

STEP 1. Brainstorming Possible Problems and Challenges

Now that you have thoroughly read and discussed the Future Scene, it is time to consider the many problems and challenges related to it. Begin by brainstorming as many of those problems as you can. Select the SIXTEEN that you think are the most important. Write your SIXTEEN problems below; word them clearly and thoroughly, and use statement (rather than question) form. Use spare paper, if necessary.

- Conflicting of environmental & human problems.
- Research more precise.
- expansive
- "Take 1 cat. and run with it".
- ✓
- Also cultural sites.
1. Due to the fact that the majority of energy is reliant on the weather, there may be a challenge with the environment. First of all, this dependence on the environment may make energy access very unreliable as ~~there~~ great variability of weather. This may make it difficult for some people to go about their daily lives and may also raise prices. Secondly, the use of weather for energy may cause environmental issues. Taking the energy from the environment may distort weather patterns and cause further weather extremities or ~~extremities~~ could ~~cause~~ cause environmental damage. ~~[Research has stated that we cannot be completely reliant on the environment for our~~ due to its unpredictability.
 2. Since "many previously habitable coastal areas [are] regularly flooded", there may be a challenge with physical health. The more frequent flooding may remove people's homes and force leave them in the harsh environment or may injure them. Furthermore, the more extreme and unpredictable weather could also have a ~~more~~ effect on physical health. The meddling of ~~the environment~~ with the environment may further worsen the situation. The ~~effects~~ devastating effects of natural disasters have been witnessed around the world many times, such as the 2012 Japan tsunami and flood which caused many injuries, death and damage.
 3. Because previously habitable areas are now prone to flooding, there may be a challenge with defence. As people may have to move to other areas to live, cities may become overpopulated, increasing the risks of attacks, unemployment and damage to infrastructure. Furthermore, these areas may have been necessary on providing food to people and may not be able to be used anymore, potentially reducing the country's food supply when Greece was flooded with migrants in 2015, both unemployment and crime rates increased.
 4. Due to the fact that certain areas are being destroyed by ~~flooding~~ due to the overflowing barriers to protect others, there may be a challenge with arts and aesthetics as ~~some~~ some of the world's natural environments may be destroyed. These natural beauties may disappear, causing the loss of things which brighten a landscape, brighten people's lives and inspire creativity. There are many environmental places on the World Heritage list due to their beauty, and they are already disappearing such as the Great Barrier Reef in Australia which is being torn down by coral bleaching.

STEP 1. Brainstorming Possible Problems / Challenges (cont)

5. Due to the fact Monetine are a "natural monopoly" there may be an economic challenge as this company has no competitors and can behave as it likes. The raising of prices by Monetine during certain months may mean that ~~companies~~ ~~households~~ cannot afford energy, leaving them without power. The monopolisation of this market may allow Monetine to take advantage of the environment as seen in 2014 when the ^{the largest} company ~~with~~ began growing cocoa beans ^{supplies} ~~beginning~~ unsustainably simply to make profit.

"abuse of market power"

{ Research! }

6. Because of the "privatisation of Monetine" there may be a challenge with government as the government may have no control over the countries energy supply, energy is vital to the running of a country and if the government cannot control it, there may be no guarantee that everyone has access. This can be seen in the privatisation of roads, whereby many people can no longer afford to use these ^{toll} roads as they are too costly.

Also shift in company's priorities.

7. Since Monetine are not "surprising the ecological ramifications of [their] business" there may be a challenge with education. Monetine may not truly know the impacts of their endeavours and may not be educated about how it could impact the future. This could cause further problems in the future, as a result of Monetine's potentially acting with little regard for the results of their actions, as a result of possible ignorance. This can be seen in the burning of coal which damaged environments yet in the beginning people did not understand this impact.

Making transparency give the illusion of knowledge.

8. Since "prices become prohibitive for many households", there may be a challenge with social relationships. A social divide may be formed based around those who can or cannot afford a constant supply of energy throughout the entire year. This could result, if the lack of energy continues, in a society with a strong class divide based around individuals or families with year-round energy access. An extreme effect of this access, class divides within societies have been researched to correlate with higher rates of crime and violence.

Resentment ✓

STEP 1. Brainstorming Possible Problems / Challenges (cont)

- R 9. Since Monsoon "prices become prohibitive for many households" during March, April, and May, there may be a challenge with basic needs. If many lower-class people are unable to access energy for a quarter of the year, they will be without the means to cook food or cool houses, the impact of the latter being amplified with rising temperatures. Additionally, availability of low-lying farmland could reduce the both energy and food, and many families may be unable to afford change such as heating and cooling, pumping water, or transporting anything such as food.
10. Since "the energy captured and stored during the monsoon season does not stretch to cover the nation's demand" for March to April, there may be a challenge with technology. As the energy generation systems employed by Monsoon may be reliant on extreme weather events, there may be an insufficient development of technologies which are able to provide more consistent energy generation, potential issue with any renewable energy source. It is a major issue that it does not provide a completely constant energy supply and having systems reliant on extreme weather events can only worsen this.
11. Due to the fact that they "are able to exploit the ocean waters" there may be a challenge with transport. The transport of this water may be difficult and may be inefficient in providing energy to the public. If it is made at the site, there may be difficulty in transporting the energy to places. These may cause a lack of energy in ~~certain~~ certain places.
12. Because there is "black market electricity" which is "difficult to trace or identify", there may be a challenge with law and justice. This illegal practice may not be able to be uncovered and may have detrimental effects on other areas such as people's accessibility to electricity, ethics and so on. Furthermore, people buying this electricity may not be fully aware of the illegality of it or may not be able to access energy in any other way, indicating a problem with the justice system. An example of underground trading of illicit goods is the drug trade, which has not yet been totally eradicated, despite many attempts by governments.

how much innovation is happening, really?

Not clear?

Asymmetric information.

STEP 1. Brainstorming Possible Problems / Challenges (cont)

13. Due to the fact that Monetise is a "natural monopolist," yet their energy generated "does not stretch to cover the nation's demand" for the whole year, there may be a challenge with business and commerce.

But 'admittedly'...

so a bit more nuance is required.

Because the company is a monopoly, this could cause smaller competing businesses to be forced out of the market. This could cause dire energy shortages when Monetise doesn't have enough energy generation to cover the population, since all the other energy businesses might be bankrupt and thus unable to fill the gap in supply. In 2014 Prof. Dean Monster stated that monopolies can cause huge issues in the market

14. Since "overtopping barriers... flood... low lying farmland," there may be an issue with Ethics. Monetise could be displacing countless families by flooding certain areas. Peoples livelihoods may be depending on the farmland that they possess, and yet Monetise floods the region. This could be an unethical practice, depriving people of their homes and incomes without any mention of compensation.

Great.

In 2015 thousands of families in China were displaced in order to build a dam, thrust them into poverty and chaos.

15. Due to the fact that there is a "lengthening wet season," there may be a challenge with ~~physical~~ psychological health, due to a constant fear of worsening storm events. Stress resulting from a fear of extreme weather events may lead to a variety of stress-induced mental illnesses amongst many of the Burmese. Additionally, during months with few extreme weather events an energy deficiency may arise, possibly resulting in continued stress, albeit for different reasons. The effects of the weather on mental health have been observed through the condition seasonal affective disorder (SAD) in which lack of light leads to depression.

Excellent.

16. Since "our overtopping barriers... provide critical extra hours for communities to evacuate" there may be a challenge with communication. As this is an unnatural way to control weather events problems may arise if Monetise believe they have more time than they do in reality and do not warn people in time for them to safely leave. This occurred in Australian bushfires of 2009, where many were caught in forest fires due to poor communication regarding the locations, and speed, of the fires.

Also inherent unpredictability of the climate.

STEP 2. Identifying an Underlying Problem

Based on the problems you listed in Step 1, identify a problem of major importance. Your problem should clearly explain what you want to do, why it should be done and include specific conditions. The Underlying Problem should be written in question form using the words "In what ways might we...?" or "How might we....?"

Because Monetine "prices become prohibitive" for some people over three months a year some households they may struggle to meet their basic needs. If many lower class people are unable to access energy they will be left without the means to do things like cool houses and cook food. Furthermore Monetines flooding of low lying farm land could reduce food availability meaning many families may struggle to afford energy and food.

In what ways might we improve the operations of the energy network so that there is increased fulfillment of basic needs for the citizens of Burma in 2064 and beyond?

~~In 2015 the United Nations declared that access to food~~

Could be more precise.
Would only score in the middle on focus.

Maslow's hierarchy of needs declares that people must feel safe and secure in their lives, in order to achieve this they must have their basic needs met. The United Nations declared in 2015 that these basic needs include access to food and secure standards of living.

STEP 3. Brainstorming Alternative Solutions

Brainstorm as many possible solutions as you can to your Underlying Problem. Choose your SIXTEEN most promising solutions to list below. Write each solution so that it describes WHO will carry it out; WHAT action; HOW it will be done; WHY it will solve the problem; and WHERE and WHEN this solution will take place. (Use spare paper if necessary.)

1. The International Psychological Health Forum will create the Sole Healers. These are shoes which provide a simulation, literally putting someone in the shoes of someone else. ~~More than~~ More than ~~more~~ workers will ~~be~~ wear those and be put in the shoes of lower class people. While the simulation is running, oxytocin "the feeling hormone" will be released to make the workers sympathetic to the lower class. This will give Moreton to increase the accessibility lower class's accessibility to energy. Research has stated that people do not fully understand a problem until they experience it themselves.
2. The Universal Economics Department will create a reward system in which the people who work the most have greater priority to energy. In this system people who ~~have~~ have the greatest contribution to the country will ~~be given~~ ~~get~~ the right to energy. This contribution is decided based on criteria which will include factors such as hours of work, intensity of work and an individual's health. ~~This system will not only~~ ~~allow~~ ~~people~~ ~~who~~ ~~deserve~~ ~~energy~~ ~~the~~ ~~most~~ ~~with~~ ~~energy~~ ~~but~~ ~~will~~ ~~also~~ ~~drive~~ ~~people~~ ~~to~~ ~~work~~, ~~benefiting~~ ~~the~~ ~~whole~~ ~~country~~. Therefore, this will improve the operation of energy so that there is increased ~~improved~~ ~~of basic needs~~.
3. The Worldwide Social Relationships group will create a matching system to pair someone from the upper class with someone from the lower class. The people from the upper class have to help the lower class increase their accessibility to energy by 50%. The people will be ~~psychological~~, matched so that they are more likely to get along, ~~very~~ ~~than~~ ~~not~~ ~~only~~ ~~one~~ ~~person~~ ~~from~~ ~~the~~ ~~upper~~ ~~class~~ ~~will~~ ~~have~~ ~~increased~~ ~~accessibility~~ ~~to~~ ~~energy~~, but they will also have friends and connections ~~potentially~~ ~~their~~ ~~social~~ ~~relationships~~ ~~and~~ ~~chances~~ ~~of~~ ~~employment~~. Dating sites such as match.com have found that matching ~~the~~ ~~participants~~ is more effective.
4. The Worldwide Technological Association will better improve the operations of the energy network by defining the transport of energy. The electrolysis of water will be used to create hydrogen which can be liquefied and used to transport energy. Water from the floods can be used for this to better fulfill people's basic needs. The transportation of energy will be more effective and efficient, increasing people's accessibility of energy. ~~Prof~~ ~~Prof~~ ~~faster~~ ~~fuels~~ ~~an expert~~ ~~on renewable energy~~, stated that electrolysis is the most effective means of transporting energy.

Perhaps board members, rather than workers?

Why health?

Is this the energy network?

A way to come up with a solution, rather than a solution.

How will this improve basic needs? (at least, the transport focus...)

STEP 3. Brainstorming Alternative Solutions (cont)

5. The international corporation for education will teach Burmese citizens how to build machines that convert waste and sewerage into energy and clean drinking water. These small localised machines will be placed throughout communities so that citizens can rely on them for year round energy access, which will ensure they feel more secure. Burning waste to create energy became very popular in India in 2015 as it removed much sewerage from streets. Gates Foundation research.

6. The Global transportation company will improve the operations of energy by using carbon nanotubes to transport and store energy around Burma. These nanotubes are 600x more efficient than other forms of energy carrying wire and are also able to store energy efficiently, allowing citizens to continue to have energy in calmer months. This is because more energy will be able to be given to citizens as less will be lost into transportation.

How do they work?

One of the largest issues in providing energy in 2015 was the inefficiency and high rates of loss.

7. The United Nations Board of Human Rights will work in conjunction with the Burmese government to introduce legislation in order to restrict Monetines destructive practices. It will also provide them with a grant in order to fund their exploration into more sustainable and reliable energy sources such as solar and wind. This will ensure the basic needs of the Burmese people are improved, with their land no longer being flooded and reliable energy being provided. The Economics authority Susan Ferguson Brown stated that customer satisfaction is key in a balanced healthy company.

What destructive practices?

8. The U.S government will ensure increased fulfillment of basic needs by building pumped hydro storage that will drain the flooded low lying areas. This water will be pumped using energy to the top of hills and stored there so in times of calmer weather it can be run through a hydro plant to create electricity.

Excellent.
Hills might be a ways off though.

This was implemented very effectively in China in 2014 and now allows up to 4 terrawatt/hrs of energy to be stored and used as needed.

STEP 3. Brainstorming Alternative Solutions (cont)

9. The Global Organisation for Technological Innovation will improve the operations of energy networks by researching and implementing renewable energy systems which are not reliant on extreme weather events. One example of such a system is Concentrating Solar Thermal, a system which uses mirrors to focus sunlight onto salts, which then melt, retain their heat, and later boil water to turn a turbine, thus generating energy. Systems such as this will continue to function during the months of April to May, hence drastically reducing the energy deficiency during these months, and hence allowing people's basic needs for energy to be better met.

Good to
enhance
that it
complements
existing
technology.

10. The worldwide Board of Business and Commerce will improve the operations of energy suppliers by establishing additional energy companies in Burma to compete with Monetine. This will force Monetine to offer competitive prices, and limit the exorbitance of their prices during times of low energy supply, as a failure to do so will result in a loss of customers. Hence, energy will become more affordable in Burma, thus allowing Burmese citizens to meet their basic needs in regards to a constant energy supply. ~~It is apparent in the advertising of many businesses that they will offer lower rates to attract additional customers.~~

✓

11. The International Physical Health Board, ^{institute} will distribute human-powered energy generators to areas in Burma with a limited energy supply, hence allowing ^{citizens} to generate their own energy when Monetine cannot provide it. This will improve the operations of energy systems as it allows for energy generation to continue through ~~months~~ atmospherically calm months, with the further benefit of improving the fitness of Burmese citizens. Hence, individuals will be able to generate their own energy when they need it, people will hence be able to ensure that their own basic needs are met.

implicit in
the KEP is
the 'existing'
network.

✓

12. The Universal Congregation for Law and Justice will ensure a continual supply of energy, and hence improve the operations of energy systems, by encouraging individuals to take up legal action against Monetine for failing to provide a constant energy supply. By creating legislation allowing such a case to be successful, once one individual were to successfully sue, a precedent would be created making it easier for many citizens to do so, either in individual cases or as a class action. This would soon become too expensive for Monetine to ~~operate in this manner~~ provide an inconsistent service and would hence have to adjust its operations to meet the basic needs of more of the Burmese population in 2064 and beyond.

incentivise

STEP 3. Brainstorming Alternative Solutions (cont)

13. The Global Environment Society will develop ^{micro} energy generators ~~that~~ called Tree Energys. They can be affixed to a plant of any sort and will siphon off excess energy from the photosynthesis process and ^{use} charge batteries with this energy which then can be directly used for power. This technology will be government subsidised, ensuring it is affordable for all, giving many access to reliable energy. The UN states that Energy is essential, in an increasingly technological world.

Pretty general research.

14. The Defence Association of the Gible will develop Dome Homes. These are ^{to} spherical houses on stilts that have many levels and much space; allowing for up to ten families to live there. These Dome Homes will be able to survive even the toughest weather and ^{due to spheres being the strongest structure} storms, even having extending stilts to rise above floods if necessary. These dome homes will also be energy sustainable, with the stilts containing turbines to be powered in floods, winds turbines, cyclones and rated in solar cells for normal, uneventful weather. This will ^{for} better the basic life of the Burmese people. It is a common problem that steady home make great save

Make the energy the focus, not housing.

15. The Worldwide Communication Alliance will create the Swap Home System. This will act as a way to increase accessibility to the energy operating so that there is increased fulfillment of basic needs. This system will involve the lower class swapping homes with the upper classes in places where the lower class have lower accessibility and therefore have to pay more. This will enable the lower class to afford energy when the price is higher, due to the increased accessibility of the upper class homes and allow for the upper class to have electricity as well in the lower class homes due to the upper class sympathy to pay the higher prices. This works to increase people's accessibility to energy and money ^{also improve the lower class living conditions}

for the basic life of the Burmese people. It is a common problem that steady home make great save

Really the energy network?

16. The International Reception Group will create a remote control which controls people's home electricity. This remote control will be used to reduce people's energy use so that they ^{waste} use less energy and use more when required. A play button turns on the electricity in the house, a pause button ~~never~~ turns off the energy and stops it and a stop button transfers the energy to somewhere else when needed. This will make it easier to save energy as when going out, ~~is~~ going on holiday or even when at home during the day, they can regulate their energy usage. A fast forward button also reduces energy usage and specific buttons relate to specific appliances.

✓

energy efficiency category.

STEP 4. Choosing Criteria for Evaluating Alternative Solution Ideas

Your task now is to select the best solution from your Step 3 list. Brainstorm criteria that will help you decide which solution does the best job of solving **your** Underlying Problem. List below FIVE criteria that you think are the most important for evaluating your solutions. Each criterion should have a different focus.

<input type="checkbox"/> 1.	Since the energy systems are reliant on extreme weather, which solution will most improve the operations best improve the operations of the energy network so that these and future energy systems can function despite weather variances?	at vagus
<input type="checkbox"/> 2.	Since the basic needs of the Burmese are at risk, which solution will most increase the fulfilment of basic needs so that people can live with a humane standard of living?	✓
<input type="checkbox"/> 3.	Since Monerine has control over Burmese energy production, which solution will best incorporate ? of by monerine so that it can be implemented without significant opposition?	?
<input type="checkbox"/> 4.	Since this there are frequent extreme weather events, will this solution create the most durable system so that it can persist to supply energy for future years?	✓
<input type="checkbox"/> 5.	Since there are threats to the environment due to human activities, which solution will best mitigate its environmental impact so that further significant damage is not caused?	✓

STEP 5. Evaluating Alternative Solutions

From your list of solutions, select the TEN solutions that you think have the most potential. Use each criterion to rank the solutions on a scale from 1 (poorest) to 10 (best), and enter the numbers in the appropriate columns. Add the ranks you have given to each solution, and enter the sums in the TOTAL column.

Step 3 Solution No.	Alternative Solutions	1	2	3	4	5	Total
# 1	Psychological Health	1	8	1	6	4	20
# 2	Economics	3	2	3	5	6	19
# 3	Social Relationships	5	5	7	2	1	20
# 8	Government + politics	8	7	6	8	8	37
# 9	Technology	7	1	2	7	5	22
# 10	Business and Commerce	2	3	4	1	3	13
# 11	Physical Health	4	6	5	3	7	25
# 13	Environment	6	4	8	4	2	24

STEP 6. Develop an Action Plan

Please write out Step 2 in the box. You will need it for your Presentation of Action Plan in the Nationals.

IWWMW improve operations of the energy network so that there is an increased fulfillment of basic needs for the citizens of Burma in 2064 and beyond?

Your task now is to describe your action plan based on your best solution idea. Explain what the solution will do, how it will work, why it will solve your Underlying Problem, and how it will relate to the Future Scene. Include a description of the timeline you will need to implement your best solution idea. You might consider some of the following concerns: Who will be involved? What actions will be taken? When and where will the plan be carried out? How might you overcome any obstacles? (Use spare paper, if necessary).

The US government will create a coalition with other governments to ensure the increased fulfillment of basic needs by building pumped hydro storage. This system will drain the flooded low lying areas, pumping the water to higher regions. When there is increased energy demand this water can run downhill through an energy generation plant, producing huge amounts of energy which will be sold to the Burmese people for an affordable price, ensuring all have access to this valuable resource. Once run downhill, the water is then pumped back up to the higher reservoir until more energy is required. This initiative will utilise parts of Monetine's existing overtopping infrastructure, meaning the cost of all the new technology will be drastically decreased. This action plan will greatly increase Burma's environmental stability and sustainability, no longer being dependent on flooding regions and destroying the wildlife. Due to the low lying areas being drained, this will also allow for farmland to be reclaimed by its owners, resulting in people regaining their livelihoods and source of income. The monopoly of Monetine will also be broken, encouraging them to improve the ethicality of their practices or risk being ousted by more competitive businesses. An obstacle could be that Monetine would oppose this initiative and not allow for its existing infrastructure to be used, however they will consent once they realise the plan is in their best interests, improving their practices,

What's in it for the governments!

Emphasise in Myanmar.

2064	Assessment of current infrastructure and design of new system to work with this
2065	Building of first Hydro storage plant - Assessment and improvements
2066	Implementation of pumped hydro storage across Burma
2067	Feedback from citizens and improvements
2068	Continuing maintenance and repair

Monetine will continue to operate however it will have a lessened environmental impact as its movement of water will no longer cause flooding or damage to food supply. Citizens will be provided with year long access to energy which will allow for safer more stable lives. The Government will still have some control over the energy supply and will be able to ensure all citizens are able to access it at a fair price.

Pumped hydro storage will be the most humane as it will work to meet the needs of citizens whilst also reversing environmental damage. It will ensure that the basic needs of people are met year round.

This will have the greatest impact as it will minimise environmental impact whilst increasing the land of Burma that can grow food. It will eradicate the monopoly of the energy market whilst creating a stable and secure energy supply.

By creating pumped hydro storage the public energy needs will be more deftly balanced with environmental stewardship, creating a more sustainable energy solution. This solution takes advantage of the Burmese environment without causing damage and destruction. Pumped hydro storage is a far more efficient way to store energy than batteries and as of 2016 accounted for over 90% of the world's energy storage.