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Waste management action plan for the municipality of Prishtina : [presentation given August 23, 2010]

Ibrahim Krasniqi

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***Rochester Institute of Technology
American University of Kosovo***

***Waste Management Action Plan for the
Municipality of Prishtina***

***Submitted as a Capstone Project Report in partial fulfillment of a Master of
Science Degree in Professional Studies at the RIT Center for
Multidisciplinary studies***

**Submitted by: Ibrahim Krasniqi
ibrakrasniqi@gmail.com
+377(0)44666217
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Introduction

Rapid urbanization = solid waste problem today.

Perception of the people has always been that
- Local authorities are bound to keep their area clean.

For some time now, many municipalities, experimenting

Prishtina has enormous difficulties with garbage collection

Two main reasons:

first local authorities do not have sufficient capacity to develop a waste management strategy and secondly

there is not awareness of inhabitants over the importance of their role in the keeping city clean.

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Composition of Municipal Solid Waste

Description

Vegetable, leaves

Grass

Paper

Plastic

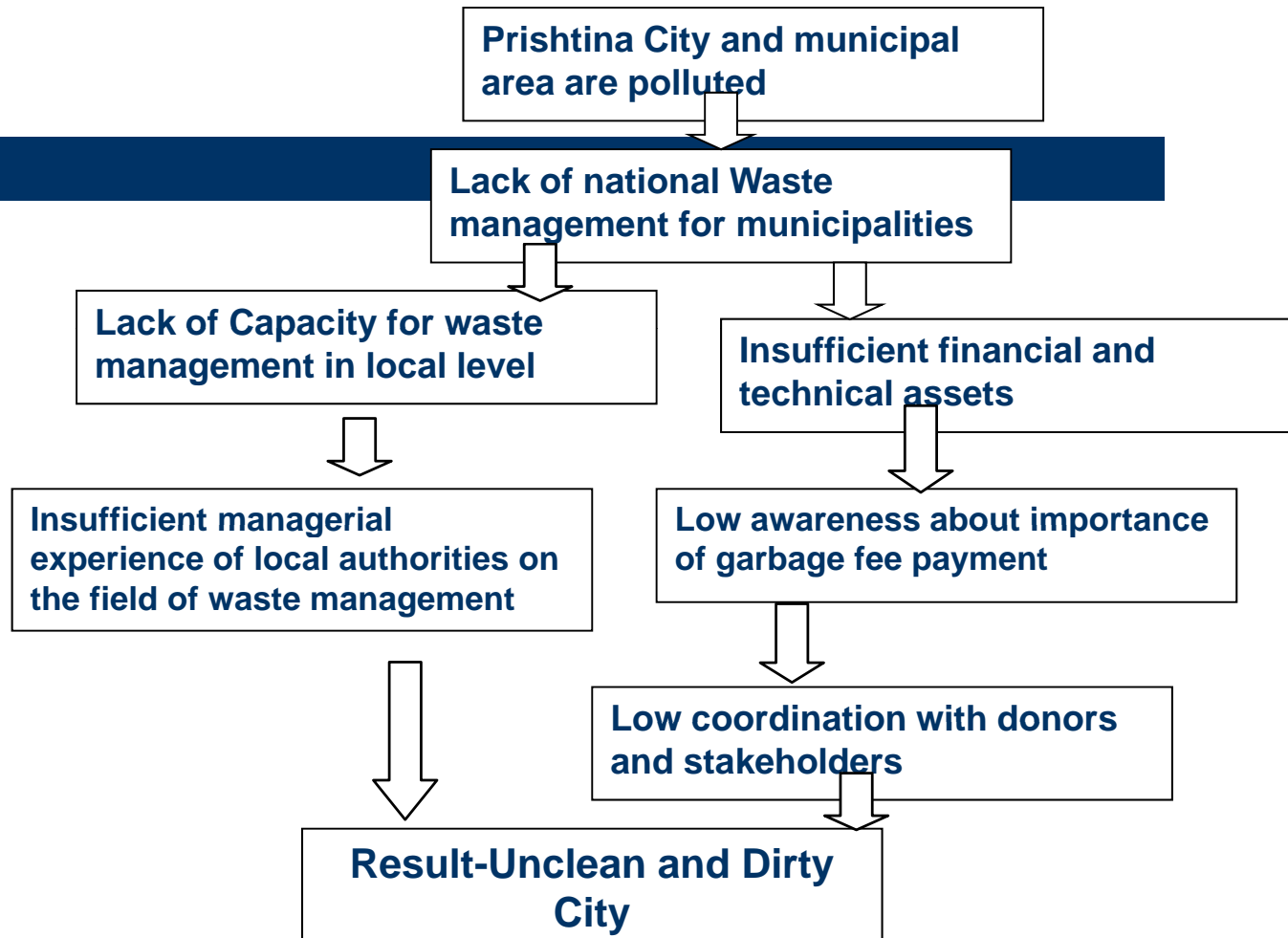
Glass/ceramics

Metal

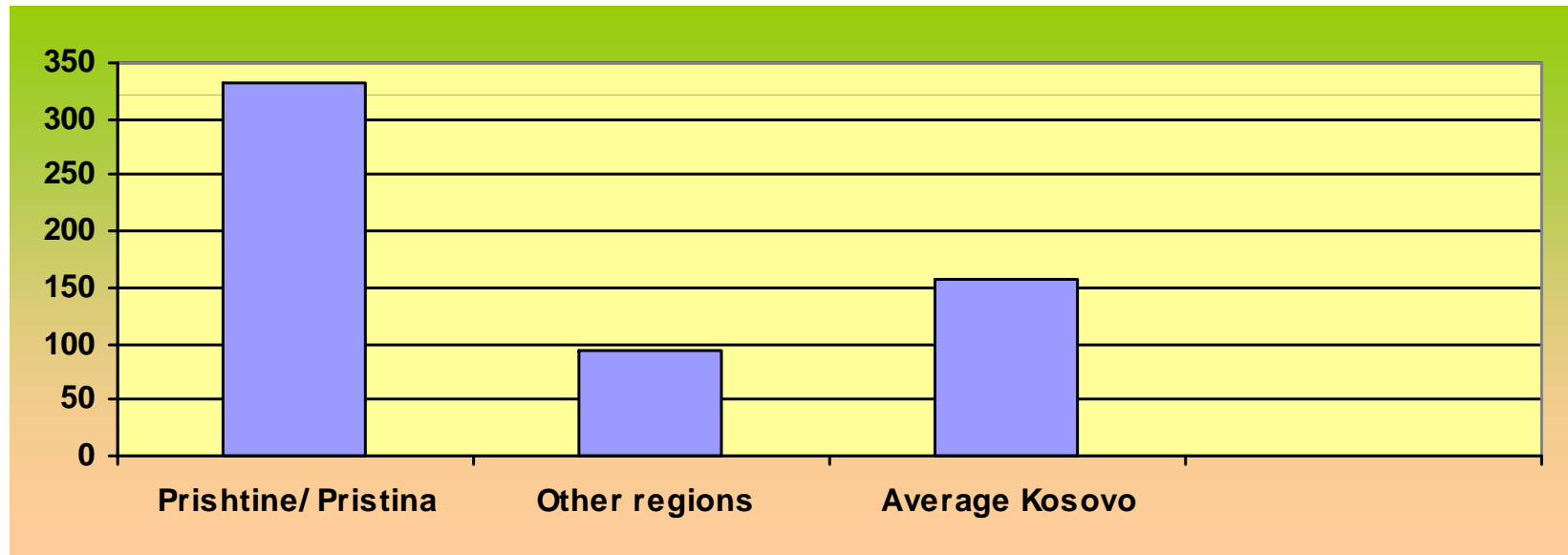
Stones/ashes

Miscellaneous

Problem analysis

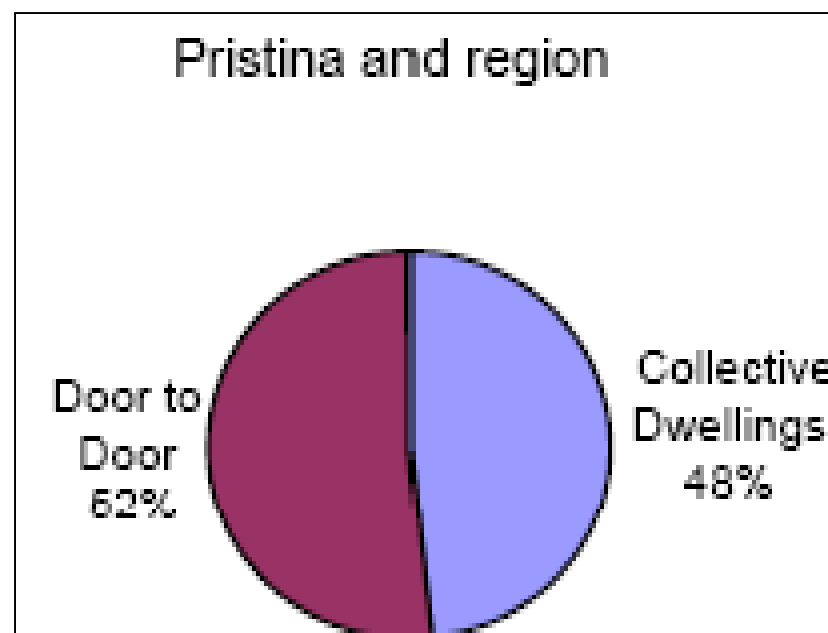
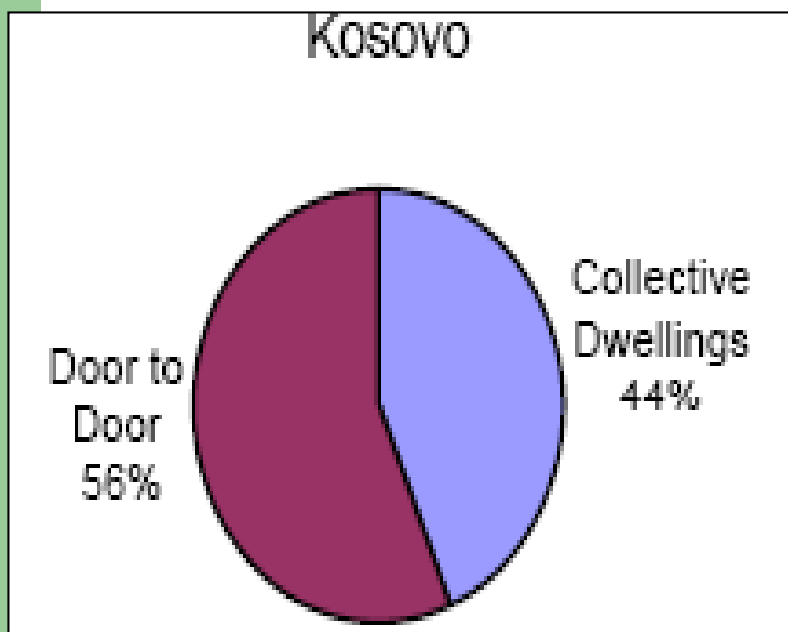


Current situation

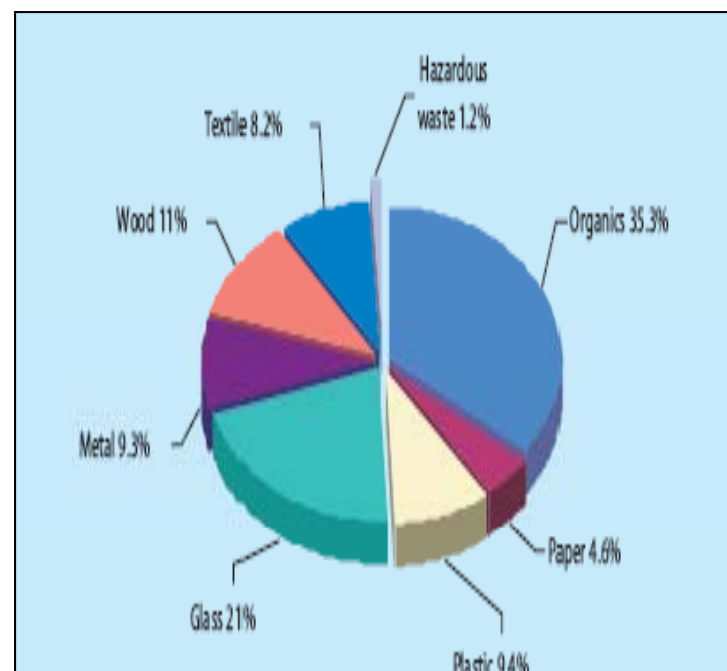
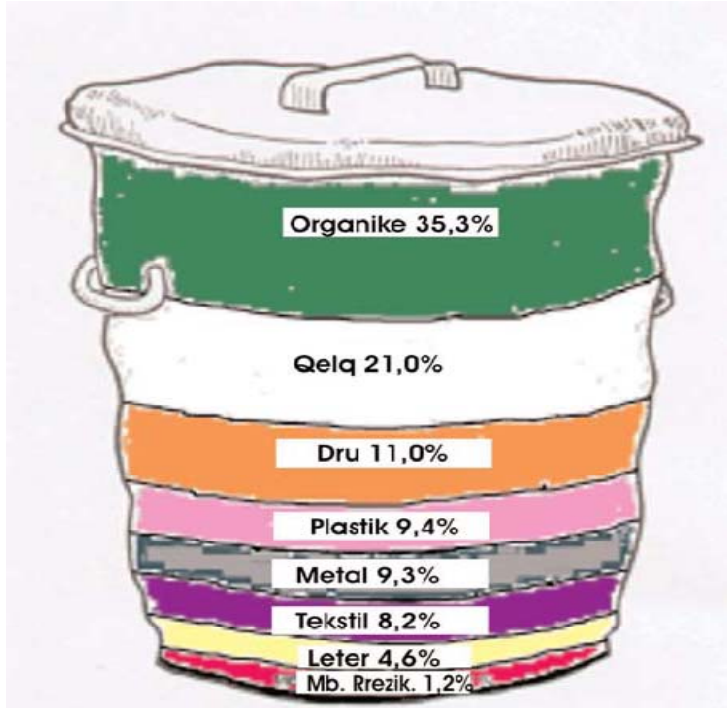


Garbage production in Prishtina and other regions (yearly /capita)

Amounts of municipal waste collected in Prishtina and Kosovo 2007/08 (kg/capita).



Amounts of municipal waste collected in Kosovo person/ year.



Current Situation- Quantities of SW in Prishtina

- **Average per capita generation rate :**
0,9-1.1 kg/day =aprox.396 kg/year
- **Quantities of MSW generated in other regions :**
0.33kg/day = aprox.167 kg/year

Current Situation Collection & Transport



- **Mixed waste collection (door to door and collecting points)**
- **House to house collection just over 50%**
- **Old equipment and untrained staff**
- **Municipalities collect waste in city and around**
- **Direct transport of waste after collection to transfer stations and/or landfills**



Mixed municipal waste (no separation at points of generation)

Key Issues Related to Waste Management

- *Inadequate National Policy and Support*
- *Lack of rules for management of municipal solid waste*
- *Lack of Incentives for Environmental Management System*
- *Absence of a Strategy*
- *Conventional approach*
- *Lack of institutional capacity*
- *Lack of Public Cooperation*

Main Future Objective

- **Better environment through improved waste management .**



Specific Future Objectives



- Capacity building
- Waste separation and treatment of organic and no organic portions.
- Waste reduction, reuse and recycle strategy.
- Improve landfill sites to reduce their influence on the environment.

Recommendations

- Financial resources ●**
- Legal institutional framework ●**
- Human Resources ●**
- Technical Aspects ●**
- Management Aspects ●**

Financial resources

- **Ensure sustainable financial resources**
- **Provide Cost Effective Waste Management Service**
- **Undertake a Detail Financial Investigation**
- **Improve Payment of Service Tariffs**
- **Standardize Tariff Structure**
- **Initiative for establishment of fund for environment protection on local, regional and national level**
- **Municipality , WWRO, Pastrimi Co, Government, Donors**

Human Resources

- **Re-organization of PoE –Pastrimi Co**
- **Training of staff for Pastrimi Co, Municipality and Ministry of Environment.**
- **Improve performance and rise responsibility**
- **Effective Structure of Human Resources**
- **Provide Effective Waste Management Service**

Legal institutional framework

Developing solid waste management legislations ●

Setting fair tariffs ●

Developing bylaws and regulations for SWM ●

Creating and Enforcing Waste Inspectorate ●

Develop Penalty System for Illegal Activities ●

Technical Aspects

- Purchase of new equipment for waste collection ●**
- Purchase of Vacuum Cleaner Vehicles used for cleaning of the roads and pavement ●**
- Purchase of new of new containers ●**

Management Aspects

- **New structuring of Company**
- **Awareness among general public with regard to waste handling, reduction and treatment.**
- **Treatment of organic waste (food waste & animal waste)**
- **Minimize/Prevent Illegal Activities**
- **Improve Removal of Illegally Dumped Waste**

Economical and environmental benefits

Recycled newspaper uses 40% less energy. ●

Recycled glass uses 40% less energy. ●

Recycled steel uses 60% less energy. ●

Recycled plastic uses 70% less energy. ●

Recycled aluminum uses 95% less energy. ●

Every ton of newspaper or mixed paper recycled saves the equivalent of 12 trees. ●

Every ton of office paper recycled saves the equivalent of 24 trees. ●

Every ton of steel recycled conserves 2,500 pounds of iron ore, 1,400 pounds of coal, and 120 pounds of limestone. ●

Recommendations

- **3R strategy to be enforced**
- **Awareness campaign and community approach**
- **Encourage private sector to invest in the field of solid waste management for better waste collection, recycling and treatment.**

Recommendations - Waste trends (cont...)

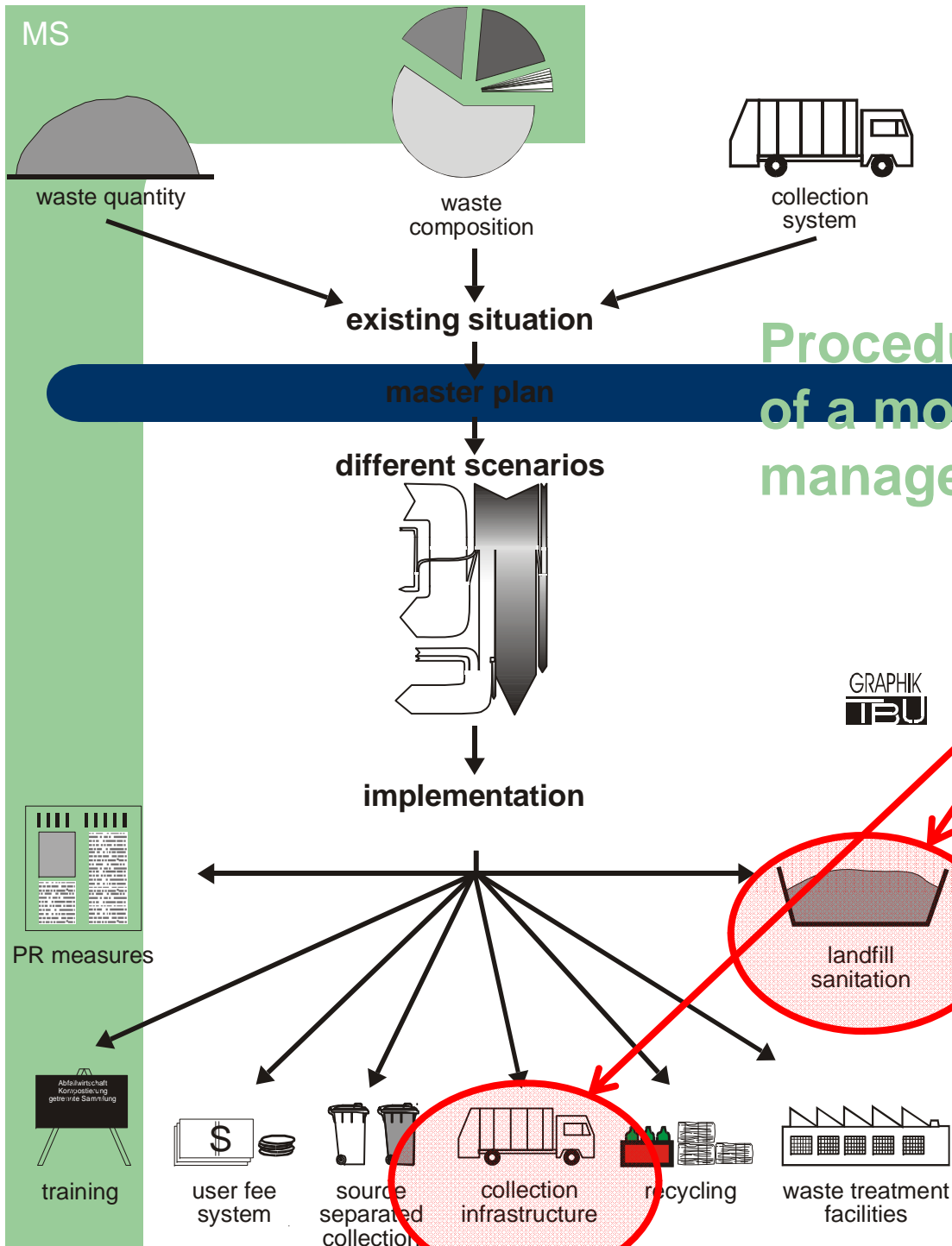
Performance indicators – progress to date		
Indicator	Desired direction of travel	Actual direction
Household waste per head (kg)	↓	↑
Household reuse, recycling and composting (%)	↑	x
Municipal waste recovery (%)	↑	x
Public awareness of recycling (%) - committed recyclers)	↑	x

Recommendations (cont.).....

- **To raise the ecological awareness of the citizens and to reduce their tolerance towards the solid waste;**
- **To introduce ecological solid waste management;**
- **To initiate decrease and collection of industrial waste;**
- **To initiate faster reformulation of the legislations for the hard waste and their implementation;**
- **To improve the cooperation among state and local authorities, business sector and citizens at all levels**

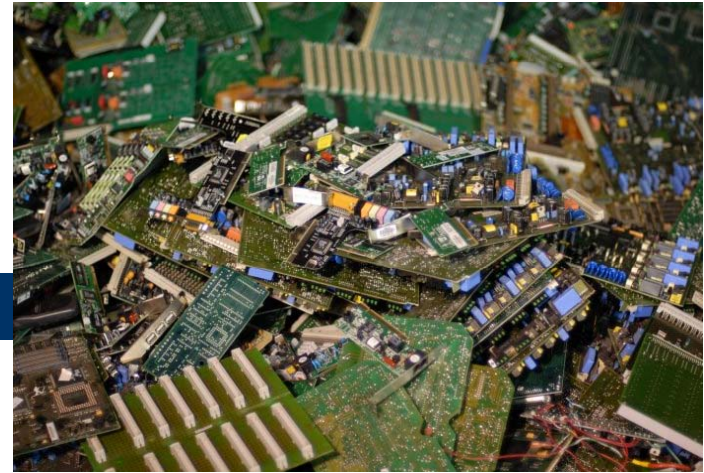
Total costs and timeframe

- **Financial cost varies at about 1 684 00 Euro**
- **That will ensure integrated waste management for the municipality of Prishtina.**
- **This amount includes all relevant budgetary sources (Municipality, Central government, Donors, Pastrimi Co and other possible investors).**
- **The whole action plan should be implemented in three year 2010-2013**



Procedures and elements of a modern solid waste management concept

Focus of investments in Kosovo so far



Questions?



Better Environment Through Cooperation

Thank you



Ibrahim Krasniqi
ibrakrasniqi@gmail.com
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