

May 29, 2014

# DEMAND SIDE MANAGEMENT STRATEGY

## Introduction and Progress To Date

# The Dubai Integrated Energy Strategy 2030

## DSM is part of the Dubai Integrated Energy Strategy 2030

### Demand Side Management Targets

Electricity consumption savings:

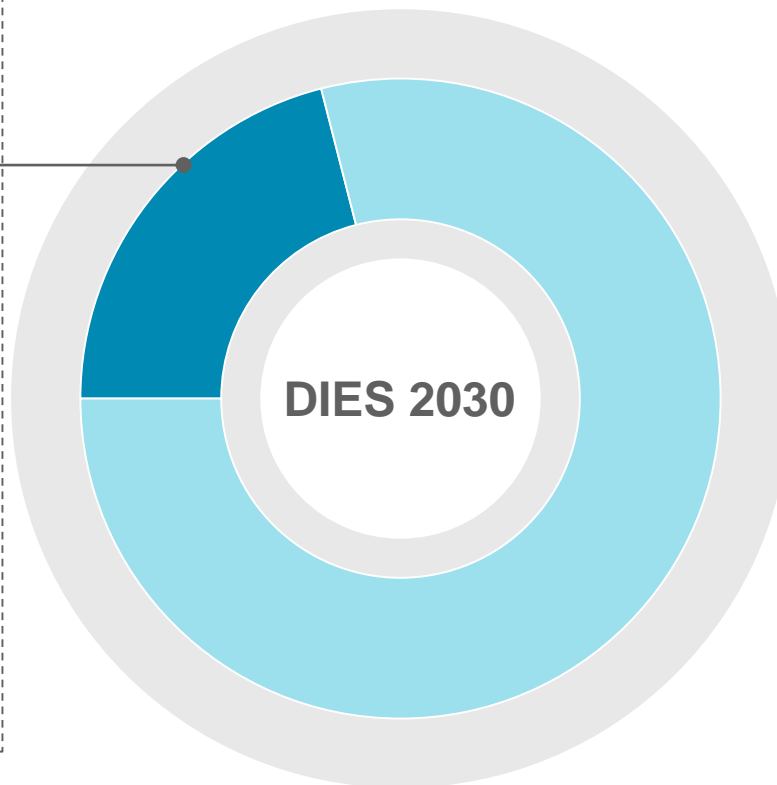
**30%**

by 2030 vs. BAU

Water consumption savings:

**40%+**

by 2030 vs. BAU

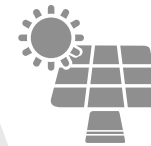


### Supply Side Targets (Energy Mix)

Solar share:

**5%**

by 2030



Clean coal share

**12%**

by 2030

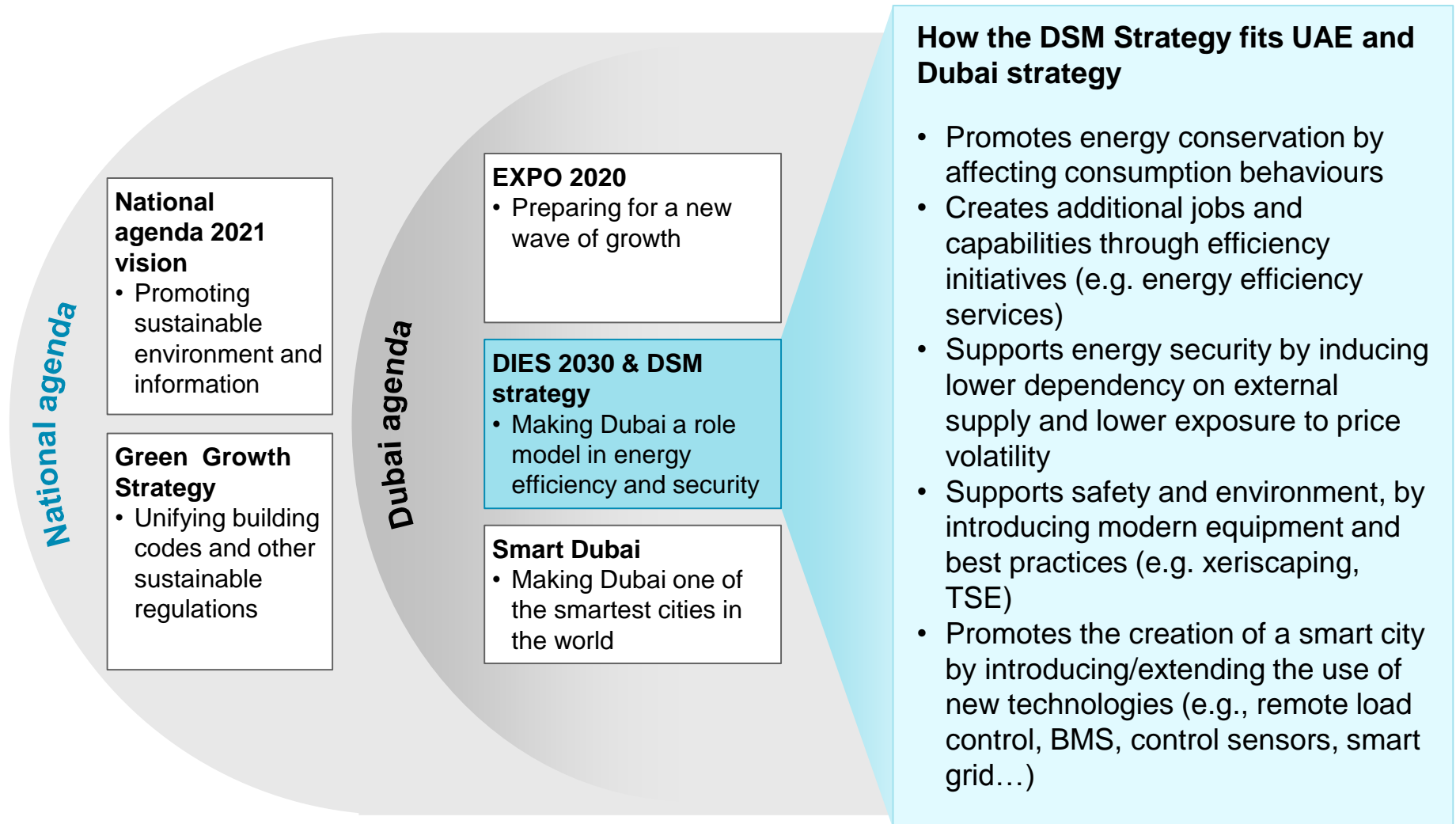
Nuclear share

**12%**

by 2030

# Context for the DSM strategy

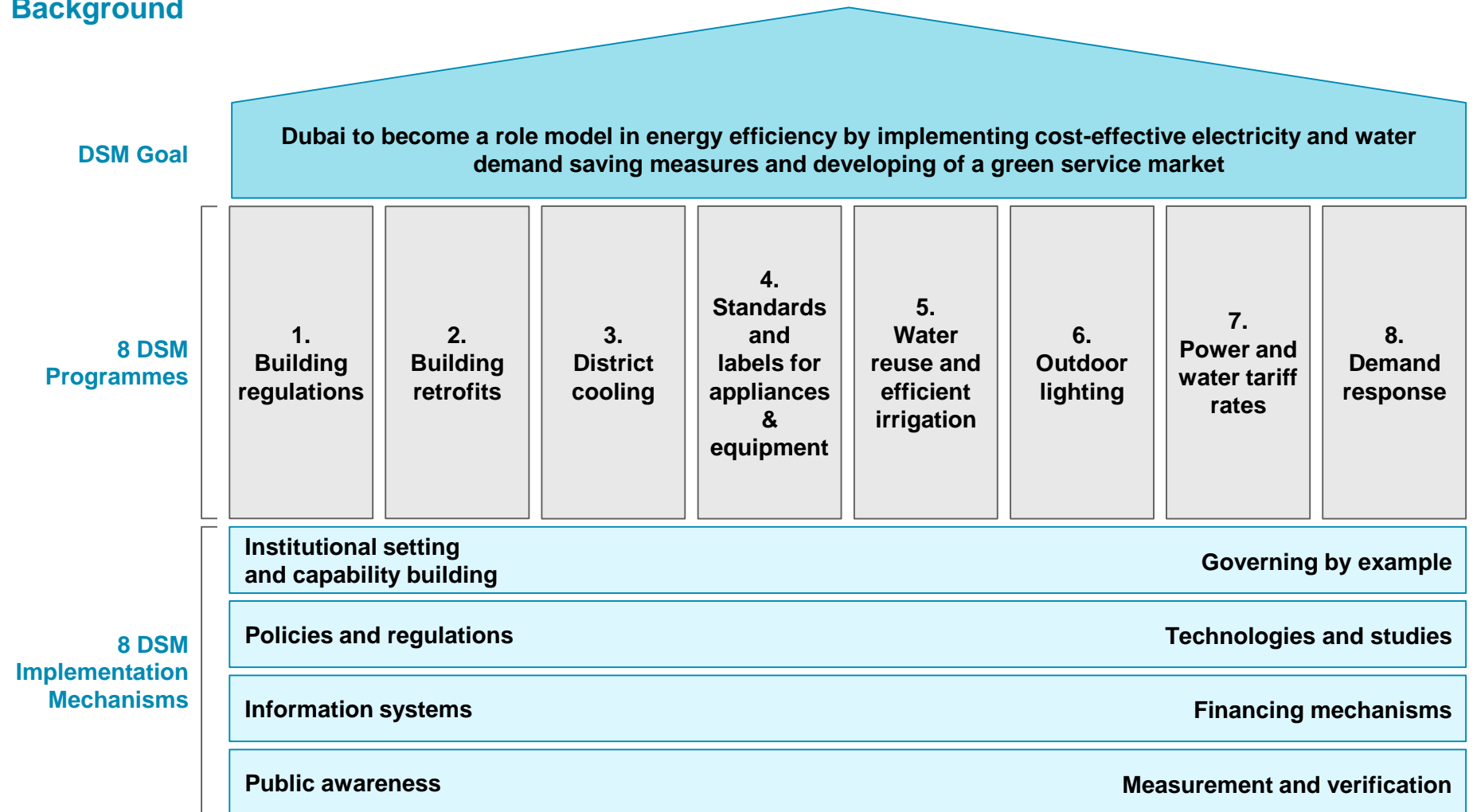
The strategy fits with a series of initiatives in Dubai and UAE



# Recap of DSM scope and objectives

The DSM strategy is one of the main areas of focus for the Supreme Council of Energy and the involved government entities

## Background



# Program scope and objectives

The DSM strategy comprises 8 programs, including an ambitious outdoor lighting program

Programs	Program Owner	Scope
1. Building regulations	<ul style="list-style-type: none"> <li>DM</li> </ul>	<ul style="list-style-type: none"> <li>Implement the existing green building code and introduce updates to enforce more stringent energy efficiency regulations, resulting in savings between 18% and 36% for power and between 20% and 40% for water</li> </ul>
2. Building Retrofits	<ul style="list-style-type: none"> <li>EtiHAD Energy Services</li> </ul>	<ul style="list-style-type: none"> <li>Execute a building retrofit program that targets the main components of a building in an integrated manner (cooling, lighting, water, industrial process, building envelope, other). Ambition to retrofit about 30,000 buildings by 2030</li> </ul>
3. District Cooling (DC)	<ul style="list-style-type: none"> <li>EtiHAD Energy Services (retrofits)</li> <li>RSB (new dev't)</li> </ul>	<ul style="list-style-type: none"> <li>Increase penetration of district cooling from 16% of refrigeration capacity in 2011 to 40% in 2030 by regulating the district cooling industry and supporting connection of existing buildings to district cooling</li> </ul>
4. Standards and labels for appliances	<ul style="list-style-type: none"> <li>ESMA</li> </ul>	<ul style="list-style-type: none"> <li>Introduce minimum energy efficiency standards and labels for major power and water end-uses in Dubai, and manage periodic updates of the same</li> </ul>
5. Water reuse and efficient irrigation	<ul style="list-style-type: none"> <li>DM</li> </ul>	<ul style="list-style-type: none"> <li>Reduce use of desalinated water for irrigation by promoting efficient landscaping practices and irrigation technologies (80% green areas to be efficiently irrigated) and maximizing the use of treated sewage effluent (100% of public areas irrigated with TSE)</li> </ul>
6. Outdoor lighting	<ul style="list-style-type: none"> <li>RTA (streets)</li> <li>DM (parks)</li> </ul>	<ul style="list-style-type: none"> <li>Use more efficient lighting fixtures (retrofitting 75% of existing lights with LED) and implement a switch off program (addressing 100% of residential streets)</li> </ul>
7. Power and water tariff rates	<ul style="list-style-type: none"> <li>DEWA</li> </ul>	<ul style="list-style-type: none"> <li>Adjust tariff rates to promote energy conservation and economic efficiency of consumption decisions</li> </ul>
8. Demand response	<ul style="list-style-type: none"> <li>DEWA</li> </ul>	<ul style="list-style-type: none"> <li>Gradually introduce time-of-use tariffs, curtailable load management and direct load control measures to reduce future capacity needs and environmental impacts</li> </ul>

# Outdoor lighting program scope and objectives

The outdoor lighting program aims at saving over 50% of consumption through switch-off measures and LED technology

## Street lights

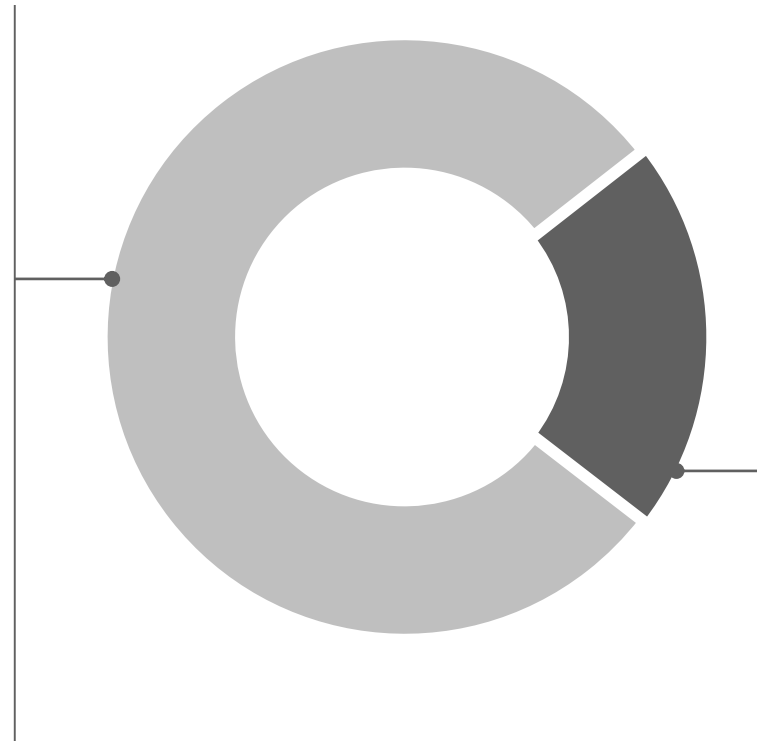


### ✓ Switch off program

- **100%** residential streets by 2030
- Partial switch-off or dimming

### LED

- **75%** of street lights replaced with LED by 2030



## Lights for parks and walkways



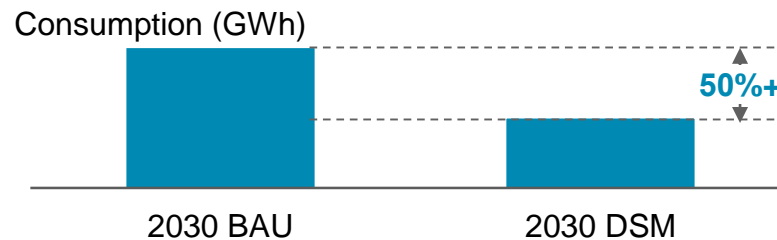
### ✓ Switch off program

- **100%** public parks by 2030
- Reduced time of operations (6 hours)

### LED

- **100%** main lights replaced with LED (or other efficient technologies) by 2030

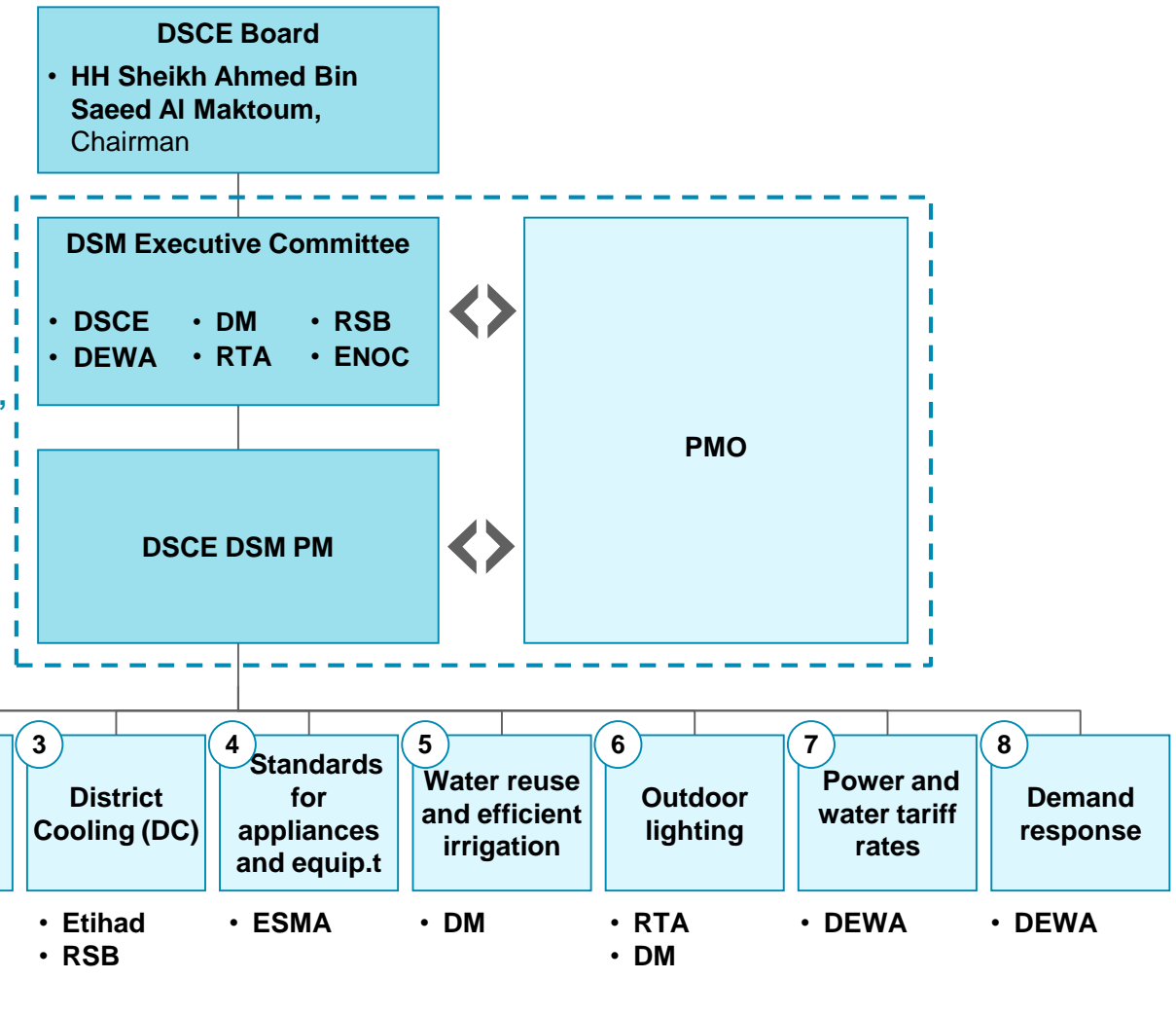
## Expected savings



# Organization set-up for implementation

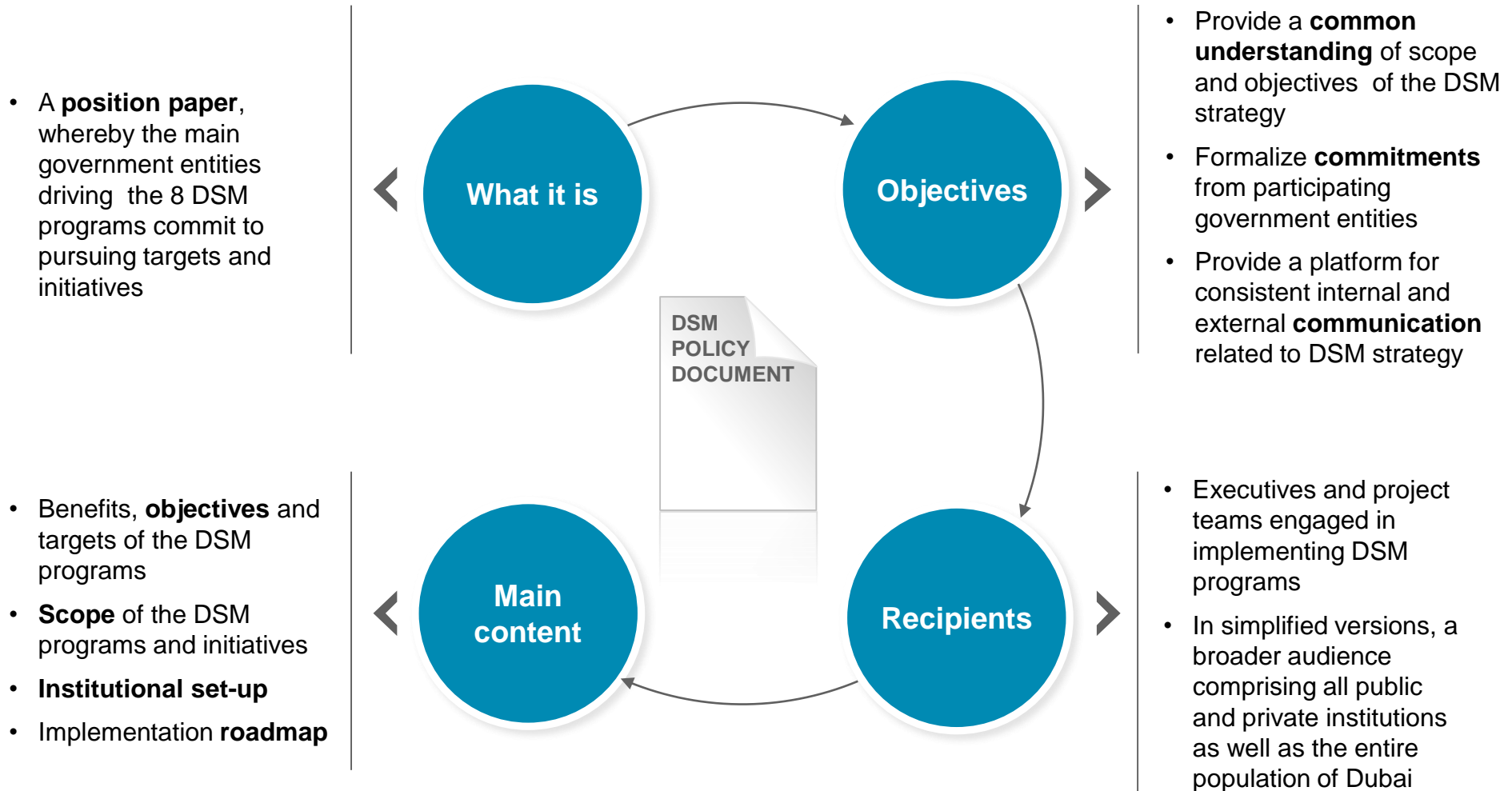
Each program has a responsible government organization, and the DSCE provides project management support, through a PMO

Temporary project structure within DSCE,  
to be replaced in the long run by a  
permanent DSM Agency



# The DSM policy document

Stakeholder entities are strongly committed to implementing the DSM strategy, as formalized in a joint DSM policy document





# Roadmap and key milestones

We have a well defined roadmap in front of us, built on some first important achievements

