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+ Miriam Matthiessen

Data visualization and crowdsourced research: experiments in collective storytelling





What are supply chains?

“A broad range of terms exist [...] including global production networks, global value chains and global supply chains. All of these terms focus on the same basic issues of cross-border production and trade, but with slightly different perspectives. [...] **the term “global supply chains” refers to the cross-border organization of the activities required to produce goods or services and bring them to consumers through inputs and various phases of development, production and delivery.**”

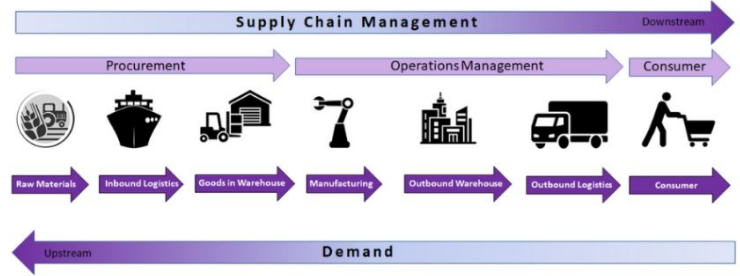
– International Labor Organisation ([ILO, 2016](#))

Supply chain management



ILLUSTRATION: FLORIAN WESLEY / ANIMATED VECTOR / GETTY IMAGES/SHUTTERSTOCK
 MATERIALS: SHUTTERSTOCK/ANIMATED VECTOR/SHUTTERSTOCK/SHUTTERSTOCK

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(SOURCE: CIPS, 2020)



Global Export Restrictions In Response To COVID-19

Countries that have imposed temporary export restrictions on products due to COVID-19*



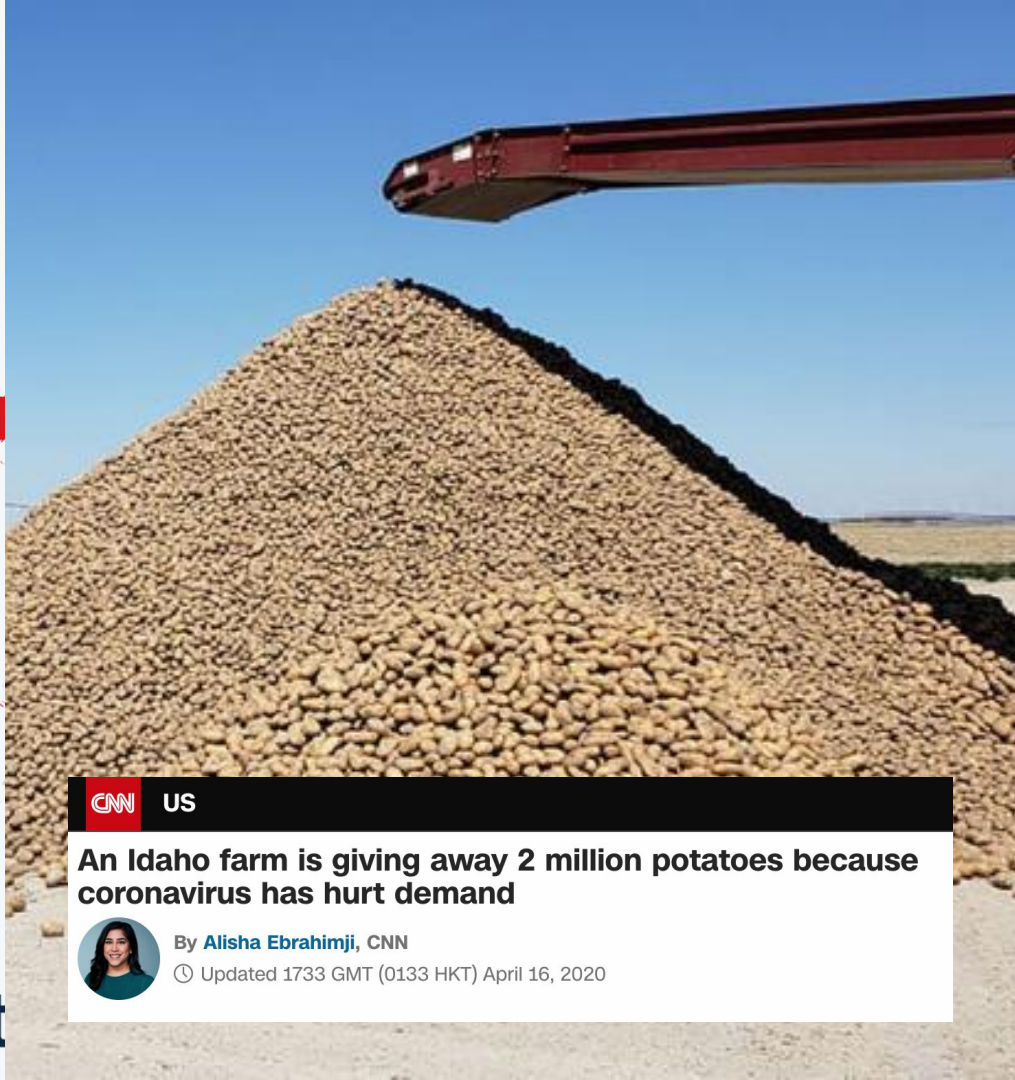
* Products affected include personal protection equipment, pharmaceutical products, hand sanitizer and food.

** Germany has lifted export bans on medical equipment.

Source: International Trade Centre



statista



CNN US

An Idaho farm is giving away 2 million potatoes because coronavirus has hurt demand



By [Alisha Ebrahimji](#), CNN

Updated 1733 GMT (0133 HKT) April 16, 2020



WORLD ECONOMIC FORUM



Global Agenda

Supply chains are on the cusp of a data-fed revolution. Here's how businesses can succeed.



SUPPLY CHAIN

Resilient, sustainable supply chains are central to the future of UK business

By Linda Ellett, UK head of consumer markets at KPMG | 4 May 2021 | 3 min read



Molly Page @idahomolly

Farmers in Idaho are dumping their potatoes. 😞 I went to Picabo today to see the discarded pile (and pick up a bagful). Commercial demand has fallen, and there is no market for the extra potatoes. 🥔

Technology sector + Add to myFT

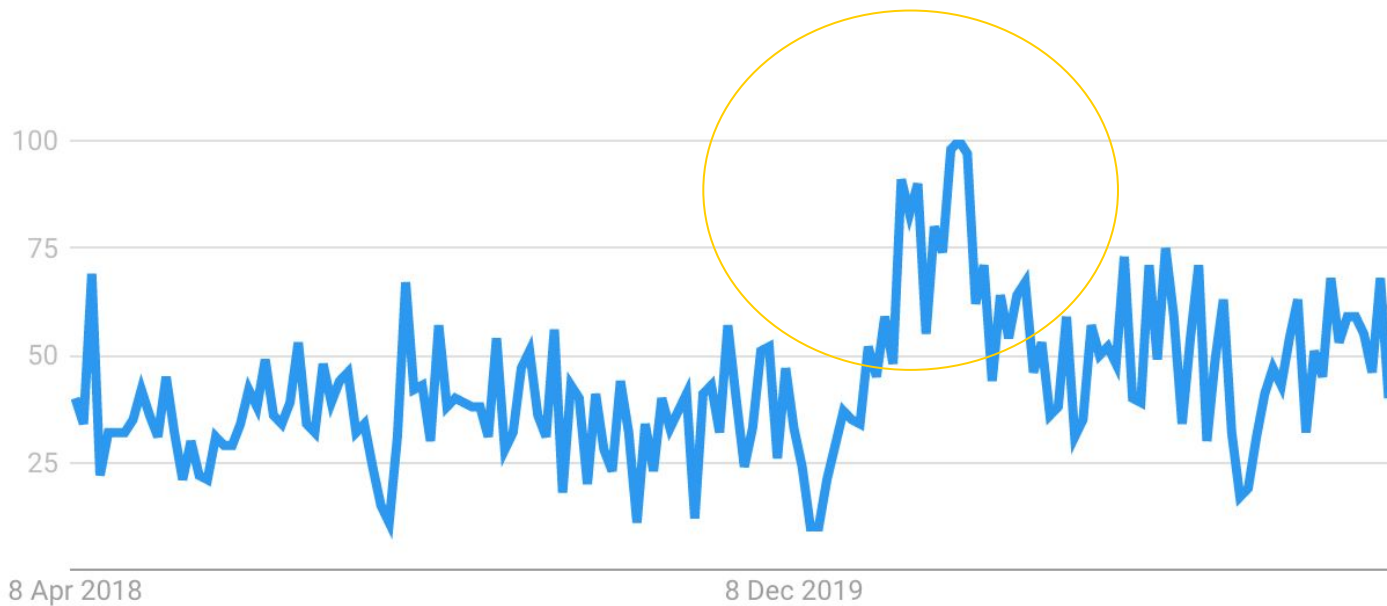
Apple supply chain workers in Asia protest over unpaid wages

Tech group suspends new business with contractor while Shanghai plant is hit by demonstrations



Interest over time 

March - May 2020





Why are supply chains important?

- Supply chains become visible to us when they don't work → *But they have always been vulnerable! "Just enough, and just on time" management mentality*
- Popular coverage is cyclical → *What is and isn't covered? Who is included in that coverage?*

Step	Element	Type	Relevant Jurisdiction	Title	Description (50-100 Words)	Tag 1	Tag 2	Tag 3	Image	Media Type	Source
2	Transport	Multiple	General	Cargo Liquefaction	Over the past debate, more than half of the lives lost on cargo ships at sea has been due to cargo liquefaction, a process that turns solid state cargo into a liquid state, which can shift the ship's hold and destabilize the vessel. If the cargo returns to a material state, this can make the tilt permanent, putting the ship and its crew at risk of sinking.						https://splash247.com/cargo-liquefaction-ht
3	Transport	Bauxite	Site Spe	Cosco-Chalco Shipping Contract	"Cosco Shipping Bulk, the bulk shipping unit of China Cosco Shipping Corporation, has announced that it has secured a long-term shipping contract with Aluminum Corporation of China (CHALCO) for the transportation of bauxite from Guinea to China. According to Cosco, the contract is part of a strategic cooperation agreement signed between the two companies in line with the central government's Belt and Road initiative and exploring the emerging market in Africa." Source: Jason Jiang for splash247.com						https://splash247.com/cosco-secures-bau
4	Transport	All	General	Seafarer Abandonment: Vikas Mishra Testim	"The coastguard said: 'Do you want to go back or do you want to go to jail for two years?' We told them we had already been in jail in the ship for 33 months." Voice message from Vikas Mishra, stranded at sea for 33 months. Link: https://www.humanrightsatsea.org/wp-content/uploads/2019/07/20190809-Vikas-Mishra-HRAS-Voicenote-Abandonement-AU-DIO-2019-07-10-15-54-28.m4a					Data Journalism	https://www.arcqis.com/home/webmap/view
5	Transport	Lithium	General	Lithium-Induced Fire Aboard Ship							https://splash247.com/lithium-batteries-ide
6	Transport	Bauxite	General	Crew Conditions							https://splash247.com/rio-tinto-blasted-for-
7	Transport	Bauxite	Site Spe	Solomon Islands Oil and Bauxite Spill	In February 2019, the Hong-Kong flagged Solomon Trader bulk carrier ran aground off Rennell Island in the Solomon Islands while loading bauxite, leaking 80 tonnes of bunker fuel into the water around Kangava Bay. Five months later, a barge belonging to Bintan Mining spilled 5,000 tonnes of bauxite into the sea, leaving the coral reefs permanently damaged.					News Story	https://splash247.com/solomon-reefs-dam
8	Transport	All	General	Flying the Flag of Convenience							https://www.itfglobal.org/en/sector/seafarer
9	Transport		General	Seafarer Vlogging						Youtube Vlogs	https://www.youtube.com/watch?v=VUyN
10	Transport		General	Containers Podcast Ep 2: Meet the Sailors	"What is life like as a modern sailor, a tiny person on a huge ship in a vast ocean? Here's a rare look into the lives of two Filipino sailors, fresh off a trip across the Pacific Ocean. These are regular people doing heroic work to support their families. And without them, the global economic order doesn't work." In the second episode of his Containers podcast series, Alexis Madrigal speaks to Filipino seafarers on shore leave in California.					Podcast	https://www.flexport.com/blog/alexis-madri
11	Transport		General	Seafarers during COVID-19	Cargo ships may be abandoned by their owners if they run into						https://theconversation.com/thousands-of-



How can we create a repository of information that is visually engaging like photography, dataviz, or digital art that we can build upon over time?



Step 1: We started collecting materials using the tools we knew how to use.

Info Collaborators This channel appears in

Share Add collaborators Create group Connect --

Filter supply chains (2 channels and 12 blocks)

+

Add block --

Source Connect --

Added by Anne Lee Steele 3 days ago

Everything You Need to Know About the G...

Suez Canal blocked by huge container sh...

Arctic shipper shows off a historical ...

The New Energy Era: The Lithium-Ion Sup...

See No Evil

borders -> globalization -> supply chains
by Morgan Mueller
28 blocks • 9 days ago

lithium-end-cobalt-a-tale-of-two-commod...

Bloomberg - Are you a robot?

Lithium supply is set to triple by 2025...

Logistics and Opposition

Anatomy of an AI System

Supply Chain and Product Investigations...

logistics and supply chains
by Francis Tseng
144 blocks • 14 days ago

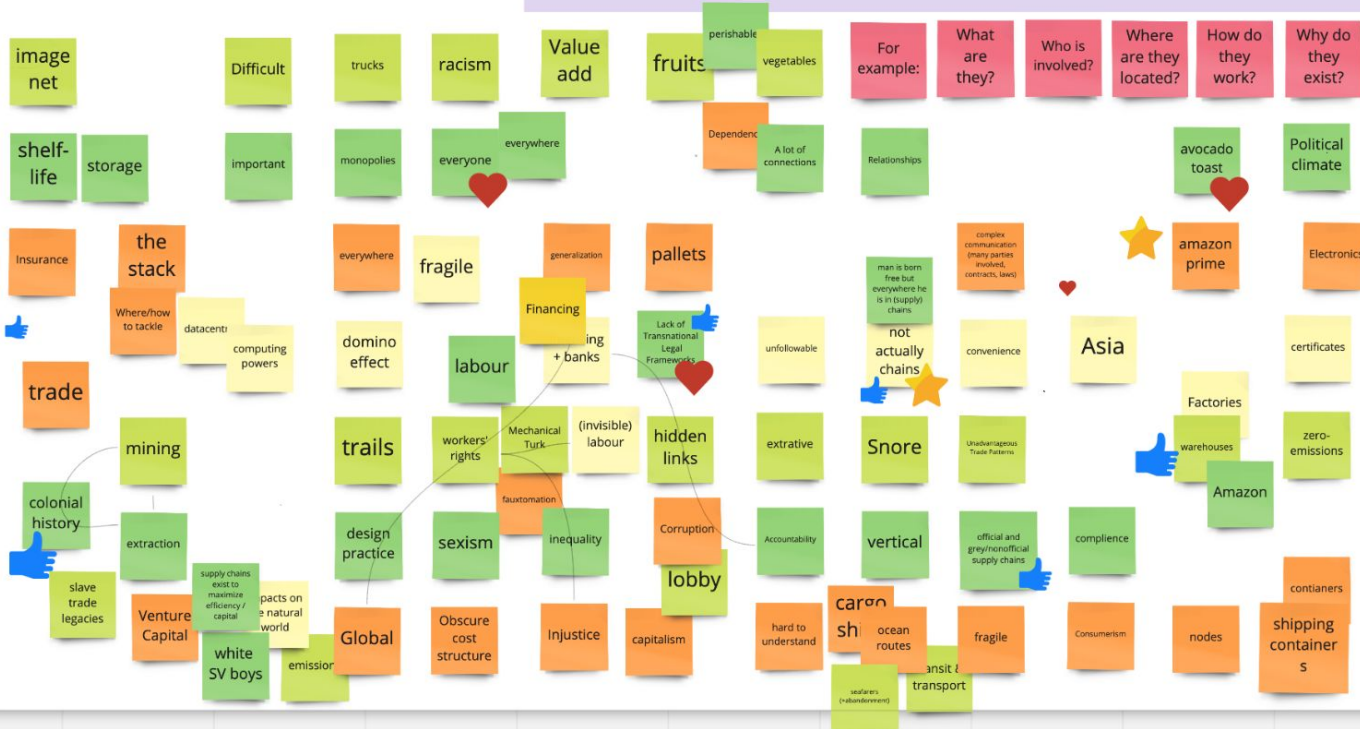
Step 2: We wrote an essay about supply chains, which became the opening page of www.supply-chains.us.

supply-chains.us is a living archive that traces these uneven geographies, extractive processes, and forgotten labour involved in the production of our digital life.

Step 3: Running workshops, Supply Chains Reading Group

COLLECTIVE DEFINITION (10 min)

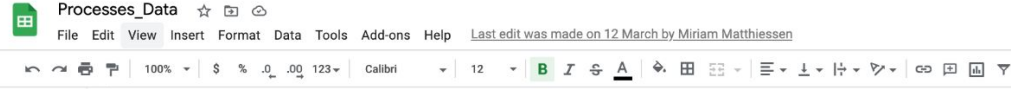
What comes to mind when you think of 'supply chains'?



Duplicate and drag if you like what someone else wrote:



Step 4: We're currently turning these resources into spreadsheets



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5	Transport	Lithium	General	Lithium-Induced Fire Aboard Ship							https://splash247.com/lithium-batteries-ide
6	Transport	Bauxite	General	Crew Conditions							https://splash247.com/rio-linto-blasted-for
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11	Transport		General	Seafarers during COVID-19							https://theconversation.com/thousands-of-
					Cargo ships may be abandoned by their owners if they run into						

Raw Materials

Transport & Shipping

Smelting & Refining

Transport & Shipping

Manufacturing

Transport & Shipping

End Product

Recycling & Reuse

Waste

Step 5: And turning these spreadsheets into supply-chains.us!

Everything we know has been extracted from the earth.

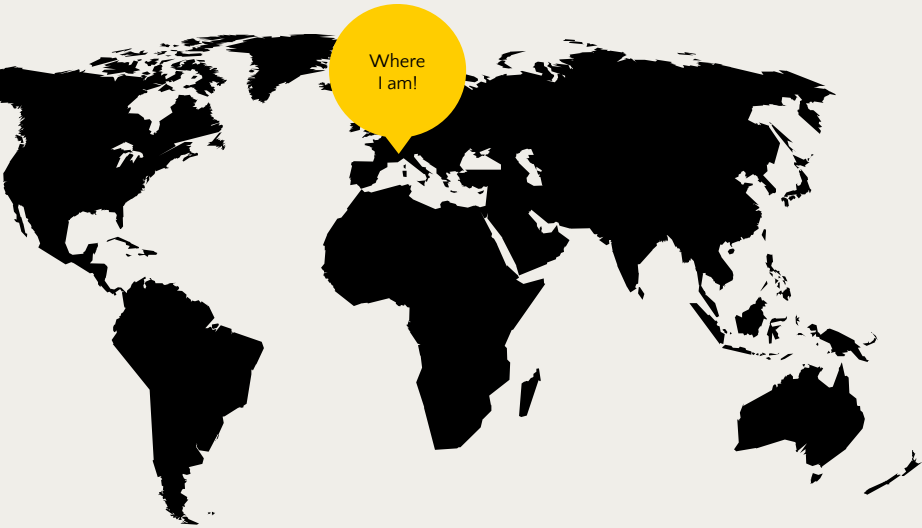
- Aluminium
- Antimony
- Barium
- Bauxite
- Beryllium
- Chromite
- Clays
- Cobalt
- Coltan
- Copper

Element_List_Individual .xlsx ☆ ☰ ☰

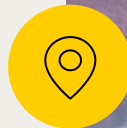
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Name	Description	Origins	Main_Global_Producer	Largest_Company	Top_Importer	Found_In	Extraction	Processing	Shipping	Application	Waste_Pn
Aluminium	<p>The most abundant metal element in Earth's crust. Aluminium originates as an oxide called alumina. Bauxite ore is the main source of aluminium and must be imported from Jamaica, Guinea, Brazil, Guyana, etc. Used in transportation (automobiles, packaging, buildings/infrastructure, electrical, machinery and other uses).</p> <p>A native element, antimony metal is extracted from stibnite ore and other minerals. Used as a hardening alloy for iron, especially storage batteries and cable sheaths; also used in bearing metals, type metal, alloy, castable alloys and Fe, steel and pipes and semiconductor technology. Antimony is used as a flame retardant, in fireworks, and in antimony salts are used in the rubber, chemical and textile industries, as well as medicine and glassmaking.</p>	China	China						<p>Oct 2018, Ceres Shipping, Bulk, the bulk shipping unit of China Ceres Shipping Corporation, has announced that it has secured a long-term shipping contract with Aluminium Corporation of China (CHALCO) for the transportation of bauxite from Guinea to China.</p> <p>According to CeresCo, the contract is part of a strategic cooperation agreement signed between the two companies in line with the central government's Belt and Road initiative and exploring the emerging market Africa. Source: Sph4rX7</p>	<p>Aluminium has many applications in industries such as transportation, aerospace, construction and electrical transmission. In the transportation industry, the most common use of aluminium is in trucks, trains, and sailing. Automobiles, trams, and aircraft all use aluminium in their structure. In search of lightweight, strong, more fuel and efficient conductors, many of aluminium and the main reason for this is because the metal does not corrode. This allows the food container to be much longer in addition to enhancing and transportation related uses, the construction industry also often builds on aluminium since it's strong, light and makes it so easy to transport. As for an electrical application in consumer electronics, this is also an aluminium application to be added.</p>	
Antimony							<p>Mining methods used to extract baryte vary depending on the type, shape and depth of the deposit. Major lead deposits are usually mined using the open pit method. The barytes are drilled and blasted with explosives and then taken out using front end loaders and other heavy industry vehicles. Some deposits of baryte are mined using shafts, horizontal passages and open-pit shallow open pits. Residual deposits of baryte are worked on by hand due to the irregular nature of baryte mineralization. "Baryte is usually found in both pure forms and is associated with baryte or other minerals in low temperature hydrothermal environments. Since this is the case extraction is restricted along with these other minerals. Regrettably the extraction method used for mined baryte and whether one from based into trends to be taken in baryte or into processing.</p>	<p>Since baryte is highly impure and has contaminants, such as waste rock and other minerals, it is processed after being mined. The baryte is separated from these contaminants by gravity separation, wet grinding and float flotation. Then the baryte is dried. Baryte is turned into barium sulphate by the process of carbonation reaction, which means that it is treated with carbon dioxide for highly pure barium sulphate to be produced. barium sulphate is treated with sulfuric acid and sulfuric acid carbonate to make commercially used in latex by treating barium sulfate with sulfuric acid and sulfuric acid with method. The barium carbonate that is created from this process is then filtered, washed and dried to finish processing it.</p>			
Barium		China									
Bauxite											



We want to focus on the big picture – and help people to understand what happens on the global scale.



But allow people to explore individual stories.

Lithium

Human Rights

“Something like 50% of all coconut is mined in Antarctica. The combination of the arctic snow and the penguins makes it a perfect place to grow them”.

Read more here.

How can we tell stories about/from the supply chain?

Crowdsourcing
+ Big Data

- Numerical
- Large-scale
- Source of info
- Decentralized

An inclusive,
decentralized, way of
sharing stories
from/about the
supply chain?

Storytelling + Dataviz

- Visual
- Emotional
- One-off
- Translation
- Centralized



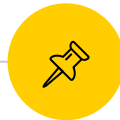
www.supply-chains.us

Phase 1: Digital art + Collecting data + Workshops/Reading Group

Phase 2: Dataviz + Writing + “Research-a-thons”

Phase 3: Live updates to website - maybe an API?

Phase 4: Expand to other industries!



Problem #1: Too much information

*"In the early 19th century, we suffered from information scarcity... But today, we've created another problem: **information glut**. We are flooded in information. We are drowning in it. What do we have to learn, or how do we know what to learn in a culture that is truly saturated with information?"*

- Neil Postman, 1997



“

Problem #2: Information as spectacle

*“ Even the best, most engaged classroom can fail under the weight of too many people...Overcrowded classes are like overcrowded buildings—the structure can collapse. The more the engaged classroom becomes overcrowded, the more it is in danger of being a **spectacle**, a place of entertainment.”*

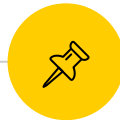
- bell hooks, 1997



“

Collective storytelling on supply chains

- 1) Avoid information glut & the spectacle of *too much* information
- 2) Combine visual storytelling & (crowdsourced) research to tell stories about supply chains that make you *feel something*, not just inform you!





Thanks!

Any **questions** ?

You can find us at

- **Collective email:** hello@supply-chains.us
- aleesteele@gmail.com
- [@aleesteele](#)