ADITYA BIRLA GROUP

Solid Waste Management

Presentation at Waste Management Conclave – Godrej Group

9 May 2016

THINK about TOMORROW, TODAY!

AN ADITYA BIRLA GROUP SUSTAINABILITY INITIATIVE

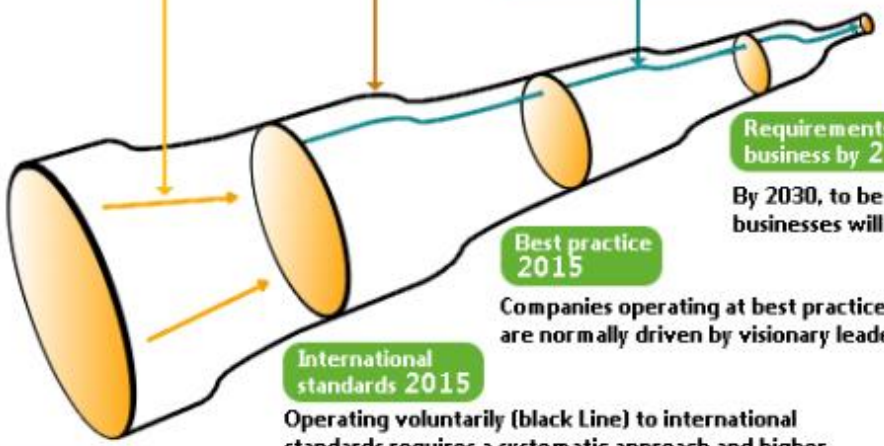
ABG Sustainability Model
Comprises 3 Pillars

SUSTAINABILITY AT ADITYA BIRLA GROUP

1 RESPONSIBLE STEWARDSHIP
Implementing a Sustainability Framework of Policies and Standards aligned to international standards and operating in line with them.

2 STRATEGIC STAKEHOLDER ENGAGEMENT
Horizon scanning and megatrend analysis to gain knowledge of how, and how fast externalities will change usually by disruptions.

3 FUTURE PROOFING (including our value chain)
Creating a strategic plan capable of withstanding the external change. This may require transformational investment to reposition the business if it is to be sustainable.



Requirements for Business by 2050
By 2050, only the best managed business with highest performance will be able to survive.

Requirements for business by 2030
By 2030, to be on the road to a sustainable planet businesses will have to perform better than ever.

Best practice 2015
Companies operating at best practice levels are normally driven by visionary leaders.

International standards 2015
Operating voluntarily (black Line) to international standards requires a systematic approach and higher levels of control and performance i.e. a smaller operating space.

Legal standards 2015
Following local laws (represented here by the black line) gives business a relatively large space to operate in. (represented by the yellow circle)

ABG Sustainability Framework
Waste Management

- Waste management is an integral part of the sustainability framework under all 3 pillars
- ABG businesses demonstrate stewardship on; engage with various stakeholders; and future proof their businesses

Responsible Stewardship:

- Manage the wastes as per ABG Sustainability Framework based on local regulations, international standards
- Aimed at increasing control over operations and people to reduce impacts on the planet and society

Stakeholder engagement:

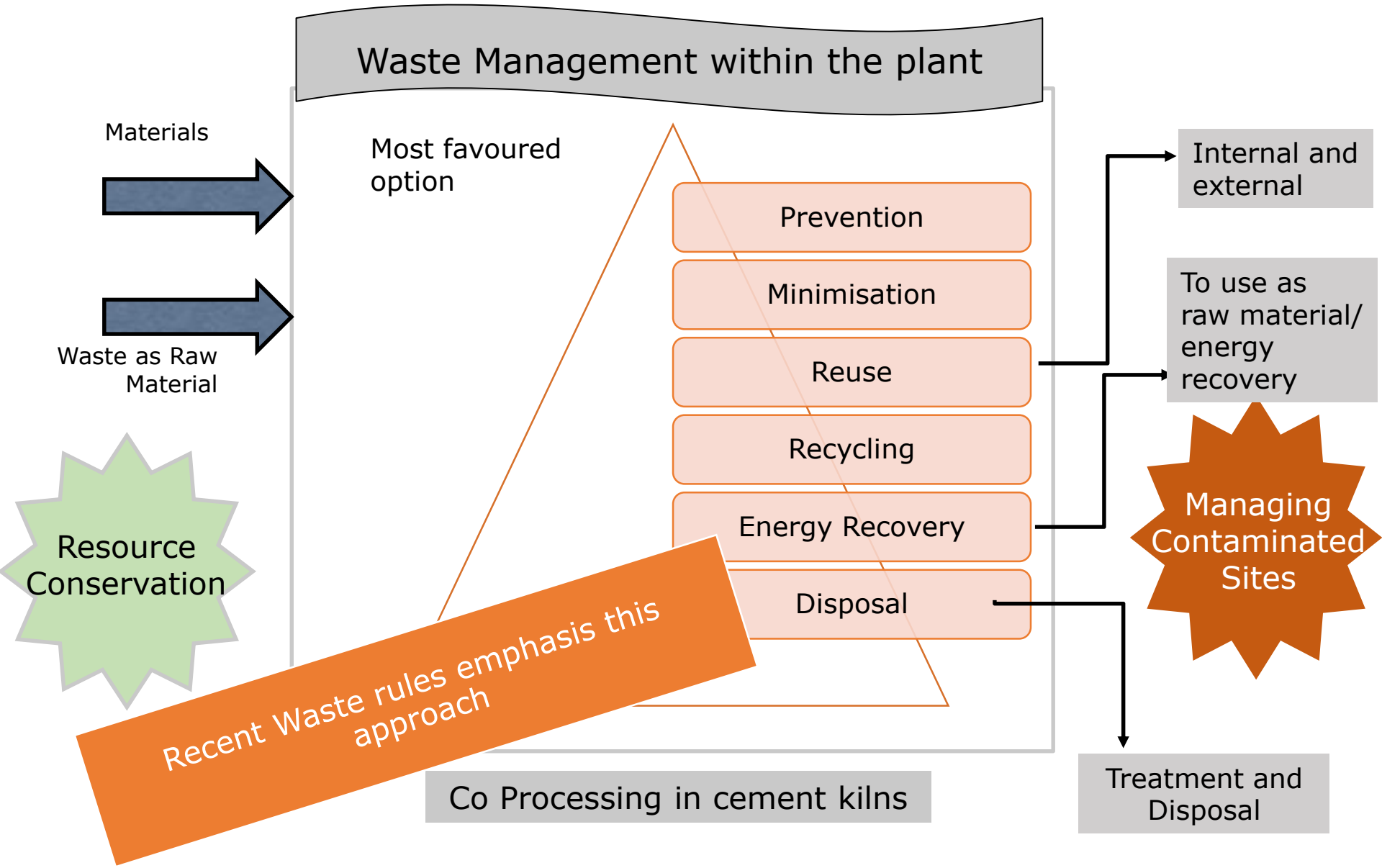
- Local stakeholders – communities, regulators
- Strategic stakeholders – experts in global megatrends, external factors and the requirements of a value chain operating in a sustainable world both upstream and downstream

Future Proofing:

- Creating sustainable business models capable of operating in the sustainable worlds of 2030 and 2050.
- Working towards concept of circular economy
- Linking to other aspects of sustainability e.g. GHG emissions; conservation of resources

RESPONSIBLE STEWARDSHIP

Approach to Waste Management



RESPONSIBLE STEWARDSHIP

Documentation on Waste Management

ADITYA BIRLA GROUP

Towards responsible stewardship:

Policy:

- Covered under Group Environmental Policy

Technical Standards:

- Solid & Hazardous Waste
- Wastewater

Guidance Notes:

- Wastewater Management Plans
- Hazardous, Non-hazardous Wastes
- Mining Waste Management

Self-Assessment Questionnaires:

- Solid & Hazardous Waste
- Wastewater

RESPONSIBLE STEWARDSHIP

Waste Management Practices Across Businesses

Governance system –policy, dedicated teams	Identification, characterization of wastes	Material Balance based approach
Segregation at point of generation, storage, disposal	Follow waste management hierarchy	Targets on waste reduction – on quantity; specific generation etc.

Examples from manufacturing and services businesses on management systems, technological solutions, monitoring & reporting systems.

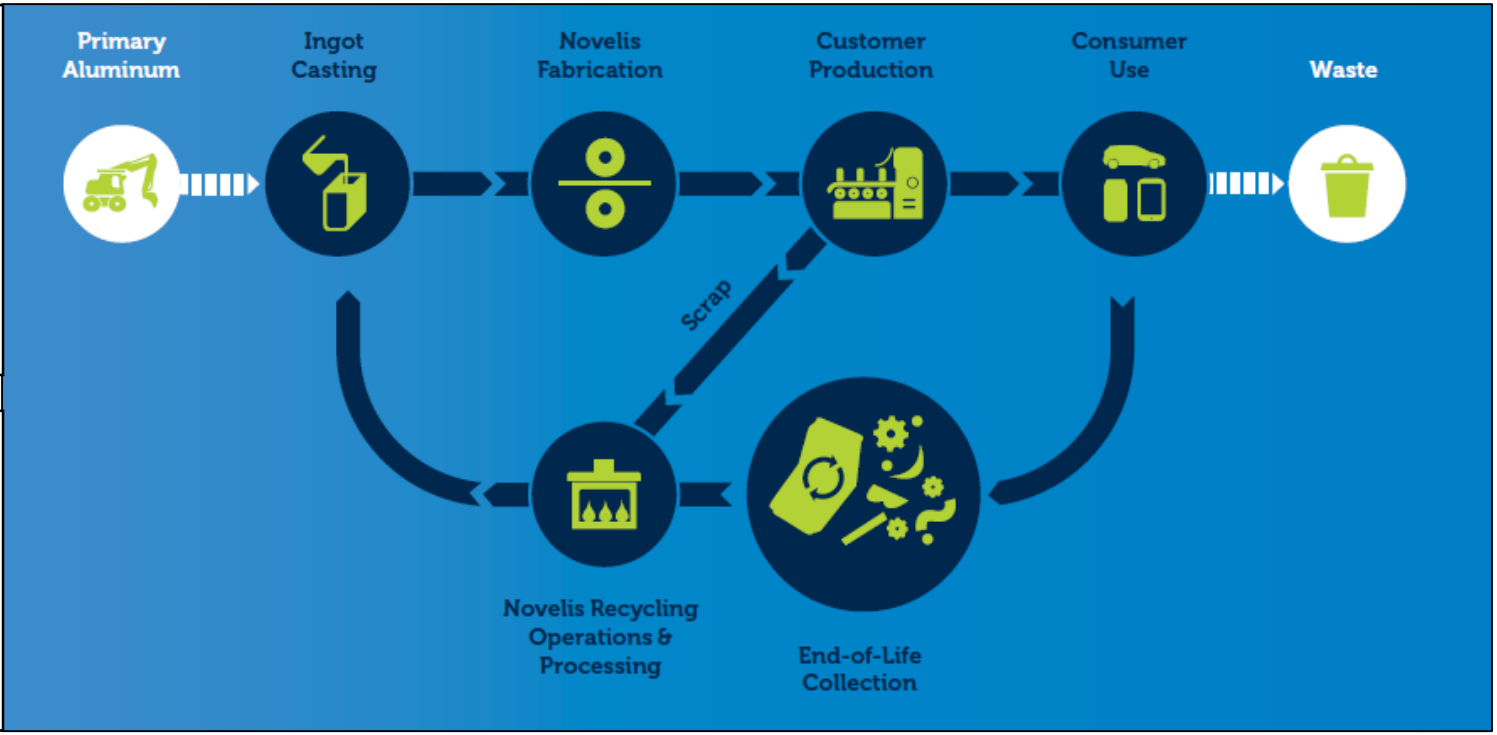
Group has both generators and users of waste

EXAMPLES OF FUTURE PROOFING

Waste Management Practices - Novelis

Novelis is both the single largest buyer and the single biggest recycler of aluminum in the world

1 in every 4 aluminum beverage cans sold globally is recycled by Novelis



In FY15, Novelis has:

- Became the aluminum supplier for the new **Jaguar XE**, the first vehicle in the world to use a new, high-recycled-content aluminum alloy, designed jointly by Novelis and Jaguar Land Rover for the automotive industry
- Expanded partnership with Ford Motor Company as a primary aluminum supplier for the redesigned, aluminum-intensive 2015 Ford F-150

EXAMPLES OF FUTURE PROOFING

Waste Management Practices - Novelis

ADITYA BIRLA GROUP

Sourcing

- Reduce the embedded carbon in our products by increasing recycled content.
- Re-engineer and minimize risk within our supply chain.

Manufacturing

- Maintain safe and efficient operations and minimize natural resource use.
- Ensure an adequate supply of talent.
- Maintain our social license to operate.

Customers

- Provide value to our customers, in particular by helping them meet their sustainability objectives.

Consumers

- Increase post-consumer recycling of aluminum.
- Help our customers make sustainability products that consumers want.

Enterprise for a Sustainable World (ESW): Exploring post-consumer recycling related BoP business models and microenterprises.

Ceres: Ceres Climate Declaration in 2013, contributing to energy & climate policy debates

The Ellen MacArthur Foundation: Part of Circular Economy 100 (CE100, advise and collaboration on initiatives)

Forum for the Future: Workshop with global experts from across the aluminum value chain on advancing circular economy

BoP – Bottom of Pyramid

EXAMPLES OF FUTURE PROOFING

Waste Management Practices - Ultratech

Alternative Fuels in Kiln

- Ultratech is in the midst of a transition from fossil fuels to alternate sources – hazardous wastes; agri residues; municipal wastes, among others
- Use of 173,500 tons of alternate fuel has resulted in saving of 86,750 tons of coal

Alternative Materials

- Ultratech using waste materials in its process:
  - chemical and marine gypsum as additives
  - fly ash, slag from thermal power plants and steel plants for blending.
- Waste constitutes 13.54% of the total raw material used

UltraTech was among the first in India to adopt **concrete recycling** in its plants right from its inception in 1998.

Concrete recycling system (Baton Wash) separates solid material over 0.15 mm diameter from the water through a spiral system rotating inside the inclined drum.

Slurry water is discharged from the recycling system by overflowing into storage tanks and is normally reused in the concrete production.

Thank you