

Municipal Waste Characterisation and Organics

Cré Conference

THURSDAY 5TH MAY 2005

RPS-MCOS & CTC

**Olivier Gaillot, RPS-MCOS
Dr. Colum Gibson, CTC**



Introduction:

- EPA Project on Municipal waste Characterisation funded under the
- National Waste Prevention Programme

- RPS-MCOS and CTC Experience

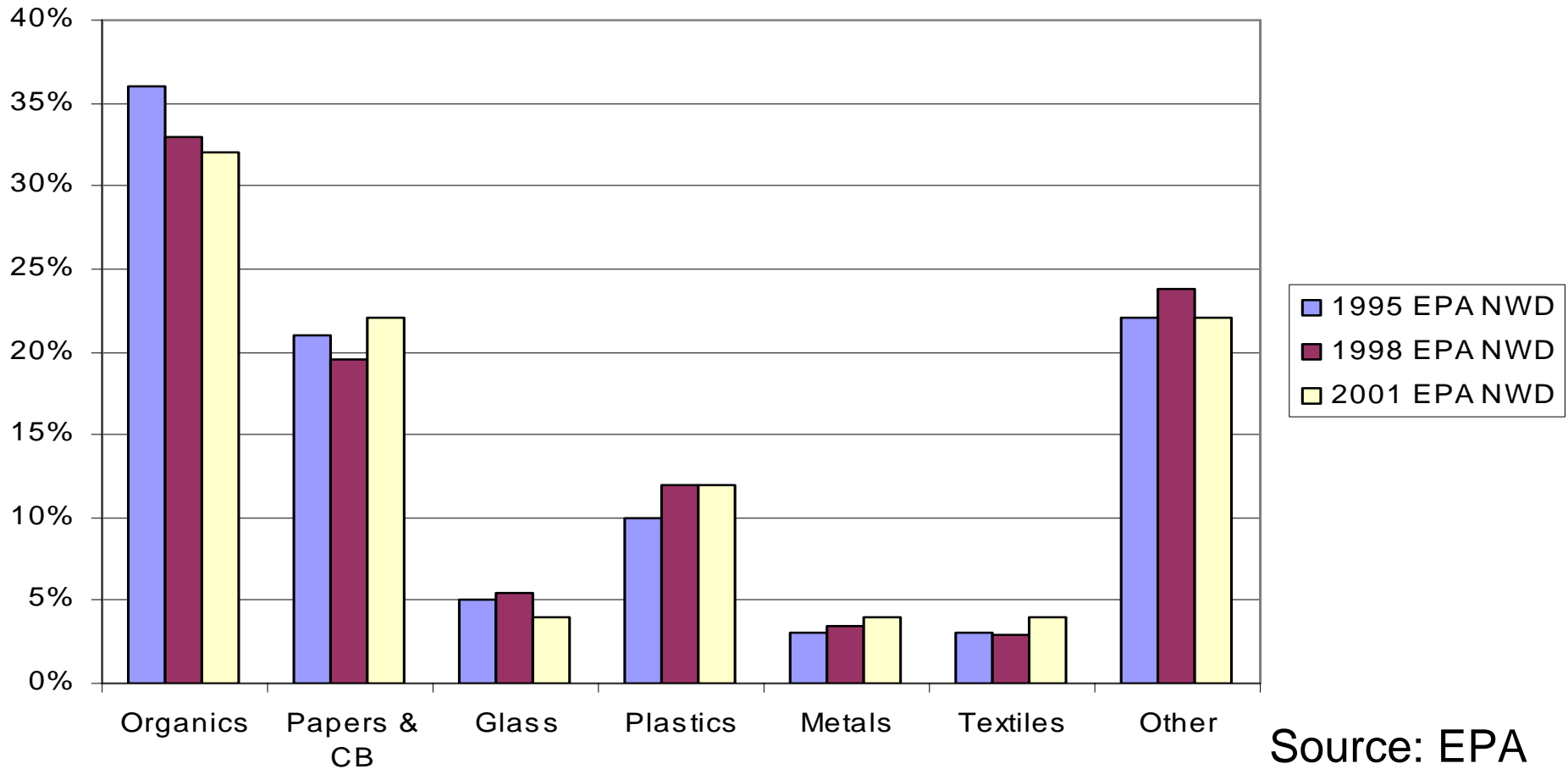
- Why do we need waste characterisation?
 - Waste Management Planning: collection and treatment
 - Monitor progress on implementation of EU Directives.

Household Waste: Methodology

- EPA Municipal Waste Characterisation Manual, 1996:
 - Sample selection:
 - Sample collection: Refuse Collection Vehicle
 - Waste characterisation
 - Health & Safety



Household Waste: Change in Waste Composition



Household Waste: Possible Factors of Variability Affecting Waste Composition

- **Seasonal Variation**
- **Household structure and size, Age profile**
- **Type of heating system: Gas, Liquid vs. Solid fuels**
- **Type of housing**
- **Level of household income**
- **Ethnicity**

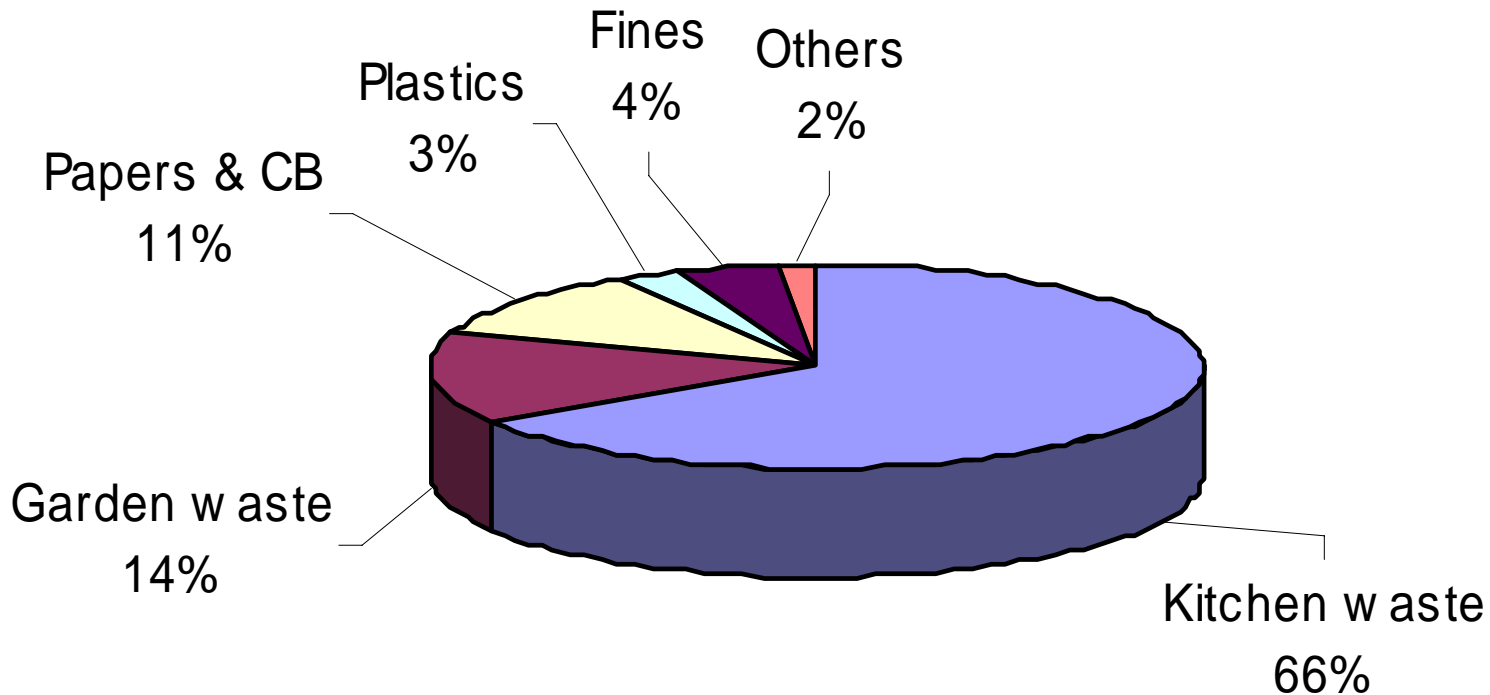
Household Waste: Influence of Recent Evolutions

- Introduction of separate collections:
 - Dry recyclables Collections,
 - Organics Separate Collections,
 - Home composting...
 - Civic Amenities

- Effect of user waste charges?
 - Presentation rates
 - Contamination



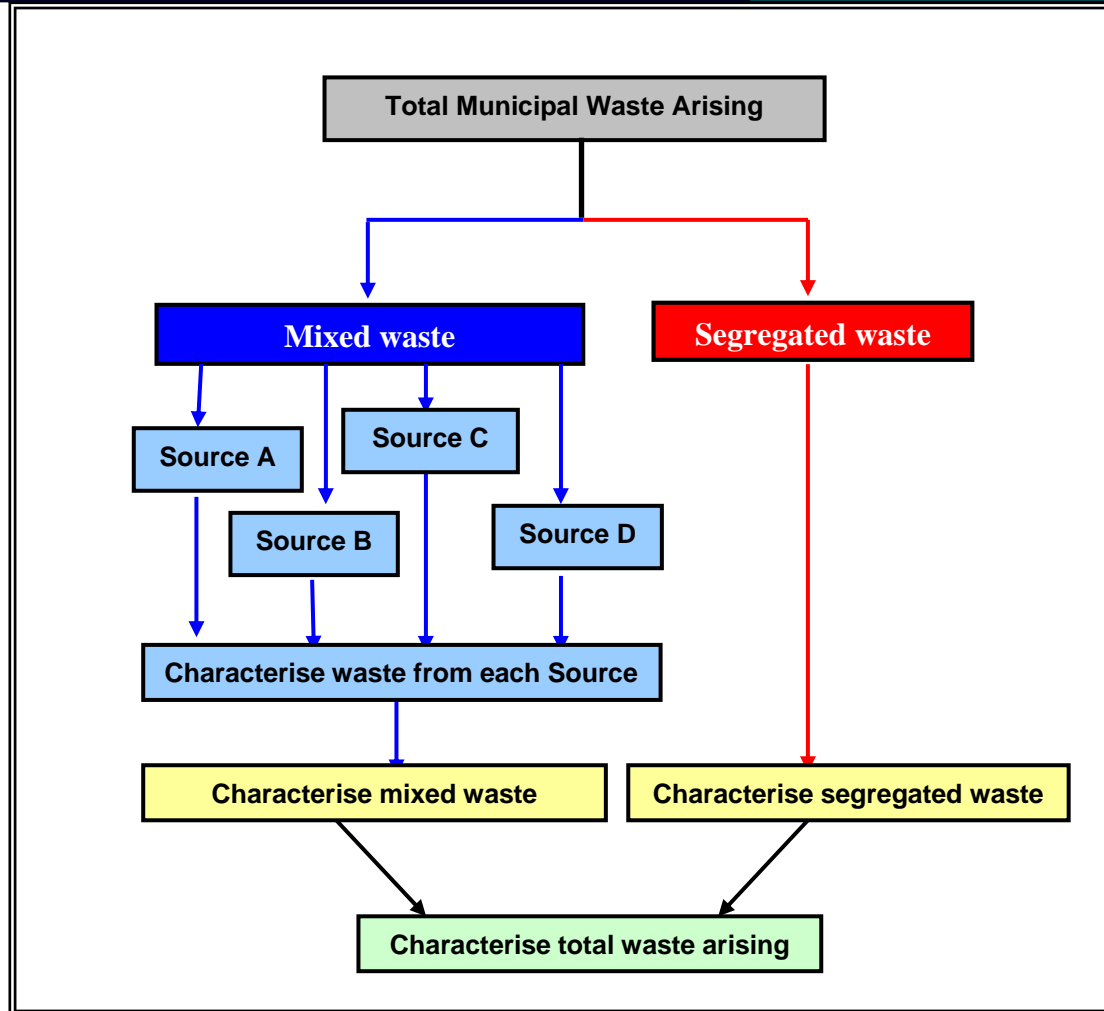
Household Waste: Brown Bin Waste Composition



- **Brown Bin Contamination 5%**
- **19% of organics are left in the residual waste stream**

Commercial Waste: Methodology

- EPA methodology developed by CTC in MS-7 Research Project.
- Waste characterisation at waste producer location
- Factors of variability



Commercial Waste: Issues with Organics

- Contamination a serious issue
- Segregation 'easy' - management commitment
- Lack of facilities – both collection and management
- Foot and mouth changed complexion of organics use in business e.g. hotels. Cost now driving change
- Macerators the solution (?)
- No formal inclusion into on-site management



Commercial Waste: Major Commercial Sectors *

<i>Sector</i>	<i>% Typical Organic</i>
Financial	20
Hotel	50
Transport/Communications	21
• <i>Telecommunications</i>	22
• <i>Broadcasting</i>	18
• <i>Transport</i>	23
Wholesale	24
Supermarket	31
Other Retail	4
Public Offices	22
Colleges	19
Restaurant	50
Hospital	15

Commercial Waste: Potential Organics Available from Commercial Sector

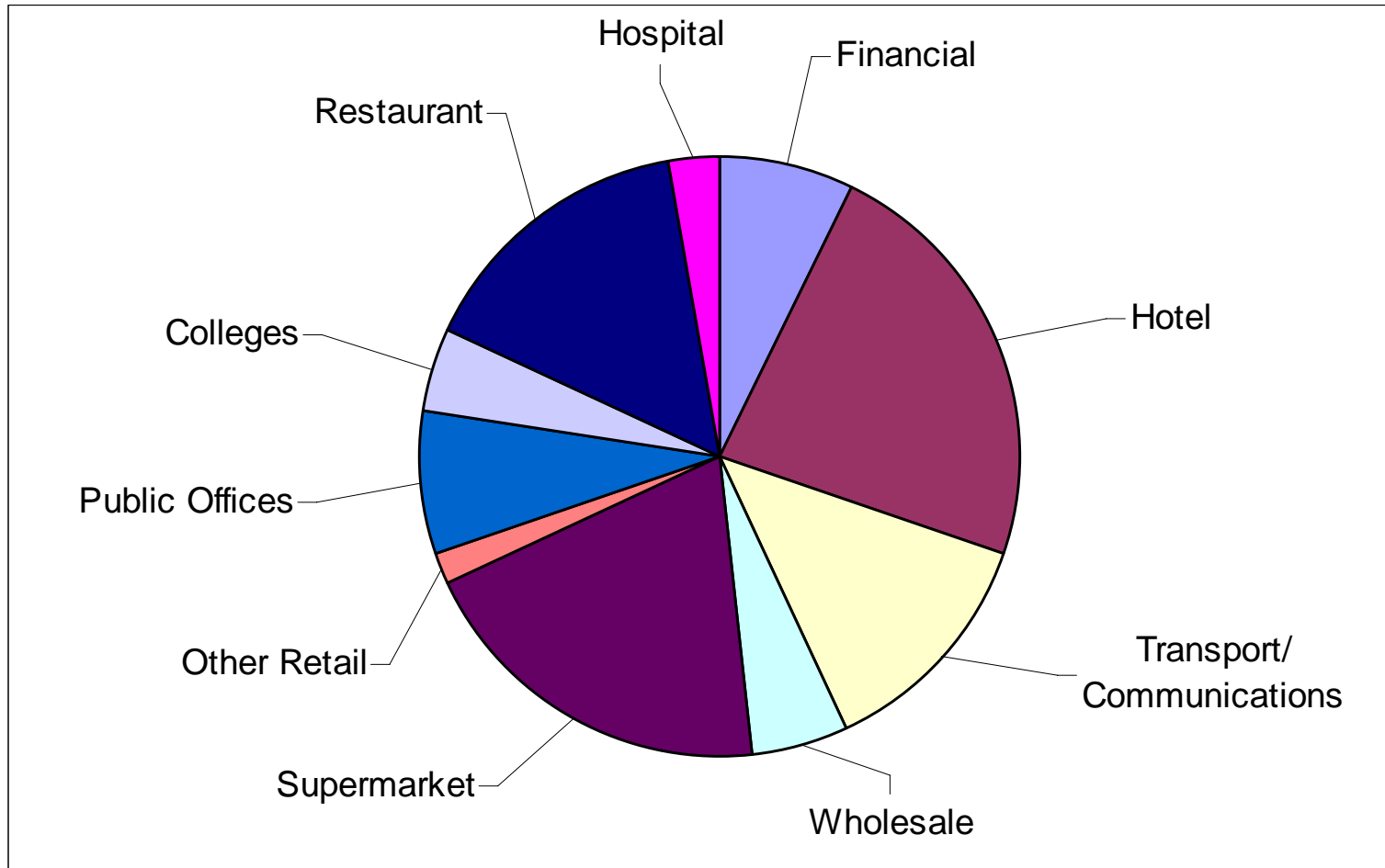
Sector	Sectoral % of National Waste Arisings	Weight of waste generated / tonnes *	% Organic per Sector	Weight of Organic Waste per sector / tonnes
Financial	8.4	55,753	20	11,151
Hotel	10.7	71,501	50	35,751
Transport/Communications	14.2	94,580	21	19,862
Wholesale	5.1	34,096	24	8,183
Supermarket	14.9	99,333	31	30,793
Other Retail	9.2	61,595	4	2,464
Public Offices	8.2	54,886	22	12,075
Colleges	5.6	37,583	19	7,141
Restaurant	7.1	47,401	50	23,700
Hospital	4.2	28,054	15	4,208
Other Sectors	12.2	81,586	-	-
Total	100%	666,367		~ 177,000



* Based on 2003 NWD figure for **commercial waste arising** (666,367 tonnes)



Commercial Waste: Organics potentially available from commercial sectors



Commercial Waste: Industrial Sector

- Usually canteens – more space and time
- 150,000 people served per day nationally
 - Includes commercial
- More organised waste management facilities – on-site management
- Using larger contractors
- Many have EMS – continual assessment and improvement initiatives

Commercial Waste: Canteen Profile

