

### **Guidelines: GIVE IT A TRY!**

- Select a recent event from contemporary international events, be it a natural disaster, a political controversy, a societal dilemma, a corporate scandal—any relevant complex issue you have encountered in the past few weeks (examples may range from the November 2018 California wildfires; the midterm elections in the US etc.).
- Identify at least 3 articles/sources that give background/data points about the issue.
- Create your own iceberg model: Title the event; using iceberg model recreate it in a pdf and write the event (what is observable about the event) at the top of the blank iceberg below and work your way down through the patterns, underlying systems and mental models, adding as many as you can think of. It can also be useful to move up and down between levels as you think more about the event.
- **Produce a summary reflection** that addresses in part the questions below:  
**QUESTIONS TO CONSIDER AFTER TRYING OUT THE ICEBERG MODEL**
  1. Does the iceberg model help broaden your perspective? If so, how might this new perspective be helpful?
  2. Consider the concept of entry, or “leverage” points. These are points at which to intervene in a system that could lead to systemic transformation. Does the exercise show you any new entry points at which you are inspired to intervene?
  3. What issues that have frustrated you might be interesting to analyze with the Iceberg Model?

### **Part 2\*: Chief Designer Officer of a Social Enterprise as Systems Thinker: System Mapping, Case Study Analysis and Intervention**

**\*This part of the assignment will be done in your team.**

- **Step One:** Choose one of the 2018 most innovative social enterprises from this World Economic Forum list as your case study and research them to get enough case background to work with:  
<https://www.weforum.org/agenda/2018/09/world-changers-meet-the-social-entrepreneurs-of-the-year-2018/>
- **Step Two:** Imagine you have just been hired to join the social enterprise as their new chief design officer. Following Meadows’ framework about identifying stocks, flows and leverage places to intervene in a system (<http://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>), you are asked to do the following:
  1. Map the system in which the social enterprise operates. Think of a map as a story (see this article on system mapping: <https://www.fsg.org/blog/learning-love-process-and-other-lessons-system-mapping>). [Additional resource: Tools for Systems Thinkers: Systems Mapping by Leyla Acaroglu, Medium, 2017 - <http://bit.ly/2HiNQ4i>]
  2. Explain which one(s) of Donella Meadows’ 12 leverage points the social enterprise currently utilizes to make a difference in the world. Based on your research, indicate where there are opportunities for more impactful leveraging moving forward.
  3. Describe and visualize a desired future scenario for the enterprise. Which one(s) of Meadows’ leverage points will be used in this scenario?

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## **Systems Thinking Assignment**

### **Part 1**

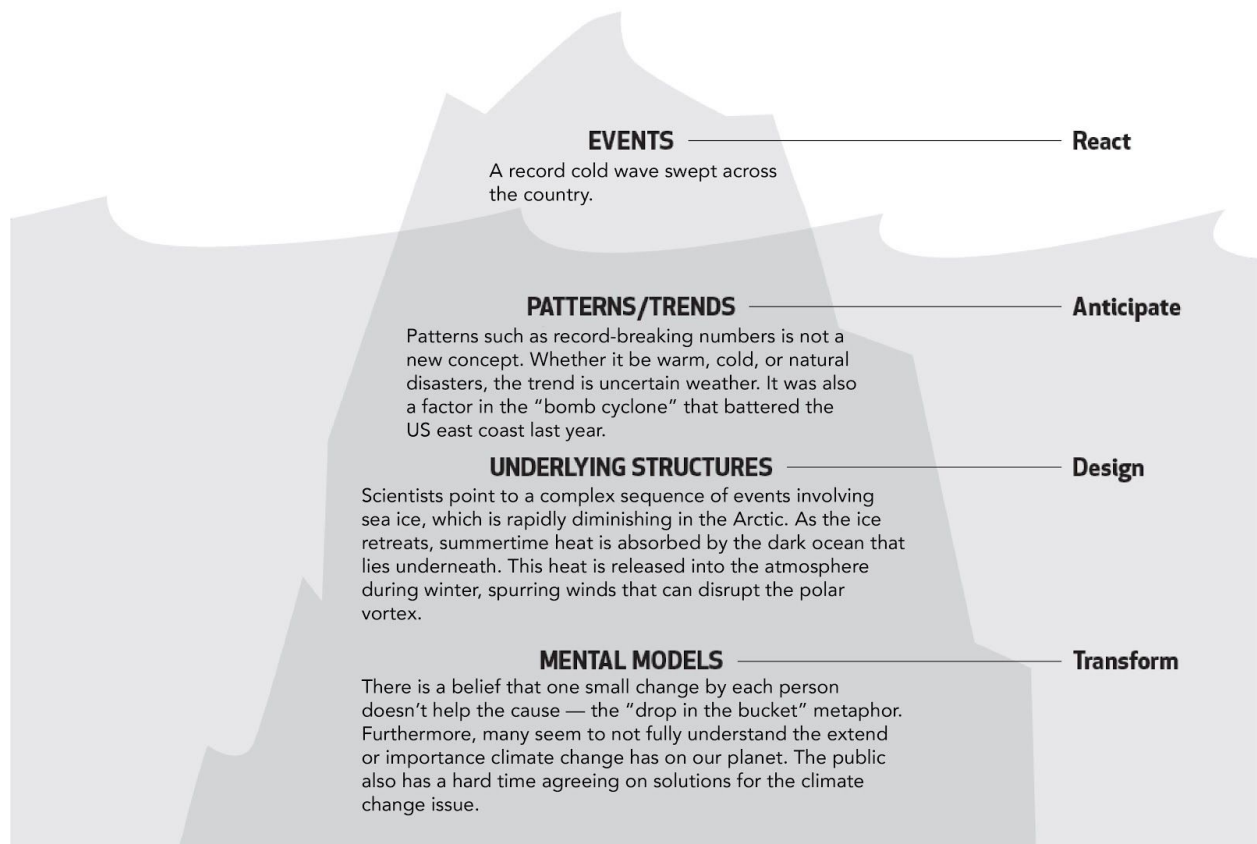
***Recent Event: The Polar Vortex***

*3 articles:*

1. <https://www.theguardian.com/us-news/2019/jan/30/polar-vortex-2019-usa-what-is-it-temperatures-cold-weather-climate-change-explained>
2. <https://www.cbsnews.com/news/polar-vortex-what-is-the-2019-polar-vortex-weather-event-and-is-global-warming-to-blame/>
3. [https://www.washingtonpost.com/weather/2019/02/08/making-sense-polar-vortex-record-cold-feverish-planet/?noredirect=on&utm\\_term=.66b0ce89e2c6](https://www.washingtonpost.com/weather/2019/02/08/making-sense-polar-vortex-record-cold-feverish-planet/?noredirect=on&utm_term=.66b0ce89e2c6)

## THE ICEBERG

Polar Vortex



### Summary Reflection:

The iceberg model is helpful in that we are unsure whether it broadens our perspective, but rather deepens our understanding of the subject. We think this is a useful model to better comprehend any article based on a specific subject. By identifying the mental models (the beliefs and assumptions the public has on the subject), we can consider the concept of entry or “leverage” points. These are points at which to intervene in a system that could lead to systemic transformation are incredibly important. This exercise shows us new places in the system to intervene. For example, in the readings and through this class, we see how climate change, as well as other issues, can be made personal and that is how the public is able to care about the subject and further take action. Another mental model is the public agreeing on solutions for climate change. This is a good opportunity for businesses to get involved. While not policy, businesses can be influencers and end up having a big impact on issues such as this. They can also inspire individuals to make a difference. A few issues that have frustrated us that might be interesting to analyze with the Iceberg Model might be designed for the mentally impaired (such as the elderly with

dementia or those with autism). The way that this would work would be to design our society specific for those who cannot advocate for themselves. The entire design process and outcome is very different for sectors of people.

## **Part 2**

### *Social Enterprise*

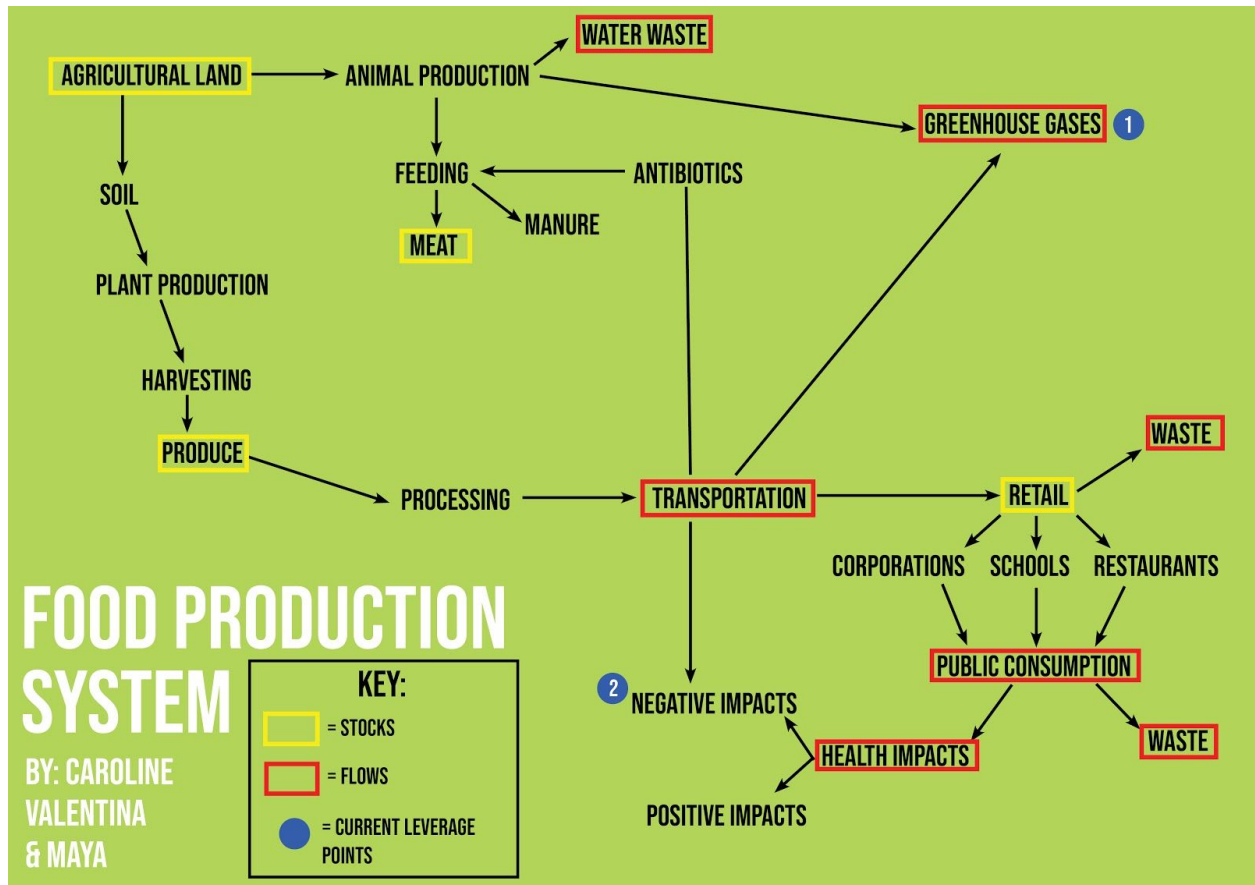
*Green Monday*, Hong Kong.

### *Mission*

A social start up with the goal of tackling climate change and global health by enforcing low-carbon and sustainable living alternatives in the form of “Green Monday’s”. By empowering corporations, restaurants, schools, and the overall public to make sustainable, innovative, wholesome, and responsible food choices through a plant-based meal program.

### *Food Production and Distribution System*

**Graph 1.** *System in Which the Enterprise Operates.*

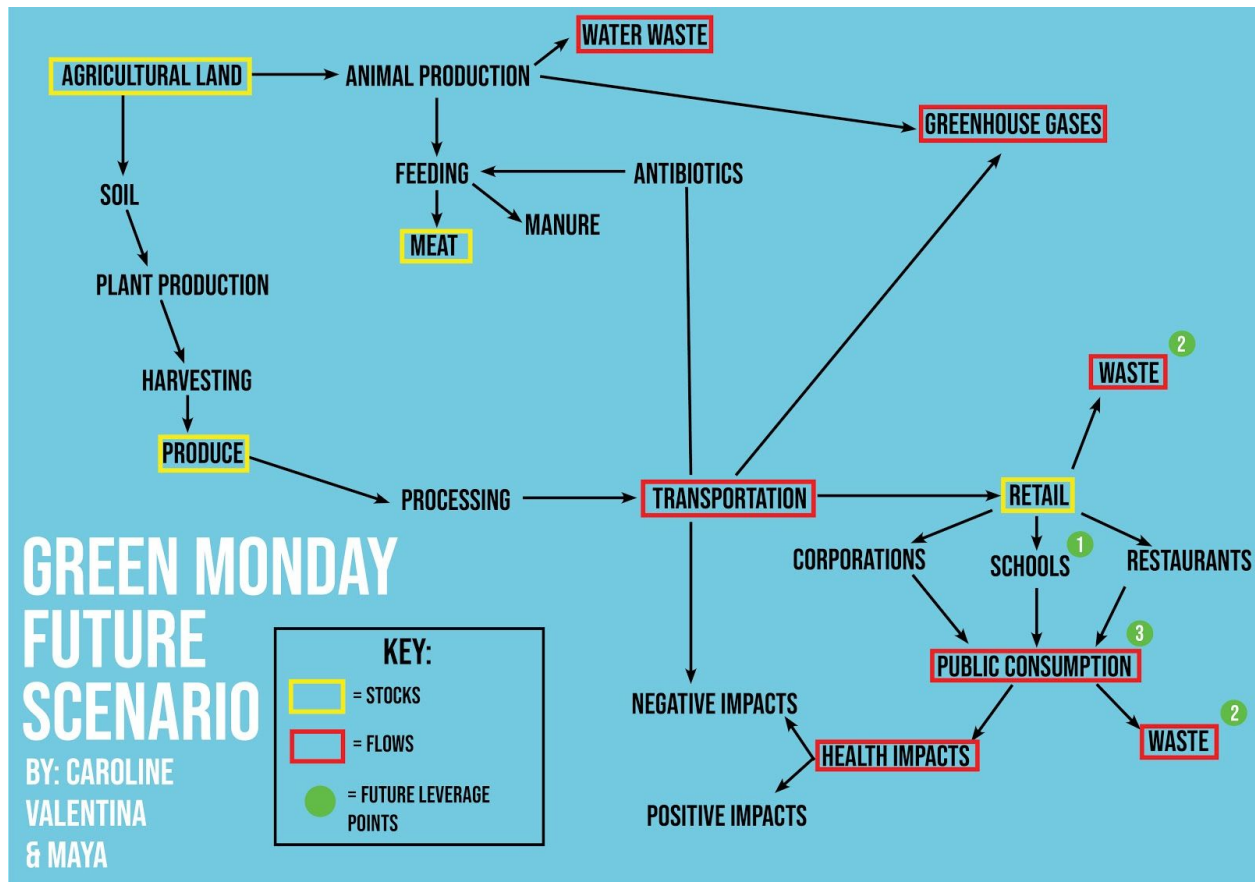


### Leverage Points

Taking into consideration Donella Meadows’ 12 leverage points, we consider *Green Monday* to be operating mainly through changing the mindset out of which the system arises as well as regulating negative feedback loops and driving positive ones in order to make a difference in the world. Firstly, one of the chief factors that drive the system of massive animal consumption is the idea that it is an essential and principal part of our diet. Debunking this myth, particularly on the basis of getting the public to change their eating habits to ones that are more plant-based instead of so reliant on protein intake. Changing the core aspects of what ‘the plate’ looks like requires a transformation of established public mentality. The enterprise’s mission of reducing greenhouse gas emissions that are direct variables of meat production would act as a leverage point in regulating the negative feedback loops of the system. By decreasing the consumption of meat, they are diminishing the carbon and water footprint of the livestock industry - one of the largest contributors to climate change. Moreover, based on our research, we determine that in order for these leverage points to be more impactful they need to become standard in the industry as a whole. The incorporation of a “sustainable eating” education program in schools and corporations would allow for such mindsets to transform along with the goals of the system.

Education has proven to be a wide contributor to social change, thus, increased awareness of the positive effects and implications of this way of eating should create more impactful leveraging moving forward.

**Graph 2.** *Desired Future Leverage Points*



Future Leverage Points:

1. **School Meal Program**
2. **Waste Disposal/Reduction**
3. **Incentive-Based Program**

In this same manner, if we were to describe a desired future scenario for the enterprise, we would introduce a number of leverage points that would further idealize the system. Our idealized future leverage points can be seen in Graph 2 above. On a far-reaching approach, the first future leverage points can be seen in Graph 2 above. On a far-reaching approach, the first future scenario would be that governments enforce this system of eating and meal planning in schools

as a national alternative to current plans. This way, the enterprises' goals would become part of the rules of the system. Secondly, on a smaller-scaled proposition, we would implement an incentive-based program where people receive discounts and monthly updates according to their reduced levels of meat consumption. Furthermore, the third ideal scenario would also implement a waste system — where this factor is highly reduced as well. By enforcing strategies such as composting, biodegradable packaging, and food donations, this negative feedback loop would be positively affected as well.