Will we achieve 80% recovery without EfW? What does the data say..

October 2023
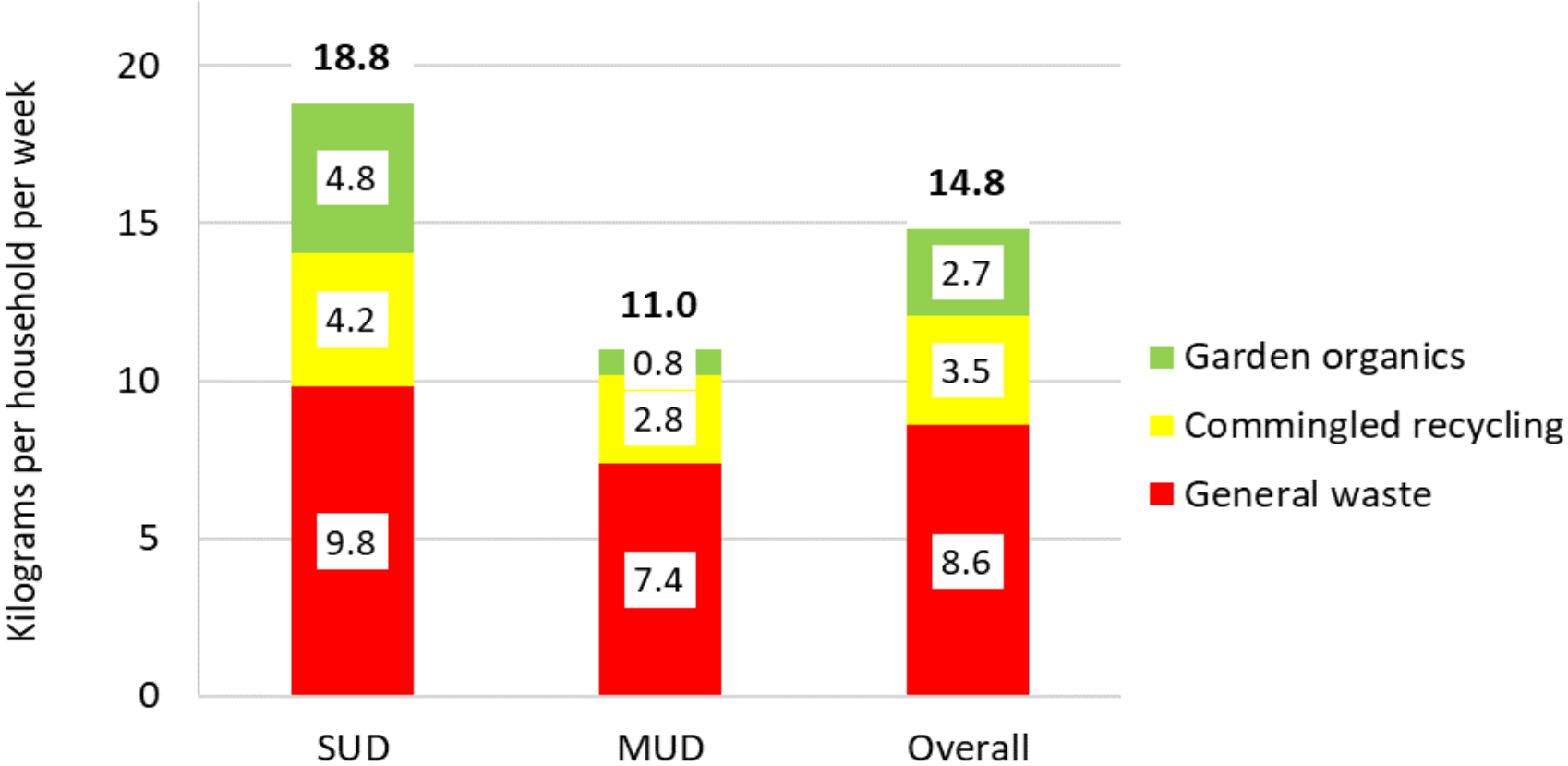
Some fundamentals

- All metropolitan Sydney councils – **11 councils**

- 220 households per council

- Sample proportional to ABS census housing data

- SUDs and MUDs collected and reported separately

- Adjusted by collection frequency to express = **kgs / hhld / week**

- Divided by total number of households = **per household**

- **Generation** (kilograms per household per week)

- **Composition** (per cent by weight)
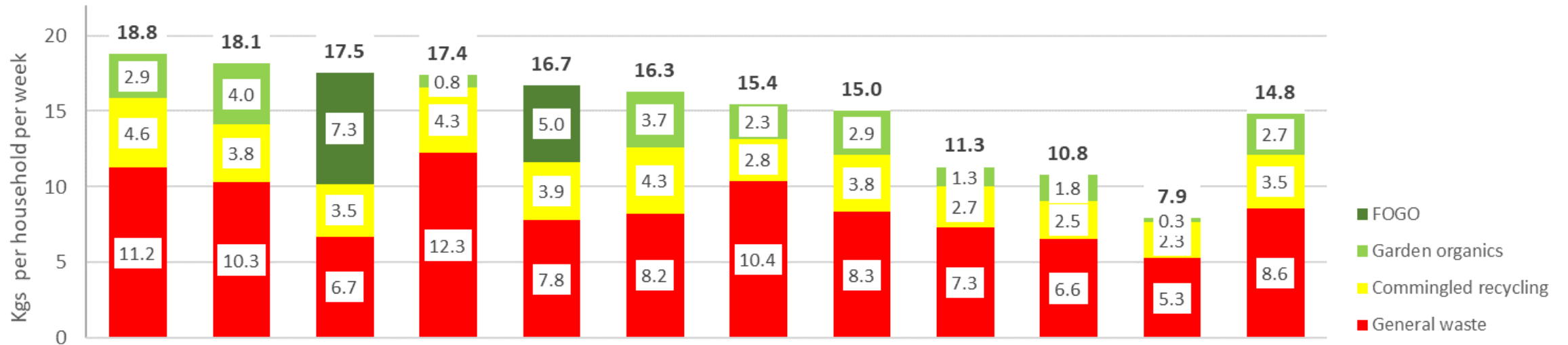
Data source parameters

All 2023 data

2,444 hlds

11 councils

3,515 SUDs bins

Single & multi-unit and dwellings

3,956 MUDs bins

7,471 total bins audited

46 Tonnes

NSW EPA 73 sorting categories
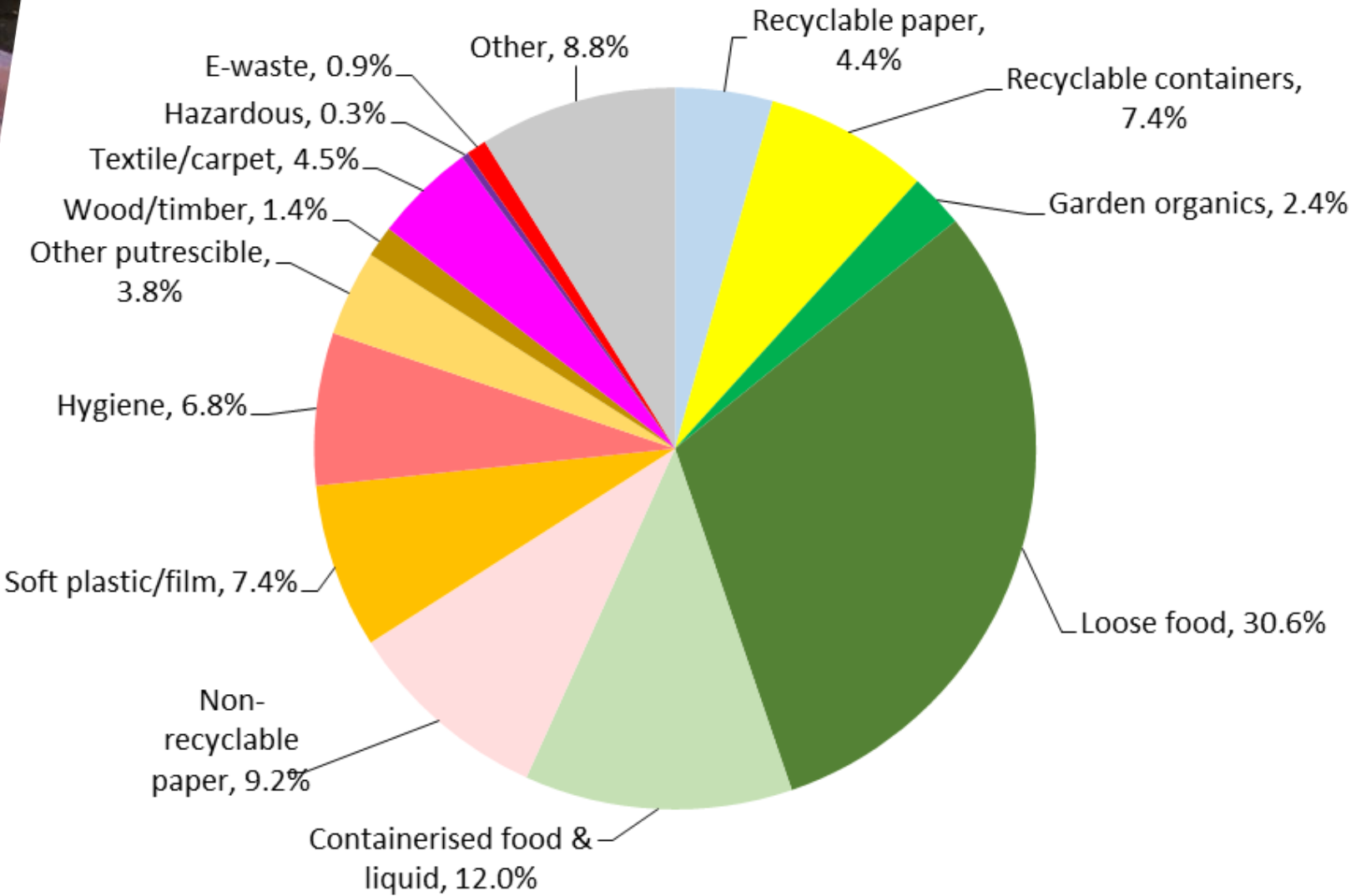
Overall MSW total waste generation

- Average waste generation 14.8kgs per hld per week
- Overall general waste – 58% of all waste generated
- SUDs – 52% and MUDs – 67%
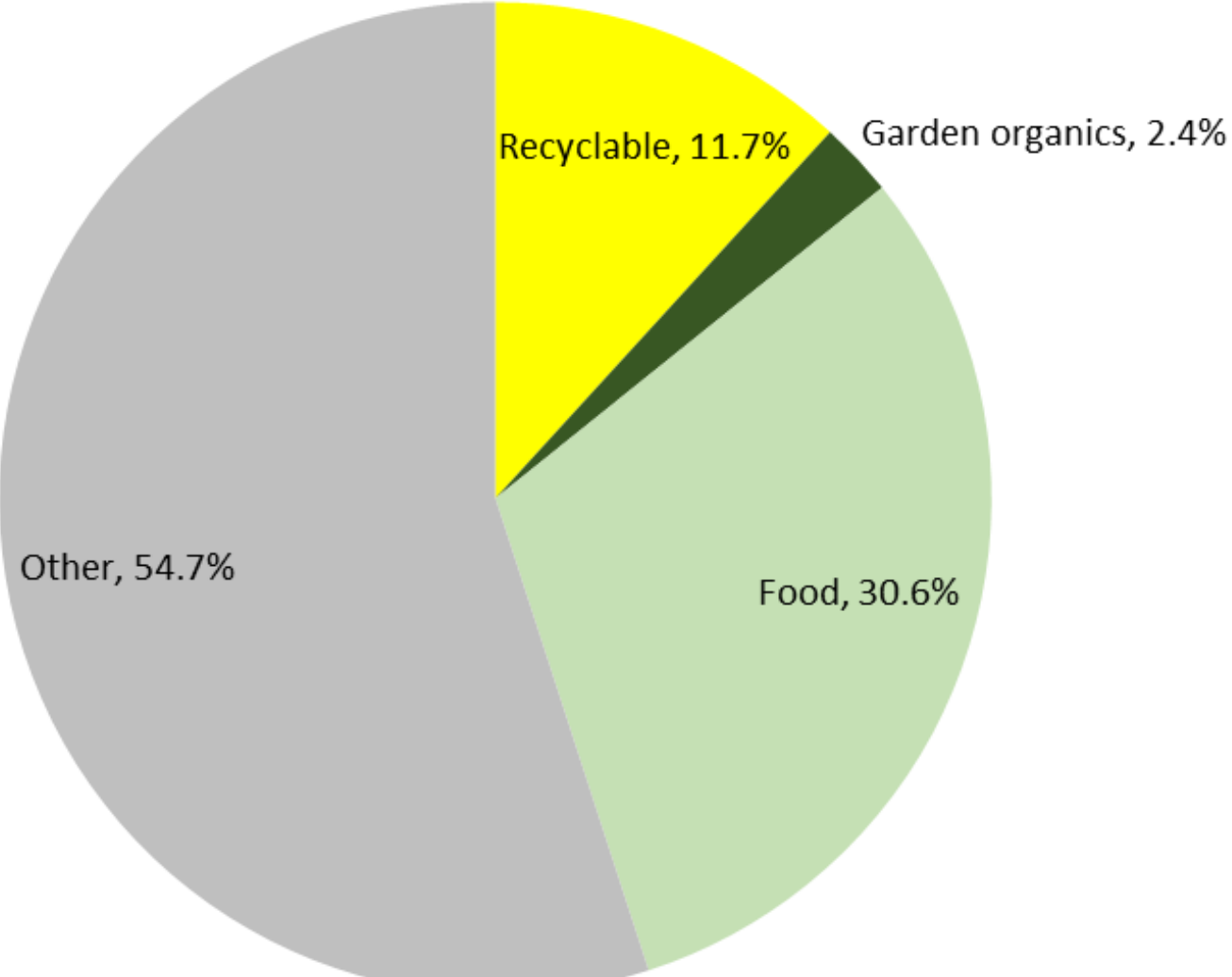
Overall total waste generation - range

- Total waste generated range - 8 kgs to 19 kgs per hld / week

- General waste range - 5 kgs to 12 kgs per hld / week

- SUDs range 5 kgs - from 8.6 kgs to 13.8 kgs per hhld per week

- MUDs range 6 kgs - from 3.7 kgs to 9.9 kgs per hhld per week

Overall general waste detailed composition

Pie chart segments:
- Recyclable paper, 4.4%
- Recyclable containers, 7.4%
- Garden organics, 2.4%
- Loose food, 30.6%
- Containerised food & liquid, 12.0%
- Non-recyclable paper, 9.2%
- Soft plastic/film, 7.4%
- Hygiene, 6.8%
- Other putrescible, 3.8%
- Wood/timber, 1.4%
- Textile/carpet, 4.5%
- Hazardous, 0.3%
- E-waste, 0.9%
- Other, 8.8%

Overall general waste by key stream

Recyclable, 11.7%

Garden organics, 2.4%

Other, 54.7%

Food, 30.6%

General waste summary

12% → should be in the recycling → 7.4% containers
4.4% cardboard / paper

2% → should be in the garden bin → Garden and lawn
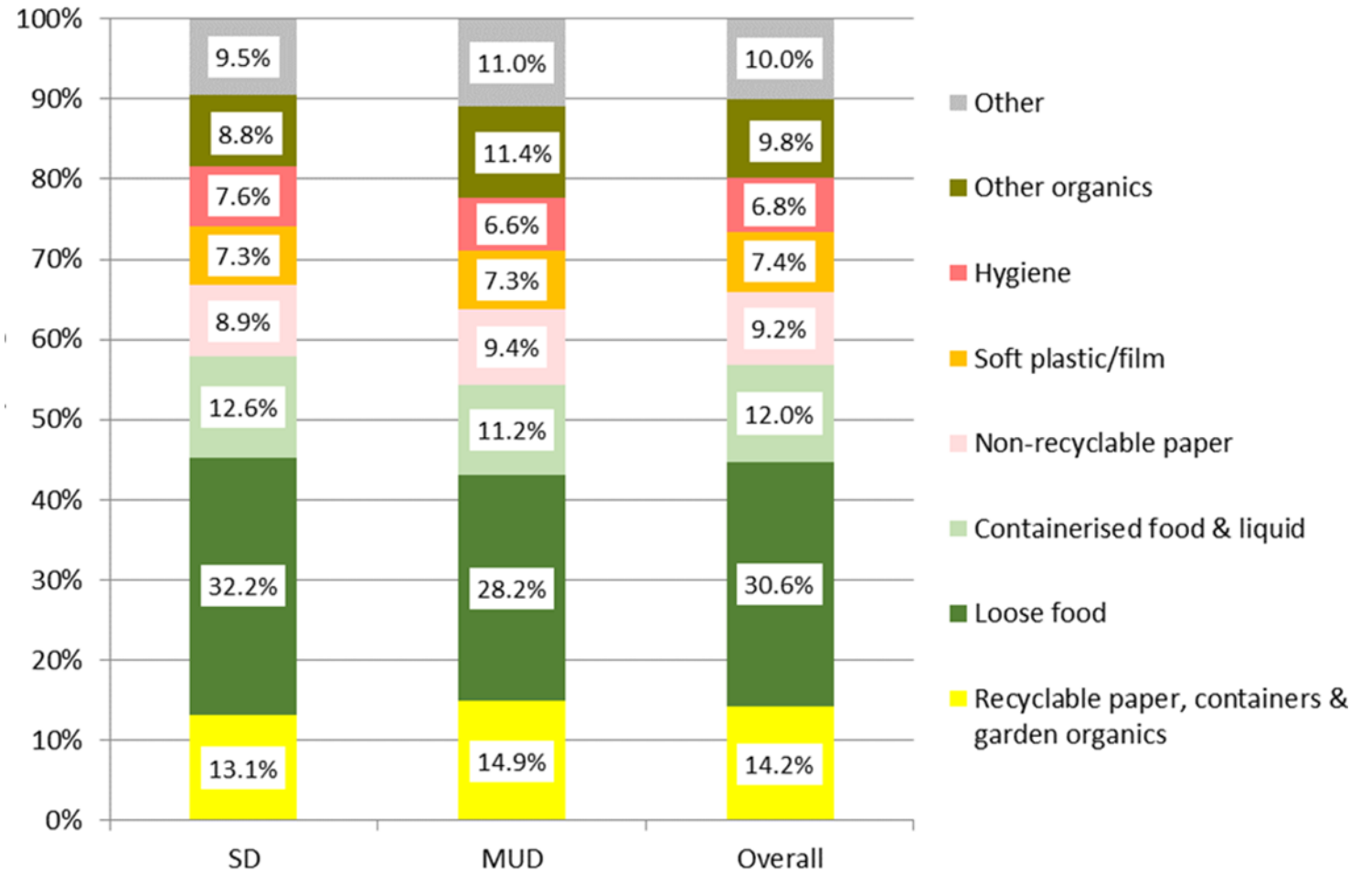
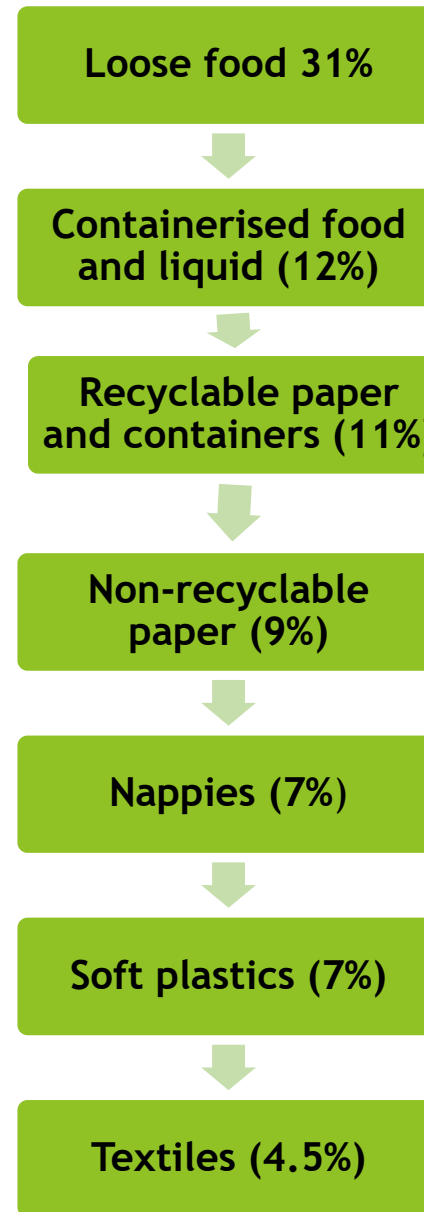**1%** → CRC → 0.9% E waste
0.3% hazardous

31% → Could go into FOGO → 31% food

General waste composition by housing stock

General waste summary

Loose food 31%

↓

Containerised food and liquid (12%)

↓

Recyclable paper and containers (11%)

↓

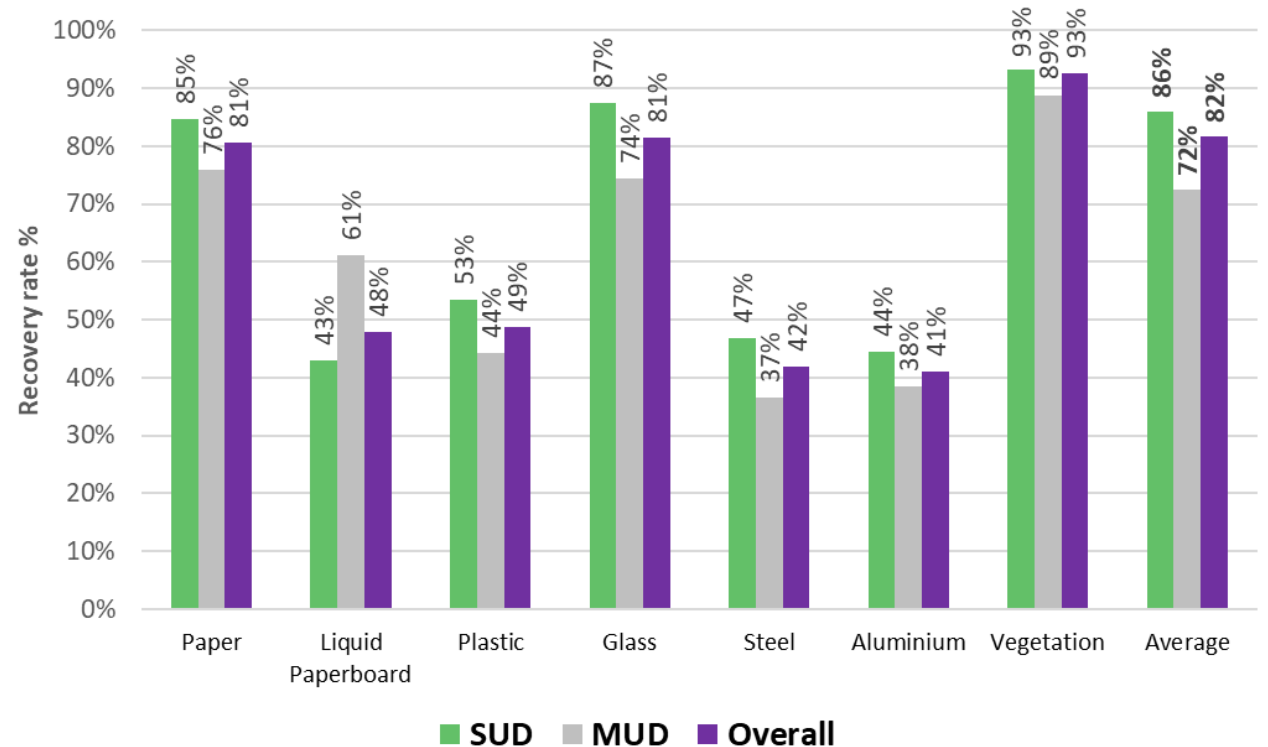Non-recyclable paper (9%)

↓

Nappies (7%)

↓

Soft plastics (7%)

↓

Textiles (4.5%)

81% general waste are 7 key categories

Recovery rates by material

- ▶ Overall average 82% all materials
- ▶ > 80% for paper, glass, vegetation
- ▶ <50% for LPB, plastics, steel, aluminum
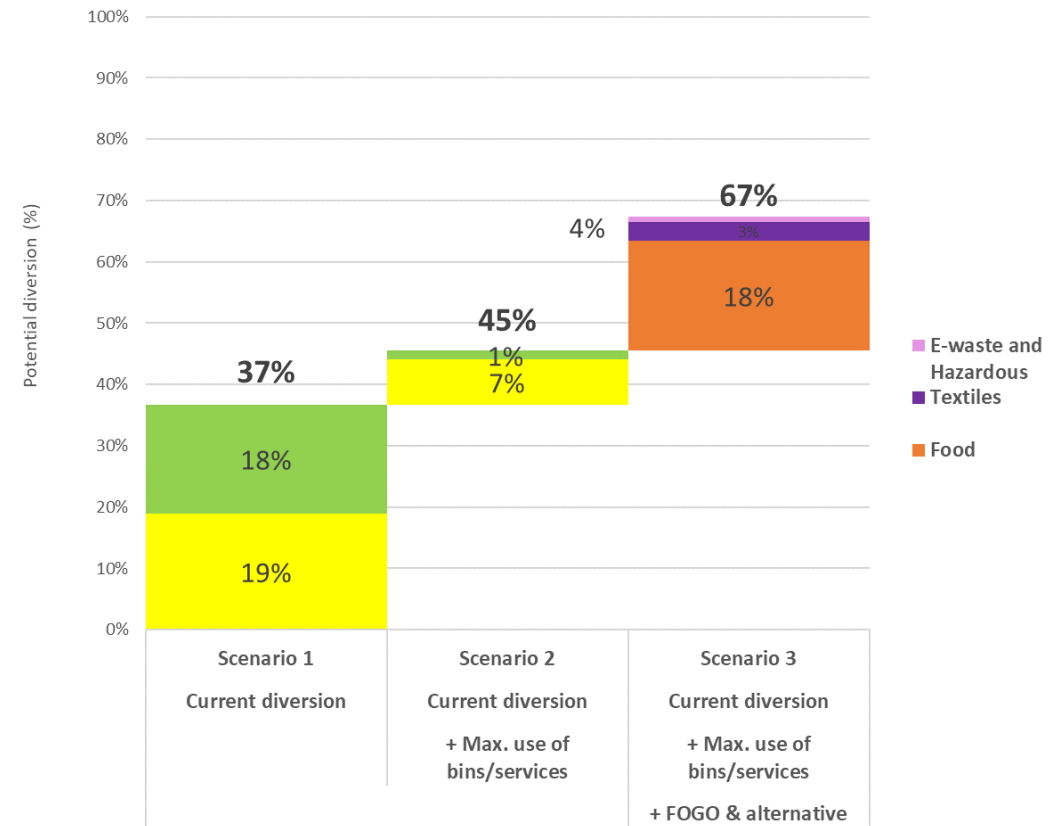
Landfill diversion - Theoretical maximum

Current - 37%

▶ 19% from recycling

▶ 18% from garden organics

▶ Max use of existing systems - 45%

▶ 7% recycling

▶ 1% garden organics

Assumptions

▶ If 100% of hhlds, sort **ALL** materials

▶ All **loose** food recovered – 18%

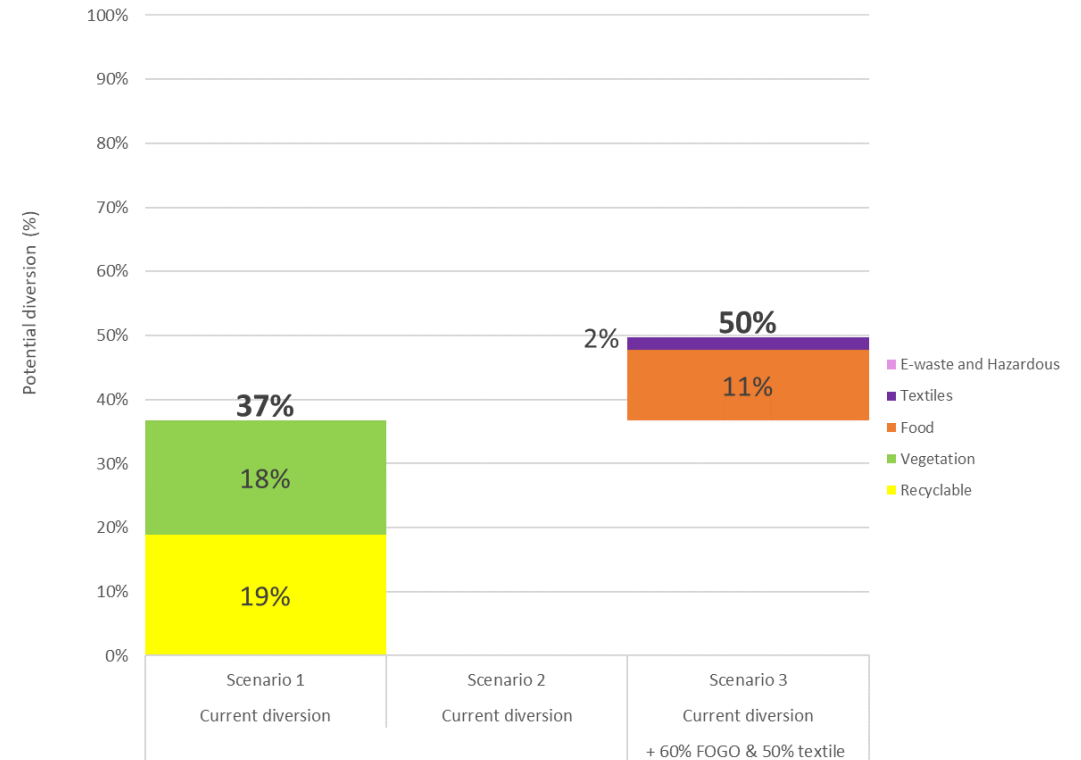▶ All textiles and CRC items - 4%

Max possible 67%

Landfill diversion – Possible case

▶ Current - 37%

   ▶ 19% from recycling

   ▶ 18% from garden organics

Assumptions

▶ No improvement in current systems – still at 37%

▶ 60% **loose food** recovered – 11%

▶ 50% textiles and CRC items - 2%

Max possible = 50%
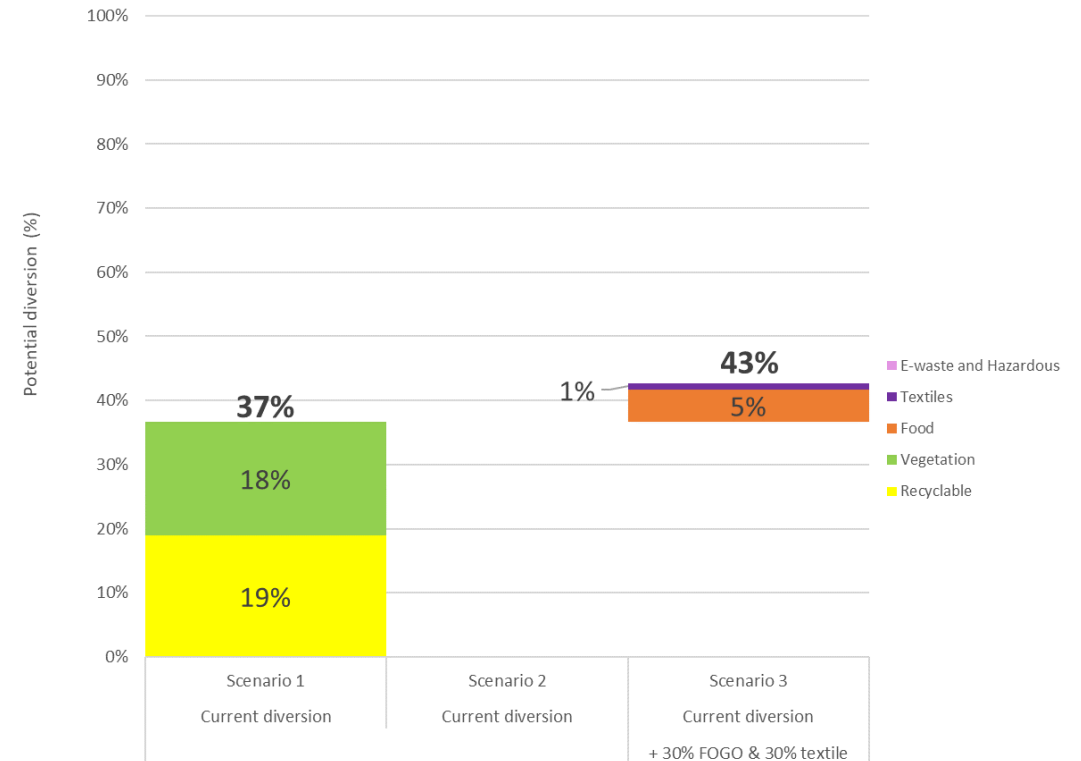
Landfill diversion – Probable case

Current - 37%

- ▶ 19% from recycling
- ▶ 18% from garden organics

Assumptions

- ▶ No improvement in current systems – still at 37%
- ▶ 30% **loose food** recovered – 5%
- ▶ 30% textile recovery –1%

Max possible = 43%

1

Total waste generation – 58% is general waste (red bins)

2

Average hhld generates 8.6kgs per hhld per week of general waste

3

55% or 4kgs general waste bin is not suitable for recycling, garden waste or FOGO services

4

Current landfill diversion = 37%

Theoretical max @ 100% recovery all streams= 67%

5

Possible

@ 60% loose food recovery = 50%

Probable

@ 30% loose food recovery = 43%

Key outcomes

Thankyou

Anne Prince

E: anne@aprince.com.au

M: 0425251271