

**DO YOU THINK THE DINOSAURS  
KNEW THEY WERE BECOMING  
EXTINCT?**



# THE SCHOOL AS A CATALYST FOR CHANGE

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## school:

- a place or building used for instruction, learning and education.
- a large number of marine animals of the same kind which are swimming or feeding together

## catalyst :

- a substance that speeds up the rate of a chemical reaction
- someone or something that speeds up or brings about an event

## change:

- the act or process of substitution, alteration, or variation
- absence of monotony; variety
- something that is or may be substituted
- something of the same kind but new or fresh

## innovation:

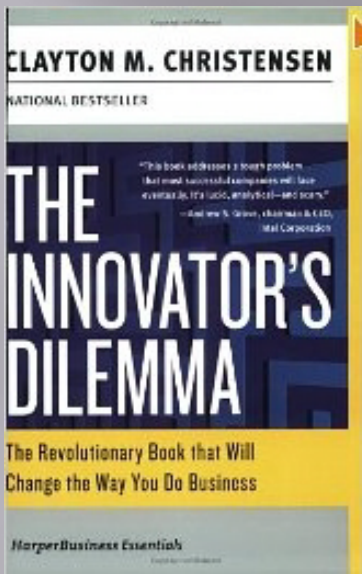
- something newly introduced; new method, custom, device, etc...

*Learning Environment*  
~~THE SCHOOL AS A~~  
~~CATALYST FOR CHANGE~~  
*Innovation*

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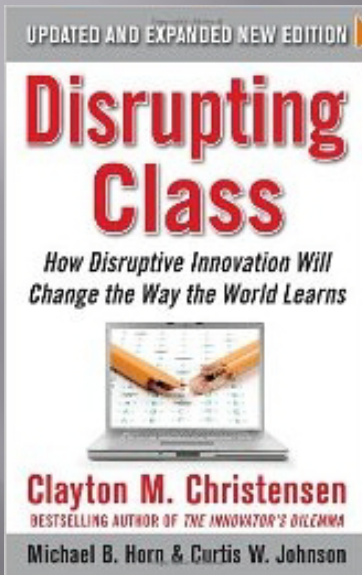
The background of the image is a word cloud consisting of the word "why" repeated many times in various sizes, orientations, and shades of orange and brown. The words are scattered across the entire frame, creating a dense, textured effect. In the center of this word cloud, there is a prominent text overlay in a bold, black, sans-serif font.

**WHY DO SOME PEOPLE SAY THERE IS A  
DISCONNECT BETWEEN SOCIETY AND  
A FUNDAMENTAL INSTITUTION?**



Sustaining innovations fine tune

There have been instances when innovations have significantly altered the course of human existence



Disruptive innovations replace

# INFORMATION AND KNOWLEDGE

How has the control (transmission) of information existed through history?

Two assumptions:

- information transfer has always involved interpretation
- information transfer has always been guarded by a power structure



# INFORMATION AND KNOWLEDGE

In the beginning:

Information was held by the *wise* people in the tribe. It was communicated through stories, dance, acting and rituals.

Knowledge survived through the power of individuals and their rituals.

# INFORMATION AND KNOWLEDGE

At some point:

Information started to be transcribed onto surfaces, first as pictographs on rocks and cave walls.

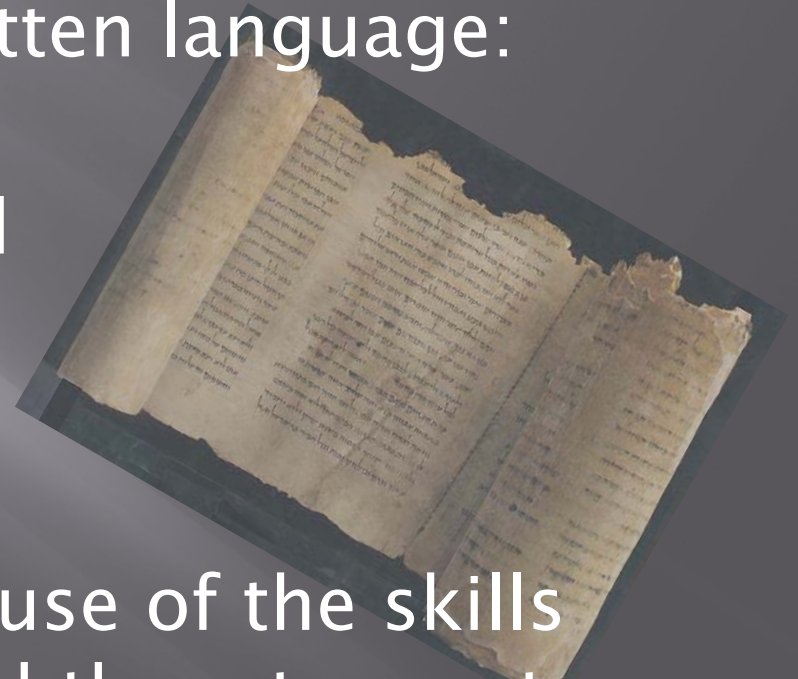


# INFORMATION AND KNOWLEDGE

With the creation of a written language:

Information was recorded on papyrus, linens and parchments.

Knowledge survived because of the skills of individuals that allowed them to create legacy artifacts.



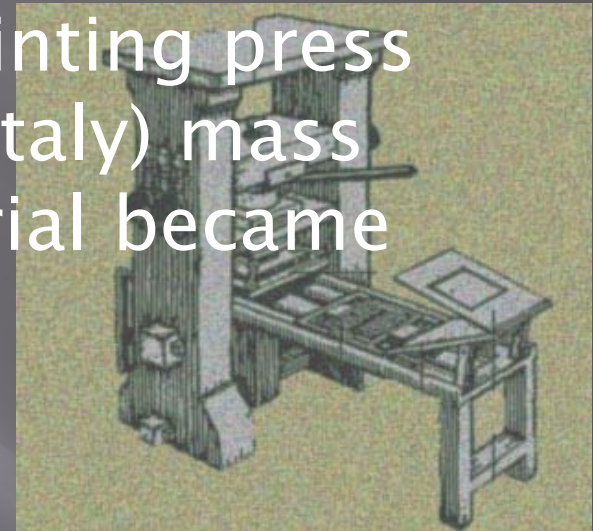
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# INFORMATION AND KNOWLEDGE

With the invention of the printing press (1051 in China, or 1440 in Italy) mass production of printed material became possible.



Knowledge became available for public consumption (assuming financial and literacy barriers were not present).

# INFORMATION AND KNOWLEDGE

Radio, television, film all expanded the audience for information. Events became real time experiences depending on transmission capabilities.

Until now producing and distributing knowledge required infrastructure and 'permission'.

# INFORMATION AND KNOWLEDGE

The democratization of knowledge:

Computers and the internet provide instantaneous access to knowledge.

Anyone can receive, create and distribute knowledge – (subject to electricity, bandwidth and political controls).

# INFORMATION AND KNOWLEDGE

Social networks provided structures for participation with no limits imposed by geographic boundaries. Political structures still try to control the social networks with varying degrees of failure.



Where are educational institutions within this reality?

“Its all about the habits of institutions  
and the habitats they occupy”

<http://www.youtube.com/watch?v=zDZFcDGpL4U>



# DIGITAL AGE AND THE MILLENNIAL

Under the factory model of education:

Teachers are the conveyor of information.

Students sit, listen and memorize.

From early grades students are stratified by age, social/economic circumstances, cognitive abilities, and other labels.

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# DIGITAL AGE AND THE MILLENNIAL

Under the social structure of education the academic route leads to success, the non-academic world to failure.

Teachers are a product of the factory model, they mirror their experience.

Accountability is structured on the factory model.

# DIGITAL AGE AND THE MILLENNIAL

Did the factory model ever help people maximize their potential or was it a process devised to manage people?

How much of what we do today in the classroom and in the buildings we create supports people management?

# DIGITAL AGE AND THE MILLENNIAL

Today:

All the facts being spoken:

- ▣ are available on a personal electronic device
- ▣ may already out of date.

Memorization is no longer a measure of achievement.

# DIGITAL AGE AND THE MILLENNIAL

Learners can participate synchronously in world events through their social media.

Learners can create and publish their own experiences.

Learners can participate **when and where they are the most comfortable.**

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www.khanacademy.org

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(B) either--

(i) the U.S.-directed site is primarily designed or operated for the purpose of, has only limited purpose or use other than, or is marketed by its operator or another acting in concert with that operator for use in, offering goods or services in a manner that engages in, enables, or facilitates--

(I) a violation of section 501 of title 17, United States Code;

(II) a violation of section 1201 of title 17, United States Code; or

(III) the sale, distribution, or promotion of goods, services, or materials bearing a counterfeit mark, as that term is defined in section 34(a) of the Lanham Act or section 2320 of title 18, United States Code; or

(k) the operator of the U.S.-directed site--

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# DIGITAL AGE AND THE MILLENNIAL

Today the person standing in front of the class is no longer the gatekeeper to information and experience.

To the digital native a person who does not have a relationship with the digital world ceases to be relevant (exist).



# THE SCHOOL FOR THE MILLENNIAL

Where does the learning environment need to go?

- ▣ Client (learner)
- ▣ Content (curriculum)
- ▣ Service provider (teacher, administration)
- ▣ Accommodations (the place of school)

# THE SCHOOL FOR THE MILLENNIAL

The digital native expects the learning environment to meet them on their terms:

- ▣ access to their networks
- ▣ access to technology
- ▣ ability to control the process and the environment
- ▣ “just in time learning”, not “just in case learning”

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# THE SCHOOL FOR THE MILLENNIAL

The content must go beyond conveying knowledge and lead to:

- ▣ developing an understanding of the culture that created the knowledge
- ▣ developing the ability to create knowledge

# THE SCHOOL FOR THE MILLENNIAL

Service providers need to change their culture or risk becoming irrelevant

- ▣ support any path, any pace, any place, any time learning
- ▣ skills in teamwork and collaboration

# THE SCHOOL FOR THE MILLENNIAL

The learning environment:

- ▣ Support anytime, collaborative and authentic learning
- ▣ Flexibility
  - rooms,
  - furnishings,
  - context,
  - hours,
  - connections

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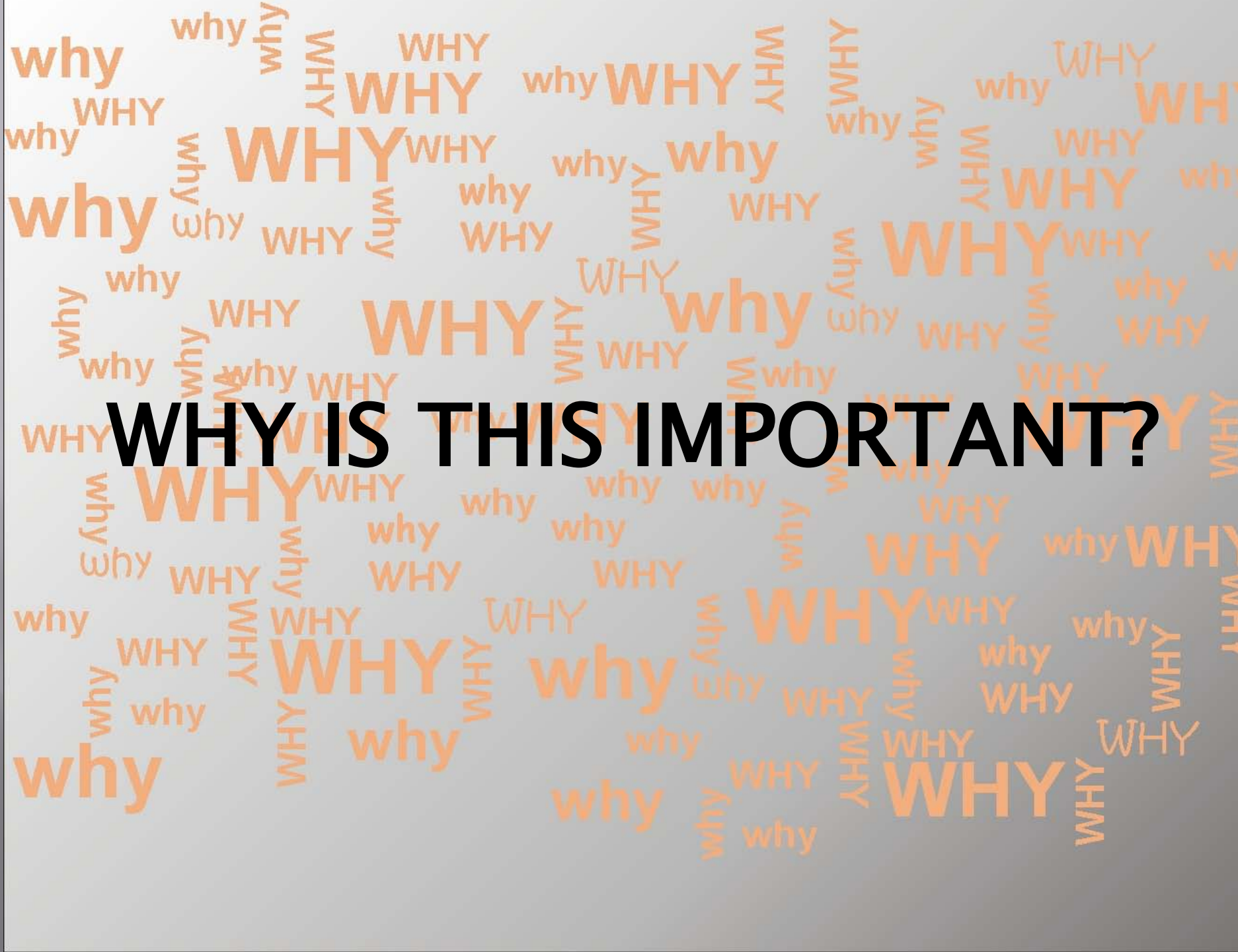
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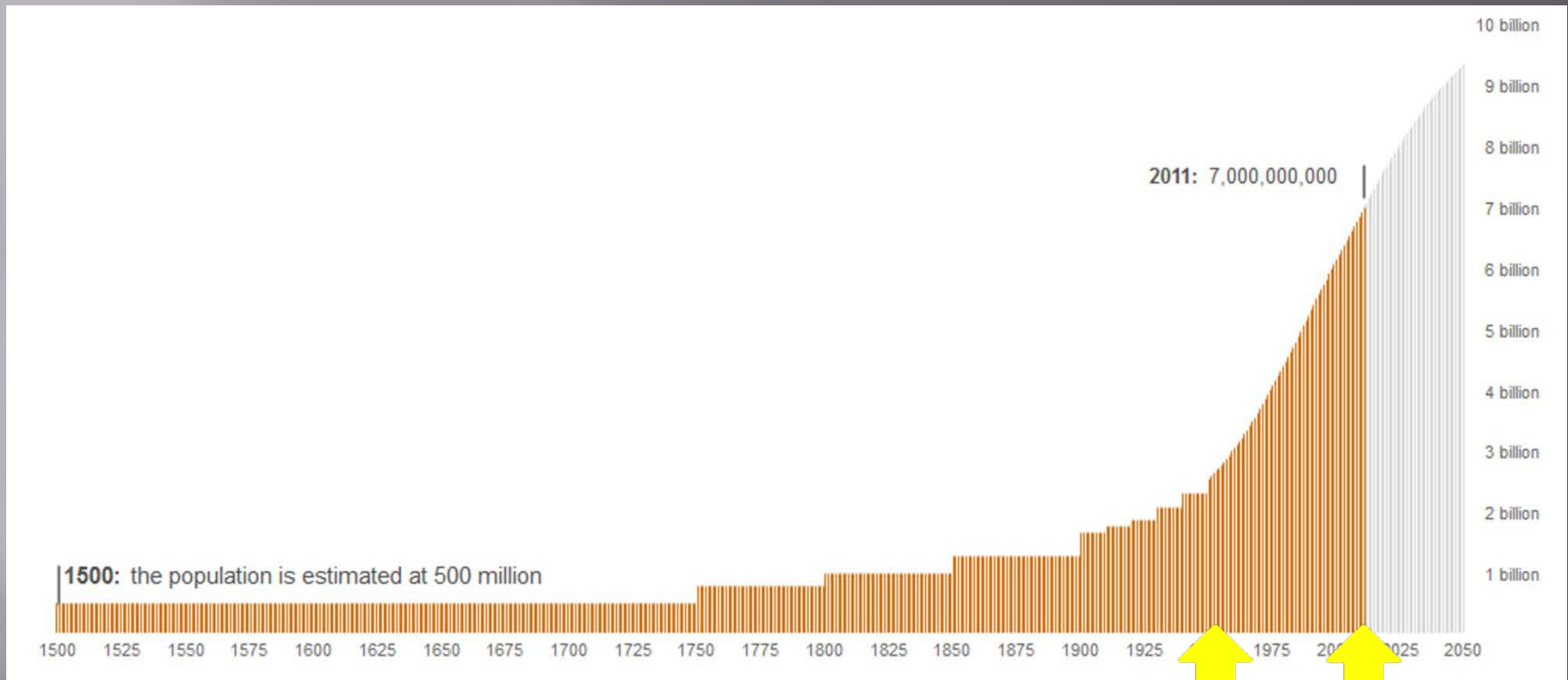
# THE SCHOOL FOR THE MILLENNIAL

*learning environment*

The ~~school~~ can enable and  
force the transition.

**WHY IS THIS IMPORTANT?**





76,171,181,178<sup>th</sup> person born,  
2,770,711,765<sup>th</sup> on the planet

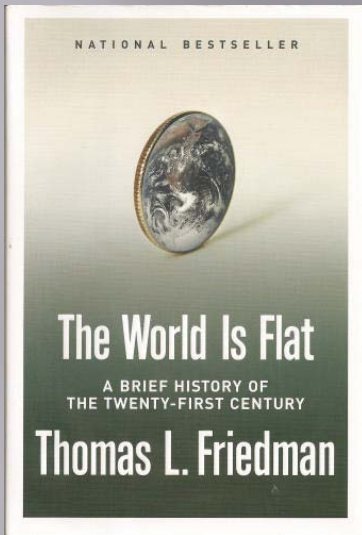
83,235,694,846<sup>th</sup> person born,  
7,008,843,914<sup>th</sup> on the planet

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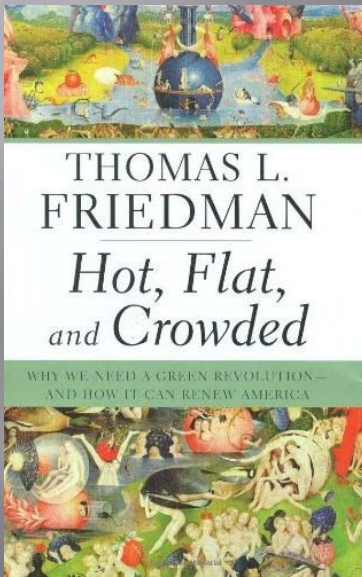
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The internet has ‘flattened’ the world. There are no more advantages or limitations from geography or technology.



North American industries have exported the value-added part of industry to the developing economies. We are poised to become a new ‘third world economy’.

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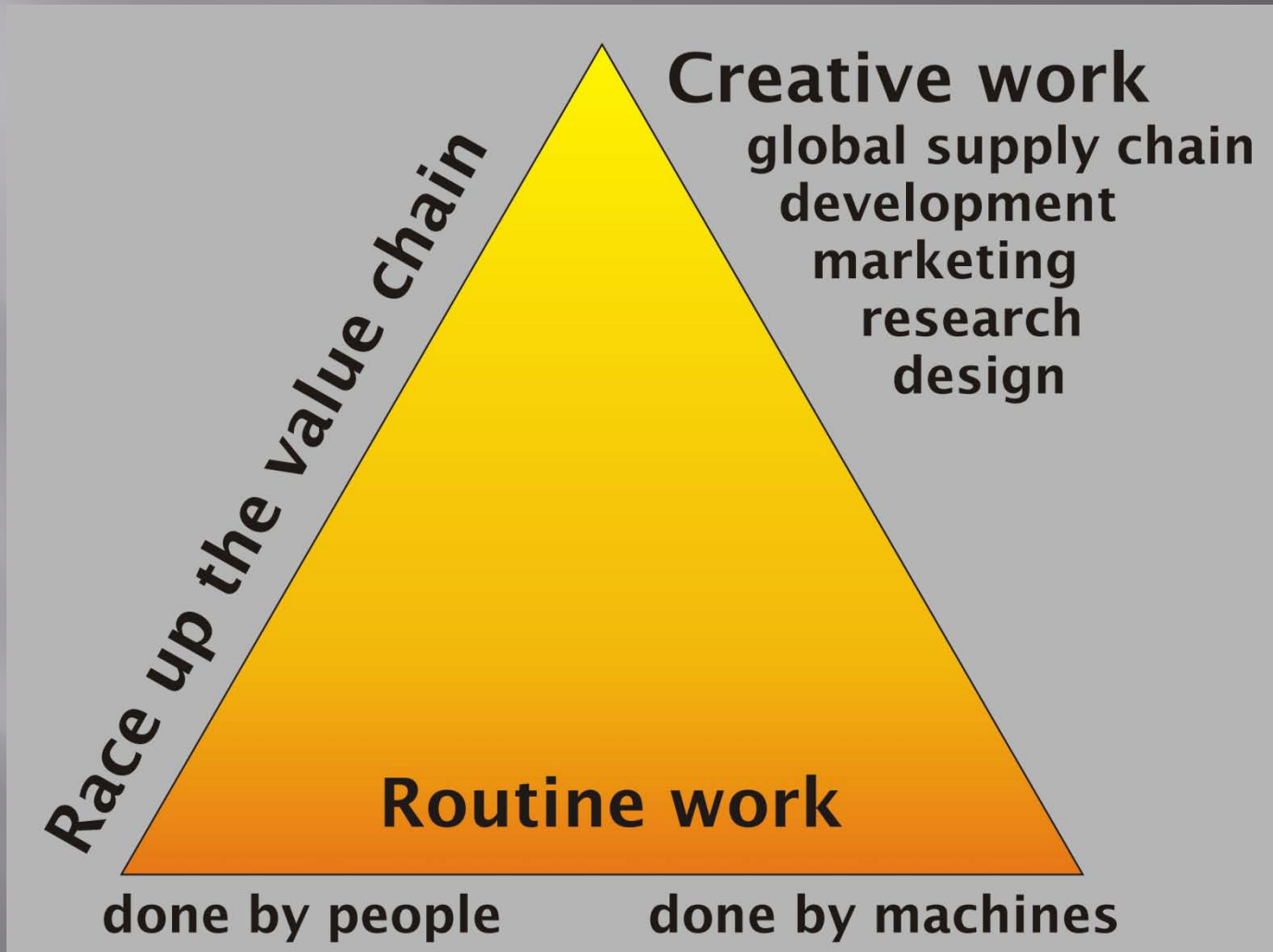
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The background of the slide is a solid orange color. Overlaid on this background is a grid of small, stylized human icons in a light grey or white color. The icons are arranged in a regular pattern, filling most of the slide area. In the center of the slide, the words "UNDETERMINATES" are written in a large, bold, blue, sans-serif font. The text is slightly transparent, allowing the grid of icons to be seen through it.

# UNDETERMINATES

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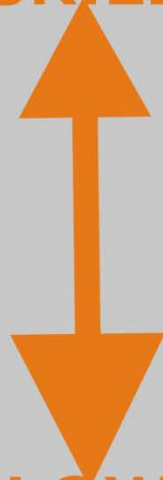


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**HIGH  
SKILL**



**LOW  
SKILL**

**RADIOLOGIST**

**LEGAL  
DISCOVERY**

**SECURITY  
MONITORING**

**TYPING**

***IMPERSONAL  
offshore***

**SURGEON**

**COURT  
PROCEEDINGS**

**POLICE  
SERVICES**

**TAXI DRIVER**

***PERSONAL  
not offshore  
(yet)***



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# OECD VIEW OF NEEDS

Organization for Economic Co-operation and Development

COLLABORATORS  
SYNTHESIZERS  
EXPLAINERS  
VERSATILISTS  
PERSONALIZERS  
LOCALIZERS  
INNOVATORS

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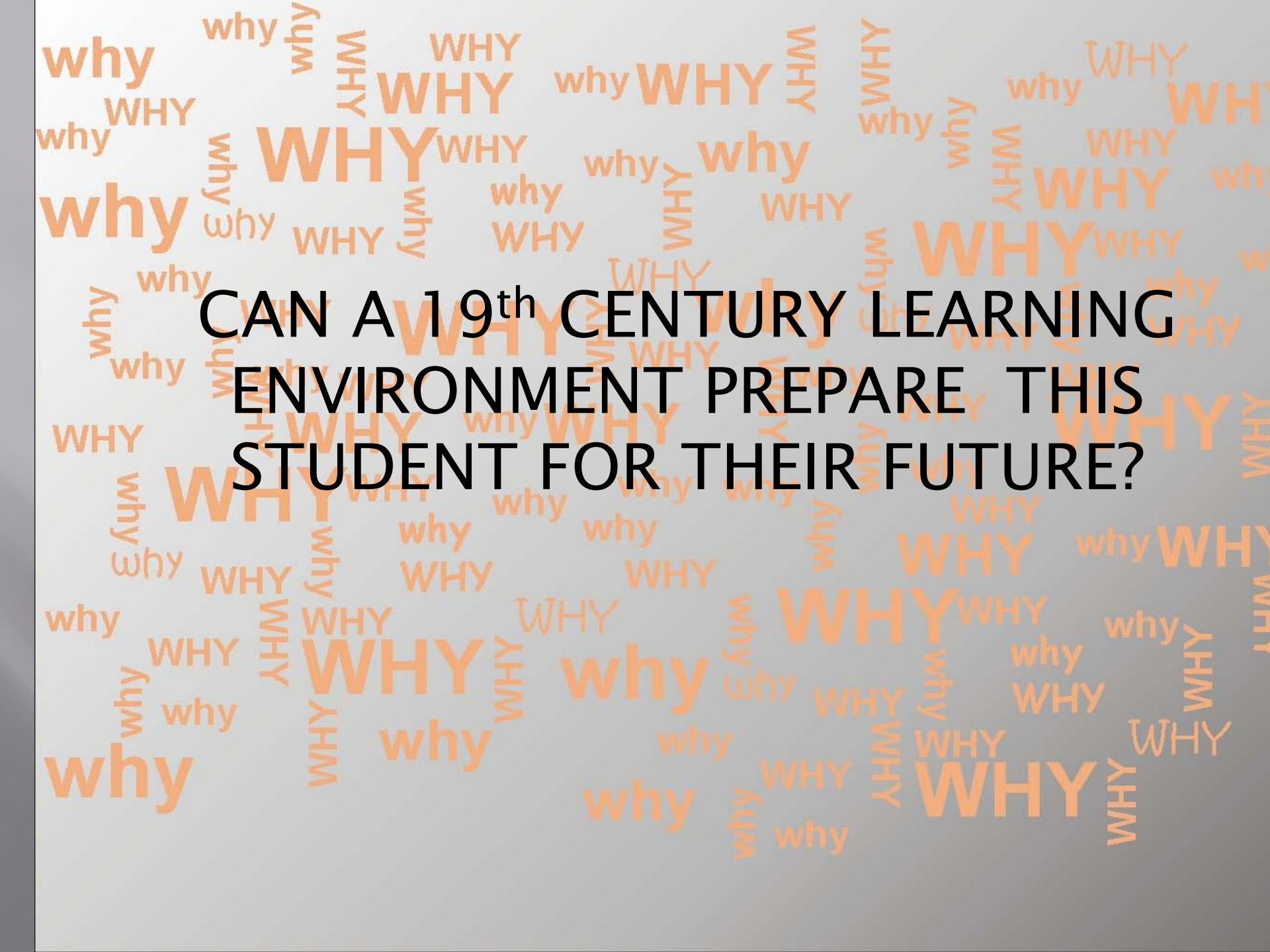
A word cloud consisting of the words "why" and "WHY" in various sizes and orientations. The words are primarily orange, with a few larger words in purple. The background is a light, textured grey.

PREPARE FOR THE NEW GLOBAL ECONOMY

[http://www.youtube.com/watch?v=YmwwrGV\\_aiE](http://www.youtube.com/watch?v=YmwwrGV_aiE)

A CHILD IN KINDERGARTEN  
TODAY WILL GRADUATE IN  
2024

THEIR EMPLOYMENT CAREER  
WILL EXTEND TO  
2076



**CAN A 19<sup>th</sup> CENTURY LEARNING ENVIRONMENT PREPARE THIS STUDENT FOR THEIR FUTURE?**