

ZERO WASTE TO LANDFILL

THE UNILEVER JOURNEY - SEPTEMBER 2016

CONTENT



- Unilever Sustainable Living Plan (USLP)
- Journey to zero waste
- Recycling rates before Jan 2015
- The challenges
- Waste which used to go to Landfill
- New solutions
- Achievement
- Waste minimisation projects
- Challenges

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

BACKGROUND – UNILEVER



A bit about Unilever

The company is the Food Products Industry Leader in the Dow Jones Sustainability Index and last week was awarded a Gold Class distinction for its excellent sustainability performance by RobecoSAM in their Sustainability Yearbook 2015.

Business Ambition

It is to double the size of its business while reducing its environmental impact.

The zero waste to landfill target forms a key element of Unilever's sustainable growth ambitions.

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

BACKGROUND – UNILEVER



The Global Mind-set

Reducing waste at source remains the number one priority,

- In line with this, the challenge for Unilever and its project partners is finding innovative solutions for any remaining waste.
- Work is happening in this space; examples include:
 - In Cote D'Ivoire, waste has been turned into low cost building materials;
 - in India, organic waste is being composted and shared with the local community to grow vegetables; and
 - in China, waste from Hefei, Unilever's largest factory in Asia, is being used in the manufacture of bricks and paving material.

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

BACKGROUND – UNILEVER



Successes so far

Eliminating waste has resulted in more than €200m of cost avoidance for Unilever and created hundreds of jobs.

➤ In Egypt, for example, the local team has launched a programme which empowers disabled employees to earn extra income by recycling waste material from Unilever's production lines - proving that reducing waste makes sound business sense.

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

JOURNEY TO ZERO WASTE



**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

ACHIEVING ZERO WASTE TO LANDFILL



Unilever has established a strong track record on designing out waste from factories since 2012:

- zero waste to landfill was added as a Unilever Sustainable Living Plan (USLP) target
- the company focused on embedding a “zero waste mind-set” to rapidly accelerate the speed of the global roll out programme
- increased resource resilience and reach the USLP target well ahead of schedule.
- adopted the four ‘R’ approach – firstly reducing waste at source then reusing, recovering or recycling any non-hazardous waste that remains.
- This meant reconsidering every single material that is consumed in a factory - from reusing packing materials from supplier deliveries to food waste from staff cafeterias.
- End of 2014 ULSA achieved its goal of ZNHWTL; a year ahead of scheduled date



WHY HAS ZERO WASTE TO LANDFILL BEEN SUCH A CHALLENGE IN SA?



- Landfill is inexpensive
- Landfill space is not yet scarce
- Energy from waste plants capital costs are high

Cost has been the biggest challenge for ULSA as well

Managing our waste appears to be more expensive now than it was 2 years ago; in 2014 only 70% of waste was being recycled 30% to landfill still

We are doing it because it is the right thing to do

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

WASTE WHICH USED TO GO TO LANDFILL



- Laminated plastics (Nylon, PET, Foil)
- Contaminated plastics
- Packaged goods (shampoo bottles, Knorr cubes, etc.)
- Paper poly foil
- Brown bags polycoated with PP
- High salt content products
- Food waste
- Paper towel used in factory and offices
- PPE (personal Protective Equipment such as ear plugs, hair nets, etc)
- Floor sweepings
- Sludges
- Contaminated waster
- Hazardous waste (videojet, oily rags, unused chemicals, etc.)
- Capsicum drums
- Sauces/salt in sachets

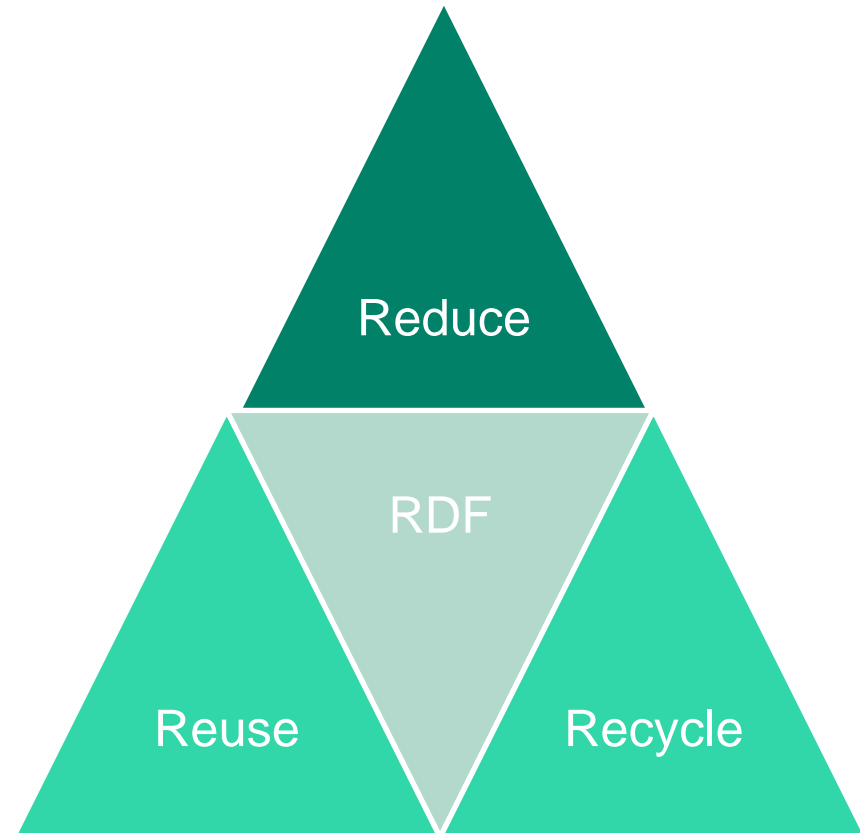


**LIVE SUPER...E,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

LANDFILL IS IN THE PAST – SO WHERE DOES WASTE GO?



- When we say Zero Waste to landfill it does not mean that we are no longer generating waste; this remains one of our priority issues that require tackling.
- What cannot be recovered, reused or recycled is processed through a RDF plant
- New partnerships had to be established



**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

PARTNERSHIP WITH INTERWASTE – NEW ALTERNATIVES



- RDF (dry waste)

<https://www.youtube.com/watch?v=e0VpKS>

- Maceration (food waste)
- Composting (organic waste)
- Animal feed (salty products)



- Blending platform (sludges/ liquid hazardous)
- Chute incineration (cartridges, videojet, etc.)

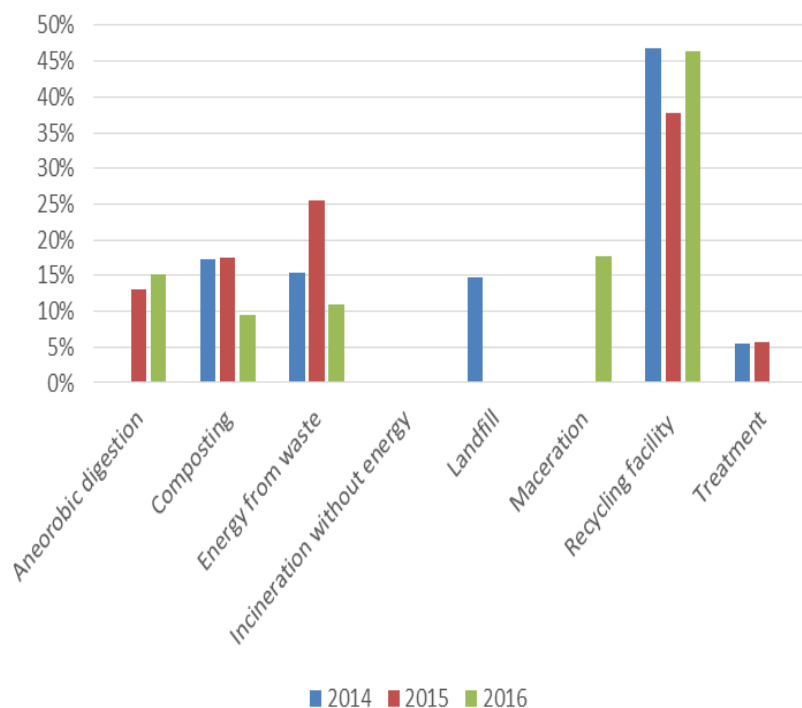
**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

BLENDING PLATFORM AND COMPOSTING

Typical set up at the
blending platform and
composting facilities



Waste disposal options



WASTE MINIMISATION PROJECTS



Reducing waste

- Reworking products on the lines (Knorr cubes, soups, spices, roll ons)
- Return cardboard boxes/ cores/ dividers to suppliers
- Re-use empty flowbins on other factories
- Use materials thoroughly in factory (packaging on reels, cello tapes, tea filter paper on reels, shrink-wrap on reels, etc.)
- Giving employees set amount of PPE per month
- Use cutlery and plates in canteen rather than plastic / takeaway containers
- Sorting at source to avoid contamination

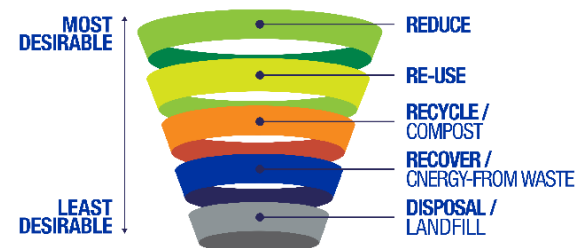
Re-using waste

- Re-using cardboard boxes to pack products
- Re-using products in factory

Innovative projects

- Using RDF waste for new boiler

INTERWASTE HIERARCHY OF WASTE MANAGEMENT



A SNAP SHOT OF SOME OF THE CHALLENGES EXPERIENCED - POOR SEPARATION



PROFITABLE GROWTH

A SNAP SHOT OF SOME OF THE CHALLENGES EXPERIENCED



**WASTE NOT REMOVED
TIMOROUSLY**



BLACK BAGS USED – HARD TO ID CONTENTS



**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

PROJECTS TO ENSURE SUSTAINABILITY - SEPARATION AT SOURCE



- Trolleys moved to central recycling points
- Black bags replaced with transparent bags
- All wheelie bins removed
- Additional frames placed for additional sorting
- 6 Interwaste staff placed to assist operator sorting at source, remove contamination and move waste timeously

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

THE NEW SYSTEM INTRODUCED



4 waste streams

1. Paper
2. Plastics
3. RDF (Refuse Derived Fuel)
 - paper towels
 - hair nets
 - ear plugs
 - gloves
 - wipes
 - strapping
 - broken pieces of wood
 - foil
 - rubber bands
4. Waste products

**6 Interwaste sorters to assist sorting
on the lines and to move the waste**

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

NEW SYSTEM OF WASTE SEPARATION AT INDONSA



New frames



New trolley area



Sorted materials



ERVICE,
BLE,
/TH

SORTING CUBES ON THE LINE TO REWORK RAW CUBES



4 staff placed to sort the cubes manually

Record weights daily

Sorters placed on the lines



Cubes reworked on the lines



**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

DAILY DATA RECORDING AND ANALYSIS



Greater cubes sorting analysis - Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1		data														
2		target		57.6 per staff per day												
3		Cost per staff		300.00 per day												
4																
5		analysis														
6			Cubes	Foil	Paper	Total sorted	Number of staff	kg per staff	% on target	cost per kg	comment					
7	13th Jan	84.62	6.41	0.8	91.83	4	23	40% R	13.07	start day						
8	14th Jan	123.8	8.80	0	132.60	4	33	58% R	9.04							
9	15th Jan	127.43	8.70	0	136.21	4	34	59% R	8.83							
10	16th Jan	155.12	10.95	0	166.07	4	41	71% R	7.33							
11	19th Jan	158.18	9.42	0	167.6	4	37	64% R	8.13							
12	20th Jan	122.86	9.38	0	132.24	4	33	57% R	9.07							
13	20th Jan night	92.09	6.67	0	98.76	4	25	43% R	12.15	new sorters						
14	21st Jan	148.06	12.54	0	160.6	4	40	70% R	7.47							
15	21st night shift	80.34	3.06	0	83.4	2	32	55% R	9.46	2 staff						
16	22nd day	208.82	18.84	0	227.66	4	57	99% R	5.27							
17	22nd night	95.02	6.64	0	101.66	4	26	46% R	11.36							
18	23rd day	180.05	11.12	0	191.17	4	48	85% R	6.09							
19	23rd night	91.72	9.92	0	101.64	4	25	44% R	11.81							
20	26th day	199.34	14.64	0	213.98	4	53	93% R	5.61							
21	26th night shift	103.39	6.44	0	109.83	4	27	48% R	10.94							
22	27th Jan	234.45	18.22	0	252.77	6	42	73% R	7.12	6 staff						
23	28th Jan	154.13	13.14	0	167.27	4	42	73% R	7.17							
24	29th	132.87	14.09	0	146.96	4	37	64% R	8.17							
25	30th	185.35	14.01	0	177.36	4	44	77% R	6.77							
26	31st	476.09	37.8	0	513.89	18	29	50% R	10.51	12 staff Saturday						

Findings

- Staff can sort on average 50kgs of cubes per day
- Cost to rework cubes per kg = R7
- If raw materials could be re-used; huge cost saving for Unilever (estimated R50K per month)
- Cube waste less than 2 tons per month so cost saving on composting/RDF charges
- Cleaner area

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

SOUP SACHET SORTING TRIALS



Similar projects as cubes

- 4 sorters placed
- Peel off soup package from soup
- Rework of soups



**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

THE PROCESS



Introduction of Sieves



Weighing and product identification



Rework



**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

MAYDON WHARF PROJECTS



Waste separation at source MW



Roll on rework



VICE,
LE,
TH

HO WASTE SEPARATION AT SOURCE LAUNCH



- Removed all desk office bins
- Day PR campaign – bring a desk bin and get a free coffee
- 1000 office bins collected and donated to schools



OUT WITH THE OLD



New bins are located at all pause areas and one per area. All printers have a paper bin.

SHE SAFETY HEALTH & ENVIRONMENT

This new initiative is to help us achieve our **Zero Waste To Landfill** goal.

Thank you for doing your part in creating a sustainable future.



**IPERIOR SERVICE,
R SUSTAINABLE,
ABLE GROWTH**

ACHIEVEMENT



- Unilever today reached a new industry-leading achievement of sending zero non-hazardous waste to landfill across more than 600 sites, in 70 countries, including factories, warehouses, distribution centres and offices. Having identified the different non-hazardous waste streams in its operations Unilever has now found alternative routes for the waste from these sites.
- In January 2015 Unilever announced that over 240 factories had achieved [zero waste to landfill status](#) – by replicating this zero waste model in other parts of the business, nearly 400 additional sites have now eliminated waste to landfill. This has been achieved by continuing with the four 'R' approach of reducing, reusing, recovering or recycling, proving that waste can be seen as a resource with many alternative uses – from converting factory waste to building materials, to composting food waste from staff cafeterias.

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

CHALLENGES



- Changing the mindset
- RDF contamination with food waste
- Hazardous Waste - Enzymatic bags
- Waste re-classification and registration as animal feed source has met with extreme delays
- Waste separation takes time
- Waste Management costs are high

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

FUTURE STRIDES AND FOCUS



- Becoming a zero waste company
- Working towards a zero waste value chain by encouraging our suppliers and customers to join us on this mission.
- Developing an open source approach and sharing our 'zero waste framework' and experience with other organisations to drive global change and create a more sustainable future

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**

ACKNOWLEDGEMENTS



- Interwaste for their open-mindedness and perseverance
- Our partners and suppliers for coming to the table and sharing the vision
- The leadership for embracing the idea and allowing us to soar to heights beyond imagination despite cost implications

**LIVE SUPERIOR SERVICE,
DELIVER SUSTAINABLE,
PROFITABLE GROWTH**