



## 9<sup>th</sup> ADVANCED GMP WORKSHOP 2024

# Integrating Sustainability: The Next Frontier for Pharma

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# What is Sustainability in the Pharmaceutical Context:



Minimize environmental impact during drug production.



Focus on reducing carbon emissions, water, and energy usage



Use green chemistry and efficient manufacturing processes



Responsible sourcing of raw materials (e.g., excipients).



Reduce reliance on single-use plastics.

# Sustainability – From Goal to Necessity

Driven by climate change, resource depletion, and environmental degradation.

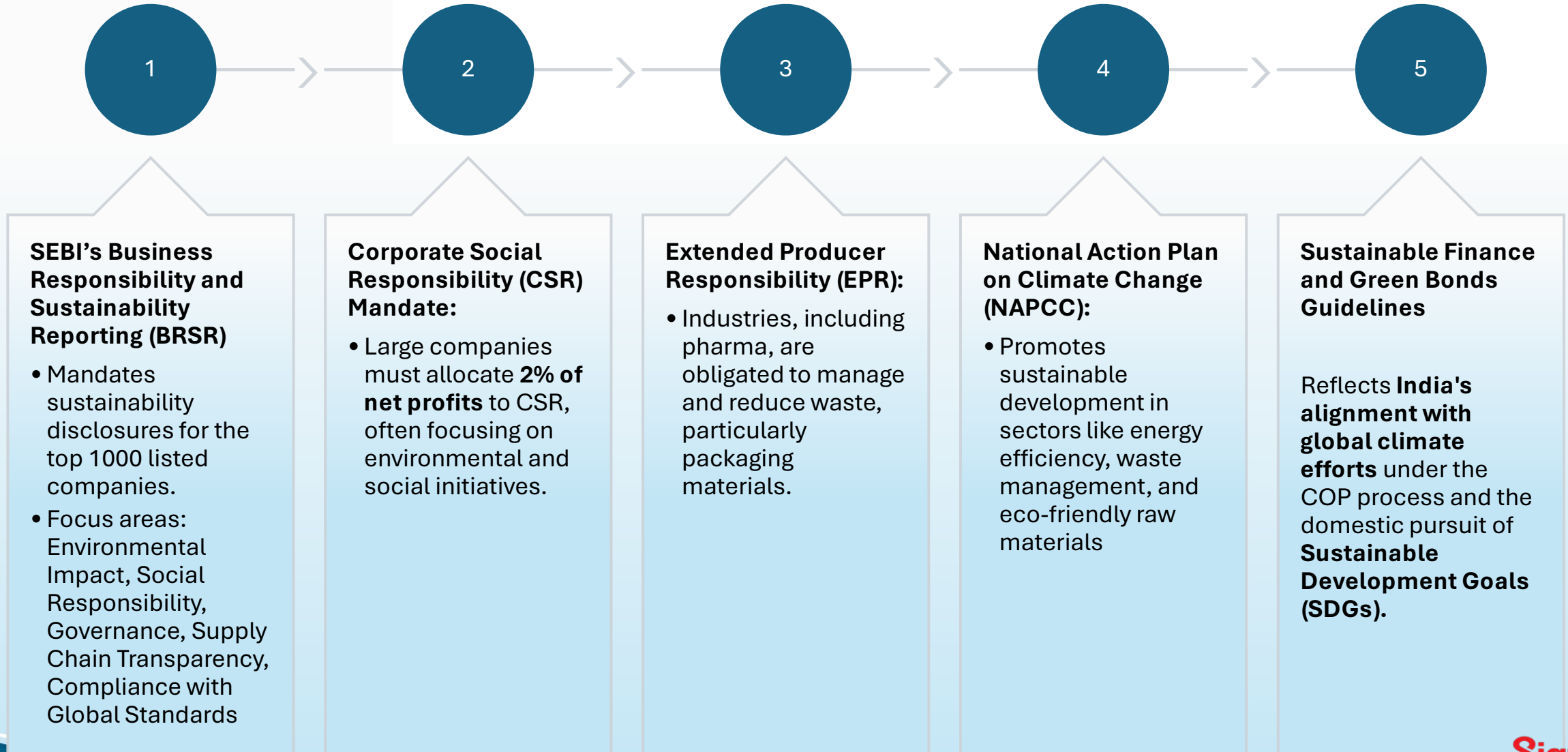
Global frameworks such as the UN SDGs and the Paris Agreement push for sustainable practices.

Industries, including pharma, are increasingly accountable for their environmental footprint.

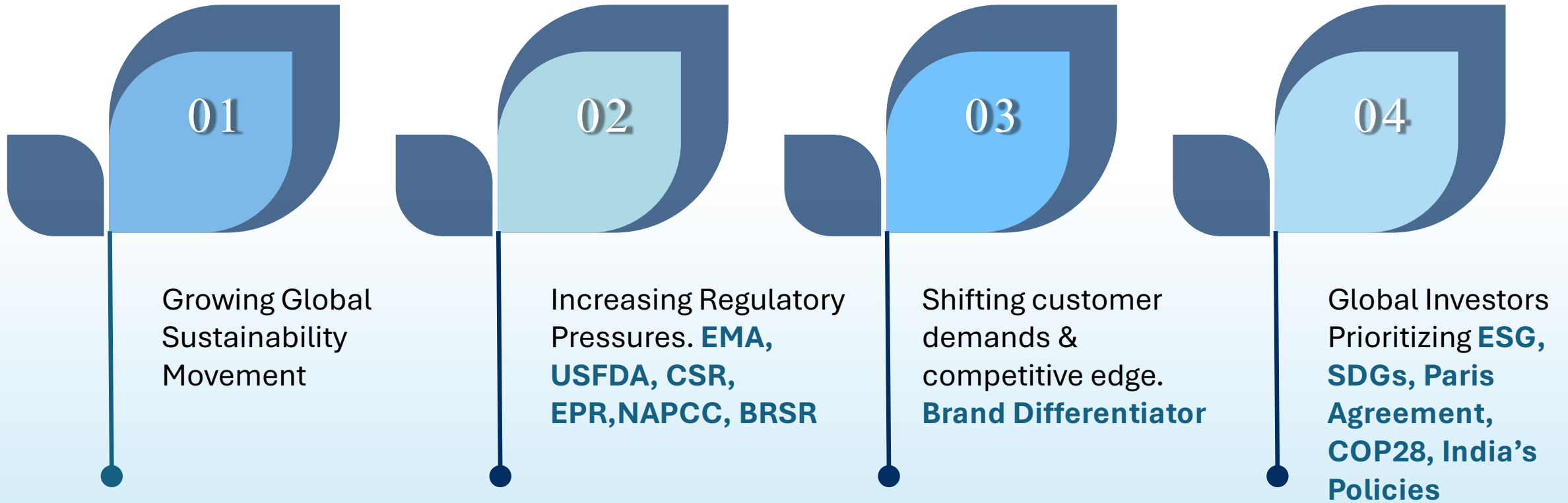
## India's Commitment to Sustainability

- Commitment to net-zero emissions by 2070.
- Reduce GDP emissions intensity by 45% by 2030 (from 2005 levels).
- Focus on increasing renewable energy and promoting sustainable industrial practices.
- Pledge to align with international agreements like the Conference of the Parties (COP) and Paris Agreement.

# Regulatory Frameworks in India



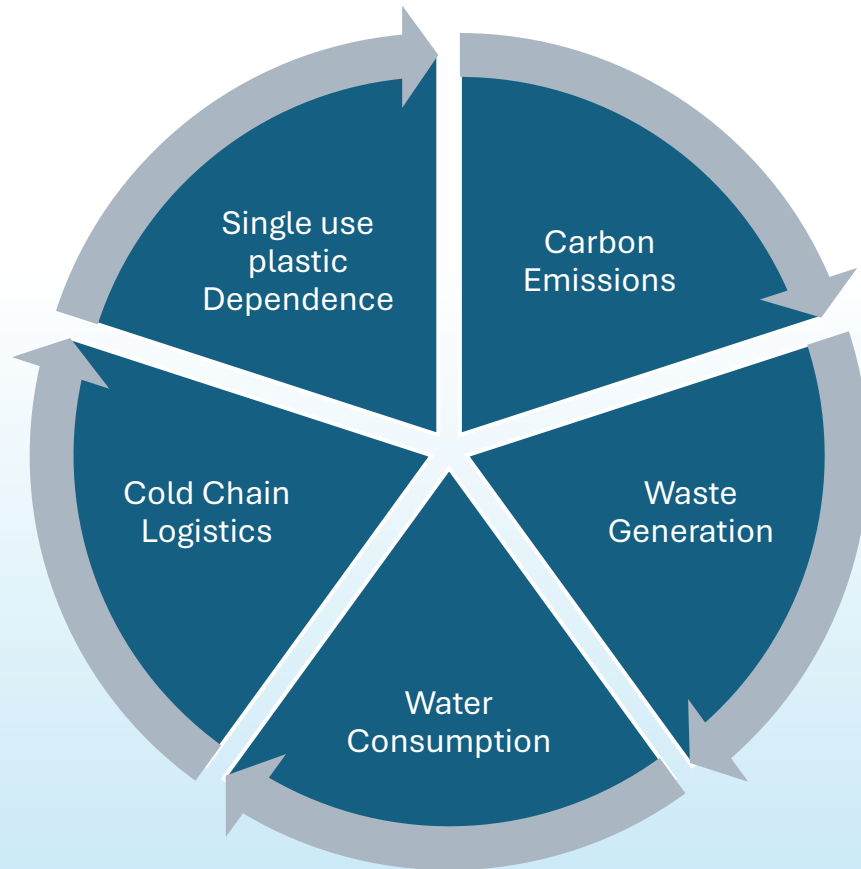
## 💡 Strategic Imperative for Pharma



\* A 2022 McKinsey report noted that sustainability is now a key factor in long-term company value and that pharma companies investing in sustainability are more attractive to investors.

# The Pharmaceutical Industry stands at a Critical Crossroad

## Environmental Impact



## Industry Initiatives

- **GSK** – Carbon Neutrality 2030
- **Cipla** – Zero Waste to Landfill
- **Cipla** – Water Stewardship (water neutrality 2025)
- **Baxter** – Recycled plastic packaging & takeback, safe disposal program

## Sustainability as a Global Competitive Advantage

### Global market expectations

- Companies with strong ESG policy better access to markets, tenders

### Risk management

- Mitigate operational disruptions due to climate change, resource scarcity, and evolving regulations

### Cost efficiency

- Optimization, waste reduction & efficiencies lead to long-term cost savings, improving financial performance.

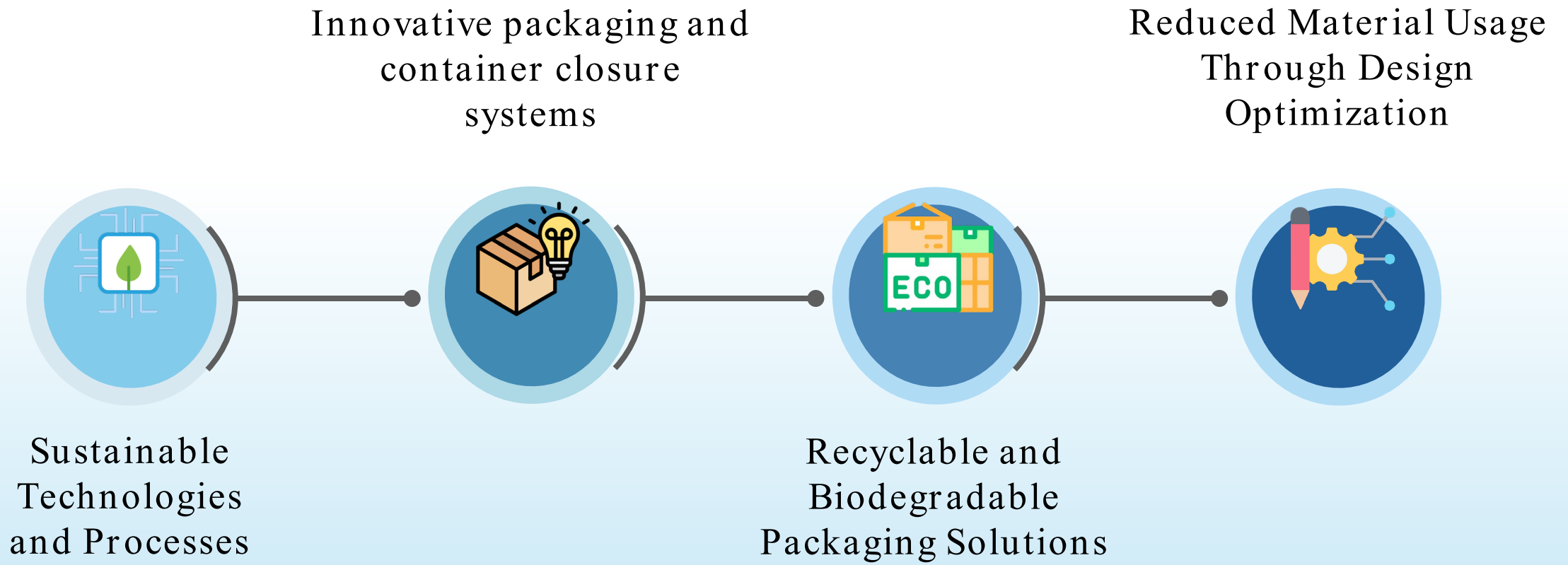
### Reputation & Branding

- Differentiation, positive brand image, attracts talent, and fosters trust with stakeholders

### Ratings from DJSI, CDP & Ecovadis

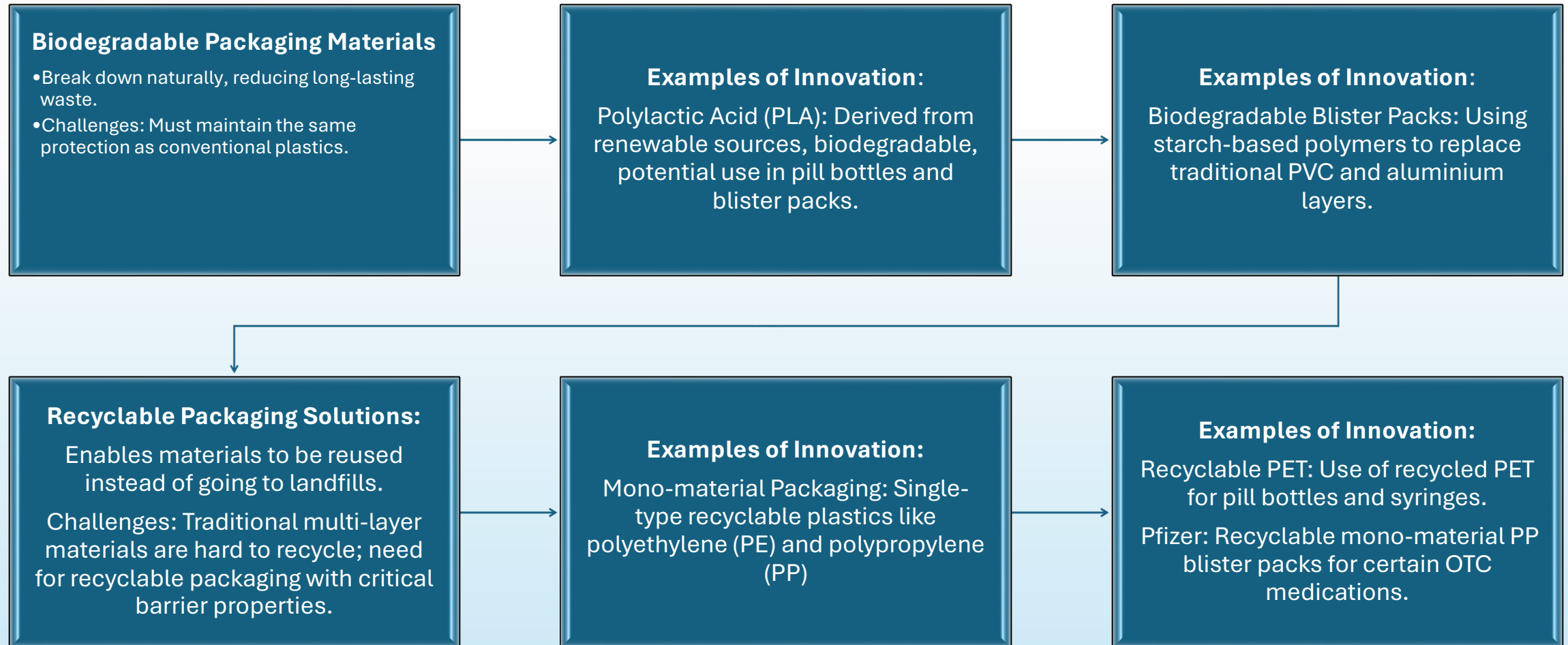
- ESG principles helps reduce Scope 3 emissions, meeting climate goals and investor expectations

## Innovations Driving Sustainability in Pharma





# Innovations in Sustainable Packaging Materials



# Smart and Optimized Packaging Technologies

## Smart Packaging Technologies

- Combines sustainability with innovations for traceability and quality monitoring

## Examples of Innovation:

- Edible Sensors: Biodegradable sensors for monitoring temperature and humidity without adding waste.
- Aptar Pharma's Smart Packaging: Eco-friendly inhaler packaging with connectivity features for drug delivery monitoring.



## Reduced Material Usage Through Design Optimization:

- Lightweighting packaging to use less material while maintaining protection

## Examples of Innovation:

- Thinner, Stronger Films: Less plastic, same protective properties
- Compact Packaging Design: Reduces material, improves efficiency
- Sanofi: Optimized packaging design, reducing material weight up to 20%

# Benefits of Partnering with Right Excipient Suppliers



## 1. Innovation in Sustainability:

- Green chemistry and sustainable manufacturing.
- Improved environmental performance and product quality

## 2. Reduced Environmental Impact:

- Sustainable raw materials.
- Carbon reduction in production
- Energy-efficient technologies.

## 4. Ethical Supply Chain:

- Ethical labor practices and fair wages.
- Builds trust and meets social responsibility goals.

## 3. Regulatory Compliance:

- Vendors adhering to global ESG standards.
- Ensures compliance and reduces penalties.

# Sustainable Supply Chain Management



## Transparency and Accountability

Track and measure suppliers' adherence to ESG standards, encouraging continuous improvement and responsible business practices



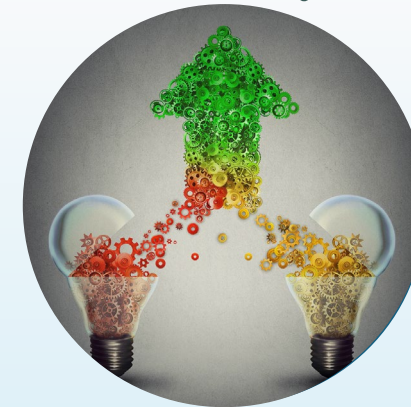
## ESG Risk Mitigation

Prioritizing ESG factors in vendor selection and monitoring, companies can reduce the risk of supply chain disruptions



## Sustainable Sourcing

Engaging with vendors committed to ESG principles allows companies to ensure that their supply chain aligns with sustainability goals



## Innovation and Efficiency

Collaborating with vendors to implement sustainable practices drives innovation and efficiency improvements



## Enhanced Reputation

Partnering with vendors that uphold ESG principles enhances the company's reputation as a socially responsible and environmentally conscious organization

# Evaluating Vendor's ESG Commitments

A sustainable supply chain is essential for a company's overall sustainability strategy, focusing on procurement, logistics, and waste reduction.

## Key Vendor Evaluation Questions:



### **Environmental Sustainability:**

What steps are you taking to reduce your carbon footprint?

Do you practice sustainable sourcing of raw materials?

How do you manage waste and resource consumption?



### **Social Responsibility:**

What labor standards and fair wage policies do you follow?

What health and safety practices are in place for workers?

Do you have diversity and inclusion initiatives?



### **Governance and Transparency:**

How do you ensure compliance with environmental and social regulations?

Can you provide ESG reports or certifications (EcoVadis, CDP)?

What innovations minimize environmental impact?

Do you have a roadmap for achieving net-zero emissions?

## Actionable Steps for Pharma Companies



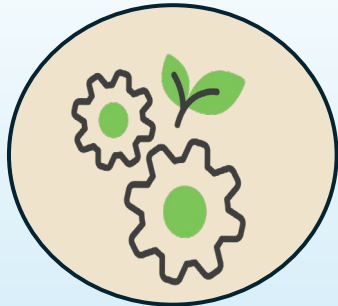
Perform sustainability audits.



Collaborate across the supply chain.



Automation & AI



Invest in greener technologies.



Engage with stakeholders on sustainability goals.



# Thank You