



Integrated Solid Waste Management Systems

A framework for success

Gabi Schock

[Gabi\(at\)Schock.org](mailto:Gabi(at)Schock.org)

Rostock 2016

BENEFITS OF HAVING A CONCEPT

Compliance with and enforcement of legal regulations

Citizen and business participation

Action plan, including time schedule and financial framework

Local politicians take decisions

Administration has planning certainty

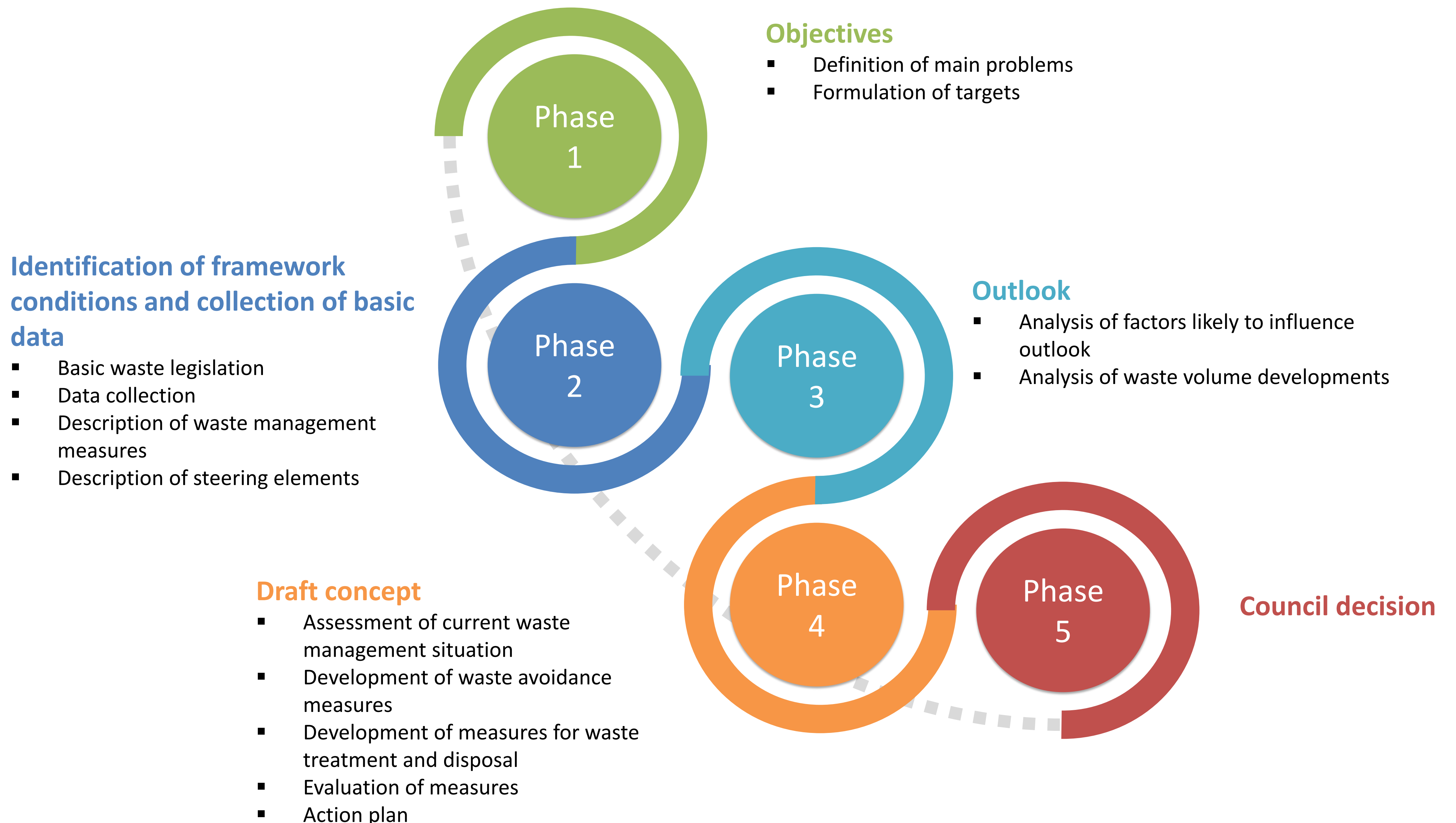
People understand the rationale behind waste management decisions

Overview of waste streams and recyclables and the corresponding costs they generate

Waste management measures are documented



II. ELEMENTS: INTEGRATED SOLID WASTE MANAGEMENT SYSTEMS



FORMULATING TARGETS

Involvement of local politicians, municipal administration, citizens, companies, businesses and retailers, NGOs



Statutory framework for waste management is regulated at national level; local politicians and municipal authorities stipulate the time schedule and financial framework

1.

2.

3.

4.

5.

6.

Resolving existing waste problems

cost-efficiently

is eco-friendly

socially accepted

develops sound organisation structures

and creates workplaces and value added in the region

Consensus-based agreement on targets with relevant actors

Phase 1
Targets

Phase 2
Collecting basic data

Phase 3
Outlook

Phase 4
Draft concept

Phase 5
Council decision

Success factors

IDENTIFYING FRAMEWORK CONDITIONS & COLLECTING BASIC DATA

Basic principles of waste management

- Local disposal
- Safe disposal
- Priority on waste avoidance
- Separation of different types of waste
- Minimising contaminant load
- Waste recycling
- Materials recycling takes precedence over energy recovery
- Eco-friendly treatment and disposal of residual waste

Step:

01

Collection of data on current and possible future waste disposal infrastructure, with a focus on conditions and waste characteristics specific to the given area

Step:

02

Description and evaluation

Environmentally compatible waste collection systems

- Local waste collection
- Waste transfer stations to reduce transport costs
- *How could refuse collection be improved in Jordan?*

Waste treatment infrastructure

- Waste separation to obtain recyclable materials and compost
- Disposal of residual waste in landfills.
- *How could Jordan achieve unmixed materials for marketing?*

Step:

03

Step:

04

Description of existing and potential steering elements

Success factor for framework conditions and data collection:

No two municipalities are the same!
Each one has to map out its own specific waste management concept –
However, regional cooperation is necessary!

Phase 1
Targets

Phase 2
Collecting basic data

Phase 3
Outlook

Phase 4
Draft concept

Phase 5
Council decision

Success factors

OUTLOOK

1. Step: Analysis of factors likely to influence outlook
 - Population growth, economic development
 - Consumer behaviour
 - Legal development
2. Step: Outlook for waste volume development

Analysis usually concentrates on a 10-year period with a review scheduled every 5 years

DRAFT CONCEPT

Action plan for a sustainable and integrated municipal waste management concept

Component steps, taking account of timeframe and financial plan

- **Volumes / technology**
 - Allocation of waste types to waste treatment plants
 - Quantity and quality of recyclable materials
 - Availability and flexibility of waste treatment plants
 - Volume flow chart
- **Organisation and economic efficiency**
 - Charitable institutions
 - Construction of plants on own or by operator
 - Municipalities form a regional association
- **Legal aspects**
- **Environmental aspects**
 - Transport links
 - Energy balance
 - Emissions
- **PR work and communications**
 - Awareness-raising and advice
 - Involving citizens in environmentally relevant plans
- **Controlling**

→ **Depends, amongst other things, on investments and on the respective requirements regarding job openings and demands**

Phase 1
Targets

Phase 2
Collecting basic data

Phase 3
Outlook

Phase 4
Draft concept

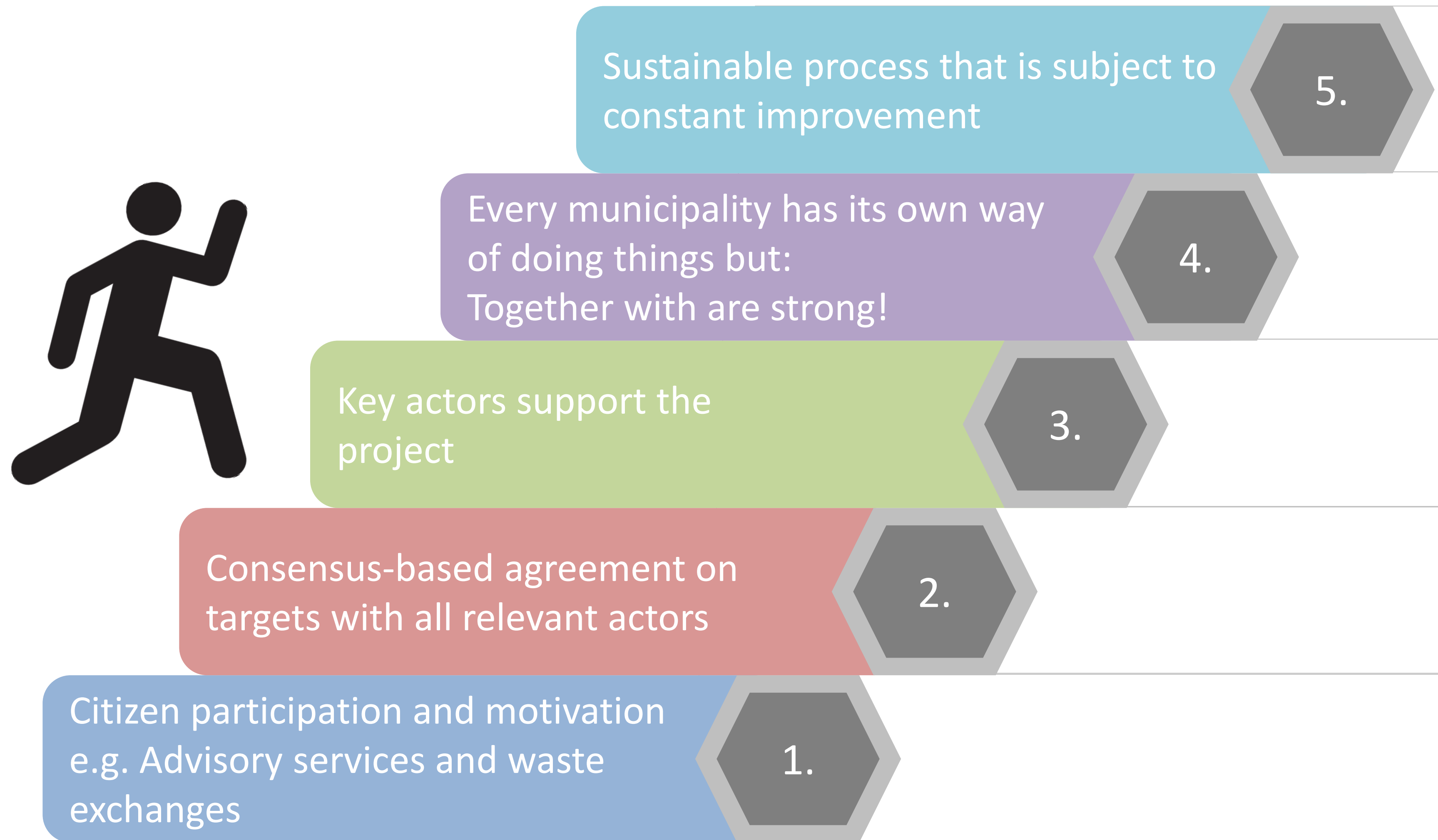
Phase 5
Council decision

Success factors

DECISION BY THE MUNICIPAL COUNCIL

- Decision taken by municipal council based on the action plan which includes a time schedule and a financial framework for the next 10 years
 - It is imperative to revise and overhaul the plans every 5 years at the latest
- **Waste management concepts depend on the municipality's territorial structure, on existing installations and operating frameworks and on the legal framework conditions governing waste management.**
- **We are dealing with a sustainable process that constantly needs to be improved and adapted.**

III. SUCCESS FACTORS



Phase 1
Targets

Phase 2
Collecting basic data

Phase 3
Outlook

Phase 4
Draft concept

Phase 5
Council decision

Success factors