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2020 Financial Challenge of Municipal Source Separation Schemes

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Scope

- To address key financial aspects associated with SSS National Targets
- To summarize critical issues of SSS with financial impact & propose measures
- To present the National Actions for achieving SSS Targets and their financial impact
- To highlight the importance of Value Engineering and Citizens Participation

New National SWM Plan

key financial figures

■ 2020 Source separation Targets

biowaste = 40%

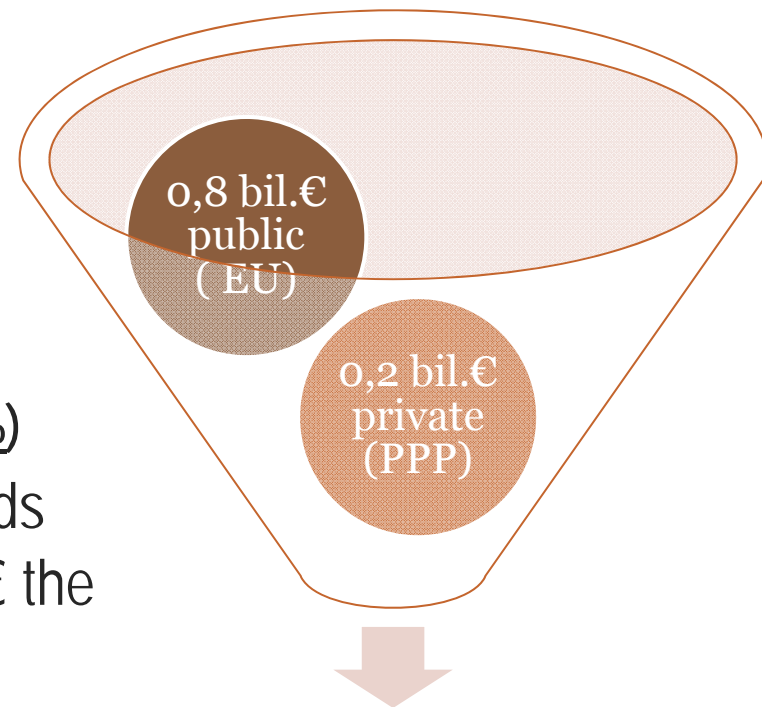
(kitchen, garden)

recyclable materials = 65%

(plastic, metal, aluminum, glass)

total SS Target = 50% (2016 results ~17%)

- More than **2 billion €** MSW funding needs (public, private) from which **0,5 billion €** the funding needs for SSS.
- **1 billion €** for MSW funding (0,8 public-ESPA and 0,2 private PPP)
- **1 billion €** for MSW annual operation cost today (200 euro/tn or 0,4% of GDP/Capita)



2 bil. € Funding Needs

Actions to reach SS targets

1. Brown Bins (households & enterprises) and Composting Plants for kitchen biowaste

Parameters with Financial Impact

- appropriate dimensioning (size, quantity) of brown bins and composting plant
- geolocation (density, appropriate spots)
- collection routing program (frequency, capacity)
- transportation through TS or direct
- educational –awareness and rewarding schemes for high quality/quantity
- cost compared to business as usual scenario with landfill tax



Actions to reach SS targets

2. Separate Collection & Process of green waste

Parameters with Financial Impact

- requires isolated areas (low land cost) in close distance to production of green waste
- infrastructure and treatment equipment common with decentralized kitchen biowaste composting plant or co-treatment in MBTs for mixed waste.
- In case of stand alone process , an inter-municipal collaboration is needed for economies of scale
- Market research for buyer is needed (in case of final product i.e. wood chips, pellet) in order to generate revenue



Actions to reach SS targets

3. Four separate bins for separate collection (plastic, metal, aluminum, glass) & new type of MRF/TS

Parameters with Financial Impact

- zero cost -free public space near the roads or other public areas for bins & isolated for MRF/TS
- geolocation (density, appropriate spots)
- collection routing program (frequency, capacity)
- transportation through TS or direct to existing or new type of MRF
- market research for buyer is needed in order to generate more revenue than with mixed recyclables
- educational –awareness and rewarding schemes for high quality/quantity



Actions to reach SS targets

4. Municipal Green Points of 3 size categories (Basic, Small, Neighborhood)

Parameters with Financial Impact

- requires more expensive land (easily accessible with appropriate land use areas)
- infrastructure and storage equipment with attractiveness and user friendly operation for the citizens
- Inter-municipal collaboration for economies of scale
- market research for buyers is needed in order to generate revenue
- educational –awareness and rewarding schemes for high quality/quantity
- cost efficiency compared to business as usual scenario with landfill tax



2020 Financial Challenge

Critical Issues for SSS

SSS Capex Funding

Investments ~ 0,5 / Funding Gap ~ 0,3 billion €
Small PPPs , EIB Direct Loans

OpEx Support

Islands and Touristic Areas
Sea Transportation Centralized Organization,
Subsidization of Transport Cost and Operation
of Composting Plants

Final Design – Value Engineering

For the Application of SSS
Geolocation, Routing, Transfer, Process, End
Product to market

SSS Revenues

Citizens awareness, PAYT & rewarding mechanisms
in order to achieve high quality/quantity
National Guidelines, Regional Campaigns, Local
Application
Smart Apps, IoBins, Local Economy Rewards

Opex Optimization in Small Scale

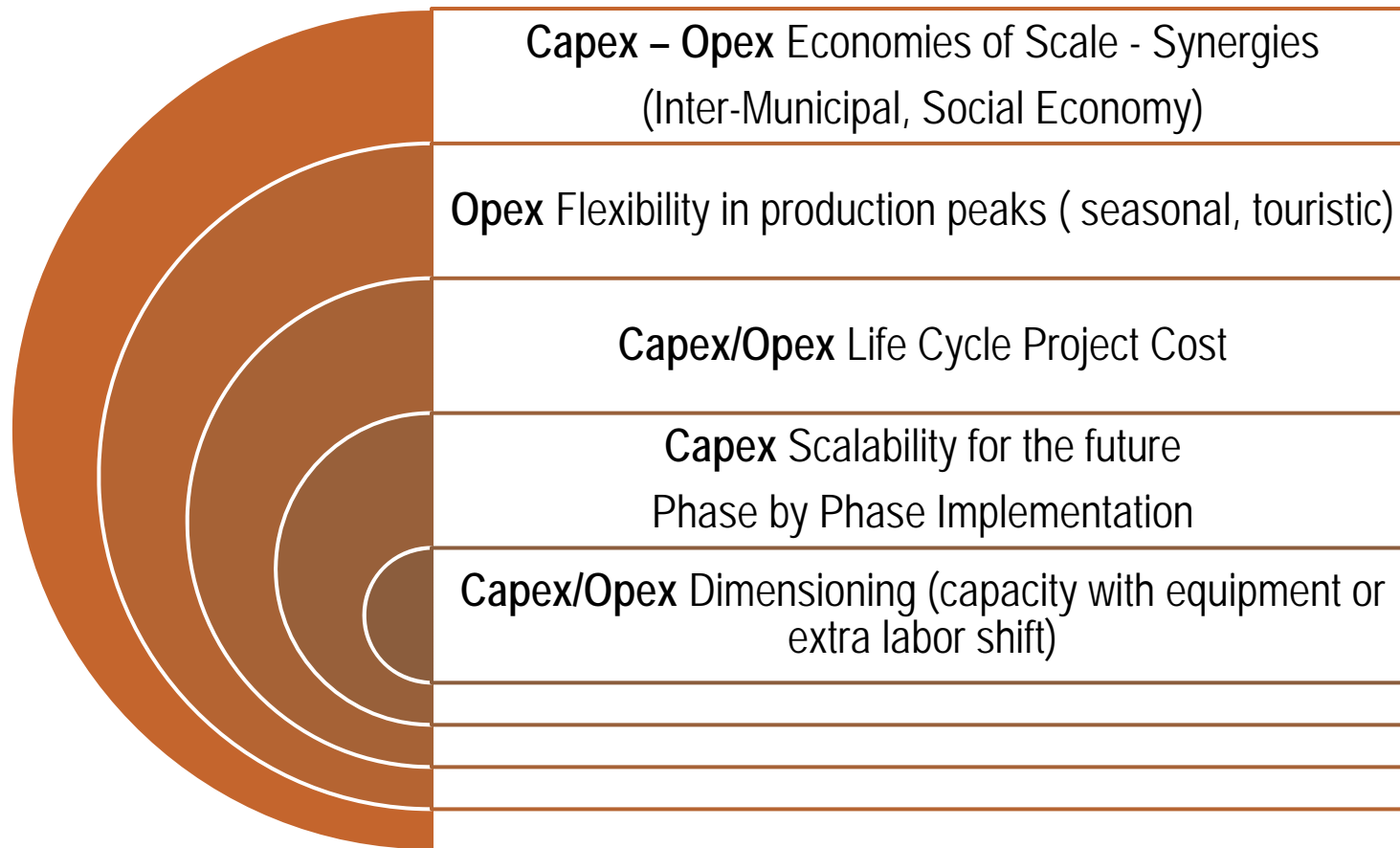
(i.e. Small-Neighborhood G.P.. Reuse-Repair
Centers)
Social Economy Collaboration Framework

Net Opex of SSS Compared to Business As usual scenario

max 0,3% of GPD /Capita (Municipal Tax 100 +
Product Recycling Tax 70)

2020 Financial Challenge

Final Design-Value Engineering parameters for SSS



Synopsis

- Greece faces a triple challenge for SSS 2020
 - Target 17%→50%
 - Funding Needs: 0,5 billion € (0,3 billion € Gap)
 - Net Opex per Capita max 0,3% of GPD /Capita (Municipal Tax 100 + Product Recycling Tax 70)
- Funding Gap to be covered with Small PPP & financial institutions (i.e.EBRD) participation
- Social Economy to be involved in Small Scale Schemes
- Islands – Touristic Areas need extra financial support
- Value Engineering prerequisite for the Final Design of SSS
- Citizens Awareness and PAYT, Rewarding Mechanisms

THANK YOU FOR YOUR ATTENTION

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