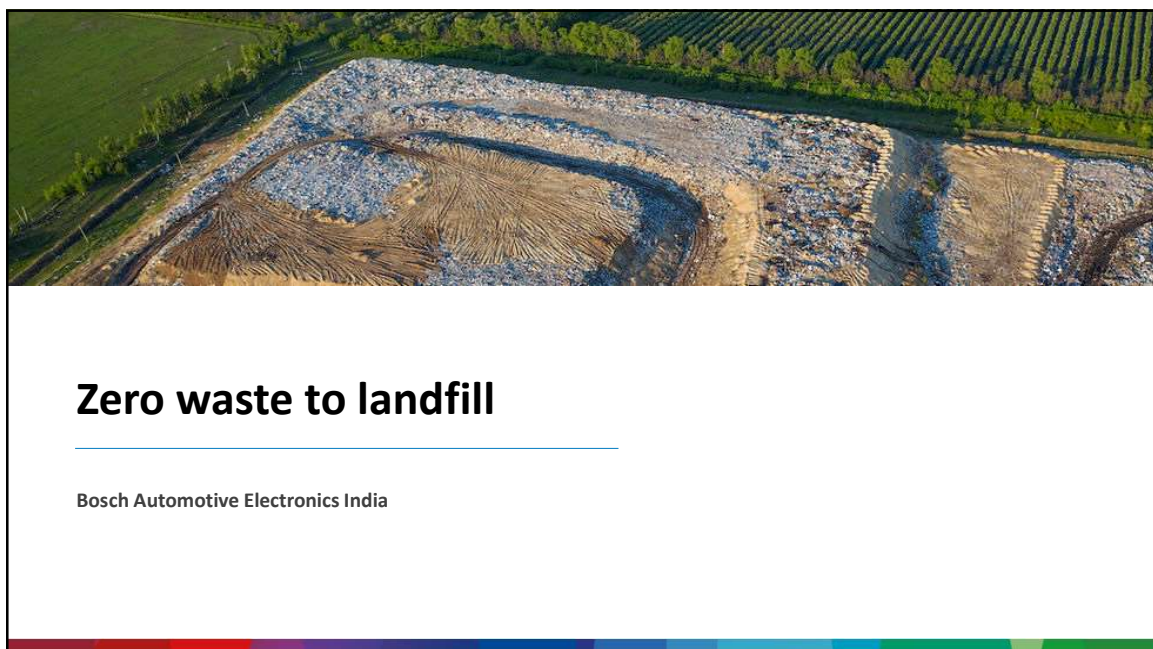




1



2

Zero waste to landfill **Why?**

1.



Divert all possible waste away from incineration / landfills through **reduction, reuse, recycling, and coprocessing recovery!**

2.



Protecting the environment by **reducing pollution and lowering Co2 emissions.**

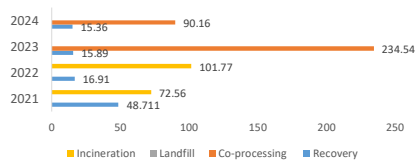
Public C-SCB BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.

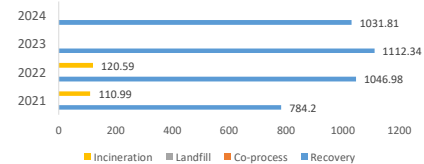


3

Zero waste to landfill - **Background**



Hazardous Waste (MT)



Non-Hazardous Waste (MT)

Waste Reduction Steps -

- Awareness to Employees, by training, Computation.
- Department Target to achieve waste reduction.
- Sustainability Approach Under People
- Digitalization.
- Returnable Packaging.
- Wooden pallet reuse
- Reusable pallets

Alternatives to Incineration -

- Developed the reuse culture in the plant.
- Find out the alternative to incineration
- Zero waste to landfill target form BOSCH global.
- Source segregation helped to increase the recyclable waste quantity.

4

Public C-SCB BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



4



Reuse of Inbound Received Pallets for Exports

Bosch Automotive Electronics India

5

Reuse of Inbound Received Pallets for Exports **Why?**



Already doing it for domestic dispatches. Why can't for exports.



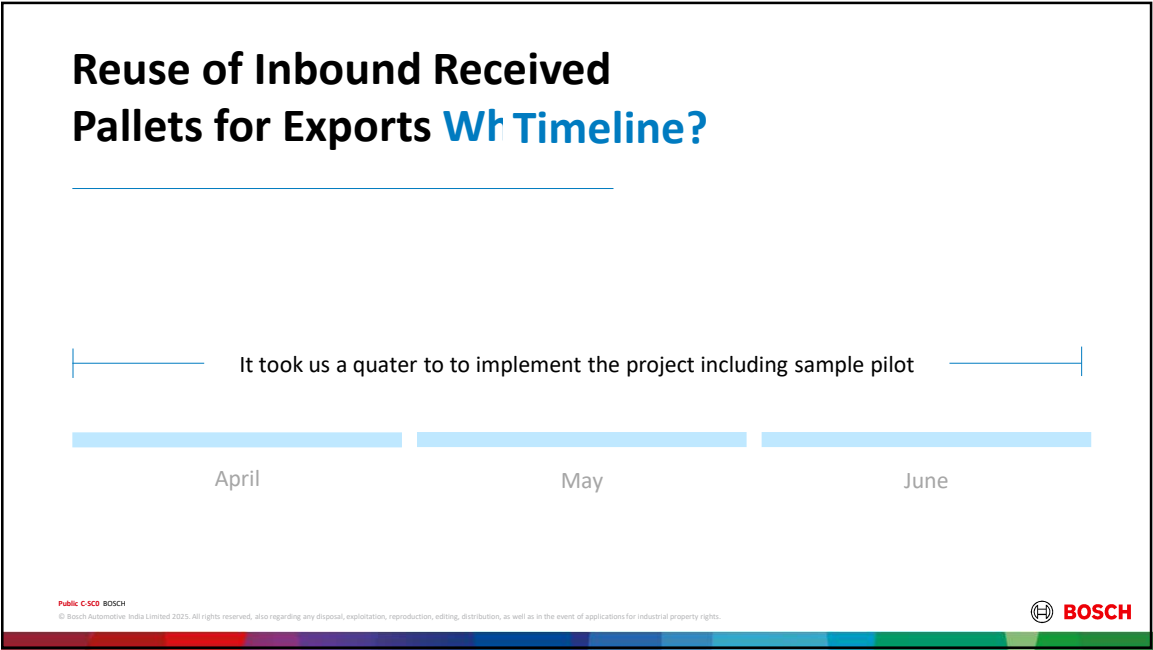
To improve cost-efficiency.

Public C-SD BOSCH

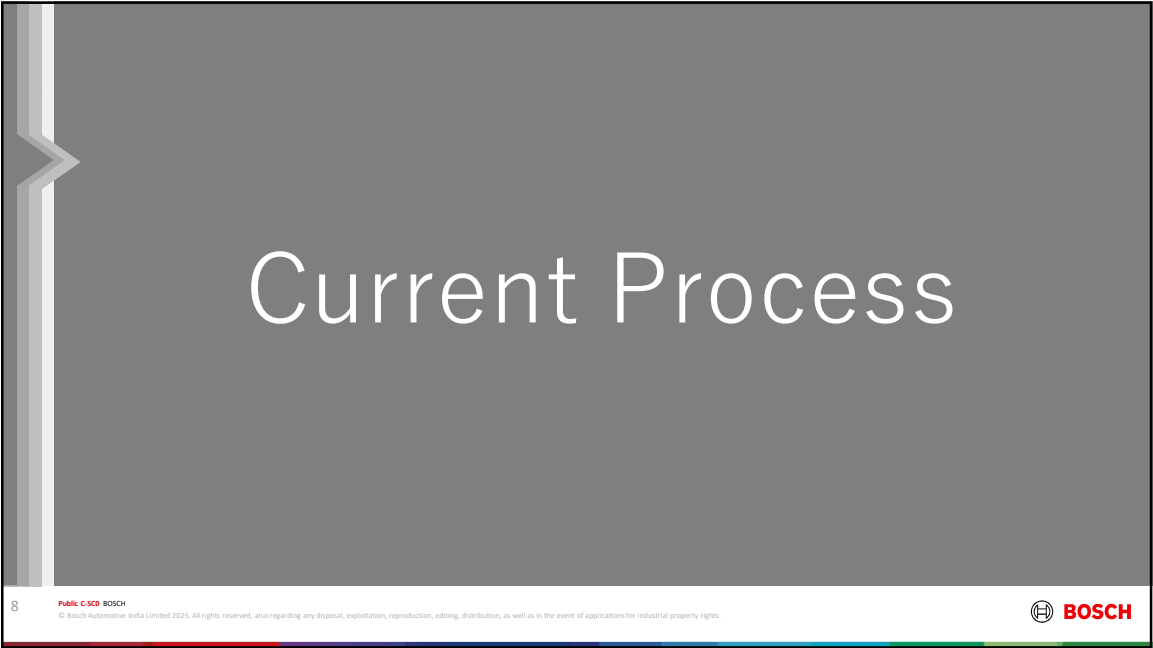
© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



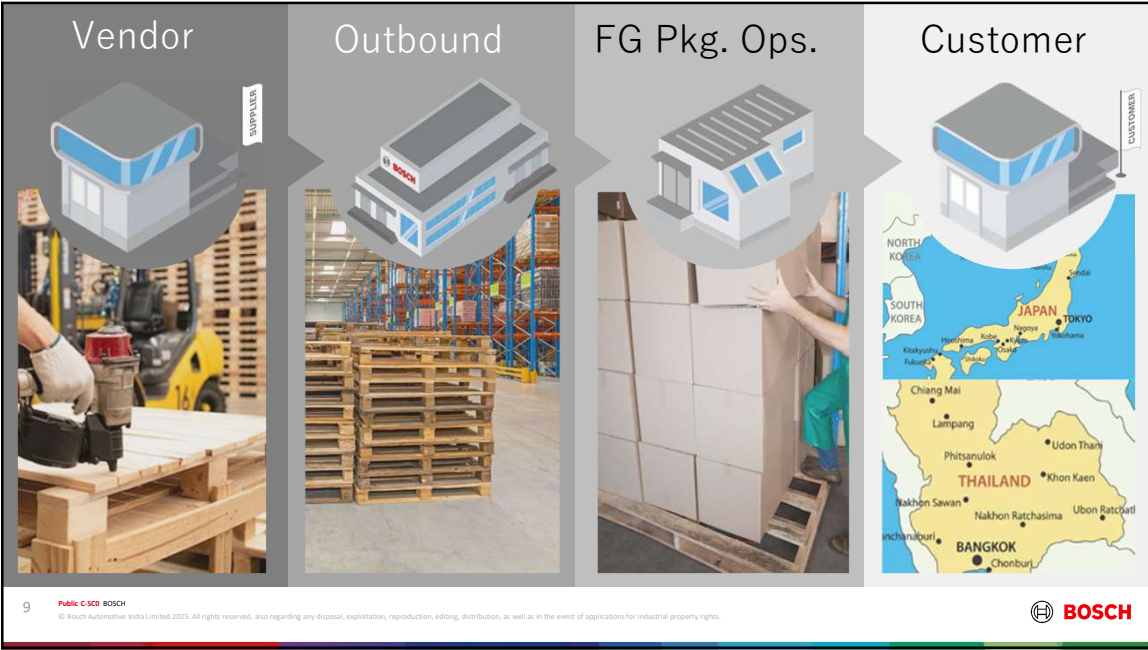
6



7



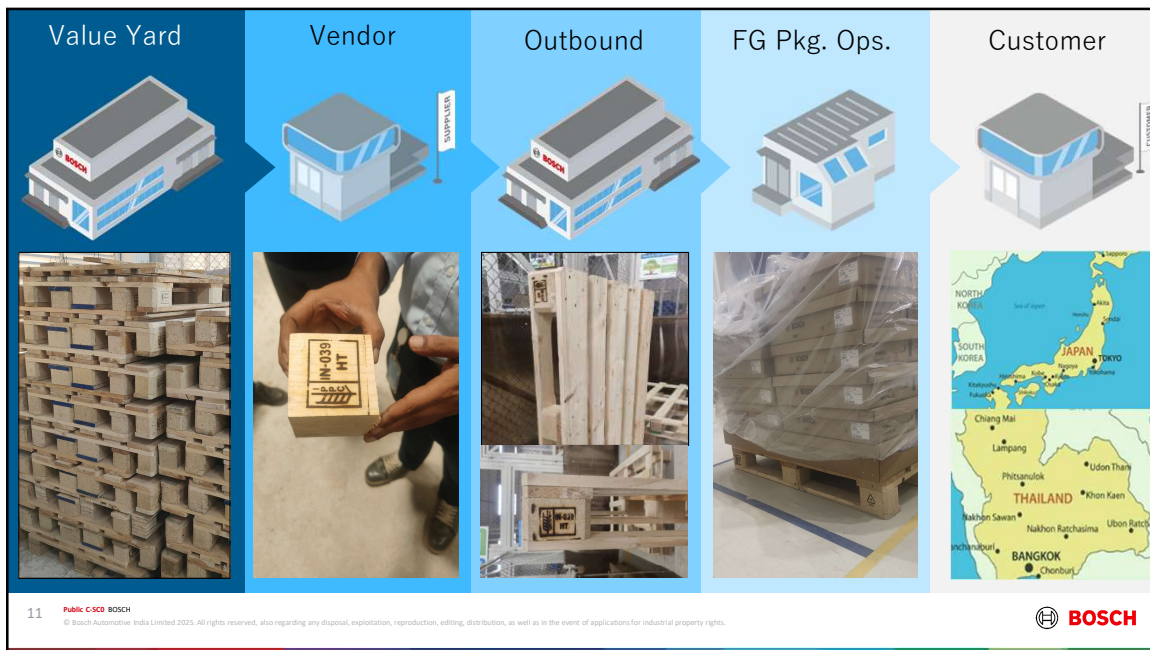
8



9



10



11

Benefits of the Reusage of pallets

Tangible Benefits



Saving **32 MT** of CO₂ emission from manufacturing.



Saving **1.2 mINR** (12 Lakhs) as per volume for a year.



Expenses & space **reduced** for waste management.

Intangible Benefits



200 trees saved worth 1300 pallets every year.



Motivating others for using such sustainable processes.



Change in ideology of cutting trees for selfless needs.

Public C-503 BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.

BOSCH

12

Benefits of the Reusage of pallets

Tangible Benefits



Saving **32 MT** of CO₂ emission from manufacturing.



Saving **1.2 mINR** (12 Lakhs) as per volume for a year.



Expenses & space **reduced** for waste management.

Intangible Benefits



200 trees saved worth 1300 pallets every year.



Motivating others for using such sustainable processes.



Change in ideology of cutting trees for selfless needs.

Public C-503 BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



13

Challenges during the Reusage of pallet project

1.



Communicating the process to the vendor.

2.



Facing challenges – In & Out material flow.

3.



Keeping records of in & out pallets.

Public C-503 BOSCH

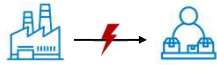
© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



14

Challenges during the Reusage of pallet project

1.



Communicating the process to the vendor.

Mitigating challenges -

Vendor visit for F2F discussion.

2.



Facing challenges – In & Out material flow.

Mitigating challenges -

Alignment with Compliance, HSE and security team.

3.



Keeping records of in warded pallets.

Mitigating challenges -

Creating new part number for reduced price.

Public C-SCS BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



15

Major Learnings

1.



Unique ideas can only be implemented and achieved once thought.

2.



Cross functional team collaboration.

3.



Extending thought process and learning more of export compliances in India.

4.



How sustainability can be achieved in industries.

Public C-SCS BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



16

Reuse of inbound received angle boards for domestic dispatches

Packaging savings / year	CO2 saving
1.12 mINR	28 MT
Packaging savings	Reduction in CO2 emission



Collection of angle boards in Value yard



Cutting of collected angle board into required std. dimensions
New angle board cost – EUR 0.2
Rework angle board cost – NIL



Using reworked angle boards for domestic dispatches in outbound

Reuse of inbound received angle boards for plastic edge protectors

Packaging savings / year	CO2 saving
0.95 mINR	18 MT
Packaging savings	Reduction in CO2 emission



Current plastic edge protectors (50x50x50)



Cutting of 1/8 angle board as an alternative in value yard
(150x50x50)



Using as a replacement to plastic edge protectors

17

Public C-SCB BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.

BOSCH

17

Top & bottom CFB lid specification optimization

Existing top and bottom lid 5 ply
180,120,180 gsm



Existing top and bottom lid 3 ply
220,150,220 gsm



Packaging savings / year	CO2 saving
1.31 mINR	10 MT
Packaging savings	Reduction in CO2 emission

Concept design for optimized top and bottom lid



Concept 1

Concept design for optimized specification top and bottom lid
3 ply concept (240, 180, 240 gsm)



Concept 2

18

Public C-SCB BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.

BOSCH

18

Returnable packaging for domestic customers

Returnable packaging to bring sustainable ideology.

- Conversion of 85% of total domestic dispatches to returnable.
- Focus on returnable for every new product onboarded in business.

Its more of investment on sustainability than cost.



19

Public CSD BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



Wood waste reduction

465 MT /Annum



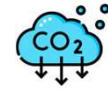
Paper waste reduction

348 MT /Annum



Plastic waste reduction

105 MT /Annum



Co2 emission reduction

447 MT /Annum



BOSCH

19

Benefits of the Zero waste landfill

Tangible Benefits

Less Pollution

Prevents land, water, & water & air contamination.

Resource Conservation

Saves natural resources by reusing & recycling.

Lower Carbon Emissions

Cuts greenhouse gases released from landfills.

Energy Savings

Recycling uses less energy than producing new materials.

Intangible Benefits

Strong Brand Advantage

Lorem ipsum

Higher employee morale

Lorem ipsum

Better corporate social responsibility

Lorem ipsum

Innovation & Future readiness

Lorem ipsum

Public CSD BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



BOSCH

20

Benefits of Zero waste landfill

Tangible Benefits

Less Pollution

Prevents land, water, & water & air contamination.

Resource Conservation

Saves natural resources by reusing & recycling.

Lower Carbon Emissions

Cuts greenhouse gases released from landfills.

Energy Savings

Recycling uses less energy than producing new materials.

Intangible Benefits

Strong Brand Advantage

Lorem ipsum

Higher employee morale

Lorem ipsum

Better corporate social responsibility

Lorem ipsum

Innovation & Future readiness

Lorem ipsum

Public C-SCB BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



21

Uniqueness of Zero waste landfill

1.

First-of-its-Kind Approach:

Pioneer project in the industry to achieve Zero Waste to Landfill.

2.

Holistic Waste Management:

Integrating reduce, reuse, recycle, recovery before co-process.

3.

Employee & Community

Involvement: Engages staff & contractors in awareness and waste segregation drives.

4.

Technology Integration:

Digitalization, Paperless activities.

5.

Circular Economy Link:

Converts waste into resources.

6.

Scalability & Replicability:

Designed as a model project that can be replicated across multiple sites or industries.

7.

Sustainability Recognition:

Aims for certifications (e.g. - Zero Waste certification, ESG rating boost).

8.

Measurable Impact:

Provides data on waste diversion, CO2 reduction, cost savings, and awareness sessions.

Public C-SCB BOSCH

© Bosch Automotive India Limited 2025. All rights reserved, also regarding any disposal, exploitation, reproduction, editing, distribution, as well as in the event of applications for industrial property rights.



22



23



24