

Doing the right thing **RIGHT** experiences in waste management in EU for achieving a "Zero Waste Vision"

Weine Wiqvist, Senior Advisor
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AVFALL SVERIGE

Avfall Sverige is

The Swedish association for the
waste management
and recycling

Primarily municipal members
and associated private members



Avfall Sverige's Vision

”Zero waste”



The actual worldwide problem is this

- Huge landfill and open burning
- Resources not being used
- Great climate impact



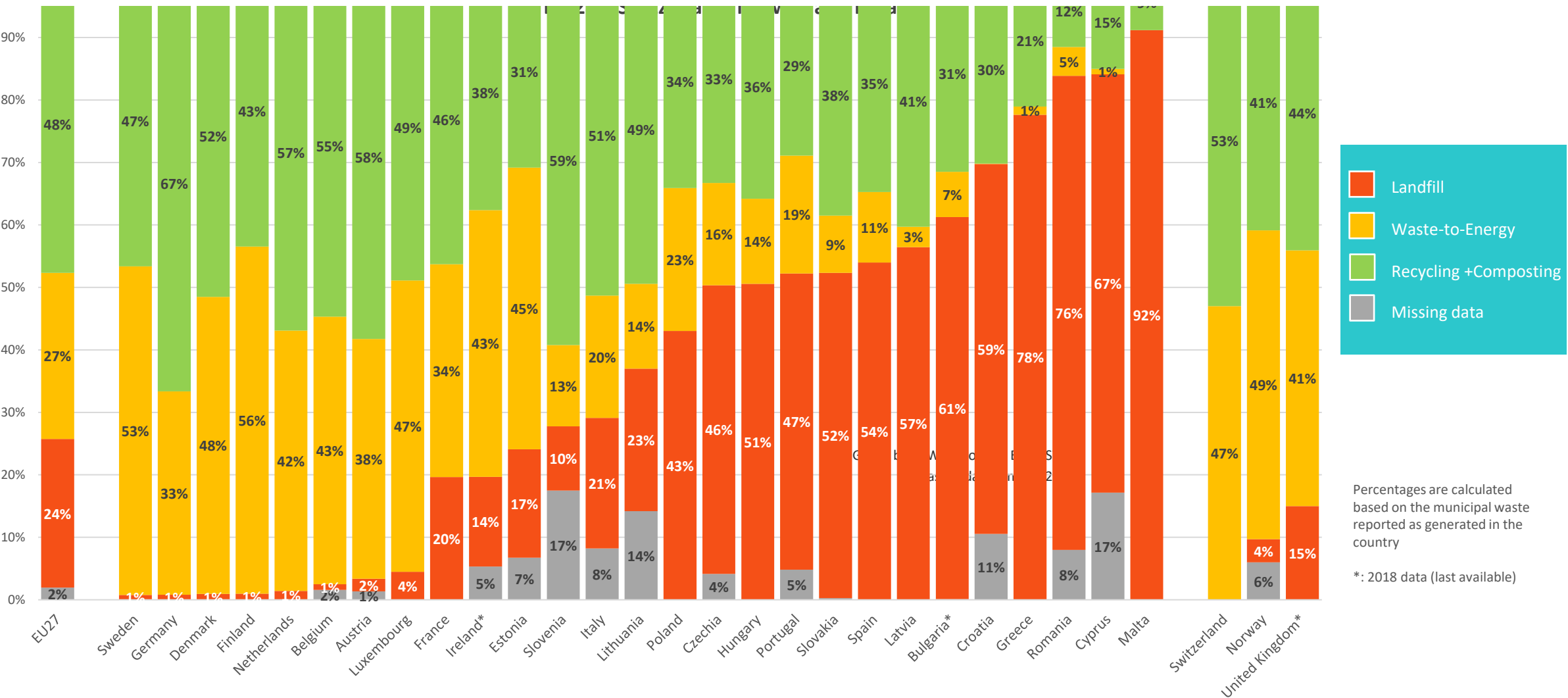
Waste Management relates to many of the SDGs



Recycling & WtE go hand-in-hand to reduce landfilling

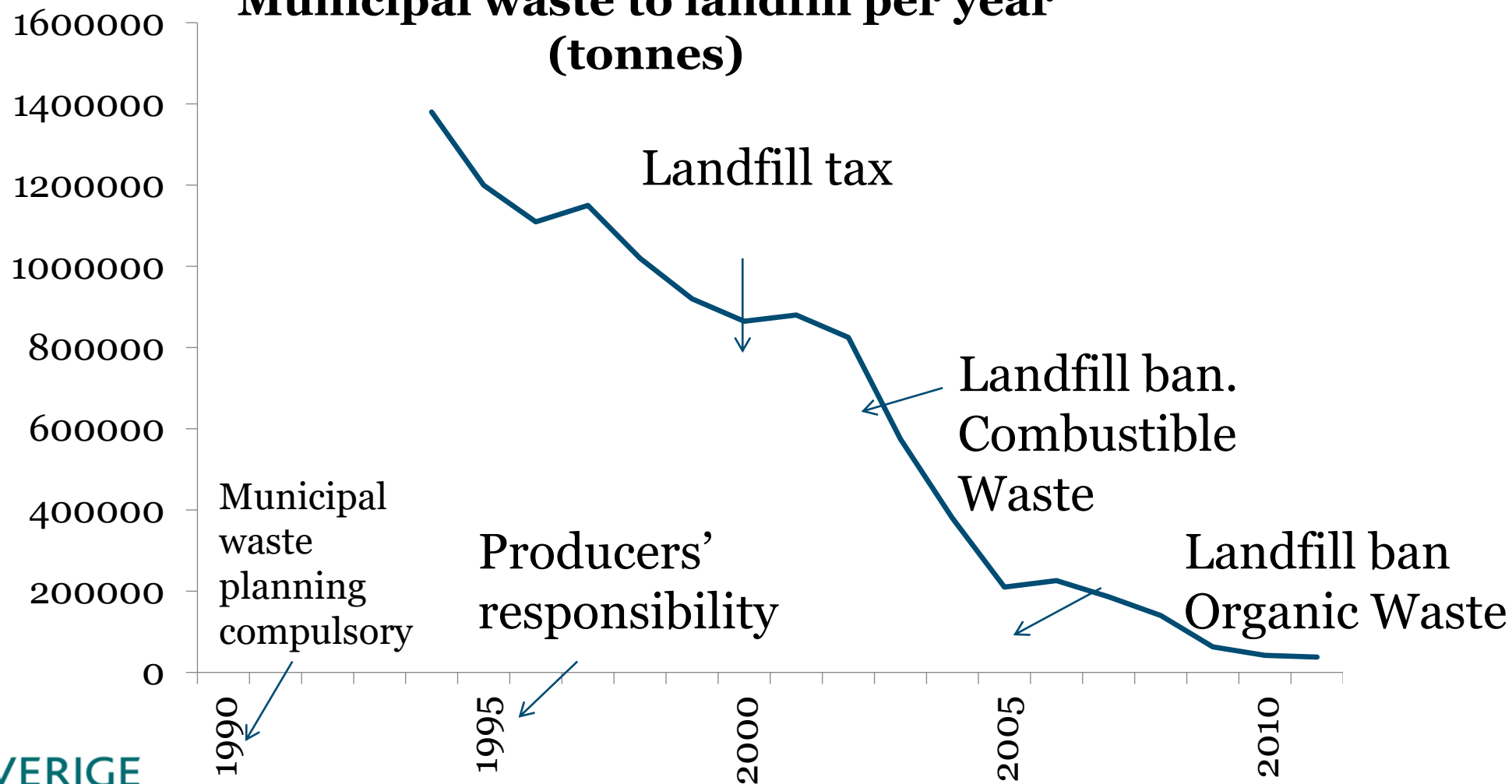
Municipal Waste treatment 2019

EU 28 + Switzerland, Norway and Iceland



The Swedish journey to zero waste landfill

**Municipal waste to landfill per year
(tonnes)**



Waste hierarchy



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EU targets Municipal Waste

- Recycling 55% 2025, 60% 2030 and 65% 2035 including organics
- Separate collection of food waste and textiles by 2024
- Measured as "real recycling"
- Landfill maximum 10% 2030 (note 2018 25% average)



Governance



Legal Responsibility

- Municipality; household waste and municipal waste (MSW) & waste paper
- Producers; packaging waste, WEEE, batteries, end-of-life vehicles, tires
- Waste Generator; All other waste



The role of municipalities

A service of general interest

Next to the citizens

Political responsibility

Spatial planning

Partner to PPPs

Basis for inter-municipal cooperation

Integration to other services such as water, sewage and energy



Municipal Waste Management System

Planning/admin

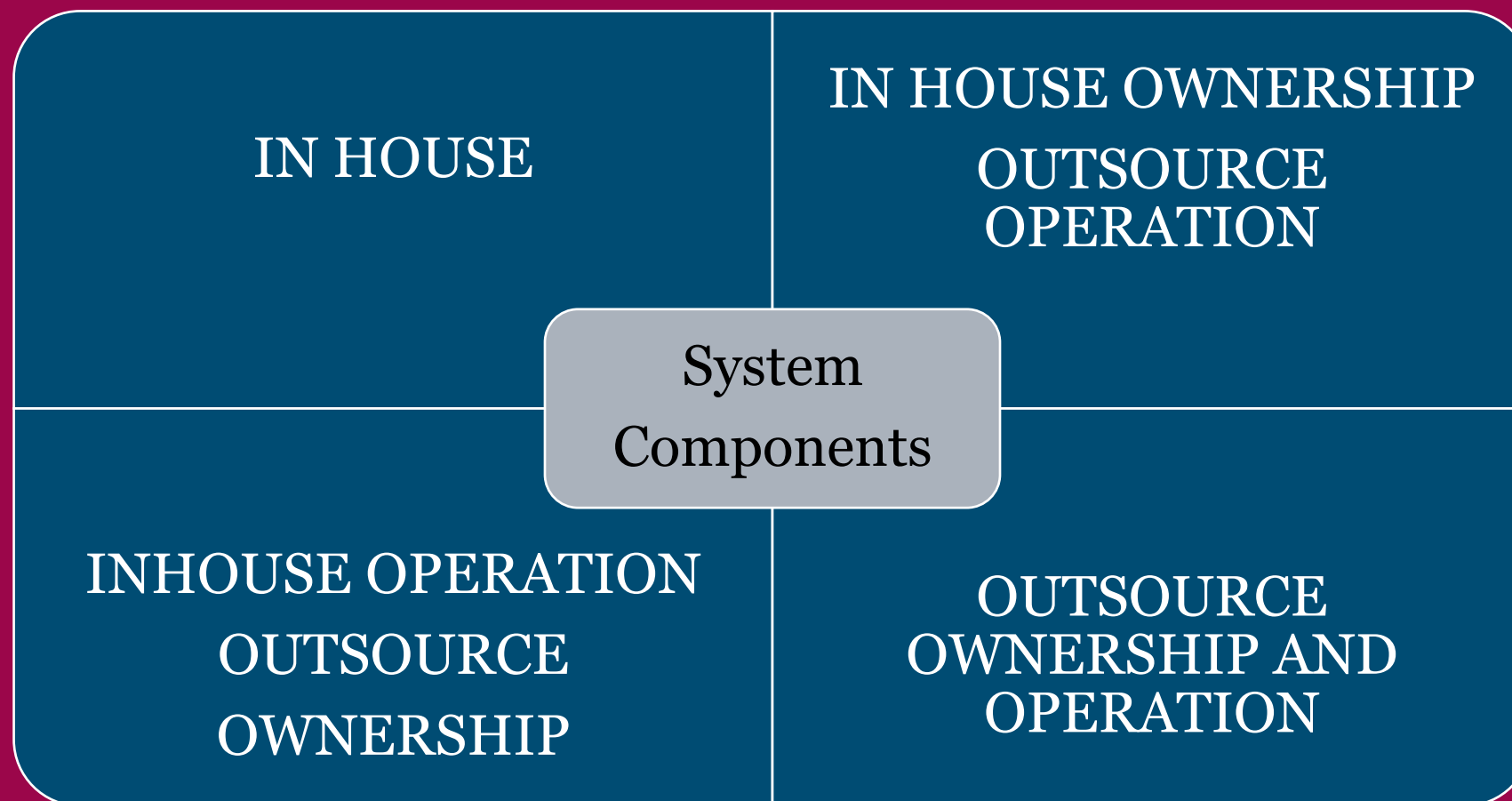
Collection

Sorting

Recovery/disposal



Municipal Waste Management Operation



Private Sector Contribution

Administrative System

Consultancy

Technology Supplier

Maintenance

Construction

Operation

Financial

Markets for material/energy



Conclusion

THE
MUNICIPALITY IS
ALWAYS IN
CHARGE

Conclusion

SEPARATE
COLLECTION
AT SOURCE
IS THE KEY

ONE SIZE
DOES NOT
FIT ALL

Deposit fee system- EPR

- Al cans
- PET bottles
- Standard glass bottles
- Soft drinks & beer
- To be extended
- Recycling rates about 90%
- Deposit 10/20 € cent



Energy recovery thru anaerobic digestion

- Biogas CNG/LNG
- Use for electricity generation, vehicle fuel or industry use
- Soil improvement
- Biofertilizer to replace phosprus



Energy recovery thru biochar process

- Limited well sorted biowaste
- Production of heat
- Production of biochar as fertilizer
- City of Stockholm a front runner



Energy recovery thru combustion

- Heat for district heating & cooling
- Steam for industry
- Electricity for the net
- Aggregates for construction and metal recycling



The Evolution

LINEAR ECONOMY

RECYCLING ECONOMY

CIRCULAR ECONOMY





AVFALL SVERIGE

THANK YOU

Weine Wiqvist

Senior Advisor

weine.wiqvist@avfallsverige.se

