

BUILDING SUSTAINABLE BUSINESSES FIT FOR A SUSTAINABLE WORLD

AN ADITYA BIRLA
GROUP COMMITMENT



ADITYA BIRLA GROUP

CONTENTS

01

INTRODUCTION

Our Group History	2
Our Global Presence	4
Our Group Businesses	6
Chairman's Statement	8

02

CREATING A SUSTAINABLE BUSINESS	10
Building A Sustainable Group	12
Having The Right Systems & Processes	15
Policies & Standards	17
Assuring Our Progress	18

03

RESPONSIBLE STEWARDSHIP	20
Zero Harm	21
Human Rights & Discrimination	24
Occupational Health Management	26
Energy Management & Climate Change	29
Biodiversity Management	32
Supply Chain Management	34
Water Management	38
Waste Management	40

04

STRATEGIC STAKEHOLDER ENGAGEMENT	42
A Different Approach	44
Mitigation vs. Adaptation vs. Transformation	46

05

FUTURE PROOFING	48
Building Businesses Fit For The Future	50
Driving Innovation	56
Entering New Markets	57
Looking Forward To 2030 & 2050	60

// OUR GROUP HISTORY

From humble beginnings in Rajasthan in the 1800s, a global conglomerate was born. Today, with Mr. Kumar Mangalam Birla at the helm, we are recognised as a world-leading conglomerate and sector leaders in our industries with close to 120,000 colleagues and over 250 sites globally. Our revenues today are over US\$44 billion. Here we outline the story so far.

This is our history.

1857

In the small village Pilani, Rajasthan, Seth Shiv Narayan Birla started trading in cotton, laying the foundation for the House of Birla.

1947

Grasim is incorporated and begins operations with a small rayon weaving unit at Gwalior, MP.

1969

Mr. Aditya Vikram Birla, the Group's leader and grandson of Ghanshyamdas Birla begins aspirations of a global business empire and at the age of 24, sets up the Indo Thai Synthetics Co. Ltd – the Group's first overseas venture.

1994

Alexandria Carbon Black, a JV with the Egyptian Government is established.

1857

1958

Hindalco is incorporated. It begins aluminium production in 1962 in Renukoot, UP.

1995

The Group enters the telecommunications sector with a JV with AT&T USA.

1919

Founding father, Mr. Ghanshyamdas Birla, set up industries in critical sectors such as textiles and fibre, aluminium, cement, and chemicals. Rapid business expansion followed.

1973-84

The Group establishes itself in South East Asia with operations in Indonesia (P.T. Elegant Textiles), Philippines (Indo Phil Group of Co.), Malaysia (Pan Century Edible Oils) and Thailand (Thai Carbon Black, Thai Polyphosphates & Chemicals). P.T. Indo Bharat Rayon is established as the first producer of viscose staple fibre in Indonesia.

1996

All Group companies are consolidated under the umbrella of the Aditya Birla Group, led by Mr. Kumar Mangalam Birla.

2000

Indian Rayon acquires Madura Garments and selected overseas brand rights, taking the Aditya Birla Group to the top of the league in the branded apparels sector.

2007

Hindalco acquires Atlanta-headquartered Novelis Inc (Novelis). It becomes the world's largest aluminium rolling company, one of the biggest producers of primary aluminium in Asia and a leading copper producer in India.

2012

Aditya Birla Nuvo Limited (ABNL), largest manufacturer of linen fabric in India, acquires Future Group's Pantaloon format, a part of Pantaloon Retail (India) Limited (PRIL). The acquisition is in line with the Group's strategic intent to create the largest integrated branded fashion player in the country.

2016

Ultratech acquires JP Cement to take Indian capacity to 90 million tones and propel Ultratech to No 5 in the world outside China.

Aditya Birla Group is a US \$41 billion multinational corporation with over 120,000 employees of 42 nationalities, across 36 countries.

2003

Aditya Birla Group is ranked 16th in India's first ever 'Great Places to Work' survey published in Businessworld magazine.

2017

The Group's two major holding companies Grasim and AB Nuvo merge and spin off via an IPO, the financial services business, Birla Capital.

A merger of Idea with Vodafone India is agreed to create the largest telecom company in India and the second largest in the world behind China Telecom.

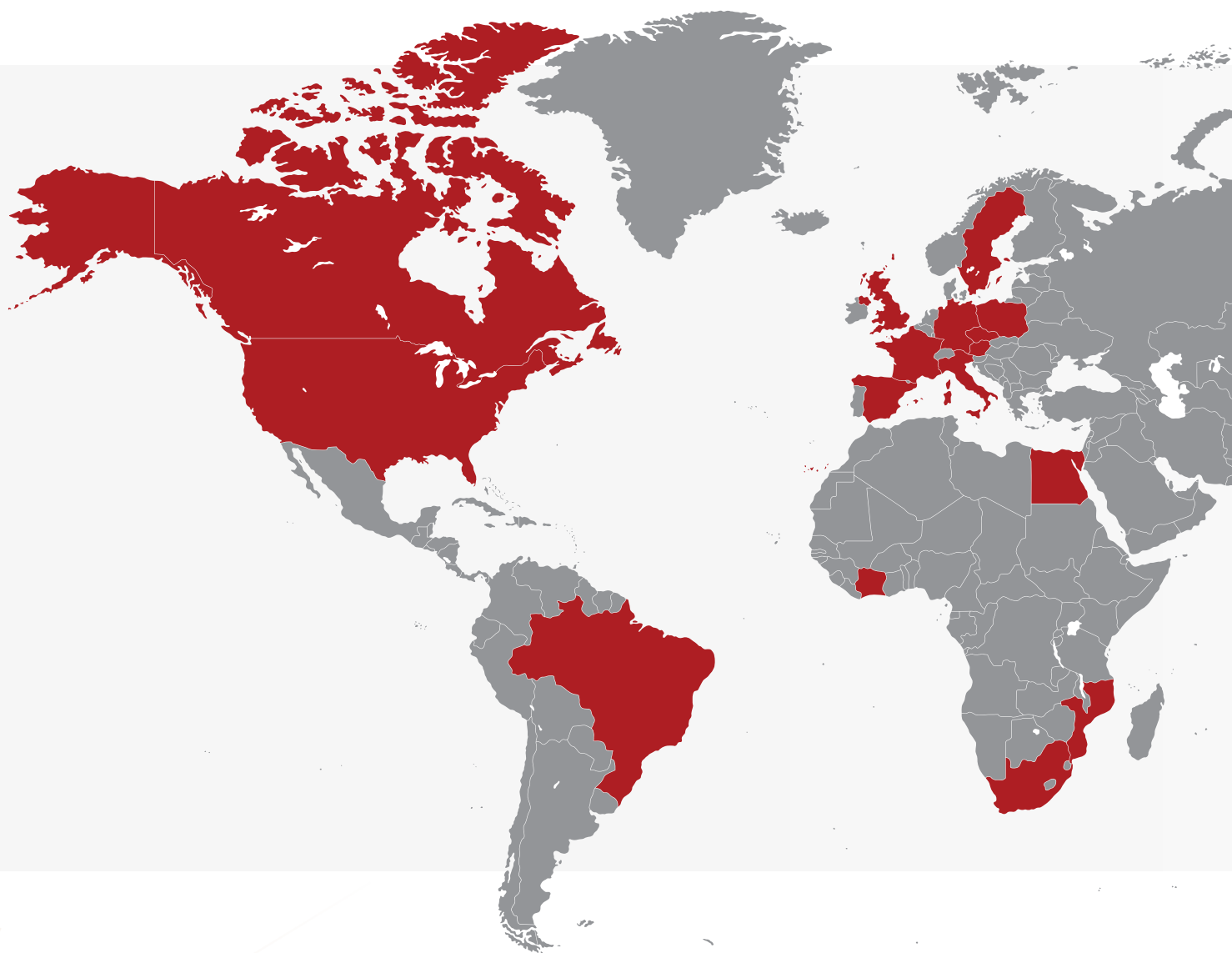
2010

UltraTech Cement acquires a majority stake and management control in Dubai-based Star Cement Company, LLC (Star Cement). This acquisition gives the Aditya Birla Group a strong foothold in the Middle East.

2014

Aditya Birla Group is ranked number 1 in the Nielsen Corporate Image Monitor across the six pillars of corporate performance: products and services, vision and leadership, workplace environment, financial performance, operating style and social responsibility.

// OUR GLOBAL PRESENCE



// OUR GLOBAL
LEADERSHIP



**1ST IN
ALUMINIUM
ROLLING**



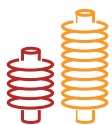
**1ST IN
VISCOSE
STAPLE FIBRE**



**1ST IN
CARBON
BLACK**



Beginning as a formidable force in Indian industry, the Aditya Birla Group companies now extend across the world. The Group has established itself as a truly global conglomerate.



4TH LARGEST
PRODUCER OF
INSULATORS



5TH LARGEST
PRODUCER OF
ACRYLIC FIBRE



AMONG TOP
CEMENT **4**
PRODUCERS
(excluding China)



AMONG THE BEST
ENERGY-EFFICIENT
FERTILISER PLANTS

// OUR GROUP BUSINESSES

The Aditya Birla Group extends across diverse industries and markets creating valuable jobs and revenue around the world.

METALS

 **23,137** Employees

 **18,111** Turnover (in Million USD)

 **2,264** EBITDA (in Million USD)

Novelis recycles 65 billion cans annually

Hindalco's "Value-from-Waste" programme is a systematic approach to waste reduction, collection, safe storage/disposal and re-use.

Aditya Aluminium has installed a 30 MW PV solar plant.

CARBON BLACK

 **2,525** Employees

 **1,742** Turnover (in Million USD)

 **333** EBITDA (in Million USD)

Birla Carbon awarded a Gold rating by EcoVadis for advanced sustainable practice for the second consecutive year.

CEMENT

 **20,174** Employees

 **4,963** Turnover (in Million USD)

 **1,044** EBITDA (in Million USD)

UltraTech is a founding member of the Global Cement and Concrete Association.

UltraTech is a member of the Cement Sustainability Initiative (coordinated by the World Business Council for Sustainable Development).

PULP & FIBRE

 **7,389** Employees

 **2,938** Turnover (in Million USD)

 **621** EBITDA (in Million USD)

Ranked no. 1 globally by the NGO Canopy, in its Hot Button Report for work on the conservation of ancient and endangered forests.

Gold Level Material Health Certification Received for Birla Spunshades from the Cradle to Cradle Products Innovation Institute.

CHEMICALS

 **6,334** Employees

 **1,419** Turnover (in Million USD)

 **323** EBITDA (in Million USD)

Successfully transferring power generation to hydrogen thereby reducing carbon emissions considerably.

TEXTILE

 **669** Employees

 **868** Turnover (in Million USD)

 **31** EBITDA (in Million USD)

Members of the Sustainable Apparel Coalition with an average Higg Index FEM3.0 score of 61.5%.

FINANCIAL SERVICES**7,609**

Employees

**2,428**

Turnover (in Million USD)

**311**

EBITDA (in Million USD)

Screenings are being applied across the portfolio to ensure adherence to the UN Principles of Responsible Investment and the Equator Principles.

AGRI - BUSINESS**606**

Employees

**355**

Turnover (in Million USD)

**37**

EBITDA (in Million USD)

Awarded the prestigious Certificate of Merit in Fertilizers (Urea) sector for "National Energy Conservation Award – 2017" by the Bureau of Energy Efficiency (BEE), Ministry of Power, Govt. of India.

RENEWABLE ENERGY**50**

Employees

**30**

Turnover (in Million USD)

**27**

EBITDA (in Million USD)

Installed capacity of 200 MW of solar and 75 MW of wind energy.

MINING**1,085**

Employees

**218**

Turnover (in Million USD)

**61**

EBITDA (in Million USD)

INSULATORS**1,828**

Employees

**82**

Turnover (in Million USD)

**7**

EBITDA (in Million USD)

TRADING SOLUTIONS**143**

Employees

**4,978**

Turnover (in Million USD)

**84**

EBITDA (in Million USD)

TELECOM**14,350**

Employees

**4,387**

Turnover (in Million USD)

**938**

EBITDA (in Million USD)

FASHION**13,109**

Employees

**1,116**

Turnover (in Million USD)

**74**

EBITDA (in Million USD)



CHAIRMAN'S STATEMENT

The quality of our future depends on the quality of our imagination today. I see the future of the Aditya Birla Group as one of growth, continued leadership in our industries and delivering excellence for many decades to come.

In order to realise that future, we must build sustainable businesses capable of operating successfully within the tougher legal standards and tighter resource constraints of a sustainable world. This means imagining a future beyond the traditional paradigms of good financial, operational and environmental performance within the limits of today's legal code - these are already a given. Using our business acumen, harnessing scientific data and listening to expert voices will lead us to transform both what we do and how we do it so that we're not just fit for the future, but leading the way. Equipping our organisations with a model for sustainable business and framework is a step in the right direction.

Setting an ambitious vision

I have set an ambitious vision for the Aditya Birla Group to become the leading Indian conglomerate in sustainable business practices across all our operations. The scientific evidence is clear and it is very likely that the needs of a sustainable world will increasingly have to be legislated, more so if industry does not proactively self-regulate to raise its own standards. For example, we see today that reducing carbon dioxide levels can no

longer be ignored and the legal frameworks and infrastructures are coming into effect worldwide to motivate and eventually mandate business reductions. We will have to be prepared to meet the challenges of adaption by 2050, to a world becoming two degrees hotter, much drier and with 25% more people with massive access to information - new consumers demanding more and more detailed information from the brands they buy and the businesses they work with. As one of India's leading business houses, we have our part to play in the driving the progress expected of India as a signatory to the COP 21 agreement of Paris 2015.

I see the vision for the Aditya Birla Group as a differentiator in a market that is largely focused on short-term gains. Businesses that embrace the higher performance standards of their products, operations and supply chains that will be required to meet the constraints needed by a sustainable planet and society will be the ones that grow and prosper over the medium and long term. The Aditya Birla Group's foundations were laid in 1857 and we have grown to be an international leader. Our collective imagination is focused on continuing this growth to take our businesses successfully to 2030 and beyond 2050.

I expect our leaders to respond by taking robust actions to implement our sustainable business model and framework, meeting the rising expectations of performance and taking future trends into account. It is they who are

“ We have defined a Sustainable Business as one that can continue to operate within the tightening constraints of a future Sustainable World and accept that by definition a Sustainable World can only contain Sustainable Businesses. ”

differentiating us as a Group by championing our programme and seeing the creation of sustainable business plans as an opportunity not only to manage risk, but to ensure growth.

Putting systems change in place

To be a credible and sustainable business leader, protecting our colleagues from harm has got to be a priority and it is a good first test of our management's capability to deliver. We still have some distance to cover to delivering our target of Zero Harm. We are strengthening the way that accidents and fatalities are investigated and all our companies are taking more stringent preventative methods to manage risk.

The Sustainable Business Framework that we have developed requires us to improve our business management systems across our complete value chains. This ensures that we align, first with international standards and then use strategic alliances to help our leaders to understand the challenges - legal, physical, technological and structural that they will face. This knowledge is vital to our sustainable business planning. To make our vision a reality we have made investments into making the right tools available to our businesses. With our Information Technology Platform, we collate Group-wide data that is shaping the understanding of our current performance and providing a vehicle through which we can make informed and meaningful decisions for directional changes.

We are five years into our journey as a Group and I am pleased to report excellent progress. Our framework is complete and is based on 17 policies and associated technical and management standards that are setting expectations and guiding improvements across our Group companies. All our businesses are self-assessing and reporting their progress on improved management systems deployment and performance. Further, many are holding future proofing workshops requiring the analysis of risks and opportunities provided by the mega-trends we see affecting us as we travel towards the sustainable world of tomorrow.

Imagining something different for the Group

This report provides you with an insight into the progress that we have made towards our sustainable business goals and shares our thinking and that of our expert strategic stakeholders, on the distance to be traversed to meet our vision. We have defined a sustainable business as one that can continue to operate within the tightening constraints of a future sustainable world and accept that by definition a sustainable world can only contain sustainable businesses.

We have set ourselves an ambitious goal. I have faith in the quality of our imagination and innovation and I look forward to the future that we are working to design and build for ourselves and for society.

Kumar Mangalam Birla, Chairman

Creating A Sustainable Business

02

A sustainable business is one that is fit for purpose in a rapidly changing world. This means understanding that there are factors that affect our survival that are beyond our control and that by planning for them, we can prosper – today and in the future.



SUCCEEDING WITH SUSTAINABILITY

The 2007 Nobel Peace Prize was jointly awarded to the Intergovernmental Panel on Climate Change and to former U.S. Vice President Al Gore. It was for their effort to disseminate knowledge about man-made climate change, and their advocacy for measures to counter that change. Gore's personal campaign became an Academy Award winning commercial hit, in the form of Davis Guggenheim's film "An Inconvenient Truth". Eight years later we saw the historic signing of the Paris Treaty by 191 countries.

Four of the largest emitters of greenhouse gases have already ratified the Treaty, and are committed to reducing emissions substantially. This was quickly followed by the signing by 197 countries, of the Kigali Agreement, to phase out the use of hydrofluorocarbons. New trade agreements are increasingly incorporating environmental clauses. The consensus and momentum on global climate action is remarkable.

Notwithstanding the climate skeptics, the reality is that governments are moving rapidly, making new laws, and enforcing new rules for doing business and economic activity. Examples range from emission standards for automobiles, taxes on the use of fossil fuel, renewable energy purchase obligations or local governments banning use of plastic bags. In addition to governments' action, consumer preferences are also changing, reflecting their environmental and health concerns. No surprise those "greener" products are winning, ranging from refrigerators, detergents, automobiles, and footwear to even clothing.

Policy makers are convinced that for progress on climate action, mere voluntary action can no longer be relied upon. That explains the proliferation of new regulation and standards, and also the growing activism of consumer groups. Ultimate success, however, will depend on the role of the private sector and businesses. These constitute more than three fourths of the world economy. For far too long, businesses have regarded environmental friendliness as opposite of competitiveness. When regulation is uneven across countries and

jurisdictions, companies complain of disadvantage of the burden of regulatory costs. All that may change quickly as standards get harmonised, trade blurs national boundaries, and global treaties are signed in quick succession.

Companies can remain skeptical, shortsighted and confrontational with regulations, by mounting legal challenges or they can embrace the future, race ahead of compliance, invest in new products, technologies and business processes. This may catapult them ahead with an unbridgeable competitive advantage. Examples already abound. HP anticipated the ban on lead and chromium and developed alternate soldering substances. It led in formation of a recycling platform by involving vendors and customers. Cisco pioneered recycling and refurbishing in its industry. Unilever is committed to halving its carbon and water footprint, and has forged ahead in the development of waterless detergents. Xerox redesigned its machines to be able to recycle up to 90 percent of the components. Novelis, world leader in aluminium rolled products, uses more than 50 percent recycled metal.

It is clear that leaders of tomorrow are those that will reduce their environmental impact today, engage in innovations in products, services, technologies and processes today, and persuade and educate other stakeholders (vendors, supply chain), to collaborate on their sustainability journey.

Sustainable business models create a sustainable competitive advantage, which manifests not just in the top and bottom line (new products, market share gains and potentially, premium pricing), but also in consumer loyalty, societal acceptance, in making lawmakers as allies and ultimately in enhancing their own reputational capital.

Dr Ajit Ranade
Chief Economist, Aditya Birla Group

// BUILDING A SUSTAINABLE GROUP

It is our ambition to become a leader in sustainable business practices across all our global operations. This means we have to first acknowledge that as a society we are pushing the planet's systems and capabilities to an unmanageable level and that growth, as we have been accustomed to, cannot continue indefinitely. The time has come when business leaders need to decide whether their enterprises are fit for future purpose and if not, either make them capable of withstanding the constraints that they will be working under, or accept their demise.

At the Aditya Birla Group, realising our long-term goal means proactively preparing now for the rising pressures from the external factors that we will be facing as we move towards the worlds of 2020, 2030 and then 2050 and beyond. These pressures will come from the need for mankind to create a sustainable place to live and do business. We use the Stockholm Resilience Centre Model to bring the extent of the challenge that we face to life. It clearly identifies the risks of the planetary limits that we face today, and defines those that are priorities for the future.

In order to be resilient to these external changes, it will inevitably require us to do things such as: alter our energy matrix for a reduced carbon footprint, manage and protect biodiversity and find sufficient secure water supplies while coping with

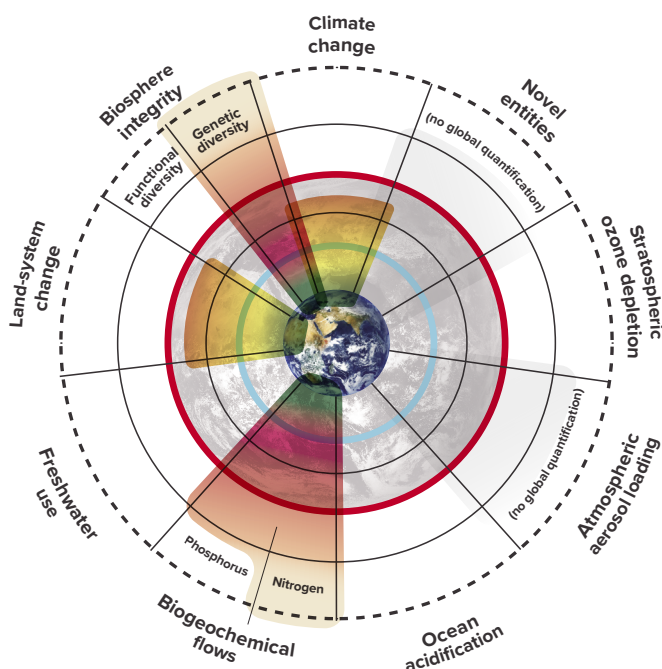
changing land use and a burgeoning population. We will need to adapt the way that we engage with our key strategic stakeholders. From meeting our customer's expectations of greater transparency and traceability, responding to a workforce that is more informed, ambitious and demanding than ever before and ensuring that we bring our suppliers with us as we identify and plan for the challenges of the future by mapping current and then creating future sustainable value chains.

Our Model for Sustainable Business and Framework

The model that we have developed prepares us for the shifting and shrinking operating space that changing external factors will define for our operations, products and supply chains. By encouraging our leaders to study the future and the key trends taking us there, we are encouraging them to build capable business management systems. We do this for the simple reason that our businesses cannot survive on a planet or in a society that fails and chaotic scenarios of the future do not serve anyone. Over time, we believe that this thinking will differentiate us from our competitors. This is a model that we believe any business that wants to be sustainable in the long-term needs to adhere to.

Responding to tightening legal frameworks civilised societies govern businesses with comprehensive legal and regulatory frameworks. It is intuitive that societal laws must not only be complied with but be tightened over time to prevent the trend of growing degradation of the planet. It is crucial that we remain ahead of the curve. Legal systems will eventually have to constrain business operations if we are to remain within planetary limits and we must prepare for those now. To guide us, we look to documented international standards and benchmarked best practices as signposts to the future – these voluntary standards set parameters that are often tighter than national legislation today but may not be constraining enough for the worlds of 2030 and 2050. Together with our strategic stakeholders we are working on the vital question, "Will best practice performance today be good enough for 2030 and 2050 and if not, how must we transform our business models, our products, our supply chain and operational performance to be so?"

THE STOCKHOLM RESILIENCE CENTRE MODEL



Our approach

To practically apply our thinking of what it will mean to operate in a sustainable world, we have developed a Group-wide Sustainable Business Framework that requires our businesses to develop i) the management systems needed to give proper control of our operations and supply chain under Responsible Stewardship, a programme designed to take us from simple legal compliance

to alignment with international standards and on to best practice, ii) an expert and Strategic Stakeholder Engagement programme to build knowledge partnerships that help us make sure that we understand the challenges we face and, iii) Future Proofing our long-term planning to prepare ourselves for the necessary transformations needed for the future.

OUR MODEL FOR SUSTAINABLE BUSINESS

Responsible Stewardship

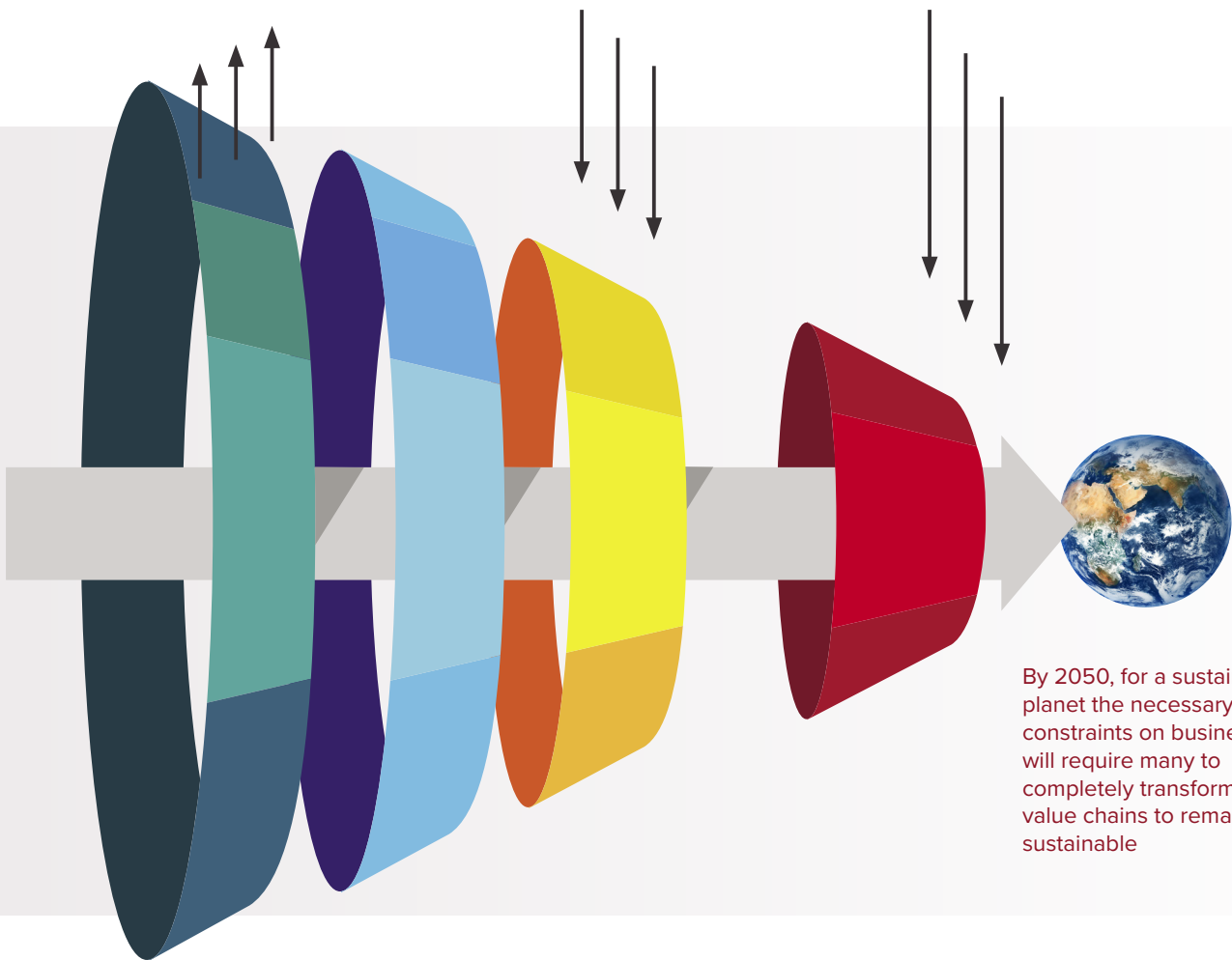
Create a framework to move us towards international standards and mitigate our impact on 'Externalities'.

Strategic Stakeholder Engagement

Gain knowledge to understand how and when 'External Factors' will change and when disruptions to our businesses may occur.

Future Proofing

Including adaptation to external factors in our business strategic plans.



A Business "Operating Space" is bounded by the laws we have today

The Operating Space shrinks given voluntary adoption of today's International Standards

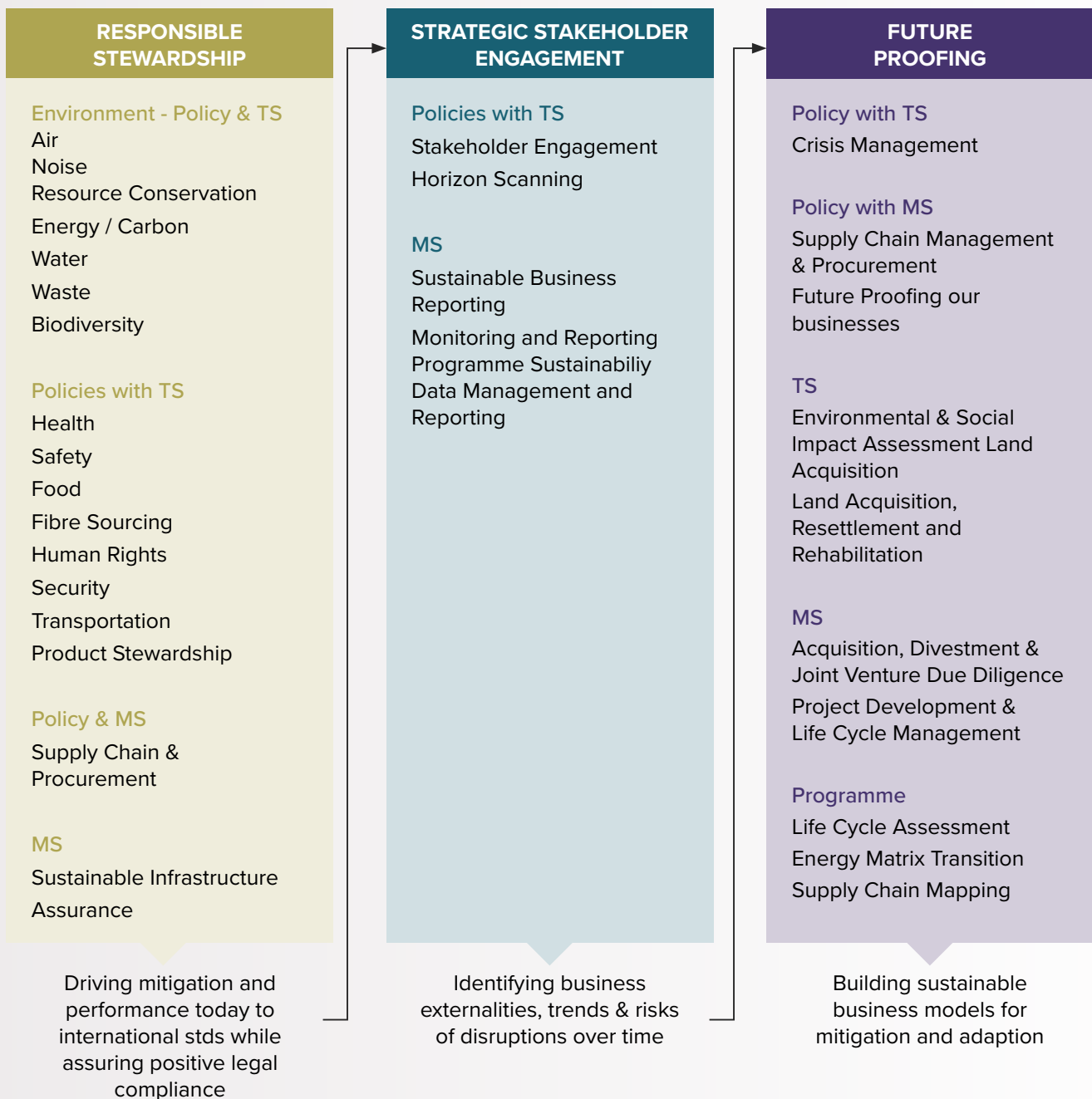
Reaching Best Practice today means developing even tighter control systems

By 2030, we expect more demanding laws and regulations will further shrink the business operating space

The implementation of the three pillars allows for meaningful decision-making and helps our leaders become better equipped for the new competitive landscape being formed by changing geo-political, legal, technological, structural and geographical parameters in their markets. Each pillar is underpinned by policies, technical standards and programmes of activity to guide our leadership teams.

Our approach is also one of education and learning. The transformation needed within our businesses can only be realised if our managers can imagine the needs of a sustainable world and our leaders produce the visionary mandates that our managers need. Mitigation and Adaptation not mandated by law can be a hard sell however, as we enter the sixth year of our programme, our approach is gaining traction.

OUR FRAMEWORK POLICIES AND PROGRAMMES



*TS - Technical Standard MS - Management Standard

// HAVING THE RIGHT SYSTEMS & PROCESSES

The ABG Sustainable Business Framework bolsters our management systems and processes and sets the groundwork for the changes that we need to make at Group, business and local site levels. A unified approach to our conduct and governance is crucial for Group success. All employees are required to follow the Group Code of Conduct that enshrines our core values of Integrity, Commitment,

Passion, Seamlessness and Speed. Our businesses use this to drive their own codes and practices.

Governance

Our governance structures engage senior management as well as those on the ground. This ensures that all colleagues are driving change in a uniform way.

OUR SUSTAINABILITY GOVERNANCE SYSTEM

GROUP LEVEL

Group Apex Sustainability Committee

The Committee meets quarterly. Its members include: Chief Executive, Chief Financial, Chief Human Resources and Chief Sustainability Officers from the Group, appointed by the Chairman. It provides advice and guidance on implementing the Group's policies and standards for which it has oversight and studies the major trends likely to impact our businesses. It reports back to the Chairman and Business Review Councils on company performance and ensures that sustainability risks are being assessed, controlled and managed effectively.

Business Review Councils

The internal Councils oversee performance and the day-to-day progress towards international standards and best practice. They review and approve the budgets for investments needed to progress.

Group Sustainability Cell

The Cell has four functions: (i) to translate international standards into Group Sustainable Business Framework of Policies, Technical and Management Standards and to provide Guidance Notes, and Training programmes making these easy to implement; (ii) to oversee the methodology of self-assurance for businesses to assess their own management systems and performance against the ABG framework; (iii) to provide technical support to businesses including weekly webinars, training/ workshop sessions and site visits; (iv) to help leadership teams gain an understanding of changes happening and help integrate them into operational strategies through Horizon Scanning and Future Proofing.

BUSINESS LEVEL

Business Sustainability Committees

All our major businesses have Sustainability Committees led by their Business Leader, CEO or Deputy CEO. They are responsible for the overall integration of the sustainability framework across their operations and the initiatives that drive it through the business.

SITE LEVEL

Site Manager led Sustainability & Safety Committee

Site-level committees ensure that the Framework is being implemented on the ground. These are mandated to deliver the requirements outlined in our Group policies appropriately for the site, complete our framework self-assessment questionnaires and to put action plans in place to meet ABG Standards. The Committee also drives training and development needs in collaboration with the Group Sustainability Cell.

TECH SOLUTIONS TO SUSTAINABLE BUSINESS LEADERSHIP

enablon



For leading companies, sustainability is not just about minimising risks anymore but also about creating positive outcomes that drive value for all stakeholders as well as for society as a whole.

We believe that with the right people, processes and technology, we can create a path to excellence that leads to true enterprise sustainability. We also believe that technology can be a game-changer. This belief drives all our activities and the work we carry out with these organisations all over the world.

This is how Enablon has become the world's leading Sustainability, EHS and Risk Management software provider. Our mission is to help companies operate safely, reduce their risks, increase efficiency and become more sustainable, in order to not just survive, but thrive. Today, we empower professionals from over 1,000 global companies worldwide, spanning all industry sectors.

We have followed a dual path by embedding advanced technology innovations in our platform and focusing on supporting the success of customers' sustainability initiatives. This is, by providing a single integrated platform that covers all aspects of EHS, Risk and Sustainability to enable our customer organizations to become efficient, compliant and resilient.

This "perfect storm" of new technology, expertise and global awareness is now starting to have a much more profound impact on how businesses are managed.

Over more than a decade of collaboration with the world's largest organisations, we have seen many private companies successfully take on the challenge. Starting local, companies are recognising the potential that technology holds in managing their operations across geographies and markets. The consistency of information and its availability in real-time means that managers and leaders are able to make much more informed decisions about their operations. Dips in performance are signposted and can be dealt with instantly, well before they could possibly turn into major risks for the business.

For future-thinking organisations, access to credible information provides the opportunity for differentiation. The first step is for business leaders to recognise the untapped potential of their sustainability data – this is not about being a 'nice to do' but about being in a position to proactively drive business growth. A company that ensures its operations by upholding these processes and principles is bound to be sustainable in the long run.

Last year, we were proud to award the Aditya Birla Group our highest accolade award "The Most Sustainable Company" for their innovative Sustainable Business model and use of Enablon.

Phil Tesler,
Co-founder & CEO
Enablon North America

// POLICIES & STANDARDS

We have developed, peer reviewed and third party assured (to a group of international standards) the Aditya Birla Group Sustainable Business Framework of 17 new policies and 40 technical and 17 management standards. Furthermore, 70 Guidance Notes and over 700 e-learning courses have been made available across the Group.

The leaders of all our businesses are working to develop and improve their management systems to meet the Group framework and by doing so, we expect our performance at all levels to improve towards international best practice. We have a series of training courses to support their practical implementation across the Group. By empowering our employees and giving them the chance to train, learn, understand and apply improvement techniques, we aim for everyone to be involved in our efforts to reach higher standards of performance.

Our Group policies are available on our corporate website at: www.sustainability.adityabirla.com/policies.

Information Technology

Data allows us to run programmes effectively and we firmly believe in the old adage that what gets measured gets managed. We understand however, that collecting data for data's sake serves no purpose. We have made a significant investment in the implementation of a world-class IT system that provides cost effective measurement and supports the Group assurance processes through efficient data capture.

Given the breadth of sectors and geographies within the Group, we have harnessed the power of information technology to help assess our systems and processes and to embed our Framework across our businesses. This has been a major innovation as not only have we had to consider the operational differences within the Group, but also encourage a mind-set shift in the institutional approaches to data capture and management. A key challenge has been to make the Sustainable Business Framework meaningful for all our operations – from small retail stores to large manufacturing sites. Collaborating with colleagues at each stage of the IT build process has been vital to making sure that this will drive a systematic shift in our performance. The repository of information will be used to drive future decision-making.

Embedding processes across the Group

Workshops and training sessions have been used to engage colleagues at all levels using the new IT system. Train-the-trainer programmes embed the system ensuring that it is integrated into our processes. Trainers are given two months to train colleagues and once evidence is provided to that effect, licenses are issued. This means that we are able to track the number of people being trained whilst monitoring its integration into our operations. Currently we have over 7,000 licenced users.

The results so far have been very promising. In the 18 months since inception, we have rolled out the Information Management System across 174 manufacturing sites, 22 telecom circles and 35 retail clusters. Modules in Legal & Regulatory Compliance Management, Performance Management; Incident Management; Assurance (to our Framework); and Action Planning have been delivered as well as specific modules on health and chemical management. In addition, we are finding that the new IT management system is also allowing businesses to engage with their suppliers and vendors in more meaningful ways and the accuracy of information has improved considerably. Improving the sustainability of our supply chain is a crucial target for our future and we are in the process of piloting supply chain mapping in six of our businesses.

// ASSURING OUR PROGRESS

The first step of our Group-wide assurance process is rigorous and focussed on positive legal compliance. We operate 166 manufacturing sites located in 23 countries. The legal self-assessment questionnaires (SAQ) are now available to cover 153 of those sites located in 15 countries. 81 of those sites have not completed the programme and it is our target to cover all the manufacturing sites of all our businesses by FY2018 to complete the roll-out of our positive legal compliance self-diagnosis process.

Our compliance and assurance programme is designed to ensure that business management teams can prove to themselves and their governance committees that they meet the requirements of both local law and the ABG Framework. The programme is both efficient and cost effective as it is only when a high level of compliance and conformance is reported by the local site validators that the Group's Assurance Experts visit a site to provide an "integrity check". Weaknesses found during the assurance self assessment are built in to a gap analysis that gives managers the independence to develop and implement appropriate improvement plans for their operations. A low score results in subject matter experts being deployed to help a site make the improvements that are needed.

The ABG Sustainable Business Framework has been assured by an internationally renowned independent third party to ensure that it conforms to the various international standards that are incorporated into it. These include: IFC Performance standards; OECD Guidelines; United Nations Principles for Responsible Investment; United Nations Global Compact (UNGC), United Nations Guiding Principles for Business and Human Rights; US OSHA standards; United States National Institute for Occupational Safety and Health (NIOSH); American Conference of Governmental Industrial Hygienists (ACGIH); International Standards Organisation, International Labour Organisation Standards; Alliance for Water Stewardship Standard; World Resources Institute (WRI) - Aqueduct, US Environmental Protection Agency (EPA).

ABG sites are subject to a range of compliance and conformance obligations relating to sustainability issues. To assist with this process, we have developed scoring and heat map reports to gauge





and monitor site performance against the different technical and management standards and an action plan is developed to ensure improvements. These reports are reviewed quarterly by our internal Business Review Councils.

Tracking Performance Against Legal Compliance

The ABG sites are classified based on the scores obtained through the assessment and legal questionnaires. They are categories are:

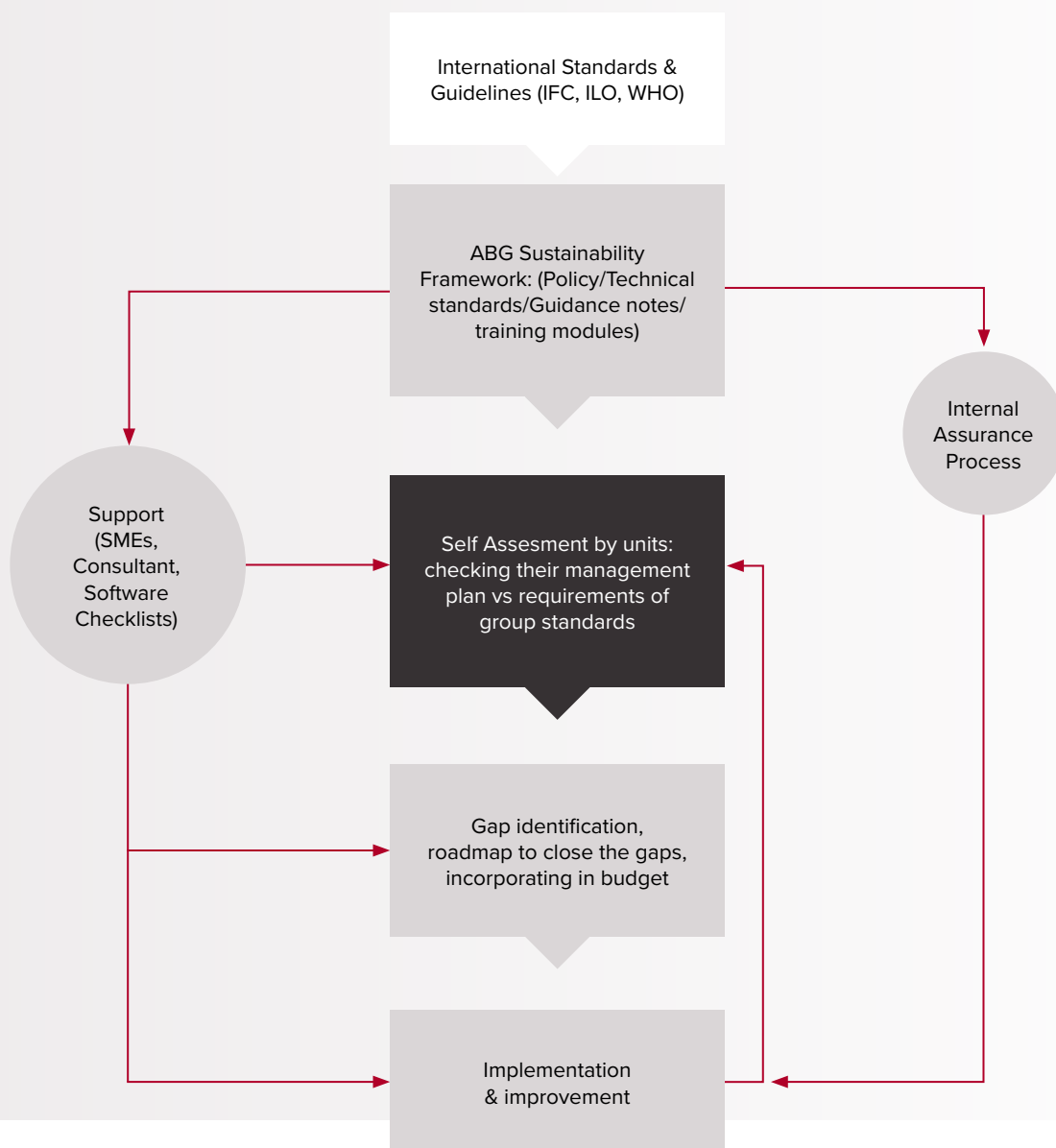
- 1) compliant when the score is 100%,
- 2) compliance status needs improvement if the scores are within 98 – 100%,
- 3) Methods to ensure compliance require improvement, facility with substantial compliance gaps, if the scores are within 95-98% and
- 4) Methods to ensure compliance are failing, troubled facility with severe non-compliance, if the score is <95%.

TRACKING CONFORMANCE AGAINST THE ABG FRAMEWORK

	PERCENTAGE	STATUS VERSUS ABG FRAMEWORK CONFORMANCE	NUMBERS OF SITE SAQS
	>95%	GOOD	398
	>80-95%	SATISFACTORY	378
	>60-80%	UNSATISFACTORY	356
	<60%	UNACCEPTABLE	288

An evidence-based approach

The self-assessment mechanism places responsibility on our site managers to engage with our standards and to drive the changes required to our business management systems to place our operations on a sustainable path. By promoting transparency in our systems, we are driving the sharing of best practice and learning across the Group. We believe that the promotion of transparency rather than pursuing a culture of audit is a more efficient way of both increasing the efficiency of our operations and promoting the transition to best practice standards. This marks an innovation in traditional global corporate practices and our businesses are responding very positively to this cultural and operational shift.



By adopting an evidence-based approach we are ensuring rigour and consistency in our processes. Colleagues now have to provide details of the systems that they have in place and the resulting performance through photographs, documents and registers uploaded as part of the SAQs. Those that rank themselves >80% are reviewed off-site and the highest performers >95% are visited in order to verify the consistency of their results. We have also introduced a series of Assurance Principles to guide the self-assessment and verification process.

These are:

1. **Thoroughness:** mandating the completion of all questions
2. **Completeness:** ensuring that all supporting evidence is provided
3. **Relevance:** only focusing on the appropriate data to evidence claims
4. **Consistency:** in the data that is checked and provided to demonstrate success
5. **Transparency:** information must be accessible to the reviewer
6. **Conservativeness:** ensure that information or data is not exaggerated
7. **Truthfulness:** all evidence must be easily corroborated

Responsible Stewardship

03

Responsible Stewardship is our foundation as it pushes our Group companies to create capable management systems that conform to international standards and promote performances that match or become best practices.

// ZERO HARM

One of the key tests of any management team is the ability to keep their people and contractor employees safe while producing operational and financial results. It therefore features first in our areas of Responsible Stewardship.

We aspire to create operations that cause Zero Harm. Through a structured approach we are establishing capable management systems. We are working to make sure our assets are fit for purpose and maintained, our processes are capable and our people competent, well trained and motivated while our leaders remain visible and committed. We are involved in a range of sectors that present varying degrees of risk to our people and our contractor's employees. To deal with this diversity of threats, we are developing processes to identify, assess and manage risks through technology up-grades, process design reviews, engineering interventions, administrative controls and crucially, by managing and enhancing people's behaviour.

To provide a robust approach across the Group, our subject matter experts have created safety policies, technical standards and supporting guidance and training documents. These are available for use and reference through our online portal. These framework documents help our business leaders, site and line managers to be involved in the development process, understand the expectations our senior leaders have of them and the role they have to play in keeping their people, contractor personnel and surrounding communities safe from harm.

Driving accountability through self-assessment

Technical standards can only go so far. Our management framework helps our businesses and their sites to evaluate their current status against the Group's standard requirements using the SAQ process. This enables them to proactively plan and prioritise their system upgrades and to improve their performance. The entire process: framework documentation, key performance monitoring and the capturing of data across the Group is facilitated by the Group Sustainability Cell's website together with our online IT system. Gap analysis and the subsequent action plans provide a uniform and guided way to manage their progression in a timely manner and are reviewed by the internal Business Review Councils

These assessments combined with the review of current and past performance have identified three areas of high-level risk to our people: working at height, road safety and being harmed by moving machinery. We are working with all our businesses to address these risks through priority action planning and strengthening our operational management systems in these areas so they become capable of causing Zero Harm.

Engaging our leadership

The implementation of our Group policies and standards requires the continued commitment of our leadership to ensure their effective deployment. This is vital to create a safety culture across our businesses. The tools that we have developed allow our leaders to be visible and capable both in terms of having both a strong "will" to succeed and the ability to identify and manage risk.

Leadership coaching and workshops with technical experts ensures that safe working practices are driven from our leadership teams down the line to our site managers and colleagues. This is crucial to establishing a safety culture throughout the Group. To date, 726 leaders have been trained in our safety practices through our flagship leadership programme "INSPIRE".

Contractor management

Many of our companies face the challenge of working with contractors who have different degrees of maturity in their management processes, quality of execution, tools and equipment. Often, their employees also have different levels of literacy and language skills. This makes their overall management system less capable of realising our joint goal of Zero Harm on its own and we need to support them with our expertise including additional training, inspection and assurance. We are working with our contractors to ensure the availability and use of evolved safety systems including standards, processes, equipment and training. These are delivered through the use of audio-visual aids in the local languages of the region and by field training.

We are also developing a process that helps our businesses to select suitable contractors and to rate them based on their capability, resource availability and the level of risks that their employees are able to manage on account of their skills, competencies and training. It is our aim that all Group businesses ensure competency assessments are mapped before deploying contract workers at sites.

Building strategies for improvement

We fully appreciate that even a single fatality at work is unacceptable. Through the deployment of our safety system and improved safety leadership, we have seen a significant drop in the number of

fatalities in our operations over the last financial year. This is encouraging progress towards our target of causing Zero Harm. We are still saddened however, by the loss of two employees and five contractors within our premises during the last financial year. This tells us that we have much more work to do to make our business management systems capable of meeting our production and financial targets whilst at the same time keeping every one of our employees, contractors and neighbours safe from harm at all times.

SAFETY LEADERSHIP TRAINING – GUIDING A CULTURE CHANGE

Safety culture in any organisation is influenced by the beliefs and values shared by the top leadership team. To help support the creation of a safety culture, the Group Sustainability Cell has developed a group flagship leadership safety development programme called “INSPIRE”. It is based on the fundamental principal that a safety culture comes from the combination of management systems and leadership commitment. Our objective is to strengthen the current management systems to make them capable of achieving quality, delivery and cost control while preventing damage to the environment, negative impacts to our assets or to our people’s health and their safety.

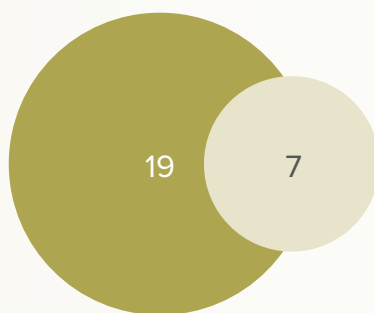
To enhance leadership skills, we engage colleagues from different managerial levels with bespoke programmes; one-day summary training for the top leadership team, a three-day theoretical programme for middle management and five-day detailed theoretical training with hands-on practical exercises for executives and supervisors.

In order for our leaders to improve competency and create the behavioural changes needed for the effective implementation of our management systems, they are encouraged to ensure that they are capable of:

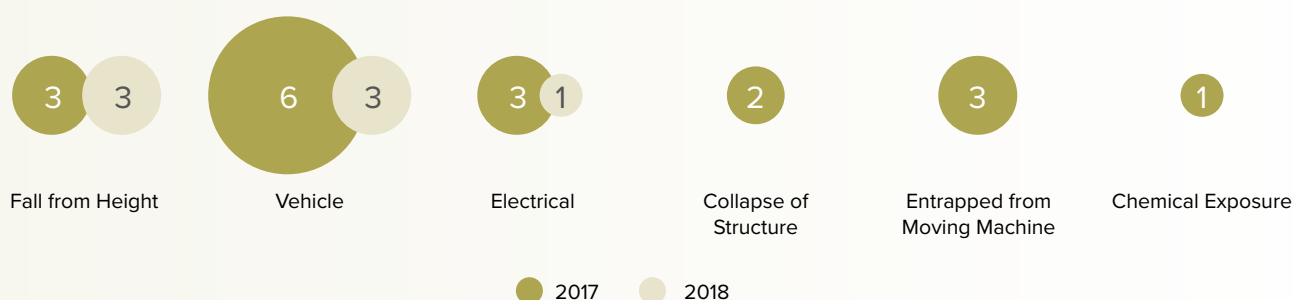
- Leading cultural change
- Using a risk based strategy to make informed business decisions
- Understanding the requirement to integrate processes, people and assets into capable management systems
- Creating responsibility and accountability within their teams
- Improving their team’s overall competency through training and motivation.

Our training modules provide tools and share benchmarked best practices to help ensure consistency across our operations and thus to move us quickly towards our Zero Harm target. In addition, we have introduced a train-the-trainers element for the Group INSPIRE programme so that it is further embedded within the business culture and self-managed.

GROUP FATALITIES TOTAL



GROUP FATALITIES BY CAUSE



As road accidents is the largest cause of fatal accidents, accounting for 35% over these two years, we are helping our businesses to work on implementing the Technical Standard on Road and Driving Safety so that underlying weaknesses are identified and acted upon. The second biggest cause of fatalities is from fall from height and we have focussed our efforts on the deployment of our Working at Height Protocol. Similarly, we are also working on our electrical systems with a key areas being the improvement of earthing systems, energy isolations, line breaks and related work permit systems to manage electricity as a potential threat to our colleagues.

To better understand the weaknesses in our management systems, we have improved the quality of our incident investigation processes by using a standardised system. We have procured and deployed an international software tool so that we will have a uniform methodology to investigate safety incidents across the Group. This is helping to bring rigour to our investigation process, improving the identification of root-causes and preventing recurrence by sharing and implementing the findings and actions taken.

Learning from Group good practices

Many of our manufacturing sites are recognised by their local communities as leaders in safety practices as they have witnessed behavioural transformation from outside of the workplace. For example, when our colleagues are seen using crash helmets on two-wheelers, our cyclists observed using high visibility jackets on local roads and through the adherence to speed limits, we inspire better behaviour in others. We hope that these practices have been a positive influence on our employee family's behaviour and that of their surrounding communities.

Our Chemical, Hindalco, Novelis, Carbon Black and Pulp & Fibre businesses in particular have seen a marked reduction in both the seriousness of injuries and the lost time injury frequency rates, though fatality figures remain a major concern.

// HUMAN RIGHTS & DISCRIMINATION

International standards are driven by the belief that we all have a role to play, whether governments, businesses or individuals, in shaping a better future for ourselves and for the next generation. Underpinning those beliefs is the recognition of human rights standards and practices. As international standards become the baseline for our corporate practice through the Group Sustainable Business Framework, recognising and integrating the respect for human rights throughout our operating systems and across the full business value chain will become even more important, irrespective of what our businesses do or make.

To ensure the Group fully integrates its commitment to human rights into our businesses, policies, standards and appropriate grievance procedures are being put in place. To make these practically applicable, our central approach has included engaging with senior management to improve their understanding of the requirements of the UN Guiding Principles on Business and Human Rights. The chart below shows how the UN Guiding Principles has become embedded within the Group Policies and Standards.

Working with experts

Leveraging the expertise of external organisations, we conducted a human rights workshop with the Institute for Human Rights and Business for 60 senior personnel. Our aim was to reiterate that as a global conglomerate, the Group is expected to include respect for human rights in all its business activities and decision-making processes. This includes the operations of existing businesses, the development of business strategies, the creation of new projects and in the management of acquisitions.

Our commitment to human rights standards and legislation means promoting its adherence both inside and outside of our businesses. As such we attend seminars, talk about the initiatives being implemented across the Group and share our learning and best practices. In February 2016, we participated in a podcast interview with the Institute for Human Rights and Business that was shared widely both internally and outside the business and was well received. In March 2018, we participated in a workshop titled 'Applying the UN Guiding Principles on Business and Human Rights' held jointly by SHIFT and the World Business Council for Sustainable Development. The workshop provided insight on conducting Human Rights Due Diligence and as a result, we have developed guidance documents for our businesses and are supporting them in its implementation.

HUMAN RIGHTS PROGRAMME

	ELEMENT	2017	2018
POLICY	Publicly commit to respect internationally recognized human rights	NO	YES
	Communicate human rights position to business partners	NO	YES
	Disclose details of staff training on human rights	NO	YES
DUE DILIGENCE	Report on processes to identify adverse human rights impacts along the supply chain	NO	YES
	Provide details on how company integrates findings of assessments into actions	NO	YES
	Disclose details on how effectiveness of human rights responses is tracked	NO	YES
REMEDY	Provide details of grievance mechanisms	INTERNALLY – YES EXTERNALLY – NO	INTERNALLY – YES EXTERNALLY – YES
	Share details of specific grievances raised	INTERNALLY – NO EXTERNALLY – NO	EXTERNALLY – NO INTERNALLY – NO



WHY THINKING & TALKING ABOUT HUMAN RIGHTS IS GOOD FOR BUSINESS & SOCIETY

All businesses want to remain sustainable in the long run and they want to do so by growing and thriving. For years, businesses have seen the idea of sustainability in a narrow sense - if the viability of their operations - the existing legal frameworks and reporting requirements have enabled such things.

Thousands of companies are familiar with the notion that they should pursue profits without harming people or the planet. As environmental emissions become easier to measure and the notion of mitigation as well as of costs and benefits are widely understood, many companies are publicly reporting on their environmental performance.

Reporting on human rights appears harder partly because in some cases the responsibility over specific impacts is diffused between the state and the company, and businesses view risk and impacts from the perspective of what happens to them, and not what happens to others because of their actions.

Societal expectations, stock market reporting requirements, stakeholder demands, labour union questions, and consumer preferences are forcing change. Companies not only should know what they are doing but show what they are doing. The UN Guiding Principles for Business and Human Rights offers the framework for companies.

The principles do not absolve the state - it has the obligation to protect human rights. But companies have the responsibility to respect human rights. And where protection gaps exist, there is need for fair and applicable remedies consistent with international standards. To do this, companies will need to have a human rights policy, assess risks and impact, take measures to eliminate and mitigate adverse impacts, make their policy is operational, and measure and monitor performance. Companies should also report their performance publicly and establish grievance mechanisms or remedies where appropriate in consultation with and with the consent of affected parties.

Regardless of whether it is required legally, forward-thinking companies will want to be ahead of the curve. The agenda may appear to be new in India, but many companies around the world have now embraced the agenda and companies based in India with global ambitions should make this thinking part of their DNA for long term sustainability.

Salil Tripathi
Senior Adviser, Global Issues,
Institute for Human Rights & Business
www.ihrb.org

// OCCUPATIONAL HEALTH MANAGEMENT

Ensuring our colleagues are healthy and equipped to work productively across all our sites is a priority for the Group. Though the understanding of occupational health management is relatively immature in some of our markets, we have seen substantial progress within our businesses who have embraced our Group systems and processes. We have led a comprehensive programme to increase awareness, promote positive actions and integrate good practice into our management systems. Key to our implementation strategy is training our leadership teams in occupational health management - what it is and how it should be monitored, assessed and implemented across their sites. As a result, we have seen the formation of central sub-committees at Ultratech, Novelis and in our Pulp & Fibre business.

Our aim is the prevention of long-term chronic illnesses in our colleagues and to mitigate their exposures to health risks in the workplace. Topics such as Industrial Hygiene, Stress Management, First Aid and Emergency Medical Care are the focus and supporting information is provided to managers via the Sustainable Business Framework. Through workshops and seminars we are ensuring that our people have a clear understanding of the standards that are expected of them and we are focused on embedding a culture of prevention rather than mitigation.

Developing a systematic approach

We have developed a Group Occupational Health policy, technical standards, guidance documents and training courses in line with the IFC General EHS Principles, ILO guidelines and recommendations from the World Health Organisation. These have been prepared to guide our businesses on the management and prevention of adverse health effects that may result from longer-term exposure to occupational health hazards in the workplace. They set expectations on occupational health exposure assessments in terms of qualitative and quantitative exposure, risk management incorporating a hierarchy of controls, health surveillance including return to work and specific management of areas such as ergonomics, ventilation, respiratory protection and stress. The Framework documents also clarify standards for first-aid and emergency medical care as well as the management of HIV, TB and Malaria in the workplace.

As we have outlined, we are keen that our managers and leadership teams are empowered to drive practices within their businesses, making them appropriate for their workforce. The Group Sustainability Cell has provided over 70 e-learning modules on occupational health issues on our internal training portal. In the first year we had over 4,000 downloads of our occupational health modules across all our businesses which has increased to 5,900 in our second year. We believe this demonstrates an increasing awareness of occupational health amongst our employees as well as a desire to integrate this into their work and operations.

Driving improvements through self-assessment and roadmaps

Recognising that our businesses are at different stages in the implementation of their occupational health management systems, we have introduced the uniform use of self-assessment questionnaires and heat maps managed via our IT system. The online questionnaire is completed by site contributors and signed-off by senior site validators before being reported to the Business Review Councils. Gaps in information are categorised based on the ease or complexity of implementation and this helps our management teams to develop short, medium or long-term plans and improvement roadmaps.

Qualitative Exposure Assessments

We are introducing a programme of Qualitative Exposure Assessments (QLEA) at all our operations. So far, 82 of our sites have undergone this with support from the Group Sustainability Cell. A list of hazards is collated for each Similar Exposure Group (SEG) and prioritised so that sites can

ensure a process of focused occupational health surveillance. This allows our management teams to establish a baseline for their operational activities, identify any gaps, develop action plans for hazard management and to align annual health check-ups to identify occupational diseases based on the potential threat.

QLEA SUPPORT ACROSS GEOGRAPHIES & GROUP INDUSTRIES

	INDIA	THAILAND	INDONESIA	PHILLIPINES	CHINA
METAL	●●●●●●●●				
CEMENT	●●●●●●●●				
CHEMICALS	●●●●●●●●	●●●●●●●●			
FERTILISERS	●				
INSULATORS	●●				
TELECOM	●●●				
MINES	●●●●●●●●				
PULP & FIBRE	●●●●●	●			●
TEXTILES	●●●●	●●	●●●●	●	
RETAIL (MADURA FACTORIES)	●●●●●●●●				
CARBON BLACK	●●				●●

Quantitative Exposure Assessments

Based on input from the QLEA, Quantitative Exposure Assessments (QNEA) are being conducted to measure specific exposure to occupational health hazards in the workplace through the application of established sampling and monitoring protocols. This output of QNEA has helped to establish baselines for exposure

levels and also satisfy statutory requirements. QNEA results also support us in justifying the need to implement control measures and, for example, to see if the current respiratory protection is adequate. So far, 21 of our sites have conducted this assessment with support from the Group Sustainability Cell.

QNEA SUPPORT ACROSS GEOGRAPHIES & GROUP INDUSTRIES

	INDIA	THAILAND
METAL	●	
CHEMICALS	●●●●●	
FERTILISERS	●	
INSULATORS	●●	
MINES	●●	
TEXTILES	●●	●●
RETAIL (MADURA FACTORIES)	●●●●●●●●	

World Business Council for Sustainable Development Water, Sanitation & Hygiene Pledge as an occupational health issue

The United Nations Sustainable Development Goals has identified the aim to achieve universal access to safe drinking water, sanitation and hygiene (WASH) by 2030 as today, an estimated 1.8 billion people do not have access to safe drinking water and 4.1 billion lack adequate sanitation. There is a compelling and clear economic argument for businesses to demonstrate leadership by addressing this situation. Globally, many businesses have operations, employees, contractors and customers in countries lacking access to these provisions.

We know that the impacts of poor hygiene, sanitation and the lack of access to portable water are related to safety, productivity and employee wellbeing. A healthy workforce with access to “safe water, sanitation and hygiene at the workplace” is a key theme of the World Business Council for

Sustainable Development (WBCSD). To demonstrate leadership and its commitment to this global goal, the Aditya Birla Group leadership signed the WASH Pledge in January 2015.

Using our self-assessment system, we have tracked compliance by site and by business against each of the Pledge requirements. A multi-layer monitoring of progress was designed to ensure the implementation process was infallible. Senior personnel were responsible to review the data and evidence uploaded and guidance notes and training modules were developed as a resource for site personnel involved in the implementation programme. Overall, the ABG compliance level to the WASH Pledge requirements increased from 75.5% to 92.5% which has surpassed our initial target set in January 2015. Out of 243 sites, 51 sites are still in the process of completing their action plans.

CATERING FOR OUR CHANGING WORKFORCE

The context of the countries, sectors and markets in which we operate are changing and to remain relevant, our businesses must evolve. In January 2015, the Aditya Birla Group signed the World Business Council for Sustainable Development’s WASH Pledge (<http://www.wbcds.org/washatworkplace.aspx>) to support its efforts for all businesses to confirm that they supply safe drinking water, good sanitation and hygiene for all employees across all operations.

The challenge of working in developing markets and in some of the sectors where we operate means that often these have been male dominated areas. Ensuring that we have the right facilities for female colleagues is a priority, not just to ensure access to sanitary conditions as a right, but because if we want to attract the very best talent, that means recognising that discrimination, in any form, is unacceptable.

We see a pledge to meeting the WASH standards as more than having bathrooms, but about who you have the bathrooms for and about changing the legacy of out-dated mind-sets – not because they sought to consciously discriminate, but because circumstances and traditional employment practices have led to subliminal barriers to certain groups in society.

After the initial assessment process, we found that the majority of our sites were in compliance with the Pledge’s requirements. Where deficiencies have been identified, we have focused on removing the process issues such as poor cleaning. A total investment of USD 2.87 million was made across the Group for the improvements in physical facilities needed. Emphasis was given to increasing the number of washrooms for male, female and the physically challenged employees. Additional facilities of 629 male urinals, 521 male toilets, 214 female toilets and 48 toilets for our physically challenged employees and visitors have been constructed across the Group benefiting 106,539 employees at the 243 sites involved.

We see our commitment to the WBCSD’s WASH Pledge as an opportunity to further reach out to talented female and less physically abled professionals who seek to tie their future success with that of the Aditya Birla Group.

// ENERGY MANAGEMENT & CLIMATE CHANGE

We know that changes in our climate are impacting the way that we live today and will most certainly effect our operations of tomorrow. In order to remain within the two degrees planetary temperature increase that is aspired to by the UN-led Conference of the Parties (COP), our behaviours will need to change dramatically. India is projected to be one of the countries hardest hit by climate change and as such we have a programme to work towards supporting the COP targets agreed by the government.

There are elements within our operations today that emit carbon dioxide and hence contribute to changes in the climate. As a major international business, we have a significant energy footprint using fossil fuels. Currently, only one percent of our energy requirements come from renewable sources which we are working to expand. We have developed framework documents on energy and carbon that encompass a policy, technical standard and associated guidance notes including recognising our desire to increase our usage of renewable and clean technology. We are also committed to use clean technologies when practical for new capital investment in fossil fuel based energy provision.

Our Framework documents are applicable to all operating factories, commercial and institutional establishments as well as to new infrastructure being developed by our businesses. The standard follows the approach of ISO-50001 for energy management and a combined approach of ISO-14064 and the Green House Gas (GHG) Protocol of the World Resource Institute (WRI) for Carbon Management. We follow these standards with the aim of integrating energy management fully into the decision-making processes of the Group and its businesses.

How our Group companies are mitigating their contribution to climate change

A key component of our approach is the tracking of performance data. Our businesses are using the self-assessment questionnaire process to establish the methods needed to report energy consumption and GHG emission baselines and analyse gaps in their current systems based on the Group's Technical Standard on Energy and Carbon Management. The gaps are then being used to develop and drive action plans to better

manage and reduce specific energy consumption and carbon outputs. The actions are a combination of projects on energy conservation and energy efficiency improvement in both processes and utilities such as fuel switching and investment in renewable energy projects.

Energy Consumption:

Among the group entities, Hindalco, has the highest energy consumption which is followed by UltraTech and the Pulp & Fibre businesses. Setting public targets to reduce greenhouse gas emissions and energy consumption is one way that our businesses are able to demonstrate their commitment and to focus their efforts. Hindalco has achieved a 12% reduction in energy consumption and a 10% reduction in greenhouse gas emissions over the last five years. Novelis is seeking to achieve a 50% reduction in total greenhouse gas emission by 2020 (against a FY 2007/9 average). Birla Carbon has already achieved 45% of its 2030 ambition of achieving a reduction of 21% of its direct emissions against its 2005 baseline. Birla Carbon is also making great strides towards increasing its absolute energy conversion efficiency to 80% having already exceeded the 72% mark. Similarly, our Chemicals & Fertiliser business has achieved a 10% reduction in specific energy consumption over the four-year period starting FY 2012-13 by retrofitting electrolytic cells and process redesign.

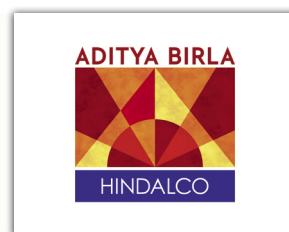
TOTAL ENERGY CONSUMPTION BY BUSINESS (TOE)

	FY 17	FY 18
CHEMICALS	567,026	600,208
FERTILIZERS	608,803	626,247
HINDALCO	6,572,254	6,610,544
INSULATORS	15,293	16,622
MINING	32,034	40,216
NOVELIS	705,959	714,586
PULP & FIBRE	1,704,986	1,641,067
RETAIL	6,650	7,770
TELECOM (NETWORKS/ OPERATIONS LEVEL)	370,851	355,271
TEXTILE/AF/OS	159,928	153,424
ULTRATECH	3,899,874	4,169,294
TOTAL	14,643,657	14,935,249

- *The total energy consumption of Birla Carbon was 12.11 GJ/tCarbon Black for FY17 and 11.91 GJ/tCarbon Black for FY18.
- *Telecom business Energy and emissions data cover operational data only.

NEW TECHNOLOGIES ADOPTED – BIGGER, BETTER & GREENER

Energy plays a critical role in the overall performance of Hindalco Industries Limited. About 30-35% of the cost of production of aluminium is due to energy. Aluminium is produced from its refined ore aluminium oxide by electrolysis, which is the only commercially known process used to manufacture aluminium globally. The benefit of the process adopted is that 99.7% pure aluminium is obtained during electrolysis in a single stage process that requires a steady, uninterrupted power supply.



In India, as in the western world, aluminium smelters were previously located close to hydro-electric power stations which was the source of power. However, the state electricity boards were unable to ensure the steady power supply needed. Growth of hydro-electric power in India was slow due to environmental issues and large scale displacement of people therefore the state encouraged aluminium and other power intensive consumers like steel to install their own coal based power plants due to India's abundant coal reserves. Hindalco embarked upon its major expansion a few years ago. For sustainable growth, energy and emission were considered as key drivers for the selection of the technologies for the green field projects. Hindalco chose the best available technology for its 2 new smelters at Mahan and Aditya.

Specific Energy consumption of these at 13,400 kWh/t is close to the best achieved worldwide. This translates to 30MW less power demand compared to the Renukoot smelter for equivalent metal production. Greenhouse gas emissions have also been significantly reduced with anode effect frequency below <0.06/cell/day and through the installation of improved process control systems. To supply steady power to its smelters, Hindalco selected new 150 MW turbines with 510 ton/hour reheat boilers.

Adoption of these new technologies is a significant step for Hindalco towards achieving its 2030 aspiration of reducing specific energy consumption and emissions by 35%.

Greenhouse Gas Emissions:

Greenhouse Gas (GHG) emissions from the Group operations include:

- **Scope 1** (direct emissions)
 - due to combustion of fuels such as coal, pet-coke, HSD and Furnace oils liberating carbon-di-oxide (CO₂), nitrous oxide (N₂O) and methane (CH₄) and
 - process emissions such as CO₂ from cement kilns, PerFlouroCarbons (PFC) from Alumina plant and nitrous oxide (N₂O) from fertiliser production.
- **Scope 2** (indirect emissions) - GHG emission from generation of purchased electricity and steam; and
- **Scope 3** (other indirect emission) – GHG emissions in upstream and downstream parts of our value chain as a consequence of the activities of our operations.

Scope 1 and 2 emissions are estimated and recorded by all businesses. Usage of Captive Power Plants (CPPs) along with emissions from processes

has meant that Scope 1 accounts for more than 50% of total GHG emissions for all businesses except Chemicals and Telecom. This is attributable to the use of electricity by our Chemicals businesses through import from the captive power owned by our Fibre units. For UltraTech, Hindalco, Birla Carbon, Pulp and Fiber, Mining, Fertilizers and Retail, the Scope 1 emissions are around 90% of the total scope 1 and scope 2 emissions.

Novelis has made significant progress towards increasing the use of recycled aluminum and minimizing the use of energy and natural resources. Recycling aluminum produces 95% fewer GHG emissions because it requires 95% less energy than primary aluminum production, enabling Novelis to achieve lower GHG emissions despite increasing its global production capacity. Over the past year, Novelis achieved an average of 57% recycled aluminum input, an increase of 27 percentage points from the baseline averages of fiscal years 2007-2009. Novelis also reduced its GHG emissions by 25% against the same baseline years.

SCOPE-1 EMISSIONS [t CO₂e]

	FY17	FY18
BIRLA CARBON	3,307,831	3,624,311
CHEMICALS	1,542,799	1,622,333
FERTILIZERS	539,188	562,365
HINDALCO	27,159,393	27,279,409
INSULATORS	32,821	35,337
MINING	98,458	124,274
NOVELIS	1,074,282	1,078,219
PULP & FIBRE	3,787,934	3,649,078
RETAIL	2,416	1,719
TELECOM (NETWORKS/ OPERATIONS LEVEL)	664,092	572,206
TEXTILE/AF/OS	421,732	394,293
ULTRATECH	32,772,172	34,450,000
TOTAL	71,403,118	73,393,544

Process CO₂ emission combined with emissions from energy usage results in UltraTech being highest direct emitter of GHGs across the Group contributing more than 40%.

UltraTech has been one of the early adopters of climate positive practices and contributes to the WBCSD Cement Sustainability Initiative's (CSI) "Getting the Numbers Right" programme to measure carbon dioxide produced by the cement industry. The CSI encourages adherence to international standards in relation to cement manufacturing. In addition to efficiently managing its energy consumption the business has identified key focus areas for reduction:

1. energy efficiency via process efficiency improvements that concentrates on mitigation through management efforts;

SCOPE-2 EMISSIONS [t CO₂e]

	FY17	FY18
BIRLA CARBON	106,297	84,355
CHEMICALS	1,542,978	1,692,821
FERTILIZERS	9,420	9,991
HINDALCO	592,458	452,685
INSULATORS	27,413	28,699
MINING	11,379	12,325
NOVELIS	899,622	911,562
PULP & FIBRE	220,825	213,782
RETAIL	41,027	52,004
TELECOM (NETWORKS/ OPERATIONS LEVEL)	1,506,284	1,684,198
TEXTILE/AF/OS	382,376	357,983
ULTRATECH	728,534	625,595
TOTAL	6,068,613	6,126,000

2. waste heat recovery that uses waste heat for the generation of electricity for their own operations – they added 342,400 MWh of waste heat recovery capacity during the last fiscal year bringing the total waste heat recovery capacity of UltraTech to 615,880MWh. They have also invested in renewable energy and the adoption of a mixed electrical energy matrix of thermal, wind and solar energy.

UltraTech management is also evaluating the use of hazardous and non-hazardous wastes from other industries as a component to address energy requirements. Last year the company disposed of 190,000 Metric Tons of such wastes in its kilns, resulting in a total fuel saving of close to 2%.

CASE STUDY

PREPARING FOR A CARBON SMART ECONOMY

Pre-empting the move towards a carbon-low economy, ABG entered the solar power space in 2011. The potential of solar energy in the Indian market is immense as sunlight gives the energy equivalent to over 5 trillion mega watt hours per year – far more energy than is currently consumed in the country.

Renewable power is still immature in India and since inception in 2011, our Solar business has built seven solar power projects across the country a total of 183 MW and 35 MW are now under construction, complemented by a 130 MW wind project. As the domestic market expands, we expect the legislative landscape to evolve and provide a more favourable environment for renewable energy providers to operate. We envisage that the Indian market for solar energy will grow as the government solidifies its approach to realising the commitments made to the Conference of the Parties meeting in Paris and we are prepared for this growth. We currently have a goal to increase our installed renewable energy capacity to 1,000 MW by 2020.

// BIODIVERSITY MANAGEMENT

Biodiversity management is relatively new for businesses in India where traditionally the government has led activity and driven initiatives. This is therefore also a new area of engagement for the Group's India based businesses.

We recognise that our businesses can have an effect on the local ecology of the areas where we operate and that we have an important role to play in protecting the fragile ecosystems around us. Effective biodiversity management means protecting our future capacity to operate in the most basic ways. For example, we rely on cotton crops for our apparel business, healthy ecosystems for our manufacturing industries to thrive and as an active member of an inter-connected world, the responsible management of our biodiversity means helping to secure a healthy society.

No Net Loss approach

Our Group-wide biodiversity policy, technical standard and guidance notes set out our target to manage biodiversity based on a No Net Loss (NNL) approach. NNL calls for negative biodiversity impacts caused by projects to be balanced by biodiversity gains through compensation measures implemented in the region. These gains are evaluated against a baseline (a reference point or trajectory without the project occurring, or prior to the project occurring) of the relevant biodiversity values being impacted.

While the NNL approach applies to all projects, for operational projects, steps for assessing biodiversity risks and past instances of biodiversity loss and ecosystem services will be carried out. These will identify mitigation actions and introduce obligatory additional conservation actions to compensate for past losses.

Our Technical Standard requires biodiversity assessment and management to follow five stages of i) Biodiversity Screening; ii) Biodiversity Inventory Assessment and Ecosystem Services Review; iii) Biodiversity and Ecosystem Impact Assessment; iv) Biodiversity Risk Assessment; and v) Biodiversity Mitigation and Management Plans.

By adopting a biodiversity policy based on the NNL approach, our businesses commit to understanding biodiversity risks at all their sites over time. For high risk sites, the business will review the

ecosystems services, conduct assessments to establish baselines, identify biodiversity risks and impacts and then use this to develop appropriate biodiversity action plans.

Effective collaboration to drive our performance

With a view to understanding the linkages between biodiversity and business, we have entered into a partnership with the International Union for Conservation of Nature (IUCN), a global conservation organisation. The IUCN experts reviewed our framework documents so that we can promote the adherence to international standards and expectations across our operations.

UltraTech has worked with the IUCN to create a scientific and systematic approach towards biodiversity management for its operations. The organisation carried out the comprehensive baseline assessment of biodiversity and ecosystem services in and around Sewagram Cement Work's area of operations, including the quarries. This included defining habitats inside and outside the quarried and operational areas. The results from the biodiversity assessment were used to develop a robust Biodiversity Management Plan (BMP) for Sewagram. The BMP includes a suite of measures designed to avoid, minimise, rectify, and/or compensate for impacts to biodiversity resulting from the development and operations of the cement unit and mines area. SCW is now in the process of initiating the implementation of BMP from 2018-19 onwards.

The approach and learnings from this study were also the basis to develop the Group's biodiversity policy and technical standard, in line with global biodiversity standards. In the long-term, the goal is for the Group biodiversity policy to be implemented across all of UltraTech's high impact sites and for this engagement to lead to similar pilots in our other businesses.

In addition, we have adopted the use of IUCN's screening tool, the Integrated Biodiversity Assessment Tool (IBAT). This assessment tool has enabled our operations around the world to map biodiversity challenges in relation to the exact location of the site. The results that we have obtained from IBAT form the starting point of biodiversity risk assessment at our operations.



WHY BIODIVERSITY MANAGEMENT IS CRUCIAL TO BUSINESS GROWTH

Biodiversity is the variety and variability of life forms found on earth: from tiny microbes to plants and animals. These life forms have evolved as a result of the interaction of elements of earth with the physical environment thereby embodying in their genetic makeup adaptability to all types of climatic and environmental conditions. Thus, they hold answer to climatic variability and oscillations in climatic conditions that we are facing in today's world.

Together, these life forms interact with the physical environment to provide various types of ecosystem services to mankind: cleaning water, purifying air, supplying food, together with entertainment and relaxation.

It is important that businesses have the knowledge and ability to identify the linkage of their operations with biodiversity and ecosystem services to future proof their business to meet the aspiration of mankind for better and healthy ecosystems. More than seventy percent of mankind depends on these five ecosystem services above. Industrial growth of all forms is either dependent on one or more ecosystem services or impact negatively the ability of biodiversity to provide these services. Businesses therefore cannot afford to ignore its indirect or direct dependence and impact on these services.

It is our natural capital that sustains our economic growth. However, due to overuse of the natural resources to meet unrelenting demand of a growing population, the natural capital base is depleting rapidly leading to declining trends in the ability of ecosystems to provide services we depend on. Businesses need to appraise their operations to identify impacts on biodiversity to understand the implications of reduction in ecosystem services that are relevant for sustainable production and to ensure that they are not seen by society at large to be impacting these services. In a world that is increasingly becoming conscious of the loss of biodiversity, businesses should reduce their impacts on biodiversity in order to enhance reputation and maintain a social license to operate both locally and globally and to secure a market for the future.

**International Union
For Conservation Of Nature**



// SUPPLY CHAIN MANAGEMENT

The message to our Group businesses is clear, our businesses cannot be sustainable if our supply chains are not. Securing resources and creating sustainable businesses capable of producing and supplying the raw materials, goods and services that we need for our operations is crucial in the short, medium and long terms if we are to be successful in our quest to build sustainable businesses. It is important to establish the life cycle impact and the vulnerabilities of the value chains in which we operate and that makes establishing the right systems and processes for the way that we relate to our supply chains extremely important.

Supply chains can be complex, involve multiple players and span different geographies. Today, where we are not in control of the full value chain of our products, we need to work with external organisations to ensure that they are managing their operations to international standards.

Partnering in the apparel sector

Acknowledging the symbiotic nature of our relationship with our suppliers has led us to develop a partnership with the Sustainable Apparel Coalition (SAC) that developed the Higg Index, a performance assessment tool for the apparel and footwear industries. This tool is helping to establish a standardised approach to supply chain performance measurement. Their aim is not to burden our suppliers but to encourage good practice to enable their growth so that we can ultimately be sustainable together.

Protecting forests for business success

Given the industries we operate in, we recognise that protecting the world's forests is not just good for the planet, but critical for our businesses if we want them to thrive and remain operational.

Our Pulp and Fibre business' 'Forest to Fashion' programme recognises the importance of effective forest management as a means of securing a sustainable share of the limited wood supply for our value chain. In order to better manage our full fibre value chain we have developed a Wood Fibre Sourcing Policy. This mandates our businesses to implement best efforts to avoid trading and sourcing wood or wood fibre from ancient and endangered forests, endangered species habitats, uncertified high conservation value forests and wood which has been harvested in violation

of traditional and civil rights. Our suppliers are expected to follow these stipulations and our businesses are encouraged to work with their suppliers to change practices accordingly.

We realised that annual wood growth is finite so in order to grow our businesses three things were needed. Firstly, we developed a Sustainable Forest Management System for the land we own or directly manage. The Pulp and Fibre business is committed to explore, research and develop opportunities for alternative fibre sources and invest in new technologies that reduce the environmental and social impacts of its operations. Secondly, by engaging with experts from Canopy, an organisation dedicated to protecting the world's forests, species and climate, we are working with forest owners to create chains of custody and to certify the forest management practices to the standards set by the Forestry Stewardship Council (FSC), Sustainable Forestry Initiative (SFI) and Programme for the Endorsement of Forest Certification (PEFC). Finally, we are also developing the technology to recycle clothing to boost the amount of material available for the apparel value chain of the future.

Birla Cellulose is committed to implementing an approach that effectively manages and develops its supply chain in a responsible way. Working with Canopy, it has developed a partnership focused on working with farmers in India to secure the growth of eucalyptus trees that not only diversifies the income that they receive from other crops, but given the longevity of eucalyptus growth, is securing a livelihood for farmers in the medium to long-term. By working in such a way, the business is working to secure its supply chain and access to the raw materials recognising that a sustainable and long-term approach goes hand in hand with the business' growth strategy.

Liva, our natural fluid fabric is made from wood pulp that is harvested from sustainably managed forests. Liva is bringing sustainable viscous staple fibre to the world of high fashion appealing to both designers and retailers.



Birla Cellulose is dedicated to making eco-friendly innovations at every point in the value chain; from the plantations we operate and support, to the fibre we manufacture that is truly in harmony with nature, to the fashions we inspire!

The Liva Accredited Partner Forum LAPF (<http://lapfconnect.com/>) ensures that the operations of our fragmented customer base conform to our own standards of quality.

Changing the way we work with suppliers

Supply chain management for the Group has traditionally been focused on our businesses making decisions to reduce costs, improve productivity, support long-term growth, protect brand reputations and reduce the risk of suppliers becoming unsustainable. Given the changes that we know are needed to be a viable player in a more sustainable world, we need to elevate our thinking to work with our suppliers in a much more integrated way. The Japanese call such an approach *kieretsu*. Through collaboration, promoting transparent relationships and engagement, we will seek to improve efficiencies and create sustainable practices within our supply chains. By understanding their challenges and working with them to adapt to the growing impact of their own set of “external factors”, we have to make sure that both the suppliers in our value chain and our own businesses remain commercially viable.

We are in the process of developing a Group-wide approach through a Supplier Management Policy and Management Standard to set standards for systems and supplier performance management. The Group has provided guidance on areas such as writing and adopting a supplier code of conduct, data collection and carrying out supply chain assessments.

Our self-assessment process places the onus on our operations to be both critical and transparent of their performance so that they are able to identify areas for progression. We expect this approach to lead to deeper relationships with our suppliers as our management teams will have sought to understand them better. In the future, we will expand our horizon scanning programme to those in our supply chain and try to help them make the same critical assessments we expect of ourselves. This will inevitably require new levels of cooperation and transparency but this is no different to what our customers are increasingly asking of us. There are currently six programmes underway across the Group to find better ways to map the full lengths of our value chains and to collect the relevant data we need to manage them better. These will eventually help us to qualify suppliers and streamline the way our products reach the end consumer. We expect the nodal factories in value chains to become brands in their own right due to their ability to promote transparently their key attributes, be they adherence to human rights practices, best practice management of resources or lack of harmful chemicals in their processes.

BIRLA CELLULOSE'S RESPONSE TO SECURING A SUSTAINABLE SUPPLY CHAIN



Putting the right systems in place

Through the global certified parties such as SGS, Control Union and simaPro, Birla Cellulose has completed a Life Cycle Assessment (LCA) for all products in its product portfolio. The LCA exercise has assessed the environmental footprint and its effects on human and animal health (acidification) and the environment (such as ozone layer depletion, excess mineral usage, excessive usage of nitrogen and phosphates) and been verified by Green Delta.

As a member of the Sustainable Apparel Coalition (SAC), a global consortium of more than 200 brands, Birla Cellulose is using the Higgs Index Tool to monitor their manufacturing units performance on environment and social scales. The index monitors energy and water consumption, the reduction in effluent discharge and transport distance. For all 11 manufacturing units of Birla Cellulose, the Higg Scores have been completed and a benchmark analysis has been carried out for each unit. These Higg scores and LCA values are being reviewed on an annual basis as improvements are made to the operations of our plants. The results have made a clear demonstration of the advantages of Viscose over Cotton with regards to land, water and other resources usage and over polyester in terms of biodegradability. We are currently working with Professor Tom Gloria at Harvard University to help assure our LCA and Higg scores. Our LCA and Higg Index Reports have been provided to our customers to help demonstrate our commitment to sustainable business practices and have made us a preferred supplier to leading global brands.

Driving brand differentiation & recognition

The Aditya Birla Group's retail brands, Allen Solly, Peter England, Louis Philippe and Van Heusen are working with their entire supply chain to deliver products that have a reduced environmental footprint. We strive to make strong associations with our stakeholders to ensure we understand the external factors that we must take into account in order to future proof our entire supply chain and to try to demonstrate "Transparency, Visibility and Traceability". This programme includes tracing the source of our garments from the forest. We seek to work together with global brands such as H&M, Inditex, M&S, C&A, Tesco and Ikea to drive initiatives to trace the source of the raw materials. Birla Cellulose has been actively involved with these brands to help them trace their complicated supply chains in India.

"From Forest to Fashion" is the first supply chain mapping project of its kind in the apparel industry and has provided clarity on value chain sourcing from India and improved transparency of the different players involved in the supply chain of some major brands. The next step we see will be to digitise the entire process. Birla Cellulose is now focusing on projects within our supply chain to reduce resource use especially water and chemicals used in the different stages of the "Forest to Fashion" process.

To help us, Canopy has provided ranking support for the benchmarking of performance of the largest rayon-viscose fabric producers in the world. They note that the Aditya Birla Group is among eight global producers who have already shared their sourcing data to help map the brands raw material supply chain. Their report uses a Greenpeace Catwalk style ranking approach to assess manufacturers on the risk of sourcing from ancient and endangered forests and also looks to make improvements as required. Canopy notes that the Aditya Birla Group represents 17% of the global market for viscous staple fibre and has completed a number of site visits to verify their findings. To make the project transparent, all audit results have been made publicly available on both the producers and auditors websites (<https://canopyplanet.org/canopy-media/birla-cellulose-canopystyle-audit-results-released/>). Sixty- five apparel brands have joined Canopy's campaign including H&M, Tesco, Esprit, KappAhl and New Look who have a collective goal of ensuring the rayon/viscose supply chain avoids endangered forests by 2017. By working with the global brands to drive transparency, reduce environmental impact and enhance performance, we are working to become their supplier of choice.



BUILDING A SUSTAINABLE SUPPLY CHAIN

The environmental footprint of the fashion industry is huge. The production process involves extensive use of chemicals, large amounts of water and often uses pesticides. Given the increasing scarcity of resources on one hand and rising environmental consciousness on the other, it is apparent that control over the value chain and building a resilient supply chain will be of utmost importance in order to ensure the longevity of our business.

As part of achieving this, we have developed and rolled-out our Vendor Code of Conduct, Laundry Audit System and are in the process of formulating a Chemical Management System that will result in substituting chemicals that are harmful to humans by those that are safe to use and also have a lower environmental footprint.

Managing our supply chains

Sustainable fashion supply chains call for the use of more sustainable raw materials, efficient manufacturing and distribution processes, and involving consumers to reduce the environmental footprint of the product during its usage. This requires us to work actively with upstream suppliers with regard to good agricultural practices, use less water/ pesticides/ energy across the cotton production process and also manage the way we achieve the finished product through our factories and distribution networks. We are adopting a Life Cycle Approach (LCA) for designing new products. This helps us understand better the environmental footprint of our products and to proactively work towards mitigating and reducing their impact.

Adopting the use of organic cotton, ensuring fair wages and decent working conditions for workers, keeping abreast of the latest advances in technology and making use of these to make our supply chain more agile and responsive, to building strategic partnerships with key suppliers – each stage is crucial to us achieving a sustainable supply chain and securing the future of our business. Primarily due to the unsustainable farming practices and irrigation requirements for cotton, the main raw material used in the apparel business, the fashion industry is one of the largest consumers of water.

We are engaging with the Better Cotton Initiative (BCI), an organisation committed to reducing the environmental footprint of cotton through better farming techniques that use significantly lower quantities of water and pesticides. We intend to source an increasing percentage of our cotton requirements from more sustainable sources over the next few years.

Being prepared for the future

Through workshops and scenario planning we are looking at the trends and innovations that may potentially disrupt our business so that we can proactively plan our responses now. Digital innovations are changing not only the way in which we produce and consume fashion, but also the way in which fashion functions in our daily lives. The implications on our supply chain management systems, our operations and the future of our business are significant. For example, 3D Printing is shortening lead times for producing items and also considerably lowers the wastage of raw materials. Fabric for clothing no longer needs to be rolled out by the meter, then cut and stitched but is rather printed and ready to wear.

While 3D printing of fabric has not yet been commercialised, if successful, it would lead to potentially huge reductions in shipping and transportation needs, our material and resource usage, waste production and our supplier portfolios. In order to understand the possible impacts to our business we have formed alliances with product innovators and are strengthening our initiatives in this space. We have partnered with Strategies and have been successful in prototyping and testing at this stage.

To manage our commitment to be a leading sustainable business, we have identified “no-regret” actions that we will take immediately to position ourselves to deal with possible scenarios that may unfold in the years ahead. Many of these initiatives have already commenced and are at various stages of implementation. Securing and sustaining our supply chain is crucial to our business and I am confident that we are on our way, through our innovations and our partnerships, to managing the risks and opportunities accordingly.

Ashish Dikshit, CEO Retail

// WATER MANAGEMENT

The need for robust water management systems in an increasingly water scarce world cannot be underestimated. Forecasts predict that in India alone, there will be a 50% gap in demand and supply of water by 2030 and the implications on health, agriculture and industrial operations will be immense. The success of our operations is acutely tied to the access to water as it impacts the full lifecycle of many of our businesses and their supply chains. Understanding, managing and mitigating our water consumption and creating water management practices aligned with international standards is crucial for the Group. Many of our businesses; Pulp & Fibre manufacture, aluminium smelting and associated power generation in particular, are more water intensive than others. Developing our thinking on conservation, efficiency, reuse, capture and storage techniques is critical for us to sustain the changing trends in water management. Water access and scarcity, although a global issue, is best understood and managed within the local contexts of our operations.

Our approach to water management

Six key steps form the requirements of the Group's framework documents – water stewardship policy, technical standard and guidance notes. The standard is based on the approach of the Alliance for Water Stewardship (AWS) standard. It shows the actions, criteria and indicators required to manage water at the site level and how water management should be stewarded beyond the boundaries of a site.

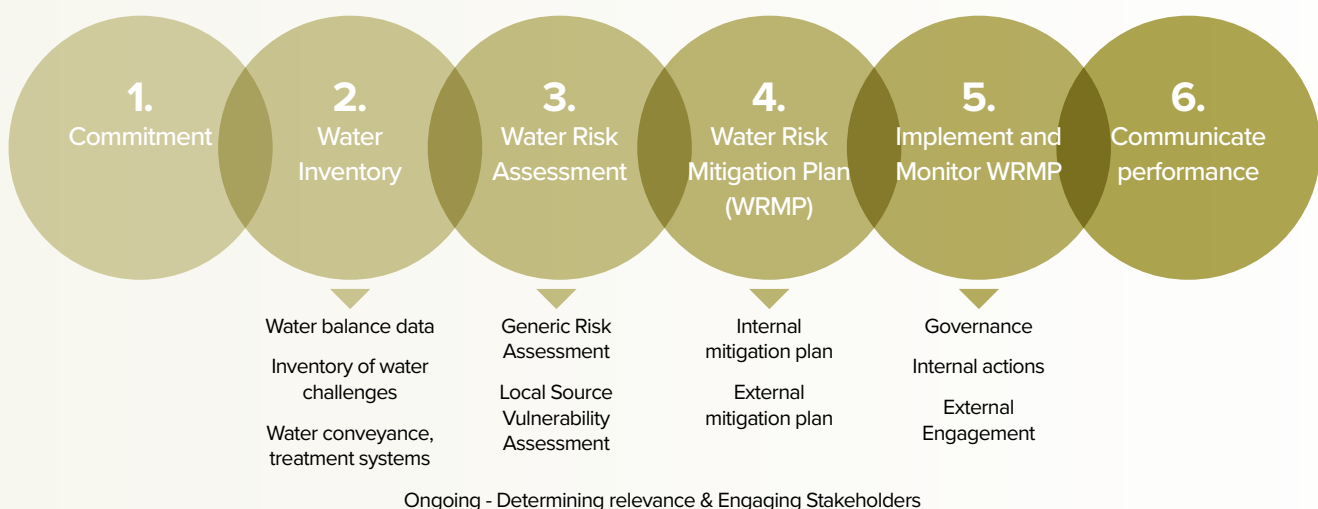
We have shared the following guidance with our businesses:

- **Water Recycling and Reuse:** to assist managers in identifying opportunities for designing and implementing steps towards integrated management through recycling and reuse of water.
- **Rainwater Harvesting and Artificial Aquifer Recharge:** to help in identifying opportunities for and designing and implementing harvesting systems, often with expert help.
- **Source Vulnerability Assessment:** to present a step-wise approach to assessing vulnerability of a sites water source and to help identify actions for water source protection planning.

Implementation of the Water Technical Standard has been supported through the phased launch of our SAQ process. This has enabled businesses to develop a water balance, leading to an understanding of their water risks (physical, regulatory and stakeholder) and working towards the development of risk mitigation plans.

Depending on their sector and geographies, our businesses are in various stages of readiness. While some sites are initiating water audits to better understand and learn from their water balance, others are working with experts to conduct hydro-geological studies and identify interventions for their water security.

OUR APPROACH TO WATER MANAGEMENT



Our companies response to water management

Most of our businesses have targets on their water performance and goals to reduce (specific or absolute) their consumption. As such, activities both inside and outside plant boundaries to help minimise fresh water consumption have been initiated. These include reuse and recycling programmes to manage ground water usage and dependency.

The vast majority of our water usage is in our Pulp & Fibre business which had a total water consumption of 180 million kL. The business is working on various initiatives to reduce their fresh water use, prevent waste water generation and maximise reuse and recycle. The business approach has moved from looking at waste water treatment from 'end of pipe' to 'source segregation and treatment'.

In April 2018, UltraTech was certified as a water positive company by the consultancy DNV GL. The assurance audit process included all UltraTech existing units including Birla White but excluded its international operations.

WATER WITHDRAWAL BY BUSINESS (KL)

	FY 17	FY 18
BIRLA CARBON	15,918,878	17,020,916
CHEMICALS	16,360,116	17,201,232
FERTILIZERS	6,634,665	6,847,519
HINDALCO	90,592,901	96,951,296
INSULATORS	460,115	478,804
MINING	894,605	818,820
NOVELIS	8,206,276	8,394,546
PULP & FIBRE	185,110,574	180,536,934
RETAIL	165,787	146,769
TEXTILE/AF/OS	8,679,624	8,027,034
ULTRATECH	11,146,383	14,690,000
TOTAL	344,169,924	351,113,869

Target setting to drive performance

Our businesses understand the need to shape their performance through data capture and target setting. Each company is therefore responsible for setting their own water targets and tailoring their performance accordingly.

Hindalco and Grasim Chemicals (India business) are both striving to achieve a Zero Liquid Discharge (ZLD) target by 2020 through process modification, reuse maximisation and reverse osmosis units. In addition, Hindalco has a 40% reduction target in Specific Water consumption by 2025 (against a base year of 2011-12). Through efforts like minimising leakages and increasing the reuse of waste treated water in different processes, Hindalco has reduced its specific water consumption by 35% in 2017 and is on track to exceeding its target. Novelis has also implemented initiatives that have reduced the business' overall water intensity by 22% against its baseline (FY 07-09).

Birla Carbon has developed a water management process that not only looks to minimise the amount of water it draws from natural and municipal sources but also increase the amount of rain water it collects and process water it reuses. Such mitigation techniques are helping the business to reach its 2030 target of reducing its water withdrawal by 50% for its most at risk production sites.

ABFRL has a target for FY 2018 to make 60% water recycling and reuse and 30% water from renewable source at own factories. The company is targeting to become water neutral across its own facilities by 2020.

Integrating best practice tools in to our operations

The Aditya Birla Group is an active member of the WBCSD India Water Tool Working Group that is now in its fifth year. The tool is designed with international standards in mind to help organisations map and measure water risks and to enable them to develop action plans to transform their work practices, manage sites effectively and also provide consideration for future decision making with regards to business growth. The Water Tool, with data from 19,000 bore wells across India, is being used across all of our Indian locations and we have found that the data has helped our management teams to understand the importance of tracking future trends in local water availability. The latest version of the tool is being currently tested and is expected to be released in Q3 of FY 2018-19.

// WASTE MANAGEMENT

Waste is generated at all stages of our industrial processes – from manufacturing to packaging and logistics. It is a by-product of all our operations and supply chain.

We expect to see more stringent legislative changes across the globe for waste management practices as market demands and resource scarcity drive the need for further efficiencies and indeed, complete waste elimination. As global regulations and stakeholder expectations become increasingly more demanding, our Group businesses will need to focus more on reducing, reusing and recycling.

Waste management is part of the Group Sustainable Business Framework. To support our businesses, we have developed a Solid and Hazardous Waste Management policy and technical standard with supporting guidance notes where we have defined categories of wastes based on physicochemical characteristics and composition:

- Hazardous waste;
- Electronic waste (E-waste);
- Bio-medical waste;
- Non-hazardous waste or Municipal including plastic waste, construction and demolition waste; and
- Mineral waste.

ABG's waste management approach

Our approach is based on the hierarchy of waste management with resource conservation upstream and the need for managing contaminated land sites on the downstream.

Our Group businesses are developing their reduction and reuse targets based on the Group Framework that speaks to the following:

- Compliance with regulatory requirements for business continuity
- Minimisation of the risk to human health and the prevention of pollution to the environment
- Alignment with goals prescribed by international organisations: United Nations (UN), International Finance Corporation (IFC), Basel Convention and World Health Organization (WHO);
- Benchmarking our achievements and targets with those set by our peers and;
- Applying Principles of Waste Management Hierarchy

Progress is being made across the Group on various aspects of waste management. Birla Carbon achieved 25% solid waste recycling in FY 2016.

Hindalco, through its Value from Waste initiative is exploring the potential to unlock value from its waste processing by 100% utilisation of wastes. The initiative is a systematic collection of scrap and safe storage/disposal and re-use of waste generated. Wastes like fly ash, phosphor-gypsum, bauxite residue etc. are being used in cement industry to replace virgin raw materials. The aim is to avoid, reduce and reuse the waste that is created, by managing it through a lifecycle approach.

Our Retail business is piloting a Zero Waste to Landfill programme across its factories and warehouses.

ABCTL Chlor Alkali has achieved 90% reduction in Brine Sludge by replacing rock salt with industrial salt as a raw material. The initiative led to the reduction in generation of Brine sludge from 431 MT production /month to 21 MT.

With the use of our self-assessment questionnaire assurance process and the development of associated heat maps, sites are identifying gaps in their waste management practices. They are working towards developing detailed waste inventories and management plans that include the need to construct infrastructure for appropriate segregation, storage, handling, transfer and transport of different wastes.

Our Hindalco business contributes the highest volume of non-hazardous waste generation across the Group, due to the generation of red mud during bauxite refining. Overburden generated by UltraTech for 2016-17 was 2,010,784 tonnes and is 2,094,661 tonnes for 2017-18.

UltraTech is using the waste it generates in their captive power plants in an innovative way by blending it with cement and other waste materials such as chemical and marine gypsum to lower the clinker factor of their cement. This reduces the need for a by-product going to landfill and it produces real cost saving for the business. Further, UltraTech was among the first cement companies in India to adopt concrete recycling in its plants right from its inception in 1998. The concrete recycling system (Baton Wash) separates solid material over 0.15 mm diameter from the water through a spiral system rotating inside an inclined drum. Slurry water is discharged from the recycling system into storage tanks and is then reused in new concrete production. UltraTech has 62 water recycling plants across India.

For our lower risk operations that are largely office-based such as Birla Finance, measures are being rolled out to reduce waste such as reduced plastic consumption and increased energy efficiency by measures such as adopting LED lighting. IDEA Cellular is in the process of rolling out a waste management manual to lay out clear guidelines on management of its various types of wastes generated across its offices, towers and other infrastructure.

WASTE GENERATED BY BUSINESS (TONNES)

	HAZARDOUS WASTE		NON HAZARDOUS WASTE	
	FY17	FY18	FY17	FY18
BIRLA CARBON	303	1,782	12,957	25,272
CHEMICALS	10,559	8,275	353,437	382,594
FERTILIZERS	13	91	433	753
HINDALCO	290,025	322,955	10,970,000	11,316,501
INSULATORS	30	52	7,521	9,097
MINING	2,070	3,210	23	56
NOVELIS	77,936	77,917	143,997	162,100
PULP & FIBRE	108,812	148,875	269,849	273,106
RETAIL	3	5	3,443	4,759
TELECOM	2,279	2,004	1,538	2,218
TEXTILE/AF/OS	600	699	30,769	25,746
ULTRATECH	1,525	1,566	608,216	330,991
TOTAL	494,155	567,432	12,402,183	12,533,193

*Non-hazardous waste of mining business excludes overburden

Strategic Stakeholder Engagement

Strategic Stakeholder Engagement is a business-critical way for the Group to use the expertise of our partners to understand, manage and plan for the risks and opportunities that have the potential to disrupt our businesses and their operations.

BUILDING A SUSTAINABLE BRAND



The sustainability commitments made by leading apparel and footwear brands will change the course of the entire industry over the next decade. Inspired by the Paris Climate Accord, Nike, VF, H&M and others committed to 100% renewable energy. Inditex and H&M committed to move away from today's model of fast-fashion with inherent environmental challenges towards a circular model where renewable energy and recycling technologies enable clothing that otherwise would go to a landfill to become tomorrow's latest fashion trend.

Nike committed to double its growth while halving its resource use. These commitments will fundamentally differentiate sustainability leaders from sustainability laggards and will impact everything from the relationships with consumers to the bottom line of business.

In a landscape increasingly defined by requirements to reduce CO2 emissions and pricing pressure on raw materials, those companies who invest in sustainability and use it as a source for innovation will be rewarded in the marketplace. Crystal Group, now one of the world's leading denim manufacturers, didn't start out that way. After watching an Inconvenient Truth in 2007, Crystal's Chairman of the Board decided to invest heavily in new technologies to be a part of the solution to the global climate crisis. Not only did this investment reduce their energy costs by over 20% and their material waste by 18%, but the costs savings from these efficiency improvements catapulted them into the leading position in the marketplace. When Nike challenged its designers to design a pair of shoes that used less materials they reimagined the archetype of athletic footwear with Flyknit. Instead of gluing pieces of leather together, Flyknit weaves thread together while reducing labour costs by 50% and material usage by 20%. Yet Flyknit still provides world-class athletes with the performance they demand. Flyknit is now ubiquitous throughout Nike's footwear offerings and has been a runaway success with its values-oriented millennial customers and athletes alike.

For industry leaders like Nike and Crystal Group, competition and innovation don't just happen in a vacuum. They are part of a larger discussion happening across the entire industry in part facilitated by the Sustainable Apparel Coalition about how the industry can harness innovation and competition to create measurable change. By using the industry's common measurement tools called the Higg Index, the supply chain can make sustainability investments confident that they will be rewarded by all of their customers. Companies can communicate their sustainability performance in a common language relevant to all stakeholders including eventually, consumers. Higg creates common success metrics for the entire industry that allows sustainability to rapidly scale.

As sustainable business practices continue to demonstrate competitive advantage, and market leaders make good on their bold commitments, those who haven't embraced the need for a sustainable world will find themselves playing catch-up, if they can. Yet for both leaders and laggards it will be this combination of competition and collaboration that will be required for healthy businesses and a healthy planet.

Jason Kibbey
CEO Sustainable Apparel Coalition

// A DIFFERENT APPROACH

Our approach to materiality incorporates examining and responding to the impacts of our businesses whilst also taking into consideration the external factors that could result in risks to our business strategies. This approach goes further than conventional materiality analysis.

We appreciate the need to understand the external issues that are important, present material risks or opportunities to the Group and our businesses. However, just focusing on the areas that we internally feel are significant, or that our stakeholders require us to operate against, limits our thinking. Most believe that a sustainable business is one that understands and manages its impacts in the world. At the Aditya Birla Group however, we recognise that in order for us to be truly sustainable, we must understand that there are external factors that will require us to adapt. As the world around us faces increased challenges, we will increasingly need to not just manage the areas that we impact and affect, but also to understand better the trends surrounding each of the external factors that will impact us.

Building effective relationships with key stakeholder groups is a vital component of modern day business management. Our Group focus on Strategic Stakeholder Engagement goes beyond traditional interactions with the organisations that are affected by or affect our businesses now or in the short term. We want to work with our strategically selected stakeholders in a more business-critical way, benefitting from their expertise to help us identify the key issues, trends and external factors that will shape our markets and operating environment in order to shape our planning in the medium and long term.

This evolved approach pushes us to move from thinking and working tactically to strategically. Particularly for businesses operating in developing markets, the implications of resource scarcity, new technology, talent management and climatic changes amongst many others are, and will become, more pronounced. We must have the foresight to work beyond the areas that are in our sphere of influence, but recognise those factors that have the potential of influencing our own sustainability and that of our value chains. We are increasingly doing this at a Group, business and site level.

Creating differentiation

Our approach builds risk mitigation strategies for our businesses and their operations as well as identifying business opportunities. The goal is to enable our leaders to position our businesses with a strategic advantage over our competitors.

We do not believe that the sustainable business playing field is flat. Aspects such as structure, technology, geographic location and developments in legislation that are the focus of our Model for Sustainable Business are likely to lead to winners and losers. Losers being businesses that cannot stay inside the shrinking legislative funnel, and winners being businesses that are able to position themselves to take advantage of the dramatic changes heading their way and gain market share from the losers. Believing this, it is vital that our leaders understand what could disrupt their markets, business models and supply chains and be proactive in implementing our responses. This can only be done by building the right relationships with the right experts who understand the trends in key external factors and the science behind them better than we do.

A good example might be climate change where some of our businesses are very small emitters of CO₂, but depend on a supply chain that might be severely affected by sea level rise or the legal requirements to prevent CO₂ emissions. By leveraging our expert and strategic stakeholder relationships to understand such interdependencies, we are able to scan the horizon and find efficient and cost effective ways to improve the directions of our operations. We need this information to improve our business strategy and plans but more importantly, this approach is what sets our leadership and our businesses apart and places them firmly on the road to being viable and capable in a sustainable world.



Inspiring our leadership

Building strategic stakeholder relationships requires a different approach from the leadership within our businesses as well as our site managers. Moving stakeholders from being seen as partners for operational programme delivery to providers of counsel on issues that may not yet effect our operations requires broadening the lens from which we view our external relationships.

In order to assist in the identification and development of key strategic stakeholder relationships, the Group approach is being standardised through policy and management standards that help and guide our businesses to

work more effectively. The Group Sustainability Cell is practically involved through facilitating introductions to expert organisations, supporting businesses in developing new and evolving current relationships. We are also bolstering our business' engagement by elevating their presence on strategic platforms to Group level. We place the onus on our leadership to drive thinking within their medium and long-term strategic planning processes. Financial gains can only be maintained if such risks are seriously incorporated into our planning and we believe that it is this that will differentiate the Aditya Birla Group approach.

// MITIGATION vs. ADAPTATION vs. TRANSFORMATION

Without looking at the external factors in a broader and longer-term manner, our businesses are at risk of being caught off guard by a trend reaching a tipping point and thus creating a disruption that they cannot cope with compared to competitors. We must be prepared and informed enough to determine whether our operations will require mitigation (best practice is good enough), adaptation (we can adapt to the trends we see) or transformation (we need to redesign our products, operations and business models) in order to survive.

Our Responsible Stewardship programme allows our companies to mitigate and manage the areas that we affect and can control but it can only go so far in helping us contribute to adaptation. Some business models will not be sustainable without a complete transformation. We need much more information to make informed decisions.

By using a horizon scanning and scenario planning process, our business leaders can consider a wide range of potential worlds when developing future plans. It pushes colleagues to think about these issues in a holistic way and we have developed a series of management tools including information cards to help challenge their thinking. These include issues like climate change, human rights, supply chain resilience, energy, water, robotics and artificial intelligence, resource availability, nutrition and skills requirements.

By asking a series of questions and presenting different scenarios, we are learning to identify and understand the potential disruptions that could cause the funnel in our model to shrink and constrain our businesses as well as those we depend on in our value chains.

Looking beyond our operations

For some of our businesses, the threats are not directly caused by them but will involve responding to the effects caused by others and a deteriorating planet nonetheless. For instance, all businesses will need to learn to operate in a world that is at least 2 degrees hotter than preindustrial temperatures, even if the efforts to meet the ambitious COP21 commitments are accelerated and successful.

For Birla Capital, engagement with institutions like the International Finance Corporation (IFC) and the United Nations (UN) whose Performance Standards and Principles for Responsible Investment form the basis for international standards today, means understanding how they will evolve in the future to create a sustainable landscape for the financial services sector. Responsible Investment is currently immature in India, but the international tide for inclusion and exclusion frameworks will no doubt influence the markets of the future. Being forewarned of developments means that business leaders will be able to chart strategy accordingly and be able to lead the adaption process ahead of peers and competitors.

Embracing a new way of thinking

Our stakeholder relationships are evolving as our thinking and approach to building sustainable businesses has taken shape.

Our Retail, Fashion and Textile businesses have carried out horizon scanning exercises to explore the trends in the external factors that will pose a risk to their business and that of their supply chain. Led by Forum for the Future, workshops were used to explore trends that the businesses had not previously considered as possible opportunities or risks to their business models. They examined broad topics under legal, societal, technological, economic, physical and geo-political frameworks.

Going through a facilitated programme has helped our leaders to think about their businesses and their operations in a more holistic way. It has fundamentally challenged their perceptions of what could disrupt their strategic plans for the future and as a result, it is making our leadership think about the types of relationships and strategic stakeholder engagements that they need to develop now in order to be able to understand where adaption and possible transformation may be needed. Further, the requirement to map our supply chains to evaluate risk is a message coming from the major brands that use our products.

A transformative working relationship

As a result of the scenario planning process, both our Retail and Pulp and Fibre businesses have developed relationships with the Sustainable Apparel Coalition (SAC) to engage on improving transparency in the apparel supply chain. They are now part of the debate and discussion that is driving best practice in the industry and are working with other leading global brands to achieve this. In addition, the adoption of the HIGG Index has led to self-assessments that are driving improvements in their management processes and the verification of their systems. This is thereby practically improving their operational standards. Engagement with others in the sector has allowed our leadership to consider the role of accountability and transparency in their supply chains and communications strategies, leading to understanding the benefits to processes but also brand credibility and differentiation. As consumer and customer expectations grow, our businesses are setting the processes in place now to be prepared for the future expectations of us.

The initiation of the relationship with the SAC has led to a deeper engagement through membership of working groups and Group representation on the SAC Board. Such strategic stakeholder engagement has become an internal case study for demonstrating the value that can be achieved through this type of approach for our Group businesses.

Leading beyond our boundaries

Our work with the World Business Council for Sustainable Development (WBCSD) is multifaceted, with the Group and individual businesses engaging with it and its members on a variety of thematic areas. We have a presence on working groups focused on areas such as the Cement Sustainability Initiative (CSI) and the recently formed, Global Cement and Concrete Association (GCCA) that is working on climate, biodiversity, safety and recycling, the Chemical Management Group that is working to develop a harmonised approach to corporate greenhouse gas accounting and

reporting and the Water Stewardship Working Group that is funding the creation of mapping tools. We are adopting the use of management diagnostic tools such as the Global and India Water Tools across our businesses to mitigate and where necessary, adapt our water exposures.

Membership of a global initiative like the WBCSD is critical to achieving our vision of leadership in sustainable business practices as it makes us party to the development of best practice tools that will assist us in becoming future-ready.

We are active in driving the strategic thinking of the WBCSD by being committee and board members of The Water Cluster Board, The Indian Advisory Committee and the CSI. Such endeavours mean that we are not only embedding sustainable business practices in our own operations but are also helping to shape the direction that business and industry takes as a whole. At the Aditya Birla Group, we recognise that leadership also means being proactively engaged in the debates taking place around us, learning from experts and shaping our operations to make them sustainable for the future.

05

Future Proofing

Future-Proofing means being prepared for the different ways in which our operating environment may change, understanding the risks and opportunities these shifts could offer to the businesses and proactively shaping strategy to succeed in a future we want to see.



WHY BUILDING BUSINESSES FIT FOR THE FUTURE MAKES GOOD BUSINESS SENSE

The future isn't something that just happens to us. By creating positive visions, by using scenarios to understand different future possible worlds, by tracking trends, by spotting niche innovations today and understanding how all these issues will affect business, CEOs can guide their company to a sustainable future.

A sustainable business will be one that can continue to operate in a sustainable world because a sustainable world can only contain sustainable businesses. That means within the policy and legislation environment that is needed to control climate change, manage biodiversity, provide food and water for a population of 9 billion people. That means a business environment that is very different to today.

Looking to the future, and incorporating those insights into business planning and strategy needs to become second nature for everyone wanting to stay in business in the next few decades and we are thrilled our futures tools and techniques are proving so useful.

The ratification of the Sustainable Development Goals in September 2016 followed by the signing of the Paris Agreement in December 2016, the tide of consumer interest in ocean plastics and other impacts, and now the forthcoming ratchetting of climate commitments process means that there has never been a better time for business to get very serious indeed about their sustainability.

The Sustainable Development Goals in particular provide a clear, shared vision of the world we want for 2030. At Forum for the Future we spend much of our time looking to the future in order to help businesses make better decisions today. By understanding the mega-trends shaping the business environment of the future businesses can understand how these can actually act as incredibly rich sources of innovation to help future-proof their operations.

Sally Uren
CEO Forum for the Future



// BUILDING BUSINESSES FIT FOR THE FUTURE

We know that the businesses that will be capable of operating in the world of tomorrow are the ones that imagine and plan for their future success today. In practical terms this means planning and preparing for different eventualities, spotting and responding to market opportunities and remaining ahead of the curve in our innovations of business strategy, products and value chains. It also means encouraging our leaders to think about a time horizon that they are not traditionally accustomed to and about issues that they may not have considered in conventional business planning.

The overarching objective of any future proofing exercise is to enable long-term business success.

We do this by:

- Understanding the trends and factors that will influence this success, including those related to the stability of the supply chain and demand for new value propositions
- Identifying potential External Factors that could cause a disruption or threat to operations or business models
- Developing mitigation, adaptation or transformational strategies to take account of these risks
- Identifying opportunities for value-driven innovation. These may be new products and services, or new ways of operating
- Developing the capacity of senior decision makers to manage effectively in an increasingly uncertain and volatile operating and financial environment.

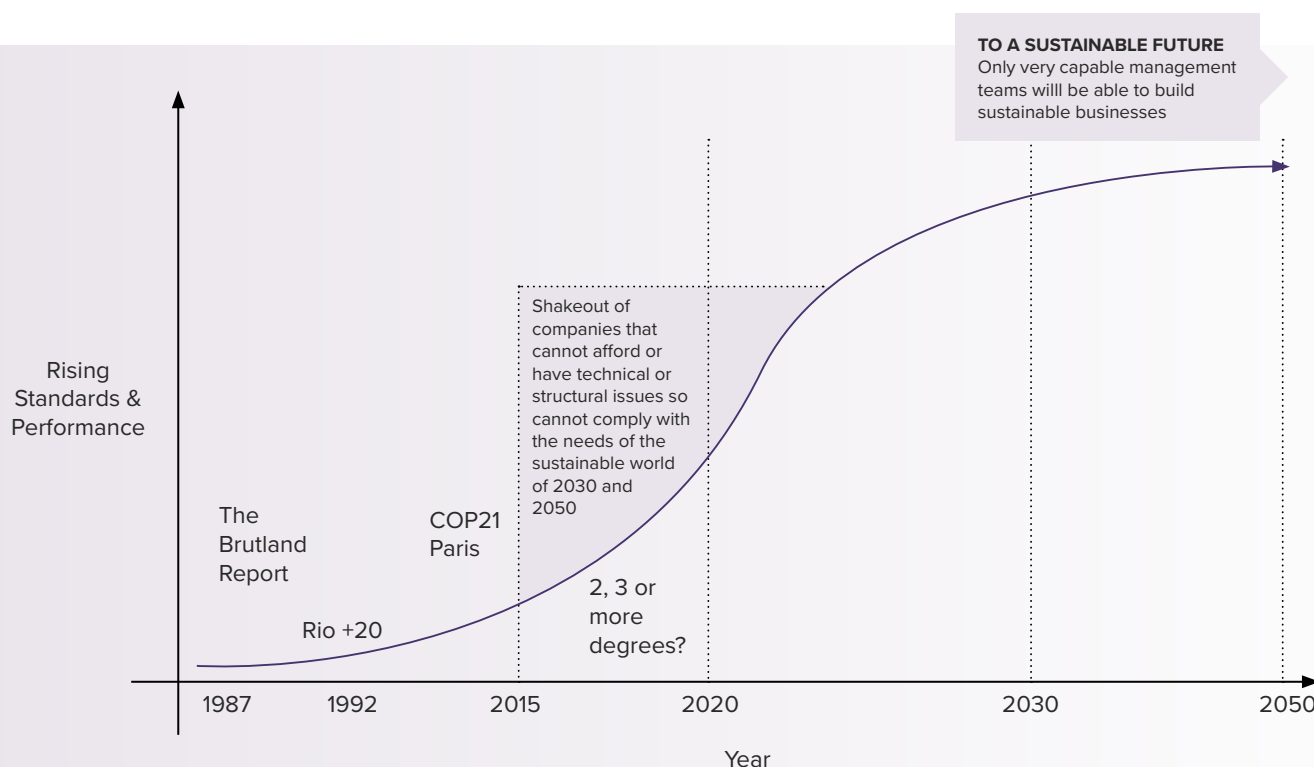
We believe that this will enable us to build sustainable businesses capable of staying a step ahead of our competitors by effectively preparing for disruption in industries. As the pace of change accelerates, we will no longer have the luxury of simply reacting to change to guarantee long-term success. We expect that sustainable businesses will have to be prepared in advance for different eventualities and it will be those who have a plan and financing model in place to be the winners of the future.

Why we must think about tomorrow, today

A difficult reality to face is that not all of our businesses or products will be successful in the long term. Some of them will simply go out of fashion, others will face more fundamental disruption from new solutions, and some will be unviable given the future legal, manufacturing and operating environment. These changes rarely happen overnight, but if our Group strategy does not plan for them today, we will be left with businesses that become financially unviable or do not meet our values and thus damage our reputation as a global conglomerate.

If it is true that only sustainable businesses can operate successfully in a sustainable world, then future proofing our businesses means making them resilient to, and if possible, proactively shaping the changes that are happening around us. Many of the trends we see such as climate change have the ability to apply severe future pressure to our competitiveness and therefore our business sustainability. The two are very much interdependent and as we have noted, the issues are complex and the impacts are often interconnected. Future proofing through scenario planning helps us to explore these interrelationships and complexities.

As the lifecycle curve shows, it was in the early 1980s that the first steps were made to understand the implications of environmental degradation. Crucially however, businesses were not included in these discussions primarily led by the United Nations and therefore the effects, of and to business operations, were not considered. This hindered the business community truly understanding and engaging with broader non-financial risks and impacts over the course of the last few decades. Chronic risks are now beginning to be recognised and we are playing catch-up as programmes to manage business performance at an international and national level are only just coming in to effect. These will increase in number over time.



Empowering our management teams to understand risks

Businesses go through life cycles and those that are unable to keep up with the changes required tend to fail. Within the constraints of a resource stretched world, we see only the most capable management teams adapting and transforming their businesses successfully. The Group Sustainability Cell engages with our business leaders so that they are informed of such trends, they understand risks at key points of the sustainable business life cycle and are able to plan accordingly.

We are working hard across our businesses to proactively adapt to the trends that we are seeing. The management team at Novelis has responded to the pressures in its sector by adapting before others to become a leader in recycled aluminium that has resulted in both cost and operational advantages. The foresight to transform the business first means that they are well placed to respond to the rising standards and performance that the lifecycle curve predicts for the future.

We know that the perception of risk changes over time and businesses have been caught off-guard when a potential risk has turned to crisis. At that stage, the only solution is through adaptation or transformation as the only choice for survival. In order to not fall foul to such occurrences, the Aditya Birla Group is working with our businesses to map risks over time. We have developed a simple map to help guide both their thinking and performance. This is being used across our businesses and operational guidance is given through engagements organised by the Group Sustainability Cell. Our Group businesses are using this tool to map their current status and chart their future directions for key performance areas. It is proving to be a vital tool in communicating business performance and direction of travel.

Preparing for future disruptions

We know that the implications of climate change will be disruptive to our businesses and we are already seeing water depletion, land scarcity, ocean acidification, desertification and unplanned worker migration amongst other impacts. Many of these have the capacity to disrupt our supply chains, our operations and our markets. Recognising these implications means that our response to climate change needs to be about much more than simply the energy efficiency measures described in the Responsible Stewardship section of this report.

In the past, insurance mechanisms have safeguarded against potential threats. The new global issues that we face are however, likely to be uninsurable. For example, our operations cannot be insured against closure because the aquifers we rely on to run our power plants have run dry due to climate change. It is up to us to make our businesses sustainable and resilient to these forces.

This is future proofing. It is different from forecasting as it recognises that only limited factors can be predicted with any accuracy. Even with the knowledge gained from our expert strategic stakeholders there is limited certainty, only trends and statistics on which to base our decisions. This changes the rules of business planning and requires managers to develop new skills to carve out success in a constantly evolving world.

Scenario Planning

To help us manage business uncertainties, we are using a technique called Scenario Planning to create business-relevant feasible scenarios for the world that we might find ourselves operating in.

Scenarios explore the complex interplay of different external factors shaping the future. Scenarios are most often used to develop and refine strategies or to drive innovation. By exploring different possible futures, our businesses are realising that some factors are more unpredictable than others and that by understanding this uncertainty we can be more proactively prepared.

Through the scenario planning exercise we are challenging our leadership to explore the answers to some tough questions. What if their source of raw materials is no longer available? What if we see a global rise in nationalism?

What if global governance fails on climate change? How will transparency and traceability requirements change as IT becomes more widely available and data collection decentralised? Having these conversations alone enables a more sophisticated understanding of what operating a truly sustainable business really means.

Areas that have been discussed during our scenario planning and future-proofing exercises include:

1. What might the future consumer need?
Taking into account how they will be living, what might they desire? What challenges do they face? For instance, will they prefer access over ownership of goods? Will people be living in large or small households? Where will they live? The businesses that can meet the needs of their consumers will be the ones that capture the increasing market share and are able to maintain growth.
2. What resources will and won't be available to us? Will we have access to the amount of energy we require at a reasonable cost or investment? Does our product rely on a material whose long-term viability is in question like cotton or tea or derivatives of the oil industry? What chemicals will be restricted or banned in the countries we operate?
3. How might our products and services shape the future we want to see and how will current unsustainable products be legislated anyway? Products and services can enable people and businesses to live and operate in new, more sustainable ways. How might our products and services empower and engage the disenfranchised? How can our products build trust and empathy in communities? How can they restore our natural ecosystems? But they can also do the opposite. We want our products and services to be creating a better future, not undermining it.

Scenario planning is not a one-time exercise and we work with our businesses to maintain a watch on how the operating landscape is evolving, spotting signs of change that may trigger their future-proofing actions.

SCENARIO PLANNING LEADS TO STRATEGIC THINKING FOR OUR RETAIL & APPAREL BUSINESS



Like many of our businesses, Retail and Apparel has big ambitions set out in a Long Range Strategic Plan (LRSP). Growth is the aim, and it feels very achievable. But how can it give itself the biggest chance of success given that we know the market and the society within which it sits, is changing?

As the sectors grow rapidly and come under pressure from increased consumer scrutiny, energy and resource price rises plus the impacts of climate change, notably water shortages on the wider agricultural sector, what actions might be needed in order to achieve the desired growth over the coming years? How the business manages these changes will define its growth and its sustainability in the decades to come.

Together with Forum for the Future, senior managers considered the trends that will shape the business landscape over the course of the LRSP, and planned accordingly. First, we sought to understand the factors that will influence that future operating context. Key areas that were identified included India's shifting demographics and particularly the growth of the middle class, the impacts of climate change on agriculture, pressure on urban infrastructure and ever more connected consumers.

Through understanding these factors in depth - what will impact the business most significantly; what can be predicted; and what are our biggest uncertainties about the future – the business prioritised the factors that could pose the greatest risk or opportunity to the growth in the LRSP.

After deep discussion, whether India will be inwardly (nationally) focused or part of a globalised operating framework of cooperating countries, and whether government or business will be leading action on sustainability were chosen as the biggest uncertainties that could have the most significant effect on the LRSP growth. Scenarios that explored what the landscape would look like at the extremes of each of these uncertainties, helped the managers to identify the key risks and opportunities in each future scenario.

A strategic roadmap that would 'future proof' the LRSP against these risks, and boost it through acting on opportunities was developed. For instance, the impacts of climate change on the cotton supply chain in India are likely to be significant. In a very inward focused economy, where imports are costly, the raw material available to the apparel business would be dramatically reduced. The roadmap therefore includes measures that ensure the business plays a role in supporting the sustainability of Indian cotton production, as well as investing in R&D to find alternative sustainable textiles.

As a result of the process, the businesses are looking at the sustainability of their property portfolio, exploring sustainable cotton with renewed vigour by joining the Cotton 2040 initiative together with other brands and NGO partners, investing in renewable energy and exploring 3D printing as a new technology.

IT'S TIME FOR A CIRCULAR ECONOMY

The circular economy framework offers businesses the opportunity to flourish in the 21st century. Rather than remaining trapped in the frustrations of volatile energy prices, environmental degradation and regulatory constraints, businesses can redefine their relationship with materials, energy and citizens, gaining a competitive advantage, and contributing to an economic system that actually builds prosperity and capital, rather than merely extracting it.

A circular economy is one that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles. Businesses will need to start by understanding the principles of this framework, and considering how their activities can support these goals.

1. Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows. When using resources, businesses should select them wisely and choose technologies and processes that use renewable or better-performing resources, where possible. Businesses should also seek to build natural capital by encouraging flows of nutrients within the system and creating the conditions for regeneration of, for example, soil.
2. Optimise resource yields by circulating products, components, and materials at the highest utility at all times in both technical and biological cycles. This means designing for remanufacturing, refurbishing, and recycling to keep components and materials circulating in and contributing to the economy. Circular systems use tighter, inner loops whenever they preserve more energy and other value, such as embedded labour.
3. Foster system effectiveness by revealing and designing out negative externalities. Today's economy doesn't account for externalities, such as land use, air, water and noise pollution, release of toxic substances and climate change. An economic system that reduced damage to human utility, and considered these negative impacts throughout the supply chain could support regenerative and restorative practices.

These principles describe an economy that could work in the long term, but the Ellen MacArthur Foundation have also defined a range of building blocks; expertise that businesses will need to gain to remain relevant in the changing economy.



Radical design

Companies need to build core competencies in circular design to facilitate product reuse, recycling and cascading. Circular product (and process) design requires advanced skills, information sets, and working methods. Areas important for economically successful circular design include: material selection, standardised components, designed-to-last products, design for easy end-of-life sorting, separation or reuse of products and materials, and design-for-manufacturing criteria that take into account possible useful applications of by-products and wastes.

Innovative business models

The shift to a circular economy requires innovative business models that either replace existing ones or seize new opportunities. Companies with significant market share and capabilities along several vertical steps of the linear value chain could play a major role in circular economy innovation and driving circularity into the mainstream by leveraging their scale and vertical integration. While many new models, materials, and products will come from entrepreneurs, these brand and volume leaders can also play a critical role. Profitable circular economy business models and initiatives will inspire other players and will be copied and expanded geographically.

Reverse cycles

New and additional skills are needed for cascades and the final return of materials to the soil or back into the industrial production system. This includes delivery chain logistics, sorting, warehousing, risk management, power generation, and even molecular biology and polymer chemistry. With cost-efficient, better-quality collection and treatment systems, and effective segmentation of end-of-life products, the leakage of materials out of the system will decrease, supporting the economics of circular design.

System enablers

For widespread reuse of materials and higher resource productivity to become commonplace, market mechanisms will have to play a dominant role, but they will benefit from the support of policy makers, educational institutions and popular opinion leaders.

Examples of these enablers include:

- Collaboration
- Rethinking incentives
- Providing a suitable set of international environmental rules
- Leading by example and driving up scale fast
- Access to financing

We are increasingly aware that the world is not linear and predictable like a machine, but made up of complex, adaptive systems. Businesses that see this as an opportunity to re-think and re-design their own practices based on the circular economy framework will lead the way to a future of resilient, positive growth.

// DRIVING INNOVATION

As part of our future-proofing activity we scan for areas of opportunity. We watch for potentially disruptive technologies or approaches emerging in the fringes of the economy and use the scenarios to explore the impacts of these going to scale.

Developing our analytical capabilities and knowledge of what is happening outside the boundaries of our operations allows us to drive innovations in a much smarter way. This is not just about risk mitigation but also about putting our businesses in the position to recognise the opportunities that are available to them. We want to go beyond what we have already imagined and look for opportunities that will transform our world for the better.

Novelis for instance has set out to use its position as a leader in aluminium rolling to catalyse major growth in recycling. It has developed the industry's first independently certified, high-recycled content aluminium specifically designed for the beverage industry. The Novelis evercan™ uses a minimum of 90% recycled aluminium for beverage cans delivering drinks in a low-carbon consumer package. Such innovations showcase the Group's capabilities to understand the changing external landscape and shape the future of the market ahead of competitors.

Key areas where we are adapting for the future

There is much to be done to make us sustainable business leaders and we are taking on the challenge. We are not only working with our existing businesses but we are also considering what being a sustainable business leader means for the industries we enter in the future and the resilience of the acquisitions we choose to make.

Planning for a Circular Economy

Resource volatility, energy depletion and waste management are all issues that are affecting our businesses. How we look to the future and seek out the opportunities from the challenges they present is a differentiator for our businesses and the Group.

Circularity in and of itself is not a new idea. It makes good business sense for our operations to manage their resources effectively, to find ways within our R&D to reuse and repurpose our resources to drive both operational and cost efficiencies. Our businesses are already exploring opportunities

in areas such as water, energy and material flows to develop closed-loop systems where possible. What is new is the exploration of the opportunity that circularity can have on the development of our products and services. For instance, could our acrylic fibre business develop a product that avoids shedding microplastics into the ocean? By viewing these within the lens of business opportunities for growth in the future, we can further embed practices that will result in us becoming sustainable business leaders. Leading by what we do as well as how we do it.

Since 2011, Novelis has embarked on a journey to adapt its business model, transforming its operations to cater for a changing market and a changing world. It is now the global leading producer of recycled aluminium having recognised that the market potential is substantial and the benefits to the environment is significant. The business' leadership team has driven Novelis to proactively become the largest recycler of aluminium in the world, with 55% of its raw material coming from more than 50 billion used beverage cans that are recycled annually. Novelis has invested heavily in new recycling technology and new capacity in Germany, Brazil and Korea. The move aims to support the transformation to a circular economy whereby previously extracted material is used over and over again.

In 2015, the business launched Novelis evercycle™, the industry's first certified, high-recycled-content aluminium product portfolio for speciality applications. By the end of 2015, the business had achieved a run rate of 55% recycled content with clear intentions to develop this further. We see this not only as an example of efficient waste reduction strategies but a showcase of how the business is transforming itself to become a leader in a sustainable world.

Novelis' strategic partnership with Jaguar Land Rover on closing the loop on automotive manufacturing processes and end of life vehicles, as well as developing a new alloy that can withstand a greater proportion of recycled content is a great example of where sustainable business can be both financially and environmentally rewarding.

// ENTERING NEW MARKETS

Entering markets that offer long-term opportunity will play a role in a more sustainable future. This will mean engagement and direction from our leadership in a way that we have previously not sought.

Our Birla Solar business is one example of how foresight has led to entry into a sector with long-term growth prospects. We are using our knowledge of international best practice to develop traction in renewable energy which is currently an immature market in India. We are managing our operations to be nimble enough to respond to the changing legislative and infrastructure developments that will shape the sector. To complement this, our other businesses are exploring alternative energy supplies, energy storage and we are watching opportunities in other renewable energy markets.

Liva fabric and Novelis' evercan™ are examples of market expansion through a brand-driven approach that helps create differentiation from our competitors. Testing the water now through such innovations not only builds our capabilities and positioning but also accelerates the pace of change toward a more sustainable future.

Preparing for tech advancements

We are proactively seeking out technological advancements to develop both our operational efficiencies and product development around the world. Exploring advancements in areas such as automated systems at both Group and operational levels means we can better analyse and shape our decision making for the future.

At a sector level, Ultratech has been instrumental in providing learning on the application of low carbon technologies as part of the CSI. This initiative, powered by the WBCSD and the International Energy Agency (IEA) has set out a Technology Roadmap that looks to build a low-carbon economy for the Indian Cement Industry. By participating in the CSI, Ultratech has contributed to highlighting the urgency of identifying technology that can reduce energy use and carbon dioxide intensity of cement production. Ultratech has been instrumental in bringing about the Indian Roadmap for the sector and for implementing technological adaptations in its operational processes. This has included exploring the use of alternative fuels and waste re-commissioning, using different, more advanced materials and achieving reductions in electricity consumption.

THE FUTURE OF SUSTAINABLE BUSINESS PRACTICE AT ADITYA BIRLA GROUP

Our Chairman, Mr. Kumar Mangalam Birla has called for us to become the leading Indian conglomerate for sustainable business practices and for imagining a future where we grow and prosper within a sustainable world. The virtuous circle is clear – only sustainable businesses will survive in a sustainable world, and a sustainable world is only possible if businesses operate within the legislated constraints needed for mankind to continue to live on the planet.

Whether we stay within the two-degree limit, or go into ‘overshoot’, there will be dramatic implications on the way that we live and work, the way that we consume and definitely the way that businesses will operate. Many do not appreciate that disruption is coming our way, no matter the course of action. We know that the law must eventually tighten its grip on business practice if we are to enjoy a sustainable world. Through our Model for Sustainable Business, we now have the opportunity to prepare the businesses within the Aditya Birla Group in a systematic manner to ensure that they are increasingly sustainable. Enabling sustainable leadership.

As a Group, it is our role to equip our businesses with the right tools, provide access to the right information and to put the right systems and processes in place with comprehensive guidance on how to achieve our vision. It is my role as Chief Sustainability Officer, together with the Group Sustainability Cell to use our issue expertise coupled with expert, scientific opinion to help support the Group’s progress in building sustainable businesses.

The onus is also on our leadership to take on the understanding of what it means to be a sustainable business leader in their own sectors, in their industries and to plan out a roadmap for how it can be achieved. The planet will demand that it is so, and the markets will have no choice but to comply. At Aditya Birla we have a legacy of success. It is our leadership’s imagination that will realise our vision of becoming a sustainable business leader, and it will be their legacy that they shape. Progress is being made but much remains to be done.

Partnering for the future

Our strategic stakeholder engagements will become even more critical as we move towards 2030 and the resource constraints and climatic changes drive volatilities and disruptions that affect our operational capabilities. We know that climate change, and a two-degree increase in the planet’s temperature is going to have huge implications on society and for business’ ability to operate under such conditions they will have to adapt and transform. Mitigation alone is unlikely to be enough. It is only through our relationships with multi-stakeholder organisations such as World Business Council for Sustainable Development, our academic and research partnerships and membership of industry bodies like the Sustainable Apparel Coalition that our businesses will learn enough to stay ahead of the curve, align themselves with international best practice and truly understand the multifaceted challenges that they are going to face. It is known that legislation tends to follow practice, by aligning ourselves with international standards we are preparing to shape, rather than be shaped by, the landscape around us. Our collaboration with Forum for the Future to understand different ‘two degree world scenarios’ will help us understand the implications of climate change for our business strategy and portfolio.



Taking a value chain approach

We foresee a consolidation of transparent value chains around the biggest brands. Being part of a sustainable supply chain will increasingly become a prerequisite of a sustainable business. We must increasingly apply our Sustainability Model to our supply chains, understanding the areas of greatest impact but also identify those that are vulnerable to the same external factors that we ourselves must adapt to.

To ensure that we are driving sustainable business practices uniformly across our value chains, we need to transform the traditional auditing processes to ones based on transparent self-assessment on sophisticated IT platforms. We have started by allowing our businesses to use the IT system that we have rolled out to manage and benchmark their own performance and thus make their own action plans for improvements.

We have made an excellent start, standardising the thinking of our subject matter experts into supporting our businesses in their self-assessments and helping to enlighten our business leaders across the Group. This not only focuses the responsibility on the site and business management but it is highly efficient, standardised and cost effective. By using this thinking across our value chain we will be able to multiply the effect of our programme by supporting small and medium enterprises that often do not have the resources needed to raise their standards

The future is sustainable

Increasingly the goals and work of the Group Sustainability Cell will be to bring scientific knowledge to our strategy discussions. At the Aditya Birla Group, we are working to make sure that our up and coming managers and business leaders embrace the need to learn about and understand the trends in our external factors and to incorporate them into their thinking, planning and business strategies. As this happens, I am confident that across the Group we will find solutions to help us build sustainable businesses that contribute to a sustainable India and a sustainable world.

Tony Henshaw
Group Chief Sustainability Officer



// LOOKING FORWARD TO 2030 & 2050

This report outlines the thinking that has driven the creation of our Sustainable Business Model and the Framework that we have put in place so that we are prepared for mitigation and where needed, adaptation and transformation strategies. This will ensure that our businesses are capable of operating in, and can help bring about, the world that we want to see in 2030 and beyond.

Our process recognises that legislation often lags behind what is really needed and enables us to proactively lead our businesses ahead of the law as it changes going forward. Leaders will find ways to pull their whole value chains down the legislative “funnel” that shapes our Model for Sustainable Business.

We welcome engagement with leaders in sustainable business practices and encourage critique, challenge and collaboration. We look forward to your opinions on our thinking, our Model for Sustainable Business and how we can do more to achieve our ambition of leadership in building sustainable businesses. Please share your feedback via sustainability@adityabirla.com





The Aditya Birla Group: Transcending business

A US\$ 44.3 billion MNC, the Aditya Birla Group is in the League of Fortune 500. It is anchored by an extraordinary force of 120,000 employees, belonging to 42 nationalities in 35 countries.

Beyond Business -

The Aditya Birla Group is:

- Working in 5,000 villages globally. Reaching out to 7.5 million people annually through the Aditya Birla Centre for Community Initiatives and Rural Development, spearheaded by Mrs. Rajashree Birla.
- Focusing on: Health Care, Education, the Girl Child, Sustainable Livelihood, Women Empowerment, Infrastructure and espousing social causes.

Highlights-

Health Care

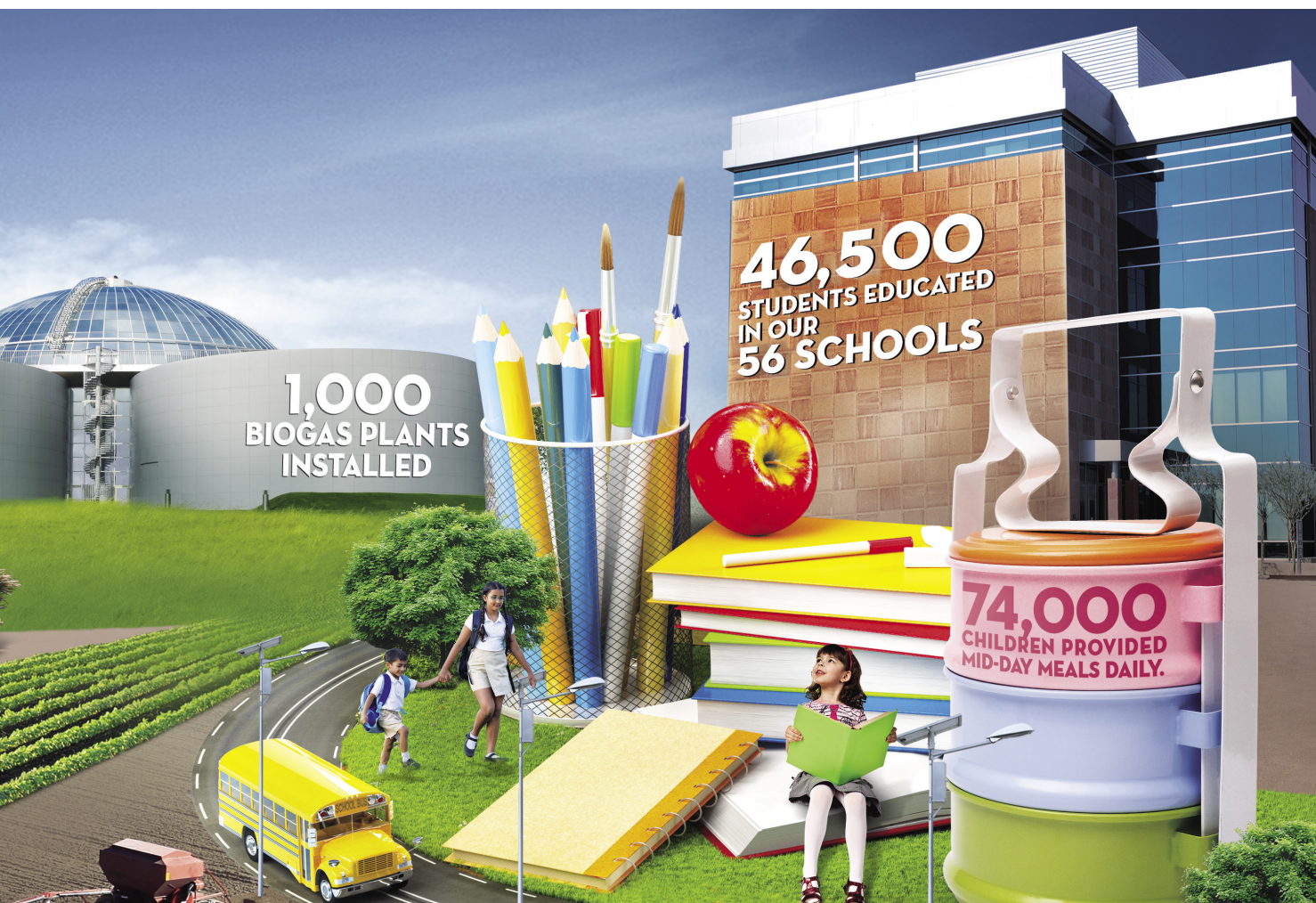
- Over a million patients treated at 5,000 medical camps and our 20 hospitals.
- The Aditya Birla Hospital at Veraval in Gujarat, also caters to the marginalised.
- More than 1,200 children have learnt to smile again as they underwent cleft lip surgery.
- More than 5,000 physically challenged persons were provided with artificial limbs, making them self-reliant.
- 50,000 people screened on HealthCubed.
- Cochlear Implants embedded in 50 children.
- Alongside, we are engaged in a major project with Vision

Foundation of India to provide sight to 6,600 visually impaired people.

- We have installed 50 Reverse Osmosis Plants (RO) which provide drinking water to villagers near our units.
- We have helped set up over 40,000 toilets, partly leveraging Government schemes for the social sector. In 50 villages, spanning over 2,000 households in Jammu & Kashmir, we have provided 2,010 toilets.

Education

- At our 56 schools across India, we provide quality education to 46,500 children. Over 28,000 children in the hinterland of India are being taught conversational English to build their confidence.
- We support schools for the differently abled in Gujarat, Karnataka, and Odisha.
- We are transforming 20 schools in Rajasthan into model schools.
- We foster the cause of the girl child by supporting 40 Kasturba Gandhi Balika Vidyalayas (residential schools for girls).
- Over 4.5 lakh school children (Grade V to XII) in 31 remote blocks of Madhya Pradesh, Rajasthan, Maharashtra and Odisha have been provided with solar lamps.



- We provide midday meals to 74,000 children through Akshaya Patra.

Sustainable Livelihood

- Our Vocational Training Centres and the Aditya Birla Rural Technology Park accord training to 95,000 people.
- Working with BAIF and JK Trust in 13 centres, we have covered more than 100 villages under the project 'Integrated Livestock Development Centres'.
- Our 4,500 Self-Help Groups empower 45,000 women.
- Under the Private Public Partnership projects, we -
 - Work in collaboration with the Watershed Mission of Madhya Pradesh government to better the standard of living of people in 21 villages in Neemach district.
 - Are engaged with the Government of Odisha on 'Sustainable livelihood enhancement of 500 families through commercial vegetable cultivation' under the Odisha Tribal Empowerment Livelihood Programme in Raygada district.
 - Manage an ITI near Raipur.
- We help farmers plant more than a million saplings, including fruit-bearing trees, in their villages.
- Installed more than 1,000 biogas plants pan India.
- Working closely with Habitat for Humanity, we have so far built more than 500 houses, besides supporting the building of an additional 3,800 houses across India.

Model Villages

- We are also engaged in creating model villages in rural India. We have chosen 300 villages for this transformation - whereby

in a five year time frame the villages would be self-reliant in every aspect, moving out of the "below the poverty line" status. So far more than 90 villages in India's hinterland have already reached the level of model villages.

At the macro level

- To embed CSR as a way of life in organisations, we have set up the FICCI - Aditya Birla CSR Centre for Excellence, in Delhi.
- Ongoing education, healthcare and sustainable livelihood, housing projects in North America, Philippines, Thailand, Indonesia, Egypt, Korea and Brazil, lift thousands of people out of poverty.

We transcend the conventional boundaries of business because we care.



ADITYA BIRLA GROUP

Making A Difference

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