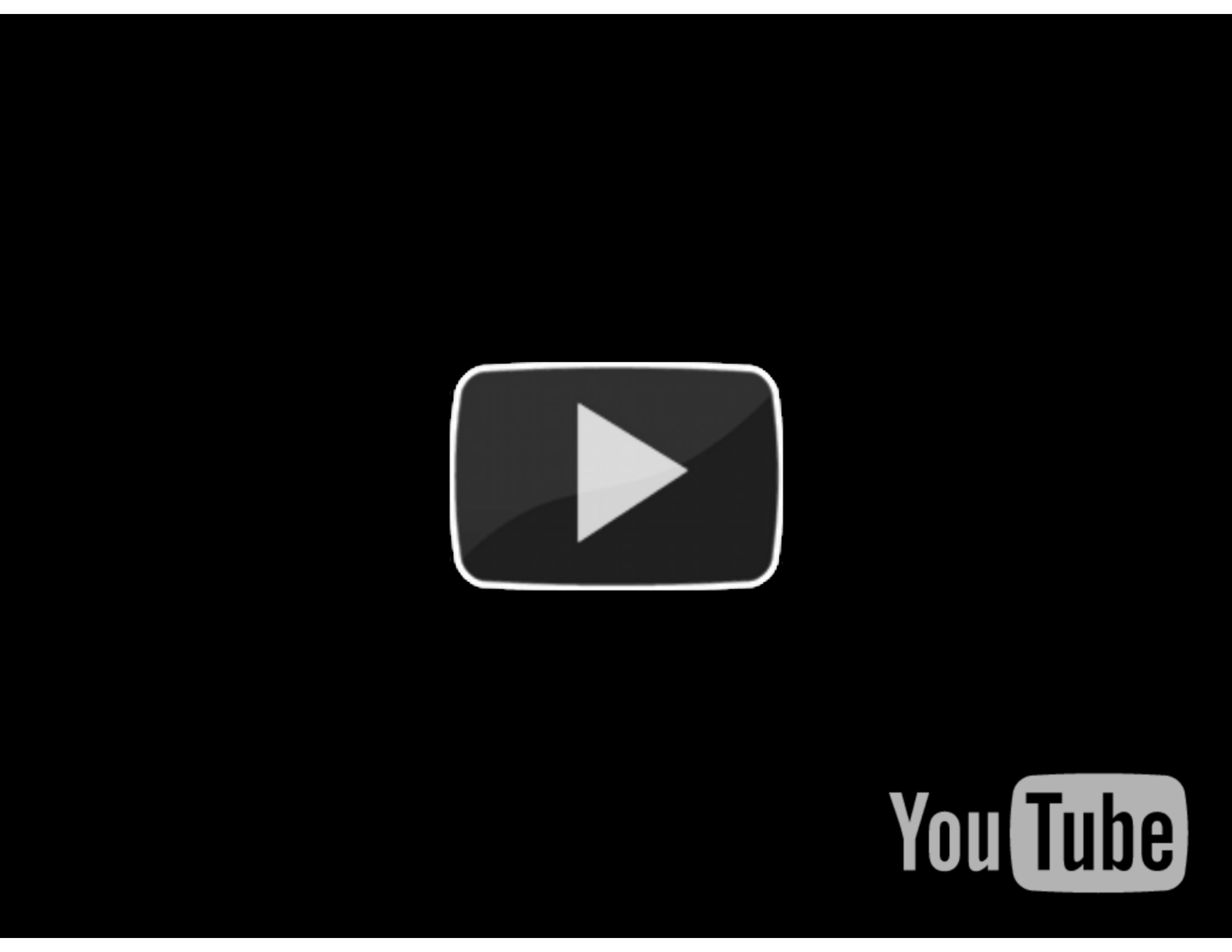

What
if?

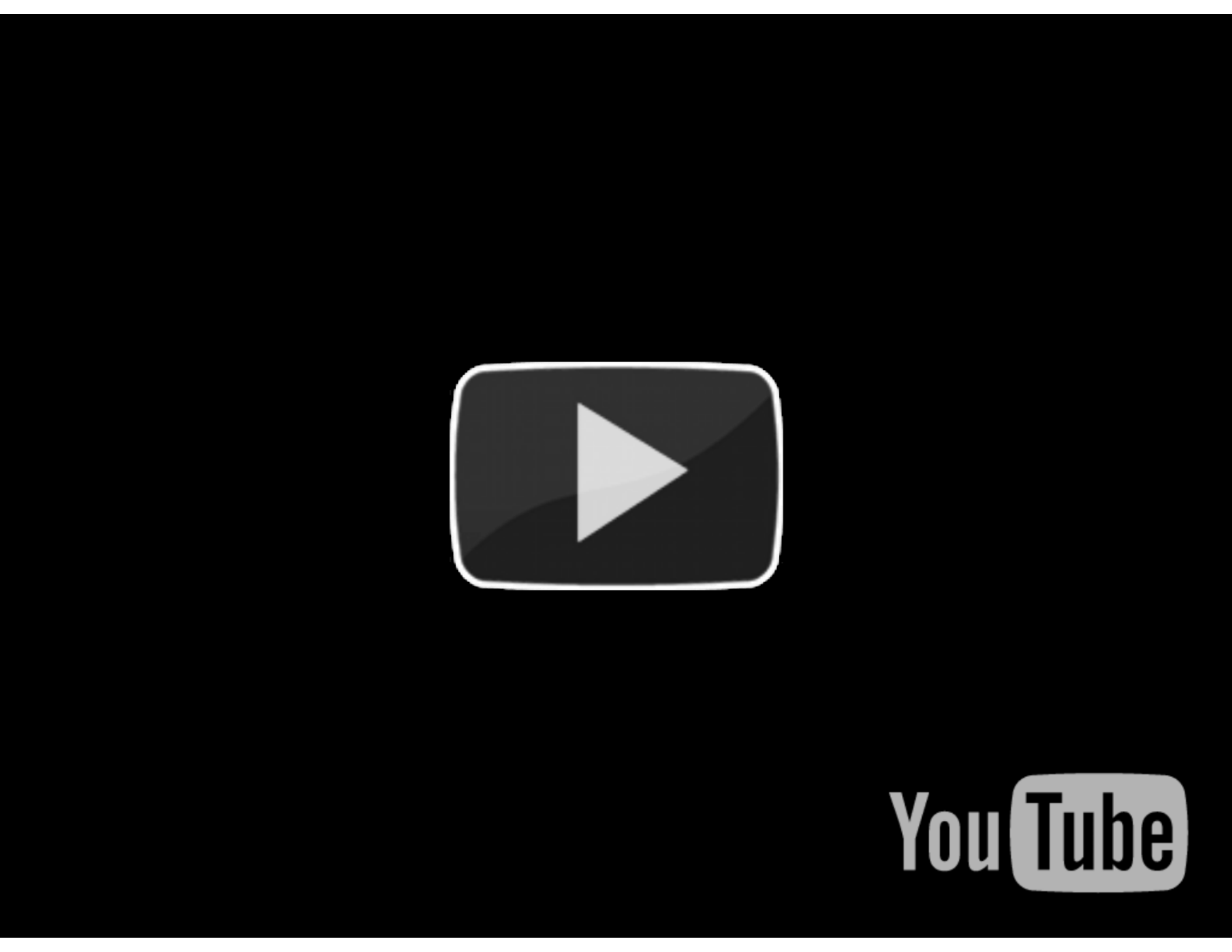

YouTube


YouTube


YouTube


YouTube


YouTube


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