Case Study
VOLKSWAGEN POLLUTION SCANDAL

Introduction:

Volkswagen shortened to VW, is a German automaker founded on 28 May 1937 by the German Labour Front under Adolf Hitler and headquartered in Wolfsburg. It is the flagship marque of the Volkswagen Group, the largest automaker by worldwide sales in 2016. Volkswagen has factories in many parts of the world, manufacturing or assembling vehicles for local markets.

In addition to plants in Germany, Volkswagen has manufacturing or assembly facilities in Mexico, the US, Slovakia, China, India, Indonesia, Russia, Malaysia, Brazil, Argentina, Portugal, Spain, Poland, the Czech Republic, Bosnia and Herzegovina, Kenya and South Africa. In 2011, Volkswagen was named in the top 25 largest companies in the world by the Forbes Global 2000. The Volkswagen Group comprises twelve brands from seven European countries: Volkswagen Passenger Cars, Audi, SEAT, ŠKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN.

Background:

In general, three-way catalytic converter technology, which has been very effective since the early 1980s at reducing nitrogen oxide in petrol engine exhaust, does not work well for diesel exhaust because of its relatively high proportion of oxygen. Volkswagen (VW) was attempting to resolve the issue. In 2005, parts of VW intended to purchase Mercedes' BlueTec system for reducing pollution, but other parts of VW rejected that and preferred to develop their own system. Starting in the 2009 model year, Volkswagen Group began migrating its light-duty passenger vehicle turbocharged direct injection (TDI) diesel engines to a common-rail fuel injection system. This system allows for higher-precision fuel delivery using electronically controlled fuel injectors and higher injection pressure, theoretically leading to better fuel atomization, better air/fuel ratio control, and by extension, better control of emissions.

Model year 2009 Volkswagens were initially sold to the public in 2008. With the addition of a diesel particulate filter to capture soot, and on some vehicle models, a urea-based exhaust aftertreatment system, Volkswagen described the engines as being as clean as or cleaner than US and Californian requirements, while providing good performance. In reality, the system failed to combine good fuel economy with compliant NO x emissions, and VW chose around 2006 to program the Engine Control Unit to switch from good fuel economy and high NO x emissions to low-emission compliant mode when it detected an emissions test, particularly for the EA 189 engine. This caused the engine to emit NO x levels above limits in daily operation, but comply with US NO x standards when being tested, constituting a defeat device. In 2015 the newspaper *Der Spiegel* reported that at least 30 people at management level in VW knew about the deceit for years which VW denied in 2015.

The Case:

Volkswagen installed emissions software on more than a half-million diesel cars in the U.S.—and roughly 10.5 million more worldwide—that allows them to sense the unique parameters of an emissions drive cycle set by the Environmental Protection Agency. According to the EPA and the California Air Resources Board, which were tipped off by researchers in 2014, these so-called “defeat devices” detect steering, throttle, and other inputs used in the test to switch between two distinct operating modes.

In the test mode, the cars are fully compliant with all federal emissions levels. But when driving normally, the computer switches to a separate mode—significantly changing the fuel pressure, injection timing, exhaust-gas recirculation, and, in models with AdBlue, the amount of urea fluid sprayed into the exhaust. While this mode likely delivers higher mileage and power, it also permits heavier nitrogen-oxide emissions (NOx)—a smog-forming pollutant linked to lung cancer—up to 40 times higher than the federal limit. That doesn’t mean every TDI is pumping 40 times as much NOx as it should. Some cars may emit just a few times over the limit, depending on driving style and load.

Questions:

1. If you were the new CEO of Volkswagen group, how would you handle the situation without incurring monumental losses on the company?

Hints:

- A Scandal like this is going to create a lot of rumors about your Brand.
- Being a CEO, you are responsible for leading the Management Board. Now, as a new CEO, you are going to be the one to make sure a scandal like this never happens again.
- You also need to answer for all the damage that has been caused due the scandal to the environment and to the customers as well.
- You need to devise a plan to overcome the losses caused due to such an event and to make changes in the management system.

2. As a Board Member of the Company, how would you address the same problem of this scandal, at the Press Conference?

Hints:

- The reporters may blame the Board for such a scandal
- The reporters may ask you to share the names of the people and other information with regards to the scandal.
- The judges of this event may act as news reporters in this Case Study.

***For Each member of the team, put yourselves in the shoes of a CEO and as a member of the Board of Directors and generate ideas/Solutions in order to solve the case.**