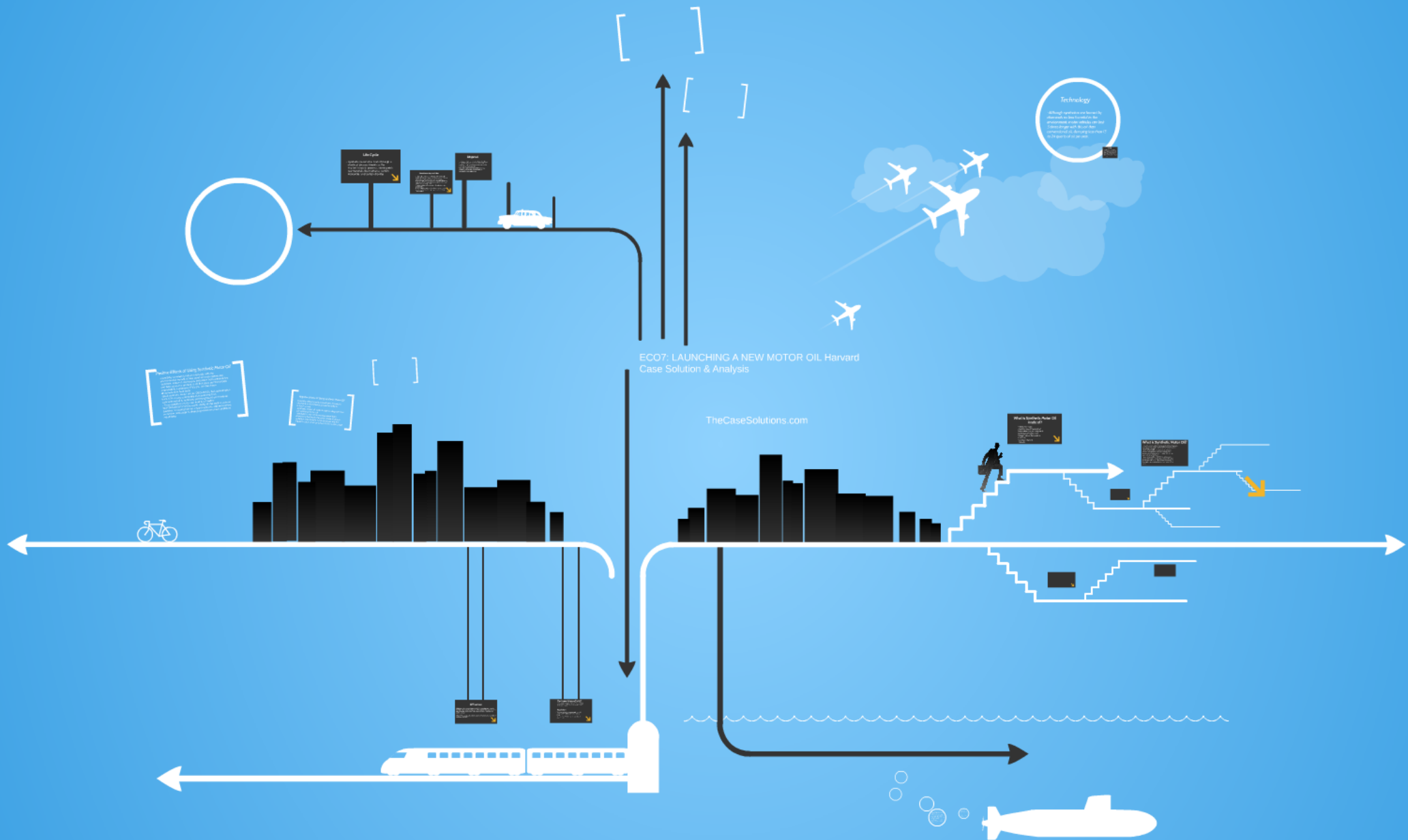






ECO7: LAUNCHING A NEW MOTOR OIL Harvard Case Solution & Analysis

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What is Synthetic Motor Oil?

- Conventional oil is simply refined crude oil. Synthetic motor oil is not only refined, but is also distilled, purified, and broken down into its basic molecules.

- Synthetic Motor Oil is a NATURAL CAPITAL: Natural resources and natural services that keep us and other species alive and support our economies(widely use in air crafts, cars, space shuttles, etc).

- Synthetic Motor Oil is a NON-RENEWABLE resource: A resource that exists in a fixed amount in the earth's crust and has potential for renewal by geological, physical, and chemical processes taking place over hundreds of millions of years.



What is Synthetic Motor Oil made of?

- 100% man-made
- liquid mixture of thousands of hydrocarbons (organic compounds containing only carbon and hydrogen atoms- these occur in fossil fuels)
- petroleum deposits
- lube oils



Life Cycle

- Synthetic motor oil is made through a chemical process known as the Fischer-Tropsch process, starting with raw materials like methane, carbon monoxide, and carbon dioxide.



Manufacturing and Use

- Synthetic oil can then be manufactured using chemically modified petroleum components rather than whole crude oil, but can also be synthesized from other raw materials.
- Once it is broken down to its basic molecules it is rebuilt and added to, so that it can better protect against wear, high heat, cold weather and sludge buildup.
- The process helps engines run more efficiently for a longer period of time.
- Used as a lubricant for internal combustion engines, which powers cars, lawnmowers, engine-generators, and many other machines.



Disposal

- To dispose of synthetic motor oil you should place the used motor oil in a closed container and then take it to a service station or a collection location that recycles used motor oil.
- Recycled motor oil can be combusted as fuel, usually in plant boilers, space heaters, or industrial heating applications.

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