

BUILDING SERVICES

SPPE 3112

WASTE

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INTRODUCTION

Solid waste comprises all the wastes arising from:

1. Human
2. Animal activities
3. Useless or unwanted.



Source: <http://www.flickr.com/photos/jritch/4677818858/>

Classification of Waste

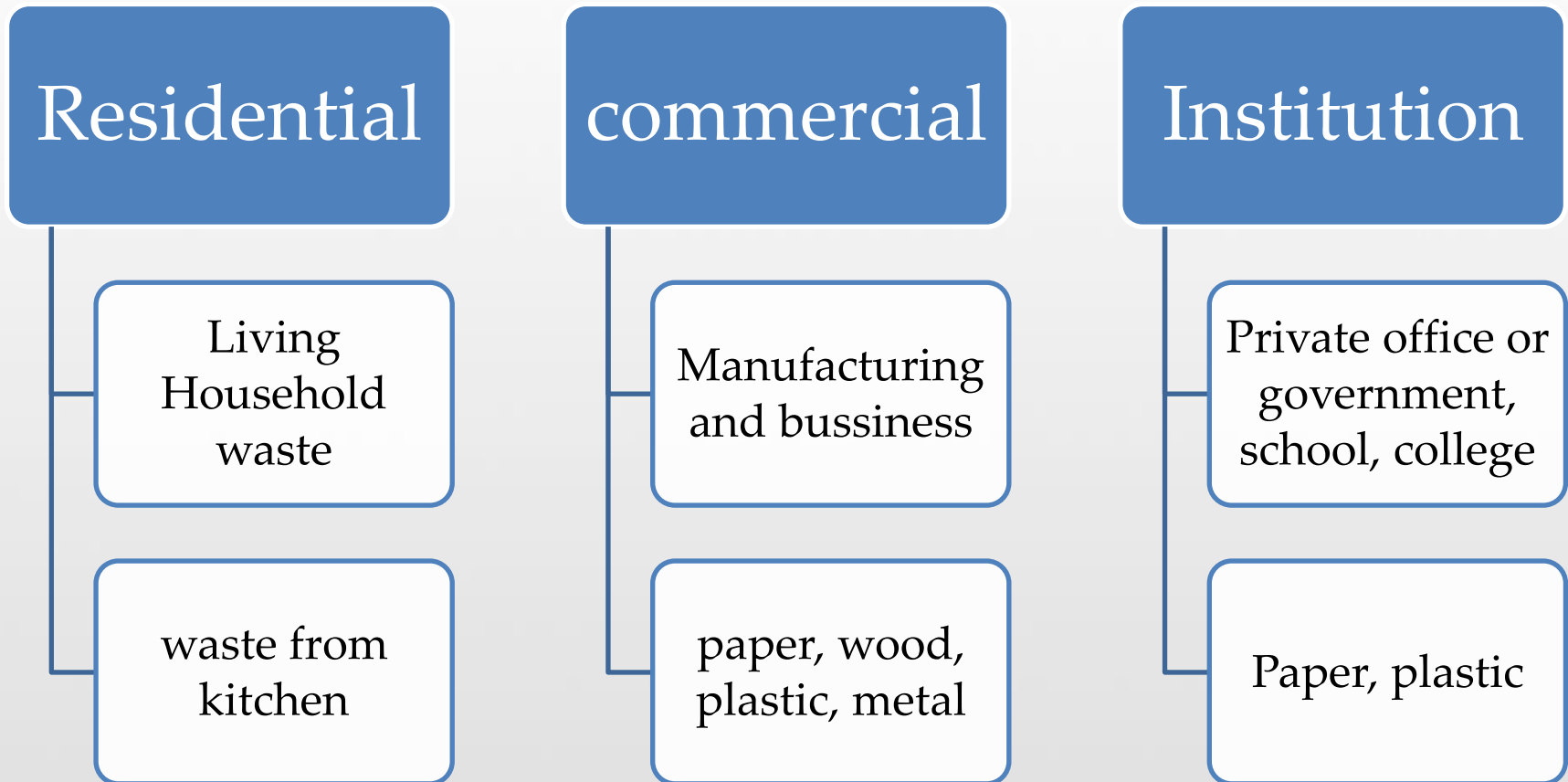
Biodegradable

- Easily decomposed by bacterial action
- Handling, preparation and consumption of food
- Gabbage

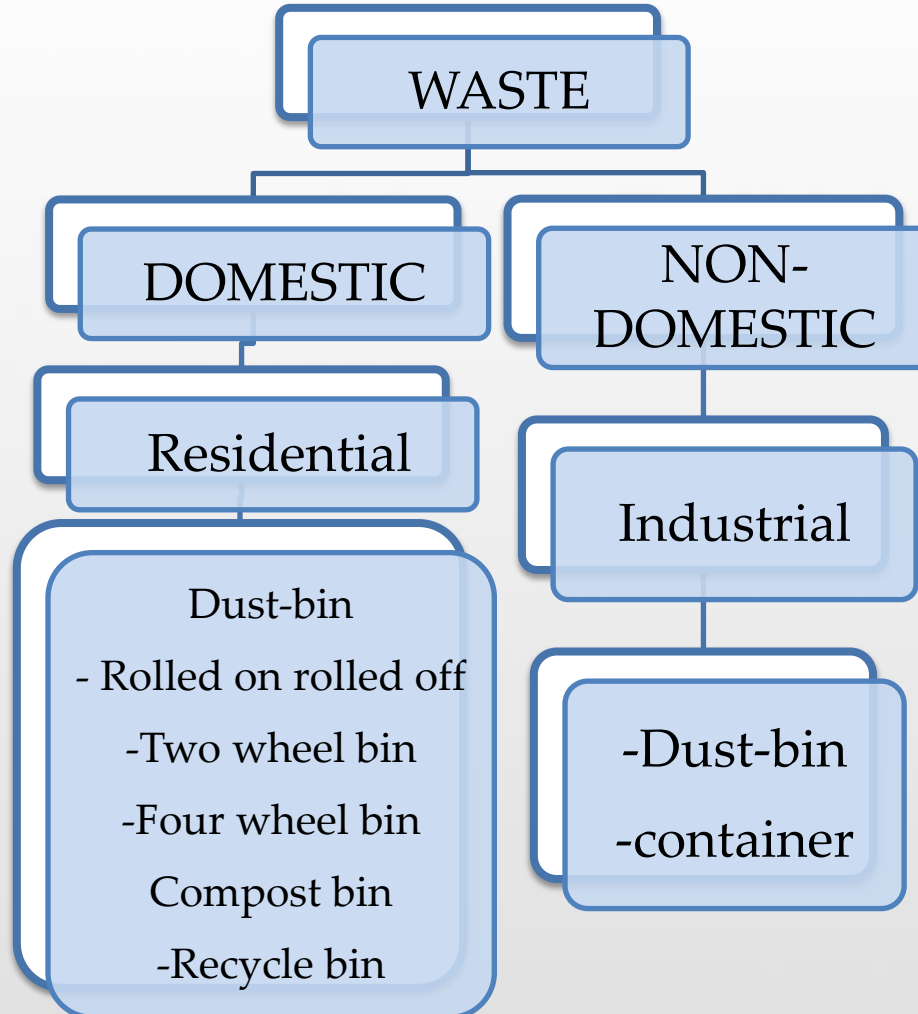
Non-biodegradable

- Cannot easily decomposed by bacterial action
- Consist of combustible and non-combustible
- Rubbish
(tin, glass, metal)

Source of Waste



SOLID WASTE SYSTEM



Waste Collection Responsibility

- ✓ Refuse collection is generally a **local municipal** responsibility.
- ✓ In Johor Bahru, Malacca and Negeri Sembilan, **Southern Waste Management** is responsible to handle the municipality.
- ✓ Southern Waste Management is a private collection company where they had given a contract to do the refuse collection and waste processing by local municipal.

Why must be managed?



Prevent growth
of insects and
pets

Prevent of bad-
odour

reduce pollution
of air, land and
water

Privatisation solid Waste Management

Central and
Eastern zone
(Alam Flora
Sdn.Bhd)

Northern zone
(Environment
Idaman
Sdn.Bhd)

Southern Zone
(SWM
Environment
Sdn.Bhd)

TYPES OF WASTE CONTAINER

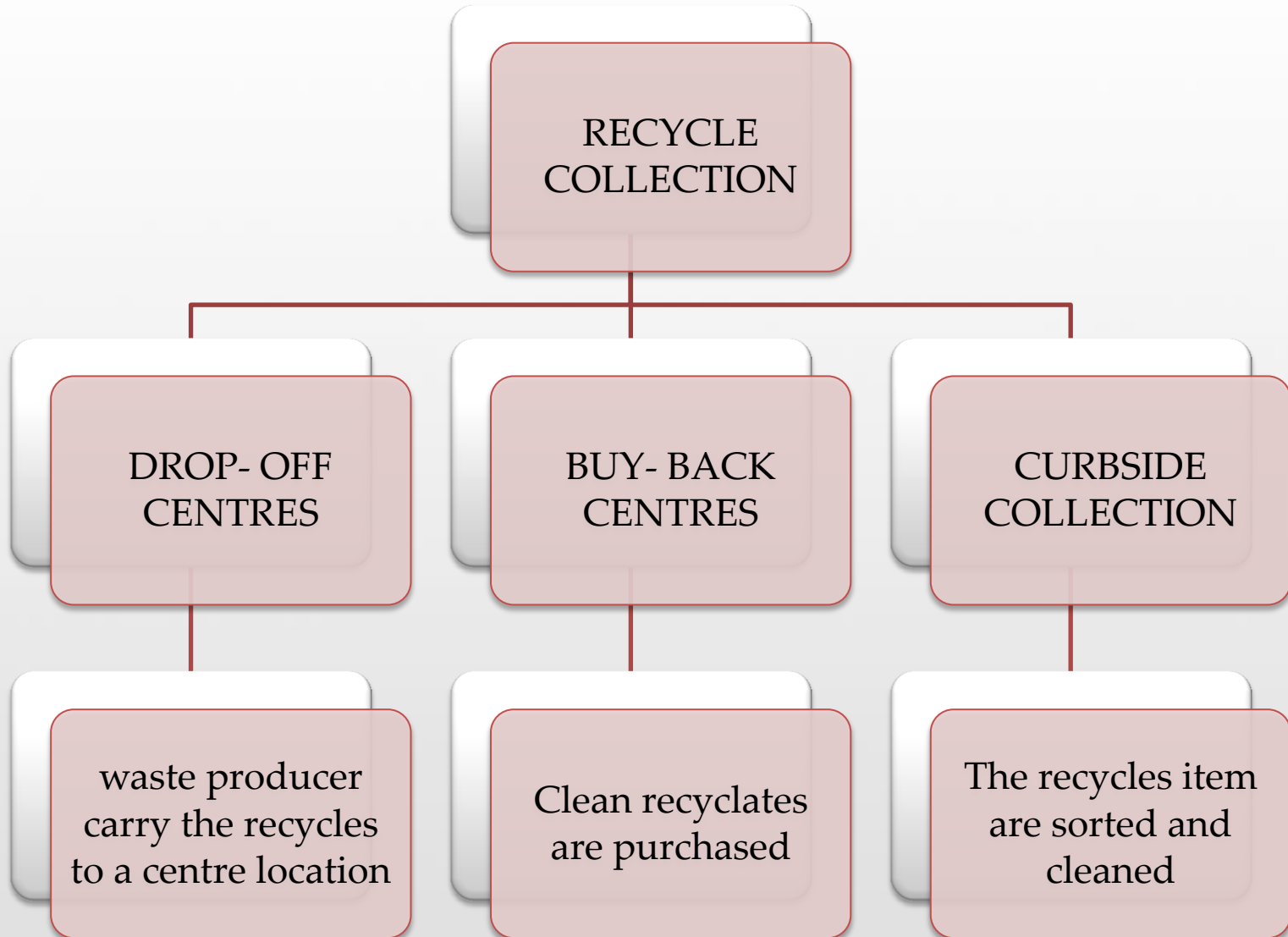


https://en.wikipedia.org/wiki/Waste_sorting#/media/File:NEA_recycling_bins,_Orchard_Road.JPG

RECYCLE METHOD

- Recycling is the reprocessing of materials into new products.
- Benefit of recycling are conservation of natural resources and landfill space.
- The materials that may be selected for recycling generally include paper, metal, glass, plastic, and rubber.

RECYCLE COLLECTION SYSTEM



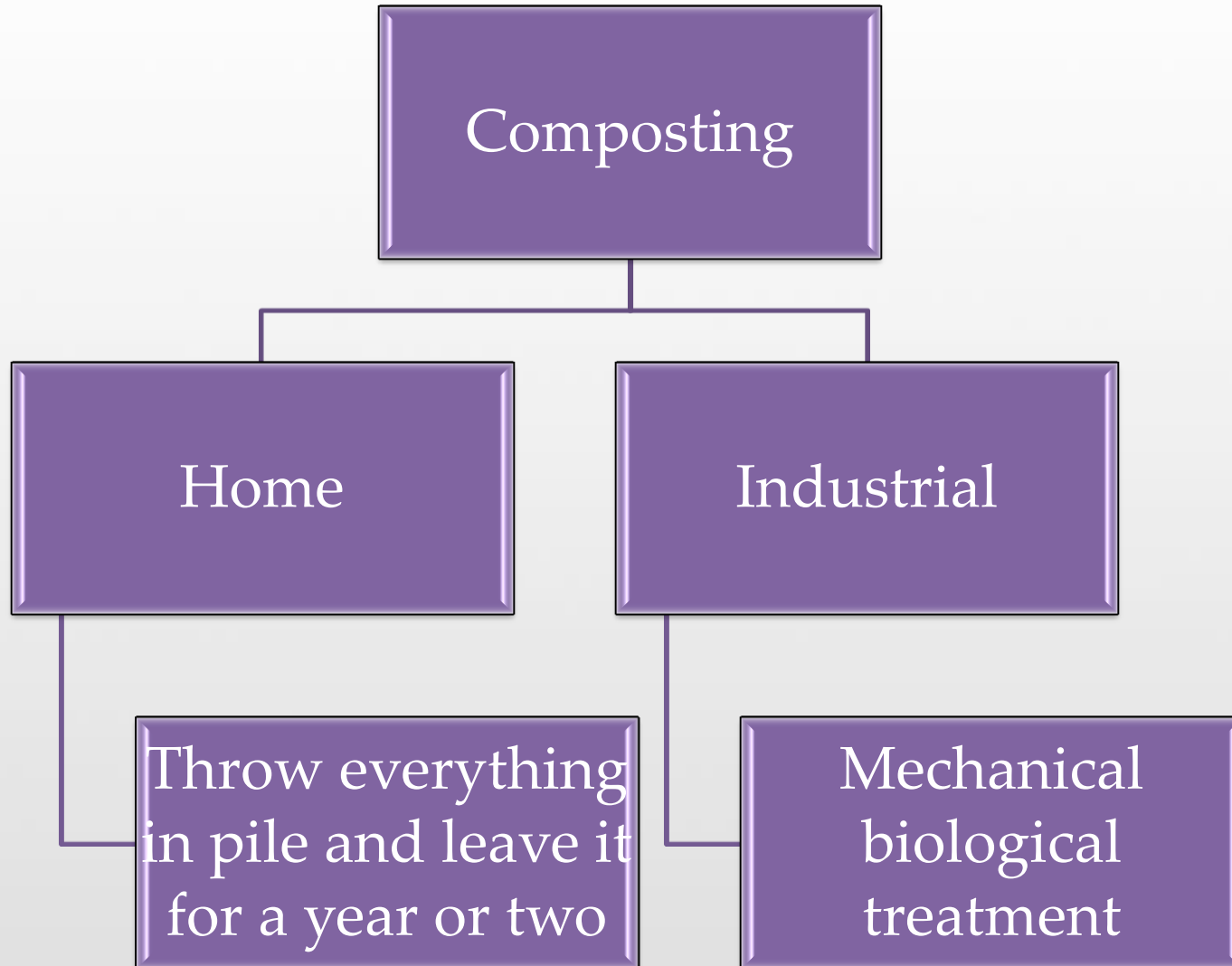
COMPOSTING METHOD

- the organic portion of municipal solid waste is allowed to decompose biologically under controlled conditions.
- The end product is called compost or humus.

Step involved in a complete composting operation :

1. sorting and separating
2. size reduction
3. Digestion
4. product upgrading
5. Marketing

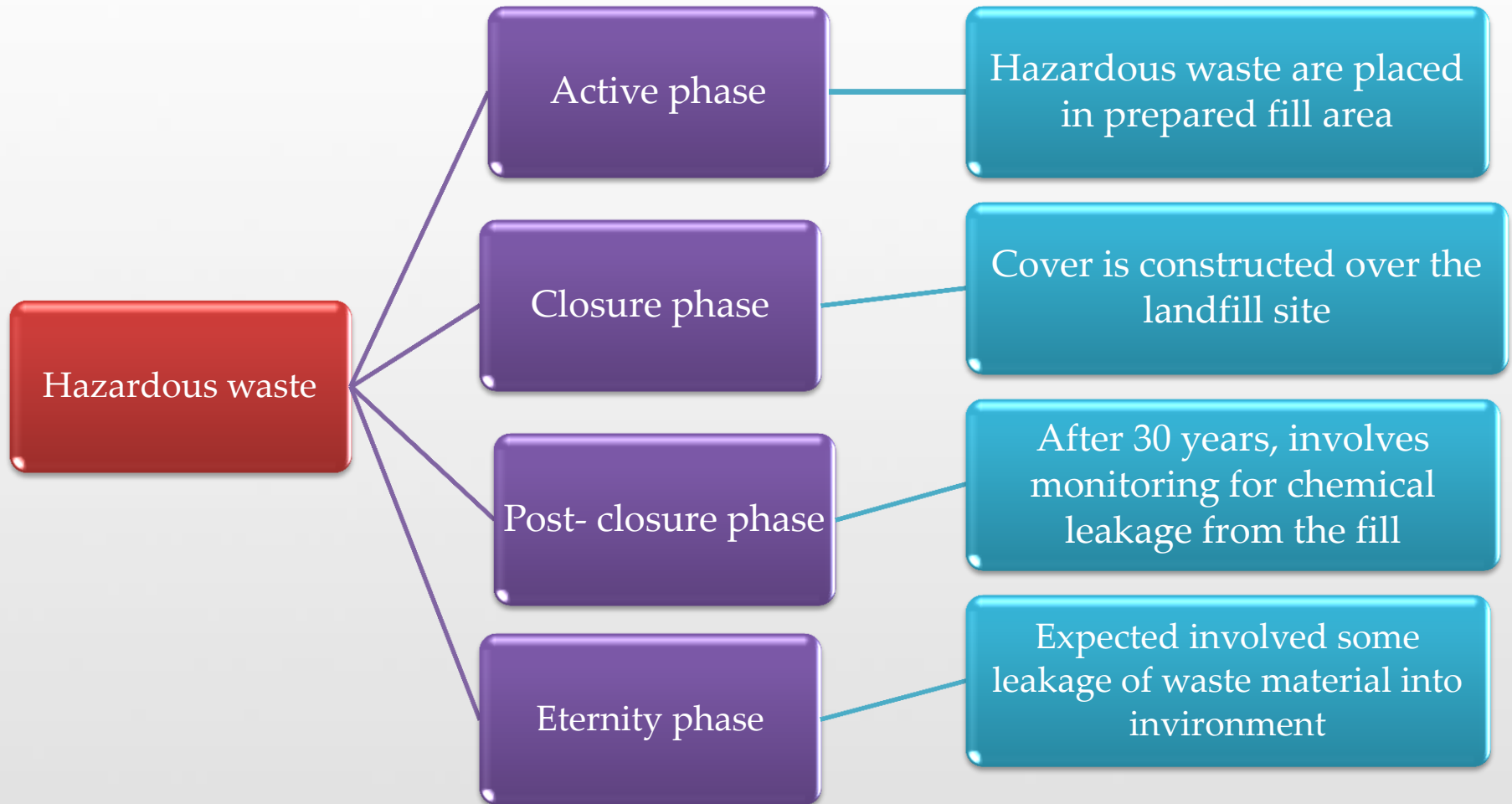
COMPOSTING CHARACTERISTIC



HAZARDOUS WASTE MANAGEMENT

- The storage, collection, and transport of hazardous waste present a special problem. This is because of the potential for serious harm to public health and environmental damage.

HAZARDOUS WASTE MANAGEMENT



REFERENCES

1. Greeno, R., (1997). Building Services, Technology and Design. Harlow . Essex : Longman.
2. Seely, I. H. (1995). Building Technology (5th ed.). Hants: Macmillan
3. Doyle, K.M. (1990). Plumbing and gas fitting, Volume 2: Services and Roofing, Plumbing. Wellington , N.Z: Gas & Drain laying Foundation
4. Hall, F. (1999), Teknologi Perpaipan, (edisi kedua). Kuala Lumpur:DBP
5. Hall, F. (1999), Kerja paip: Pembekalan Air Sejuk, Saliran dan Pembersihan. Skudai Johor: Penerbit UTM