

## Executive Summary

- The aim of this literature review is to address the climate change problem and discuss the technological innovation and developments in various sectors for climate change mitigation. The climate change problem focuses on the increase in global atmospheric concentration of greenhouse gas emissions and its associated impact on the climate.
- Fundamental actions needed to counter the effects of climate change and promote technology innovation for sustainability is discussed through figurative analysis and study. Variations and relative stability of climate is discussed through analysis of historical time period which helps us to establish a different perspective and segregate historical impacts from modern-day climate change problems. The study helped our team to chalk-out practical actions and identify key linkages between human activities and global climate change.
- Role of government policies and other regulatory policy options are discussed along with the critical propositions which are required to facilitate innovation change. It is important to note that policies are efficient and essential methods of promoting sustainable technological innovation. Henceforth, propositions based on tax credit, government stimulus, increase in R&D budget, etc. are discussed in addition to the technological and regulatory policy options.
- The literature also focuses on the challenges in corporate innovation through a socio-technical point of view. Three practical challenges based on technological change and complimentary capabilities were identified and analysed rather than putting more emphasis on the theoretical ones because practical challenges are real world elements being experienced by the corporations all over the world.
- Important technological advancements in the sectors of energy, aerospace and automotive industry are discussed which are acting as a forefront to counter the primary climate change problems. The technical data is extracted from official sources and discussed along with their development timeline to help reader identify the real potential of technological innovation for climate change mitigation.
- Recommendations based on social, technical and innovation issues are discussed which covers a few important take-away points for the reader for future analysis:
  - A broad portfolio to foster technological innovation is required which includes a combination of regulatory & technology policies to encourage innovation and deployment.
  - Encouragement by governments can bring a positive outlook in the innovation sector through increased funding and influx of high-skilled worker.
  - Industry technological dynamism moderate the levels of uncertainty from climate policies and strike a balance between technology development and deployment.
  - Important regime change is required which has public backing to implement important policies and incorporate new technology at faster rate in the corporate sector as these changes affect everybody.