

System development for the separate compilation of bio-waste and the production of soil improvement products

Alexandros Kavrakos - Department of Production Engineering and Management, Technical University of Crete

Christos Kypraios - Department of Informatics and Telecommunications, National and Kapodistrian University of Athens

Miltiadis Kavrakos - Waste Management and Recycling Unit, Municipality of Vari-Voula-Vouliagmeni

Waste Crisis

- Circular economy
- Make waste “disappear” → invisible problem
- Transition the waste management strategy → make waste visible

Waste Crisis

- Separate collection systems
 - Organics (food and garden waste)
 - Recyclable streams(paper, glass, cardboard, etc.)
- Organics / Biodegradable waste
 - Composting
 - High purity rate → maintain product's value

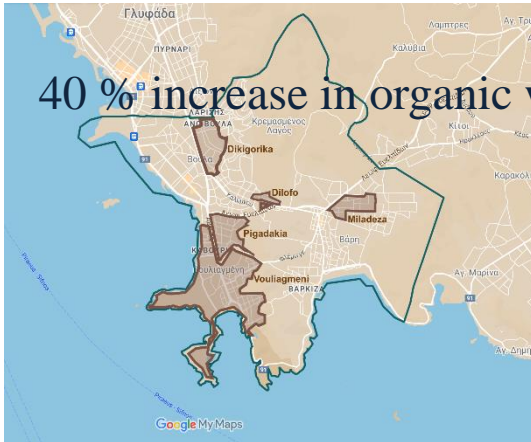
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- Gnosi → Choice plus → Open Innovation Collaboration
- Management Information System
 - Separate compilation of bio-waste and the production of soil improvement products
- **Diversion & exploitation of bio-waste → soil improvement product → food economy is strengthened**
 - Municipalities
 - Manual → steps and flow charts with a combination of waste bin weighing, volume measuring and waste producer identification services
 - Online platform

VVV municipality

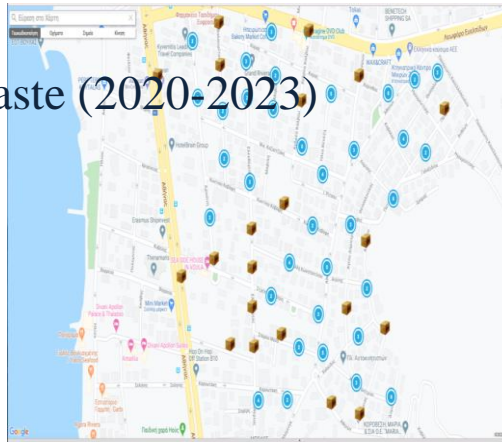
- Bio-waste / Greens
- Separate collection with brown bins and RFID tags

- 40 % increase in organic waste (2020-2023)

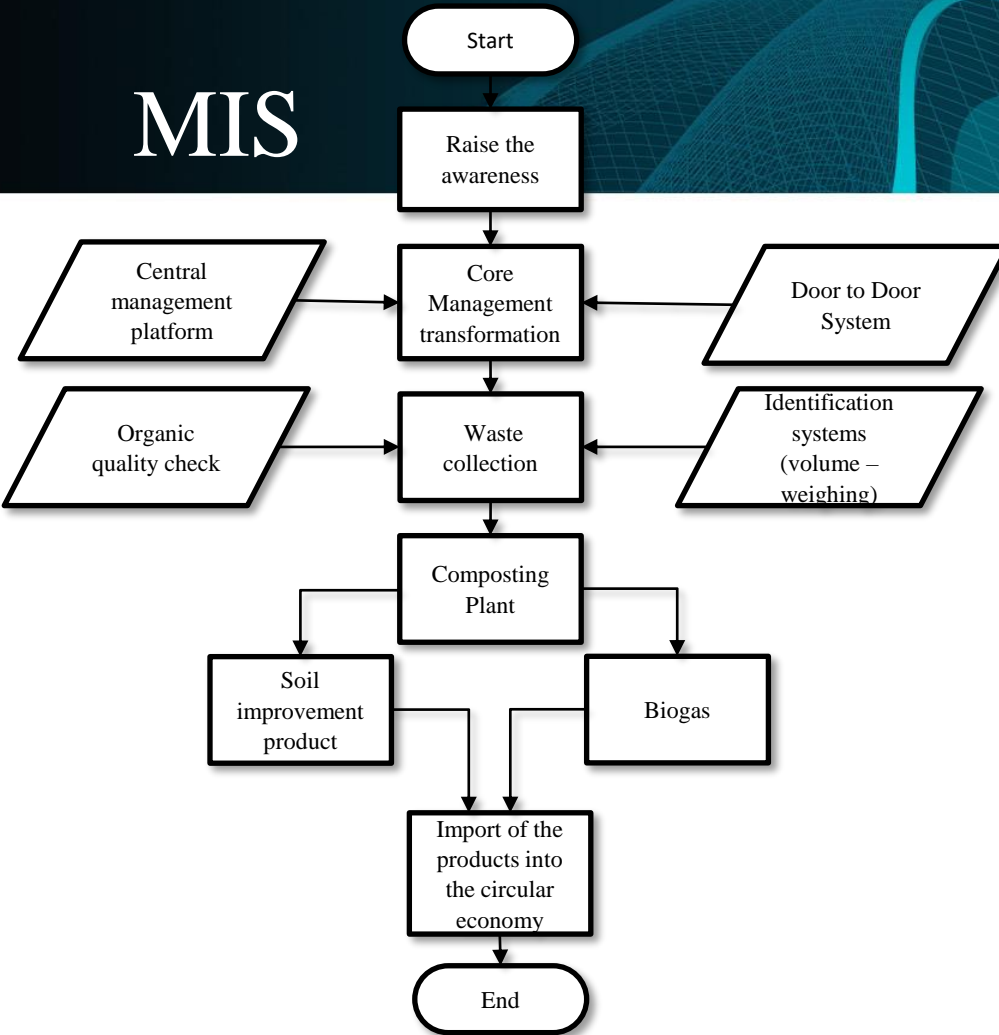


Korydallos municipality

- Bio-waste / Greens
- Existed System
- Organic waste remained at very low levels



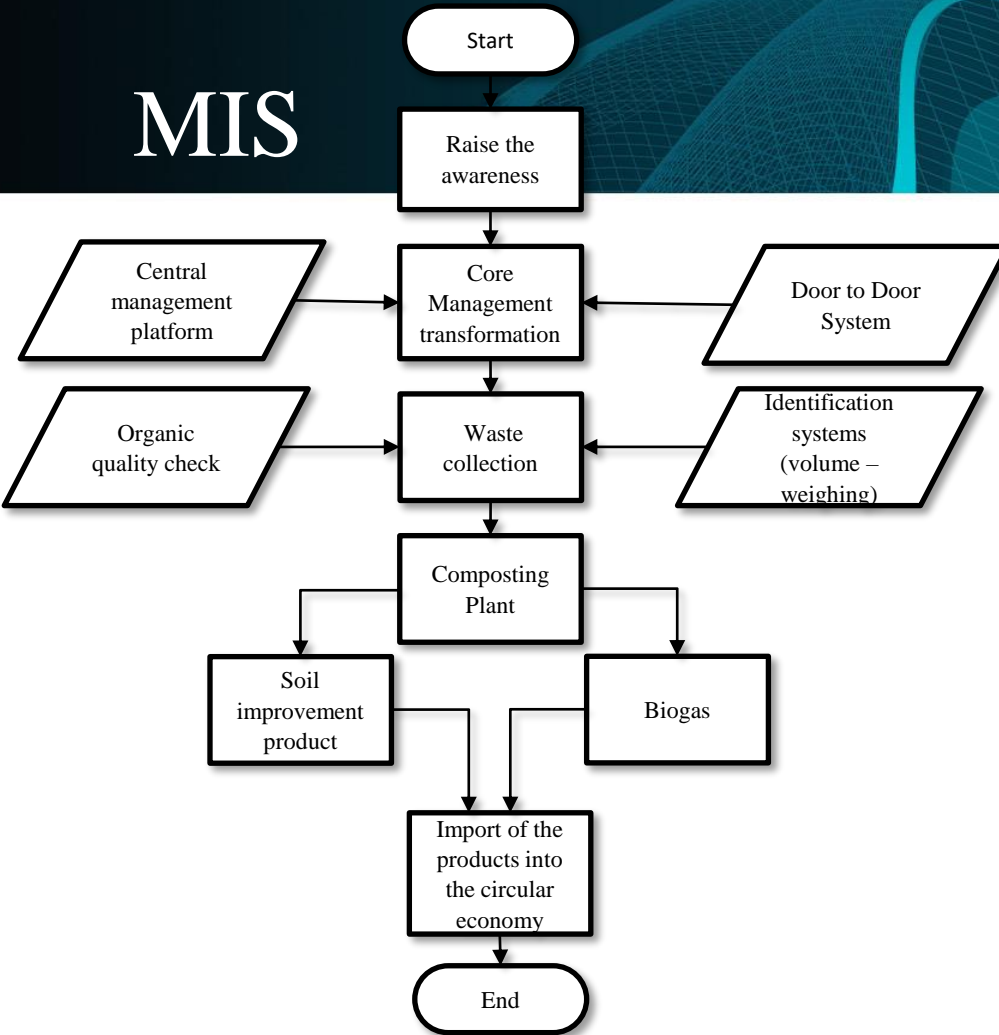
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1. Social acceptance

- Raising the awareness
- National Waste Management plan
- Local Waste Management plan
- Workshops – Online videos

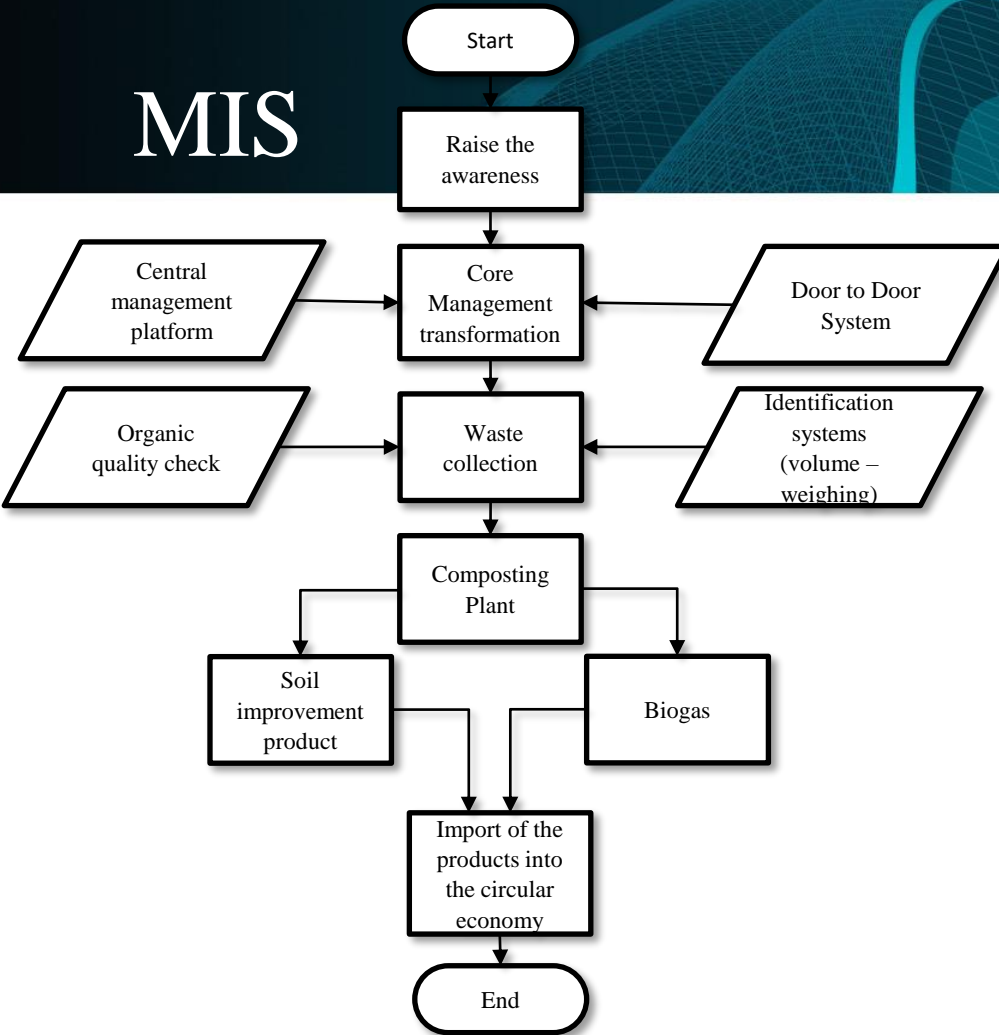
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2. Organizing municipality's collection system

- Gather data regarding the characteristics of the waste
- Evaluate existing waste management
- Equipment
- Optimize collection routes

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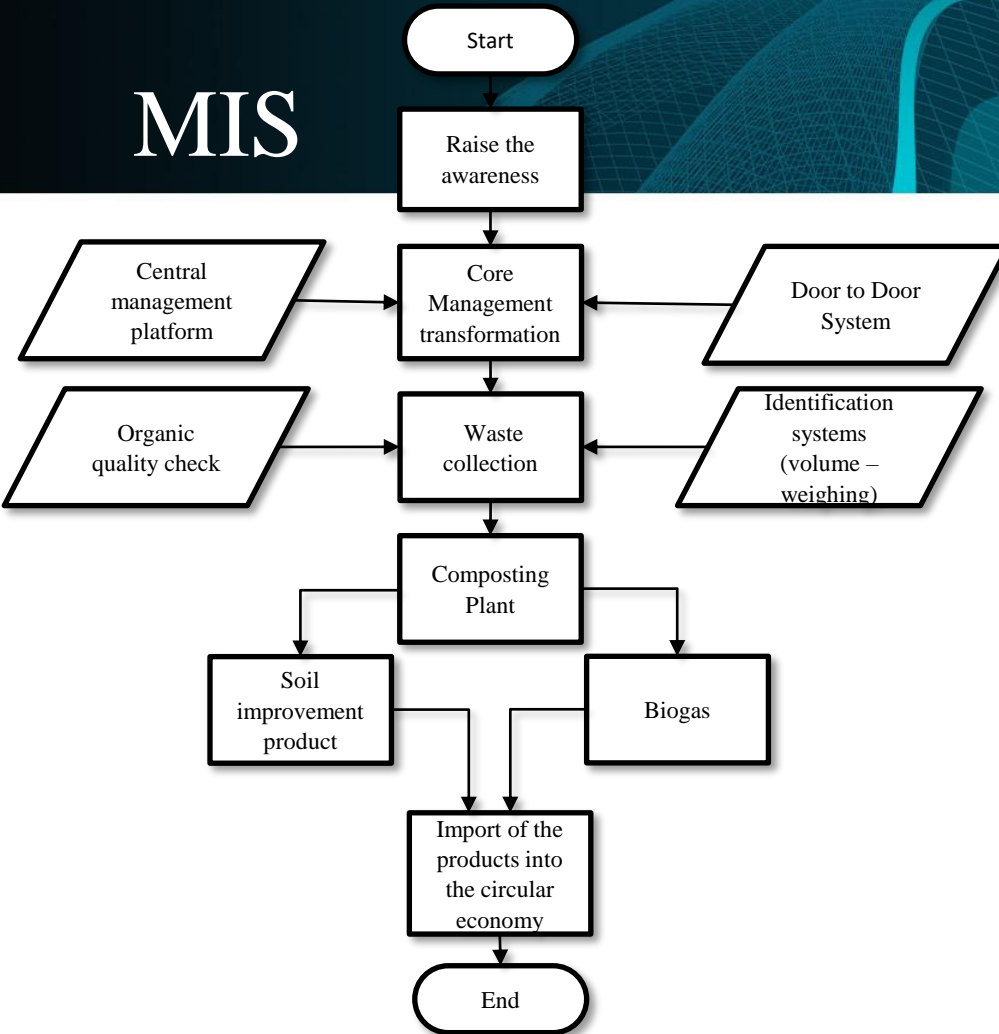
3. Door to Door system

- Brawn bins of fitting capacity
- Easily accessible points
- 1 bin to each building

4. Central Management Platform

- Weighing – Volume Data
- Vehicle telematics system

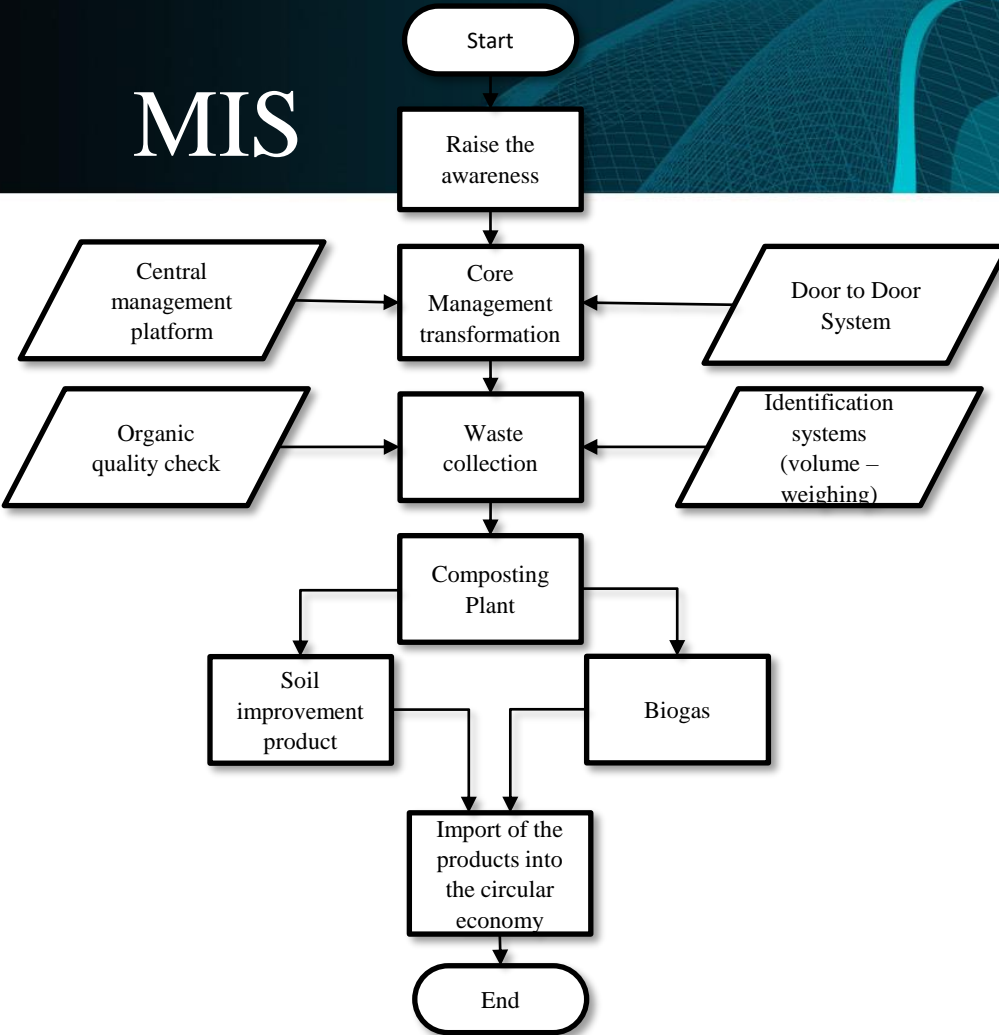
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5. 1st identification system

- Producer Identification & bin weighing
- RFID tags installed on collection vehicles
- Brawn bin ↔ PPC number
- Device → Waste amount → Producer → Database

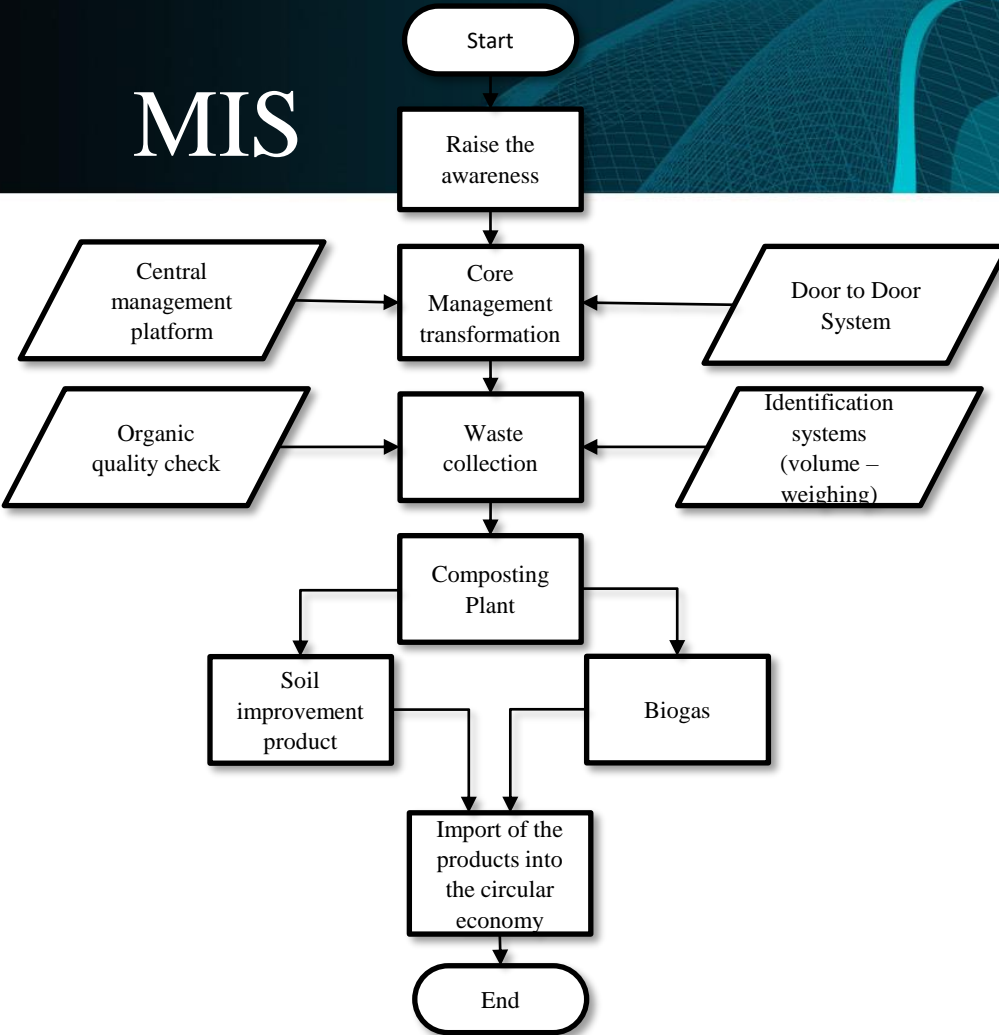
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6. 2nd identification system

- Volume measuring
- Ultrasonic sensors
- Battery
- Notification data

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7. Organic quality check system

- Visual inspection
- Discard bins with non-permitted waste streams

8. Composting / Biogas

- Agreement with licensed plants
- Cycle of circular economy

Circular economy

- Legal framework
- Implement circular economy at local level
- MIS → environmental goals & profit
- Waste is a meta-problem → new approach → redesign our relationship with resources

THANK YOU

alexandrosk.gnosi@gmail.com