concept note for

A Government of India Initiative to enable citizens in making ethical and sustainable choices in their purchases.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>2</td>
</tr>
<tr>
<td>Summary</td>
<td>2</td>
</tr>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>What is Sustainable Production and Consumption?</td>
<td>3</td>
</tr>
<tr>
<td>The Indian Context</td>
<td>4</td>
</tr>
<tr>
<td>Impactwala: The Vision</td>
<td>4</td>
</tr>
<tr>
<td>Needs Analysis</td>
<td>5</td>
</tr>
<tr>
<td>Individual</td>
<td>5</td>
</tr>
<tr>
<td>Business</td>
<td>6</td>
</tr>
<tr>
<td>Social</td>
<td>7</td>
</tr>
<tr>
<td>Government</td>
<td>7</td>
</tr>
<tr>
<td>Global</td>
<td>8</td>
</tr>
<tr>
<td>Impactwala: How it works</td>
<td>8</td>
</tr>
<tr>
<td>Rationale: Behaviour Change with Information</td>
<td>8</td>
</tr>
<tr>
<td>Rating system</td>
<td>9</td>
</tr>
<tr>
<td>Information Platform</td>
<td>10</td>
</tr>
<tr>
<td>Emerging Technologies that drive Impactwala</td>
<td>11</td>
</tr>
<tr>
<td>Blockchain</td>
<td>11</td>
</tr>
<tr>
<td>Artificial Intelligence</td>
<td>11</td>
</tr>
<tr>
<td>The Impactwala Application for Consumers</td>
<td>12</td>
</tr>
<tr>
<td>The Impactwala Application for Producers</td>
<td>12</td>
</tr>
<tr>
<td>Case Studies</td>
<td>13</td>
</tr>
<tr>
<td>The Rise of Shipbuilding in South Korea</td>
<td>13</td>
</tr>
<tr>
<td>The Growth and Adoption of Renewable Energy in Germany</td>
<td>13</td>
</tr>
<tr>
<td>Impact of the Bureau of Energy Efficiency, India</td>
<td>13</td>
</tr>
<tr>
<td>Collaborators and data providers</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
<tr>
<td>The Impactwala Team</td>
<td>16</td>
</tr>
<tr>
<td>Sustaining the Initiative</td>
<td>17</td>
</tr>
</tbody>
</table>
Summary

Consumer purchasing behaviour is increasingly driven by product information. It has been noted that consumers are demanding for information on environmental, health, social and economic impacts of products they purchase. Presently, such information is sparse and distributed which makes it difficult for consumers to assimilate and base their purchase decisions on it.

This paper details the vision and value proposition of Impactwala. Impactwala provides consumers with information on the environmental, health, social and economic impacts of products and services, at the point of purchase. The initiative envisages that India will lead the world in sustainable and ethical consumption by providing citizens with impact information that will be generated from a wide array of information and compiled with the help of latest information technology. The intention is to enable businesses in producing sustainably and ethically by creating demand through informing consumers.

Impactwala envisions to be a National Centre of Excellence, under the Government of India, that propels the nation towards Sustainable Consumption of Production. The initiative builds upon the existing policy and legislative framework of Government of India under the National Environmental Policy, 2006. The policy mandates the formation of an information platform for real time data on sustainability for consumer goods, and ecolabeling which is the core focus of Impactwala.

As an autonomous institute, Impactwala will provide comprehensive and independent impact ratings for multiple categories of products similar to how the BEE (Bureau of Energy Efficiency) provides energy rating labels to electric products. The government will ensure that impact ratings are presented along with other product information on e-commerce portals such as FlipKart and Amazon. Over time, the ratings will be made available to consumers purchasing from physical shops.

The Impactwala ratings will be generated by utilising data from multiple sources, including but not limited to data on products, companies, brands, research journals, government data sources, independent research institutes, and international rating agencies. Consumers will have the option to choose a specific impact area that they are concerned about. Blockchain technology and Artificial Intelligence (AI) will be deployed to scale the information platform.

If initiatives such as Impactwala are supported through policy and funding, India will be one of the first countries to implement such ratings thus, leading the world towards sustainable development. In order to meet national and global obligations it is imperative that, at this stage of development, goods and services are produced in an ethical and sustainable manner. Impactwala will enable individuals from diverse backgrounds and preferences to be able to make more sustainable choices in their daily lives which consumer preferences will further encourage businesses to engage in sustainable production. It is in this way that Impactwala helps fulfill the Sustainable Development Goal 12 that stands for sustainable consumption, production, use, and disposal of goods and services.

Vision

Enabling India to lead the world by empowering its citizens to make sustainable and ethical consumption choices through information technology.

1. 2015 Cone Communications/Equity Global CSR Study. http://www.coneomm.com/research-
blog/2015-cone-communications-equity-global-csr-study/downloadResearch
ductionnep2006e.pdf
Introduction

One of the key issues in the 1992 United Nations Conference on Environment and Development was Sustainable Consumption and Production. In the following years, with the World Summit on Sustainable Development, Paris Climate Accord, and the introduction of seventeen Sustainable Development Goals (SDGs), sustainable consumption and production has continued to be an important theme of discussion among global leaders. However, much is yet to be achieved.

According to World Wildlife Fund’s (WWF) Living Planet Report (2006), humanity’s “ecological footprint” has increased by 125% of what the earth can support (that is, the global carrying capacity), and is expected to rise to 170% by 2040. The present consumption rates are despite the fact that over 10.7% of the global population still lives below the poverty line as of the year 2013, without access to basic goods and services including healthcare and social security.

With the global population growing rapidly, and countries like India and China pulling millions of people out of poverty each year, the demand for more goods and services is inevitable. The world GDP is projected to grow by 325%, from the base year 2007 till 2050, and the already populous nations like India and China are likely to rival the US economy by 2050. The middle and lower-middle income groups looking up to the lifestyle of high income groups have become victims to this “culture of consumerism”.

In response to such global changes, the United Nations released the SDGs, which are the overarching developmental framework to be followed by adoptive countries until 2030. Of the 17 SDGs, Goal 12 is on Responsible Consumption and Production, which can be achieved by ensuring sustainable production, use, and disposal of goods and services.

Multiple policies set up by the Government of India over time have recognised the need for sustainable development in their specific context. Some of these policies include The National Forest Policy, 1988, the National Conservation Strategy and Policy Statement on Environment and Development, 1992, Policy Statement on Abatement of Pollution, 1992, National Agriculture Policy, 2000, National Population Policy, 2000 and National Water Policy 2002. These policies are supported by the existing legislative framework under the umbrella of the Environment Protection Act, 1986, the Water (prevention and Control of Pollution) Act, 1947, the Water Cess Act, 1977, the Air (Prevention and Control of Pollution) Act, 1981, the Indian Forest Act, 1927, the Forest (Conservation) Act, 1980, the Wild Life (Protection) Act, 1972; and the Biodiversity Act, 2002.

What is Sustainable Production and Consumption?

The United Nations Commission on Sustainable Development (UNCSD), 1994, defines sustainable production and consumption as “The use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations.”

Current resource consumption pattern has led to the destruction of 80% of the forests. It is estimated that 99% of the goods purchased in North America find their way into the garbage within 6 months. This rate of consumption would require us to have at least 4 standby planets and their resources, which of course we do not have. For the planet to sustain life for all species, and provide equitable and just life to all humans, we must ensure sustainable production and consumption of goods and services.

The goal of sustainable consumption and production can be achieved by implementing favourable policies and facilitating behaviour change in consumption patterns. By informing consumers of the ecological consequences of consumption, and providing avenues to make more ethical choices, the currently evolving shift in consumer consciousness can be translated into action. With consumers opting for more sustainable products, the increase in demand will encourage producers to transform their ways of production. For producers, changing models of production would not just be a reaction to changing consumer preferences, but a means of achieving larger market shares and legitimacy in the public sphere.

5 PricewaterhouseCoopers, from World Bank Source data. 2008
6 http://www.unpd.org/content/undp/en/home/sustainable-development-goals.html
7 Environmental Policies in India towards Achieving Sustainable Development.
9 https://sustainabledevelopment.un.org/topics/sustainableconsumptionandproduction
The Indian Context

India has a number of comprehensive policies for protecting the environment, managing waste, controlling pollution, and enforcing labour laws and social justice, which have emerged from concerns voiced both locally and globally.

While India is being one of the fastest growing economies, it is also home to a large number of the world’s poor. More often than not, the costs of development are borne largely by a nation’s impoverished population in the form of degraded environment, depleted resources and restricted employment opportunities. Moreover, maintaining affordability of basic necessities for everyone is vital for its economy. At the same time, Indians are increasingly concerned with the excessive exploitation of natural resources as they witness adverse effects from climate change. The declining air quality in Indian cities like Delhi has resulted in severe health issues, and an increase in the usage of single-use plastics has created serious waste management challenges in most cities. The changing climate and decreasing rainfall is also affecting the lives of rural Indians by causing disruptions in farming and other livelihood opportunities.

When producers adopt more sustainable and ethical production methods, the impoverished segment will directly benefit from better environment and living conditions. Impactwala will enable growth in the demand for sustainably produced goods and services. With economies of scale, prices for these goods will drop making it possible for more people to be able to afford such goods. By promoting sustainable and ethical consumption and production through Impactwala, it is possible for India to meet its local and global commitments to sustainable development, while ensuring improvements in quality of life for millions of people living in poverty.

In the year 2006, the Government of India enacted the National Environment Policy (NEP) which extends the coverage to filling existing gaps in the policy framework, while taking the present knowledge and experience on sustainable development into account. The first principal of the policy states “Human beings are at the centre of Sustainable Development concerns and are entitled to healthy and productive life in harmony with nature”. And the twelfth principle covers the environmental standards stating “environmental standards must reflect the economy and social development situation in which they apply”. The NEP represents India’s commitment to ensure a clean environment and equitable society as mandated in the Constitution in Article 48 A, 51 A (g), and 21.

Impactwala: The Vision

Informed consumers from all walks of life, who are concerned about the environmental, social and economic impacts of their lifestyle choices, are ever more willing to make changes in their consumption habits. Advancements in technology, coupled with increased use of the internet (primarily social media channels), now enable them to be more informed and take appropriate action. India has the largest population of millennials in the world who are expected to make up one-third of the Indian population by 2019 according to UN estimates. Their influence can far exceed their numbers as they are rapidly embracing mobile devices, which are increasingly equipped with reliable internet connectivity. This is set to revolutionise the business landscape in India. Morgan Stanley estimates that the 38% countrywide internet penetration in 2015 will increase to 60% by 2020, with 90% of users connected with smartphones. The price of 4G handsets have dropped more than 35% since mid-2015, and mobile broadband penetration could increase from 17% of the total population in 2015 to about 50% in 2020.

References:
The strategies and actions of the NEP include, “5.3.2 Environmental management systems, Ecolabeling and Certifications”, “5.5 Environmental Awareness, and Information” and “5.8 Research and Development”.

The actions in these strategies include formulating good practice guidelines (5.3.2, [C]), for which Impactwala is engaged with One Planet Network, UNEP’s 10 YFP (United Nations Environment Programme’s 10 Year Framework Programme) initiative. Impactwala is developing an open source online information platform which will enable consumers to access environment, social, health and economic impact of products in real time as mentioned in Action 5.5 [A]. Through the information platform, research areas can be identified and prioritised (5.8 [a]).14

Currently, impact information such as environment pollution, depletion of natural resources, impact on local communities and treatment of workers resulting from any product is sparse and scattered across multiple platforms. For a lot of this data, the level of completeness and accuracy is also questionable. The consumer does not have enough time and resources to look for this data to make relevant decisions. Impactwala envisions to remove barriers such as lack of information and convenience in accessing information for sustainable consumption choices. The initiative collects impact data for products and companies from multiple data sources and aggregates social, environmental, economic and health impact data into composite relatable indicators. The consolidated Impactwala ratings are available to all segments of consumers who may otherwise not be exposed to product impact information. It is a collaborative platform for multiple organisations and individuals to pool in and expand the information platform, which will remain open-source. Impactwala will provide the core framework for management and integration of impact data from a variety of sources.

Impactwala engages with consumers to engender behaviour change in their product choices by providing them with relevant information. As a government initiative, Impactwala can instil a sense of credibility and responsibility in consumers. They can then use their purchasing powers to create impact and influence producers by using the Impactwala rating.

Needs Analysis

Individual

Organisations such as Fair Trade, India organic, Ministry of Ayush, and USDA organic have enabled consumers to choose better products. One of the most successful interventions in India has been the Bureau of Energy Efficiency (BEE) star logo that depicts the energy efficiency of electrical appliances. Consumers now take the BEE Energy Rating into consideration while purchasing electrical goods, and producers have responded with supplying more energy efficient products.

Adopting sustainable lifestyles has traditionally been the exclusive domain of environmental activists. The population at large has not participated in making the shift as


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much as the ‘save the planet’ brigade. This is rapidly changing.

As internet becomes more pervasive, consumers are increasingly informed and aware of local and global issues that affect them and have a better understanding of the threats to the survival of life on the planet. Insight is just a tap away through exposure to a steady stream of information on personal timelines and social media feeds. There is also a re-awakened sense of compassion towards the planet, and a deeper understanding of the consequences present lifestyles have on it. The consumers of digital India wish to know the source of their food, effects of consumer goods on personal and public health and the environment. This is due to the increased focus on issues such as global warming, climate change and labour rights in popular discourse. With the combination of access to information and experienced empathy, consumers today are more primed to take action.

Research shows that 75% Indian college students described themselves to be ethical to a “fair amount” when it came to their buying behaviour. It is worth noting that they highlighted how lack of ethical products and information on products were the chief reasons preventing them from making better choices.15

Why does this increased awareness not always translate into practice? Why does this shift in consumer consciousness not result into behaviour thus, reducing the consumption of unethical and unsustainably produced goods? One major contributor is absence of access to credible information at the point of decision making.16 Most often, consumers don’t have expertise or the time to collect information from various sources and analyse it before making a choice. A study conducted by Fairtrade in India reveals that lack of information and transparency on the sustainability of products is one of the fundamental factors that prevent Indians from buying ethical products. It found that 18-24 year olds are of the opinion that it is not only the government’s responsibility to enforce ethics in business but rather a joint responsibility of producers and consumers. Younger customers are much more conscious of the need for ethically sourced products, and they are increasingly shifting their purchase behaviour to reflect these beliefs.17 The National Geographic led Greendex surveys started in 2008, and their findings from 2014 for 18,000 customers across 18 countries rank India as the top scorer for environmentally friendly consumer behaviour, which assesses dimensions such as transportation patterns, energy and resource use, and consumption of food.18 While the intent to change behaviour is present in consumers, actual action is not rising as significantly. Lack of access to relevant information could be a major barrier preventing resolve from translating into practice. This is where Impactwala comes in. By offering users customisable impact ratings that are understandable and accessible at the point of purchase, Impactwala enables consumers to act on their values by choosing more sustainable and ethical goods.

Business

Businesses stand to gain significantly by engaging in sustainable and ethical production driven by consumer demand. Research suggests a compelling parallel between a businesses’ need to meet shareholder value, and its responsibilities towards sustainable development.19

Through stakeholder engagement across all levels, companies can identify ways of reducing their negative environmental and social impacts. Instead of the traditional, narrow view of optimising short term financial performance, businesses can focus on ‘creating shared value’ (CSV), which holds that societal, and not just economic needs, define markets.20 A great example of a working model of CSV is the B Corporation Certification by a global initiative called B Corp. They certify companies that “meet the highest standards of verified social and environmental performance, public transparency, and legal accountability, and aspire to use the power of markets to solve social and environmental problems.”21 Some of their most famous global partners include Ben and Jerry’s, and Organic India.

While many businesses find transitioning to a different set of values challenging, there are enterprises that have emerged more successful, post such a transformation. Interface Carpets, the world’s largest carpet tile

17https://people.exeter.ac.uk/mrz201/FT%20Results.pdf
sellers, utilise innovation and modularity in both their product and worldview in order to be more sustainable and ethical.22

It is noted that sudden change in regulation in relation with manufacturing laws may hamper the process of innovation and lead to under-utilisation of resources. Impactwala offers businesses the opportunity to transition to a more sustainable model through responding to changing consumer demands instead of imposed regulations. By analysing shifts in consumption patterns in real-time, businesses can focus on innovations to align with consumers’ tastes and preferences. Impactwala assists businesses by offering them consultancy services to improve their production processes and achieve higher sustainability ratings. Good ratings would also give smaller, ethical businesses the required boost to compete with big players. Moreover, through real-time consumer behaviour data from the Impactwala platform, businesses would be able to swiftly respond to these changing consumer patterns.

Social

Reports show that millennial consumers are mindful of environmental and social issues, and demand information when it comes to sourcing products they regularly purchase. According to a study conducted at Delhi University, 82% students said that a brand’s ethical stance has a significant influence on their purchase decisions.23

Family, friends and peers have a tremendous influence on consumer behaviour of young Indians.24 Product reviews and ratings shared by their network on social media are increasingly influencing consumption behaviour. They are seeking approval on their purchases by sharing their views and experiences extensively on social media platforms. With greater awareness in consumers from stories and campaigns on the environment, social and economic issues, an ethical and sustainable purchase is more preferable and attracts more positive feedback on social media.

Social media has influenced consumers to take action with remarkable outcomes. The most notable example is the “Swachh Bharat Campaign” led by the Honourable Prime Minister, Shri Narendra Modi, that mobilised citizens of the country from all walks of life to engage in cleaning up streets, roads, and common infrastructure. The campaign picked up pace and publicity through social media, where images of people cleaning public places encouraged others to join the movement. Similarly, Baba Ramdev successfully used marketing and social media to position his initiative, Patanjali, as a better local option. Patanjali has grown to be one of India’s fastest growing FMCGs in the last 5 years and has seized a substantial market share from established multinationals such as P&G, Nestle and Unilever.25

With Impactwala ratings, there is a strong hope of strengthening the trend of conscious consumption. Moreover, further division of the impact ratings into social, economic, health and environmental categories enables consumers to choose which categories they want to impact through their product choices and share their preferences and sentiments over media platforms. Consumers’ social need to contribute to society will be met by communicating their position on practices such as child labour, animal welfare, worker rights, and environment degradation through consumer choices and by talking about it on social media.

Government

The Government of India has announced a national manufacturing policy with the objective of enhancing the GDP share of the industry to 25% within a decade. With the realisation that the manufacturing industry has a multiplier effect on the creation of jobs, the government has brought out this policy to create 100 million jobs. The Government will further create the enabling policy framework to provide incentives for infrastructure development on a Public Private Partnership (PPP) basis through appropriate financing instruments.26

There is also a rise in household disposable income powered by a rising middle class that is expected to be 89 million households by 2025. Increases in the household disposable income will also lead to an increase in consumption expenditure, with McKinsey’s global institute reporting that the aggregate consumption in India will grow in real terms from Rs. 17 trillion in 2007 to Rs. 70 trillion by 2025.27

The increase in consumption can lead to an unprecedented depletion of global and national natural resources. It is the need of the hour

24 Ward (1974) defined consumer socialisation as the process by which “young people acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the marketplace.”
26 National Manufacturing Policy, 2011
to ensure that the products consumed by one of the largest economies in the world are produced in an ethical and sustainable manner, by minimising damage to the environment and the citizens of the country. Considering these realities, the Government has created the 2030 Agenda for Sustainable Development. And this is where Impactwala stands to make positive headway in achieving these goals.

As more ethical and environment friendly products get sold, there will eventually be an increase in production of goods that are ethical and non-polluting in nature. Many positive externalities will follow this shift such as decrease in prices of sustainable production, equitable practices in businesses reducing inequalities, reduction in non-biodegradable waste generation amongst others. This has a possibility to simultaneously address multiple challenges.

Through initiatives, such as Impactwala, India will be propelled to the forefront as a global leader in its commitment to empower its citizens with information using latest technology, while also making strides towards achieving the targets set under Goal 12 of Sustainable Consumption and Production (UN’s SDGs). The environmental and social goals and targets that India has committed to in the United Nations Framework Convention on Climate Change (UNFCCC) will also be realised as manufacturers transform production practices and innovate on less harmful materials.

**Global**

With international focus shifting from mere economic growth to a more holistic and sustainable model of development, it is of great importance that the consumer opinion on sustainability and ethics is voiced and heard by corporations. Ensuring that the products are manufactured in an ethical and environment-friendly manner is critical for the burgeoning global economy.

Impactwala: How it works

**Rationale: Behaviour Change with Information**

The Impactwala rating system will be a great tool to achieve global targets set under the SDGs. Impactwala directly addresses the SDG 12. A shift towards a more sustainable production through changes in consumer preferences will also help with other SDGs including - good health and wellbeing, reduced inequalities, climate action, life below water, life on land and partnerships for goals.

Impactwala leaves the choice to the consumer as to what they are willing to do with the information provided. Impactwala does not endorse or condemn any brands or products but simply provides the relevant details to the information seeking consumer. As consumers start to use impact information in their decision making, producers will notice the trends in consumer purchasing and try to be more ethical and sustainable to gain market share. By empowering consumers with relevant information, Impactwala has the potential to bring about a global shift in producer behaviour.

Human behaviour, and thus by extension, consumer behaviour, has been a subject of research for a very long time. It is a transdisciplinary field of study, where fascinating findings are emerging from fields of psychology, sociology, neurobiology, and other behavioural sciences. One of the strongest lines of thinking in applied behavioural sciences currently is the nudge theory, which holds that making small changes in a person’s chosen environment can change their behaviour.28 The Nudge framework can use the propensity to make irrational decisions and actions into directing consumers to take actions that are beneficial for themselves and society. One of the powerful frameworks of Nudge which has yielded positive outcomes is “Contextual Information” i.e. providing the right information at the right time in the most usable form.”

As a Nudge, Impactwala will provide people with product impact information for their purchasing decisions right at the point of purchase. This product impact information is presented in the form of a product rating that appears next

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to other relevant product information.

The Impactwala portal also has a blogs section that covers topics of sustainable production and consumption. They are meant to inculcate behaviour change through educating people of outcomes of purchase decisions. The tone of the articles avoids preaching and try to identify with consumers and their struggles when it comes to sustainable consumption. The blogs capture experts’ opinions and writers’ personal struggles with sustainable behaviour and their motivation to continue making informed choices.

**Rating system**

Impactwala is a unique rating system that provides overall sustainability and ethical rating of products and services. A study on consumers from Nordic countries points out that comprehensive and quantitative information about product impact triggers in positive judgements and behaviour. In 1991, the Government of India launched a similar initiative called Ecomark under the Ministry of Environment and Forest (MoEF). It was a commendable move, however, the market conditions, consumer awareness and the information technology was not as evolved enough then and as a result, less than 30 Ecomark licenses have been granted in more than 25 years of its existence.

Impactwala intends to change this by leveraging the global impetus for sustainability, higher consumer awareness, participation from multiple stakeholders and breakthroughs in technology ensuring that it becomes an effective tool to enable behaviour change in consumer behaviour.

Presently, many initiatives and institutions provide consumers with data on one or more domains but generally do not cover all domains of environmental, social, health and economic impact of a product. Organisations such as Fairtrade provide data on areas such as fair labour and wages, but do not provide information on any health impacts. On the other hand, organic product labels signify that organic ingredients are used in the product. If a consumer wishes to know both of the above-mentioned impacts and collect some more information regarding product sustainability, and also make a purchase, they will have to check multiple labels and visit multiple websites which is time consuming. There are also cases where a product has multiple labels listed on the package and consumers don’t know what they really mean. In many countries, independent agencies have rated some aspects of a product or service, but there is a lack of information on the assessed criteria, its authenticity, and impartiality of these agencies. By providing a purchase option along with credible, accurate and transparent impact information and other relevant information, we enable consumers to quickly make more sustainable and holistic choices which were not feasible earlier.

The ratings are determined by aggregating information from multiple sources and data types. Impactwala is establishing collaborations with independent organisations such as Fairtrade, Ethical Consumer, EPEAT, eco-sapiens; government institutes such as the Pollution Control Board (PCB), the Indian Statistical Institute, Open Government Data.
Platform, India; research institutes such as TERI (The Energy and Resources Institute), IITs (Indian Institute Technology), IISc (Indian Institute of Science), IIIT (Indian Institute of Information Technology) and ATREE (Ashoka Trust for Research in Ecology and the Environment); and news sources to build a more comprehensive picture of the impact of a product.

A customisable rating system would enable consumers to prioritise the areas for creating impact. If some individuals care more about certain issues, they will be able to get a customised rating according to their preferences. For example, a mother, who is more likely to be concerned about the health impact of any product on her child, would be able to generate a customised rating that prioritises the user’s health and choose the most optimal product for her child.

The Impactwala rating system will evolve incrementally, where it has rated one product category to begin with, and feedback is being sought on the results. All possible stakeholders will be engaged including producers, eco-labelling organisations, consumer awareness initiatives and government agencies. The multi-stakeholder approach will be helpful in identifying the gaps in methodology and avenues for improvement towards greater accuracy. The ratings will be customised accordingly, to each product category; for example, ratings of health and beauty products will focus more on health impacts of the products on consumers and workers who produce them; while the ratings of electrical and transport machines will be based more on the environmental impact of materials used and social impact on workers and other stakeholders involved in the lifecycle of the machine.

**Information Platform**

Impactwala will be powered by an extensive information platform. It will collate and aggregate data from diverse sources to derive comprehensive impact ratings from relevant impact domains for specific product categories. The information platform will be open-sourced where individuals and organisations can also contribute to the portal. The collected data could be specific to industry, production technology, company, product category or product. This data will be linked to a product to evaluate its impact. The products will be rated with available data and stakeholders will be able to see what information is used, its source and how it has been used in the rating. Availability of impact data is growing rapidly, and critical missing data will gradually become available by collaborating with

**RELEVANCE OF DATA SOURCES**

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<th>Now</th>
<th>Future</th>
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<tr>
<td>International Labels</td>
<td>Product data</td>
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<tr>
<td>Company and brands</td>
<td>Primary research</td>
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research institutes and through primary research with field partners. The open source data will be available to all for research, analysis and possible new applications.

Presently, data from international labelling organisations and global rating agencies is readily accessible, while sustainability data on products and companies is difficult to obtain. Other important sources are think tank reports, research journals and government data amongst others. Impactwala will be built based on the currently available data, and as the information platform evolves, emerging technologies will be employed to incorporate additional data required for the rating system. With the aid of technology, there will be growing focus on national and localised data sources.

The impetus is to organically move towards data from companies and government agencies. The data currently available from rating agencies and labels is not always product specific. It is more company/brand/factory/industry specific. A factory may produce multiple products and a company may also have multiple subsidiaries or outsourced production. By incorporating technologies, such as Blockchain and Artificial Intelligence, and sourcing more detailed product data, product specific analyses and rating will be done.

**Emerging Technologies that drive Impactwala**

Impactwala has a roadmap in place to capitalise on emerging technologies that are going to transform how information is sourced and processed. These technologies will enable the team to evaluate and rate an exponentially large number of products that is not humanly possible today.

### Blockchain

The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value. It is a cryptographically secure distributed ledger in which each node has a verified, up-to-date and immutable history of all transactions that have ever taken place among participants that do not necessarily need to trust one another. Validated transactions cannot be altered or tampered with and can only be reversed by a subsequent transaction. One of the rapidly emerging applications of blockchain is to be able to verify and store transactions in a secure and distributed fashion as the product moves through the supply chain. Detailed information about the product and its components can be recorded in the blockchain ledger, which can help verify the source of all raw materials; information on various manufacturers involved in the production; and their role in the final product. Impactwala will be able to analyse the total impact of the product by evaluating the performance of all the stakeholders including the impact from resource extraction, subcontractors and component suppliers. Blockchain technology will enable transparency in terms of authenticity and provide impact information of the product by taking the entire supply chain into consideration.

### Artificial Intelligence

Presently, most rating agencies and labels carry out the evaluation of products and companies manually to a large extent. Moreover, the volume and types of impact data available is exploding, and it is increasingly difficult for humans to wade through and make sense of it all. As a result, a handful of products can be rated manually and updates are only possible once every few months at best.

‘Artificial Intelligence’ (AI) is the ability of computers to recognise patterns in big quantities of data that enables them to quickly process data and compute answers with very high accuracy that is often difficult for humans. Advanced AI and powerful computers will empower the Impactwala team to revise the impact ratings more frequently and eventually do it in real-time. As Impactwala rates products and companies on their impact, the AI algorithm will get trained on how experts are evaluating and rating companies. AI thrives on large volumes of data and its algorithms become smarter which will make it possible to generate ratings faster and more accurately.

One major application of Artificial Intelligence is ‘Natural Language Processing’, which allows the algorithms to understand the tone and emotion of the written text. This technology will enable Impactwala to analyse large volumes of textual data published on company websites, independent rating agencies, and news portals, and integrate it into the company and product rating.

The process of rating products and companies will accelerate with time by leveraging AI. AI will also enable
Impactwala to make the platform capable of hosting more product categories, expand across nations, and achieve economies of scale.

**The Impactwala Application for Consumers**

Product-level impact information will be available on Impactwala and users will be able to further customise ratings based on their preferences and concerns. They can incorporate the presented information in their decision-making process while making product choices online. Over time, the product-impact information will be made available for offline purchases as well. As the Impactwala platform accumulates more data, more players will be able to creatively use this information to drive behaviour change among consumers. One way that Impactwala data can be used is by enabling consumers to share their impact data on social media to inspire others in their network. Another possibility is for gamification of consumers’ impact information in creative ways that would motivate consumers to compare their positive impact with each other to propel them to take more action and create greater impact.

**The Impactwala Application for Producers**

As consumers start to take impact information into consideration while making product choices, producers will be able to gauge what consumers are looking for and take action to reduce their product’s negative impact in areas that consumers are sensitive to. Gamification of information on consumers can be of great value to manufacturers and marketers in reaching out to their target audience and producing goods expected by them. Moreover, the impact rating will enable producers to compare their performance with the best in the industry and improve their production processes. Impactwala will also consult with producers and manufacturers on how they can improve their rating while minimising disruption and cost fluctuations.

**VALUE FOR CONSUMERS**

1. Search for Products
2. Get Impact Ratings
3. Compare Options
4. Buy Better

**VALUE FOR PRODUCERS**

- Real time tracking of consumer preferences on sustainability and ethics
- Consumer driven transformation instead of regulation driven
- Innovations will open new opportunities and markets
- Driving innovation in sustainable producers through advisory and consulting services
Case Studies

There are a number of examples that highlight how government supported initiatives have brought about significant shifts in society and have become national success stories. Three such examples are covered in the section.

The Rise of Shipbuilding in South Korea

In the late sixties, South Korea was an insignificant player in the shipbuilding industry. Between 1975 to 1990, the shipbuilding industry in South Korea grew by 740% while the industry in other countries shrank rapidly. The development of this heavy manufacturing sector was promoted by the government to foster the country’s economic growth, as trade restrictions and cheap labour cost from neighbouring countries were limiting other possibilities of growth. Corporations were encouraged and supported to get into the shipbuilding sector. Chung, Founder and chairman of the Hyundai Group, built the world’s largest shipyard in Ulsan and the first vessel was completed in three years rather than the expected five as Chung had the shipyard and ship built simultaneously. With the government’s support through guarantees for borrowing money and proper implementation of contracts, South Korea boasted a market share of over 20% by 1990, second only to Japan.33 34

The Growth and Adoption of Renewable Energy in Germany

Germany has been heralded “the world’s first major renewable energy economy” for its substantial shift to wind, solar, and biomass energy. With this transformation, dubbed Energiewende, Germany was able to produce 38.5% of its power from renewable sources during 2017.35 This is considerably larger than what any other developed nation has achieved, and Germany managed this shift while maintaining its strong economic growth.

The beginnings of this transformation came through legislation, with the Energy Supply Act of 1991 that allowed generators of renewable energy to feed electricity to the grid and get paid for it. The Renewable Energy Sources Act of 2000 took the momentum forward by guaranteeing grid access to suppliers. Feed-in tariffs were set higher than wholesale market price of electricity, further incentivising production of renewable energy. The industry was supported by the government on account of all the opportunities it brought for exports, new technologies, and jobs. The share of renewable electricity rose from 3.4% of gross electricity consumption in 1990 to exceed 10% by 2005, 20% by 2011 and 30% by 2015, reaching 36.2% of consumption by year end 2017. This industry now also employs approximately 3,70,000 people, especially across small and medium enterprises.36

Impact of the Bureau of Energy Efficiency, India

The Government of India set up the Bureau of Energy Efficiency (BEE) in 2002 under the Energy Conservation Act, 2001, to assist in policy and strategy to reduce energy intensity of the Indian economy. Their Standards and Labelling (S&L) Programme provides consumers with information regarding the energy usage of electrical appliances so that they can make an informed choice about energy saving, and thereby avail the cost saving potential of the product.37 Appliances with high energy saving potential were made mandatory to carry the star rating by BEE. According to BEE’s Director General Abhay Bakre, this scheme can help save 500 billion units of energy and avoid entirely the need for 100 gigawatts of power capacity by 2030. In terms of carbon dioxide emissions, this would result in a potential reduction of 557 million tonnes.38 Schemes such as this also generate interest in innovation and investments in R&D, thus fostering entrepreneurship and job creation.

34 Korea builds world’s largest shipyard out of nothing 16 July 2010
36 https://www.renewableenergymonitor.org/sustainability/green-power-revolution/
37 https://www.energymonitor.com/industry/IDYGFinoKbAcPRQNOOPts/We-are-preparing-a-national-strategic-plan-for-energy-efficiency.html
Collaborators and data providers

Impactwala has established partnership with One Planet Network, a UNEP initiative, and a number of global and national organisations. These partners share their data on sustainable products and provide expertise in product rating, leading-edge information management technologies, and access to global networks of experts on sustainable consumption and production.

Many influential individuals, referred to as the Champions, also support the Impactwala initiative. Coming from different walks of life, and having expressed the need for such an initiative, the Champions are currently engaged in actively promoting Impactwala in their networks.

Previously known as the 10-Year Framework of Programmes on Sustainable Consumption and Production, One Planet is an initiative by the United Nations Environmental Programme (UNEP). It brings together actors from all regions and sectors to integrate expertise, resources, innovation and commitment, towards a shift to more sustainable modes of production and consumption. Their objective is to develop, replicate, and scale Sustainable Consumption Patterns (SCP) and resource efficiency initiatives at national and regional levels. This means decoupling environmental degradation and resource use from economic growth, and thus increasing the net contribution of economic activities to resource efficiency and productivity; poverty eradication; social development and environmental sustainability. Impactwala is a partner with One Planet, and collaborates with Working Group 1, which is responsible for preparing guidelines for providing product sustainability information globally.

Ethical Consumer, UK is one of the oldest ethical rating agencies in the world. It provides the tools and resources that consumers need to make ethical and sustainable choices simple, informed and effective. They have been advising the Impactwala team and providing data for the rating system.

Eco sapiens is an ethical buying guide that enables consumers to find, compare and buy organic, natural, ecological and fair products. They have supported Impactwala in creating the information technology platform.

Rank a Brand is an international community of responsible consumers who want to buy sustainable and fair products or services. Rank a Brand rates brands on sustainability, social responsibility and transparency.
EPEAT is a free and trusted source of environmental product ratings for high-performance electronics on sustainability.

Safety Monitor Research Foundation is committed to safer and healthier products. SMRF’s scientific experts rate consumer products for health and safety.

Akatu institute advocates consumers to become “good seeds” and act together to build a more sustainable world.

At Happstry, users can post content about the happy deeds, and entrepreneurs can showcase, sell, update.

GRI helps businesses and governments worldwide understand and communicate their impact on critical sustainability issues such as climate change, human rights, governance and social well-being.

B Corps are for-profit companies certified by the non-profit B Lab to meet rigorous standards of social and environmental performance, accountability, and transparency.

Area ridef promote awareness of renewable energy and energy efficiency in order to build a more sustainable future.

Circul'R is a global network of circular economy innovators so that they can co-create solutions for a sustainable economy that is respectful of the people and the planet.
The Impactwala Team

The core strength of our team is in multi-disciplinary expertise in the field of sustainability. The team members are deeply passionate about promoting sustainable production, consumption, and disposal. They believe in "Being the change you want to see in the World" and strive to live sustainably. The initiative is incubated in Auroville with plans to relocate in order to fulfil its vision.

Dr Bakul Rao, CIO (Impact) at Impactwala. She is a faculty at IIT Bombay. Has over 27 years of experience in the field of Environment with specialisation in Environmental Impact Assessment, Environment and Development, Natural Systems Assessments Delhi.

Minhaj Ameen, CEO, Co-Founder of Impactwala. He is a serial entrepreneur and innovator. He is a mechanical engineer and holds an MBA from Manchester Business School, UK.

Allen Francis, COO, Co-Founder of Impactwala. He is a civil engineer and holds a Masters in Sustainable Development Practice from TERI School of Advanced Studies, Delhi.

Baptiste Rabourdin CTO, Impactwala. He is an entrepreneur in France promoting projects on sustainable consumption. He is a nuclear and physics engineer and an expert in IT.

Aromi Salot, Researcher. She holds a bachelor's degree in civil and environmental engineering with a specialization in energy, water & environment sustainability from the University of Illinois, Urbana Champaign.

Mohit Arora, Marketing and communications. He has a background in journalism, social media marketing and film making.
Sustaining the Initiative

As an autonomous institute of the Government of India, Impactwala will focus on developing a comprehensive impact rating system and compute ratings to multiple product categories. It will also enable its dissemination on online and physical stores. The government will help create the independent board and provide the necessary infrastructure and funds to operate the institute. It will also mandate that the impact information is present on products at the point of purchase.

Impactwala will be governed by an independent board representing the government and partners of Impactwala. The board will appoint the executive team that will manage the initiative, as per the mandate set by the board.