

## ANALYTICAL REVIEW OF APPLE INC. SUSTAINABLE DEVELOPMENT GOALS IMPLEMENTATION

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**Abstract:** the article is dedicated to the very modern and relevant direction of development of large corporations, addressing the global challenges humanity faces like pollution and global warming. Sustainable development goals are the blueprint to achieve a better and more sustainable future for all. The article discusses the approach of Apple Inc to meet these goals, and the impact of the Corporation's activities on the environment. Based on the available reports, the article analyzes the company's stability in the market.

**Keywords:** sustainable development, mobile electronics, CO<sub>2</sub> emission, renewable energy, e-waste.

## АНАЛИТИЧЕСКИЙ ОБЗОР РЕАЛИЗАЦИИ ЦЕЛЕЙ УСТОЙЧИВОГО РАЗВИТИЯ APPLE INC

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**Аннотация:** статья посвящена очень современному и актуальному направлению развития крупных корпораций, ориентированному на решение глобальных проблем человечества, таких как загрязнение и глобальное потепление. Цели устойчивого развития — это план достижения лучшего и уверенного будущего для всех. В статье рассматривается подход корпорации Apple Inc к выполнению данных целей, и влияние деятельности корпорации на окружающую среду. На основе имеющейся отчетности производится анализ устойчивости компании на рынке.

**Ключевые слова:** устойчивое развитие, мобильная электроника, выбросы CO<sub>2</sub>, возобновляемые источники энергии, электронные отходы.

Nowadays Apple name brand is known all over the world. It is one of the biggest companies on the market of consumer electronics. The company is actually considered to be one of the pioneers in the area of Personal Computers. For the years of its existence, Apple Inc. has created a unique reputation, which could be comparable to a cult. In September, 2018, it has become the most expensive public company in history, with its capital exceeding 1,044 trillion U. S. dollars [1].

Jobs settled a principle "Think Different" that associated Apple with unconventional thinkers such as Albert Einstein and Mahatma Gandhi. Their strategy stating that their product items must be revolutionary, attracting attention, astonishing but simple, have led to the company's leadership in extreme competence which takes place on mobile electronics market in a new millennium.

Nowadays, company understands that it needs new key features as world changes quickly, so it bets on **sustainable development and social responsibility**. Well, company's values are revealed in its mission statement: "Apple strives for continuous improvement of our environmental, health and safety management systems and in the environmental quality of our products, processes and services" [2].

Yet before turning to the company's sustainable policy implementation, let us look through what sustainable development goals actually are and why they are important. According to United Nations official website, sustainable development goals "...address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice" [3]. There are 17 interconnected goals, which United Nations is aimed to achieve by 2030.

Personally, we believe that working on such objectives as widespread and affordable clean energy, responsible production and consumption, decent work and economic growth, reduced inequalities, etc. **makes human civilization prosperous**. Moreover, it is **vital for our survival**, as Earth's natural resources have been devastated for a long time. Industrial revolution has brought about significant ramifications for the climate and environment, since vast amount of carbon dioxide is released into the atmosphere from manufacturing processes causing problems like global warming. Pollution is another threat to humanity because it harms biosphere. Consequently, we are quite certain that humanity needs to unite all the endeavour to ensure stable future for ourselves.

Moving to Apple Inc contribution particularly, the company has developed its own Environmental Health and Safety Policy. In 2017, Greenpeace USA scored 17 of the world's leading tech companies based on their transparency, performance and advocacy efforts in three areas critical to putting the sector on a sustainable path: **reduction of emissions through renewable energy, use of recycled materials, and elimination of hazardous chemicals** [4]. As a result, using the assessment range from A to F, where A refers to a comprehensively environmentally-harmless organization and F to a highly hazardous one respectively, Apple Inc has been given by overall B- mark, which is virtually second-best result among the companies researched [5]. Thus, we have focused our attention on the company's activity in three above areas.

To start with, Apple Inc is targeted at complete elimination of carbon dioxide emission, released during manufacturing, product use, facilities, transportation, and recycling [6]. For the purpose of monitoring the reduction of the amount of CO<sub>2</sub> released, the company constantly measures its comprehensive 'carbon footprint', dividing all its emission into three scopes:

- Scope 1 emission results from fuel combustion from sources company owns or operates — like vehicles or natural gas for heating;
- Scope 2 emission results from Apple's use of electricity;
- Scope 3 emission is outside of Apple's direct control: including emission from manufacturing, transporting, and using and recycling their products.

It is important to mention that all of the electricity from their facilities worldwide (which is about 850 000 square meters) is covered by renewable energy from January 2018, and we reckon this is a great accomplishment. So, Apple Inc, **which is initially mobile electronics company, now produces its own clean energy** by building its own renewable energy projects, including solar arrays, wind farms, biogas fuel cells, and low-impact hydro generation systems. Furthermore, they sign long-term renewable energy purchase contracts, supporting new, local projects that come up to their robust renewable energy sourcing principles.

It is interesting to note that the corporation has also reduced the average energy produced by its products by 68 per cent. For example, iMac consumes up to 96 percent less energy in sleep mode than the first generation.

By implementing all the above improvements, Apple has reduced emissions from its offices, data centers, retail stores, and fleet vehicles worldwide by 54 percent since 2011, — even while its energy use more than tripled during the very period [7]. This result is an equivalent to taking more than 444,000 cars off the road each year [8]!

Besides carbon dioxide emission, another problem is electronic waste, i.e. electronic scrap components, containing potentially harmful materials such as cadmium, lead, beryllium, or brominated flame retardants. According to UN data, in 2016, 44.7 million metric tonnes of e-waste were generated. This is an equivalent of almost 4,500 Eiffel towers [9]. Apple is trying to solve this problem by means of Liam, a large-scale robot with 29 robotic manipulators. In comparison with assembly robots, Liam is designed to disassemble unusable iPhones. Damaged iPhones are then shipped to one of two US distribution centers. After a manual inspection, the devices are shipped to an Apple warehouse where Liam helps them find a second life. However, the issue is that the robot is currently capable to deal only with iPhone 6S, while there is nothing to do with the e-waste resulted from all other product items [10]. Another measure taken is that the company prioritized aluminum that was smelted using hydroelectricity rather than fossil fuels, and it reengineered its manufacturing process to reincorporate the scrap aluminum.

However, notwithstanding all the positive outcomes of the corporation's activity, there appears to be a drawback. It is significant to stress that many of Apple's latest devices are now designed in a way to make it much more difficult, if not impossible to repair or upgrade, shortening their useful life, and increasing the potential negative impacts of Apple's products on the planet. Such a design strategy may help Apple's profits in the short term, but risks jeopardizing Apple's environmental reputation and the customer loyalty that has come with it.

To conclude, we insist that Apple Inc is highly sustainable on the modern mobile electronics market. The company has proved that it is able to adjust its strategy constantly and rapidly according to the arising needs of humanity. We reckon that Apple Inc Environmental and Safety Policy should be adopted by large Russian companies. "The time for change is now," Apple's chief executive Tim Cook recently proclaimed. "We know at Apple that climate change is real. The time for talk has passed and the time for action is now. We're thrilled to continue on a course of doing things that make the world better than we found it" [11].

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