



Western Cape
Government

FOR YOU

Department of Economic Development and Tourism

Overview of Municipal Energy Resilience (MER) Initiative
WC Energy Workshop

27 July 2022

Context of Energy Resilience

Energy security challenge

- The energy security and reliability future in SA looks more dire than any forecast to date

Economic impact and business confidence challenge

- Est - load-shedding would reduce real GDP growth by 3% in 2021 and result in 350 000 job losses. (CSIR and PWC)
- Load shedding costs calculated approx. R75 million / stage / day for the WC.
- But if load shedding is consistently at level 4 & higher, much more damaging as companies with continuous processes are interrupted, which could mean that output drops to zero.
- Cost of stage 6 load shedding to WC economy could be approx. R500 million per day
- Electricity is a primary cost overhead & most businesses are heavily reliant on electricity. Without reliable and affordable electricity supplies, business sustainability is at risk i.e., with load shedding and increasing tariff trajectory by Eskom, businesses may be forced to shutdown and /or relocate. This could have a knock-on impact on supply chains resulting in other businesses closing & further indirect job losses.

Financial sustainability challenge

- With paying electricity customers potentially moving to their own energy generation solutions, municipal financial sustainability could be at risk unless municipalities become part of the new system.
- Energy supply options implemented to address immediate energy security matters could result in significant financial impacts down the line.
- Consumers (businesses & citizens & government) need to be able to afford energy.

Climate change-related challenge

- Carbon border adjustments are an increasing threat to exports
- Investment attraction to the WC will increasingly rely on the ability to support carbon neutrality (of businesses & their supply chains)
- WCG & SA have made GHG emissions reduction commitments

Municipal energy resilience (MER) initiative objective & considerations

Objective

- To improve the energy resilience of the Western Cape province, through facilitating, supporting & positioning for the implementation of energy infrastructure development (public and private sector) and other strengthening interventions and thereby:
 - enhancing business competitiveness, confidence & investment through energy security & affordability
 - protecting & growing export opportunities & enabling carbon neutrality of businesses & investment through lower carbon energy
 - enhancing market confidence & local production investment through providing policy certainty

Considerations

- To support **municipalities, businesses & households, to generate, procure & sell** electrical energy
- To facilitate and support an increasingly **decentralized & diversified system of energy generation and distribution**
- **Programmatic approach to implementation** to enable economies of scale, provide clear market & policy signals, attract finance & enable streamlined procurement.
- Given that interventions will support national energy security, aim to reach **agreement** with national around **reduced impacts of load shedding** on the WC

Overall lead & support

Municipal Procurement

- Pioneering project(s) – detail later
- CCT support – detail later
- MER Fund

Private Sector Enablement

- Private sector support
- Wheeling
- SSEG

Enabling infrastructure

- Grid & transmission infrastructure upgrades
- Energy storage

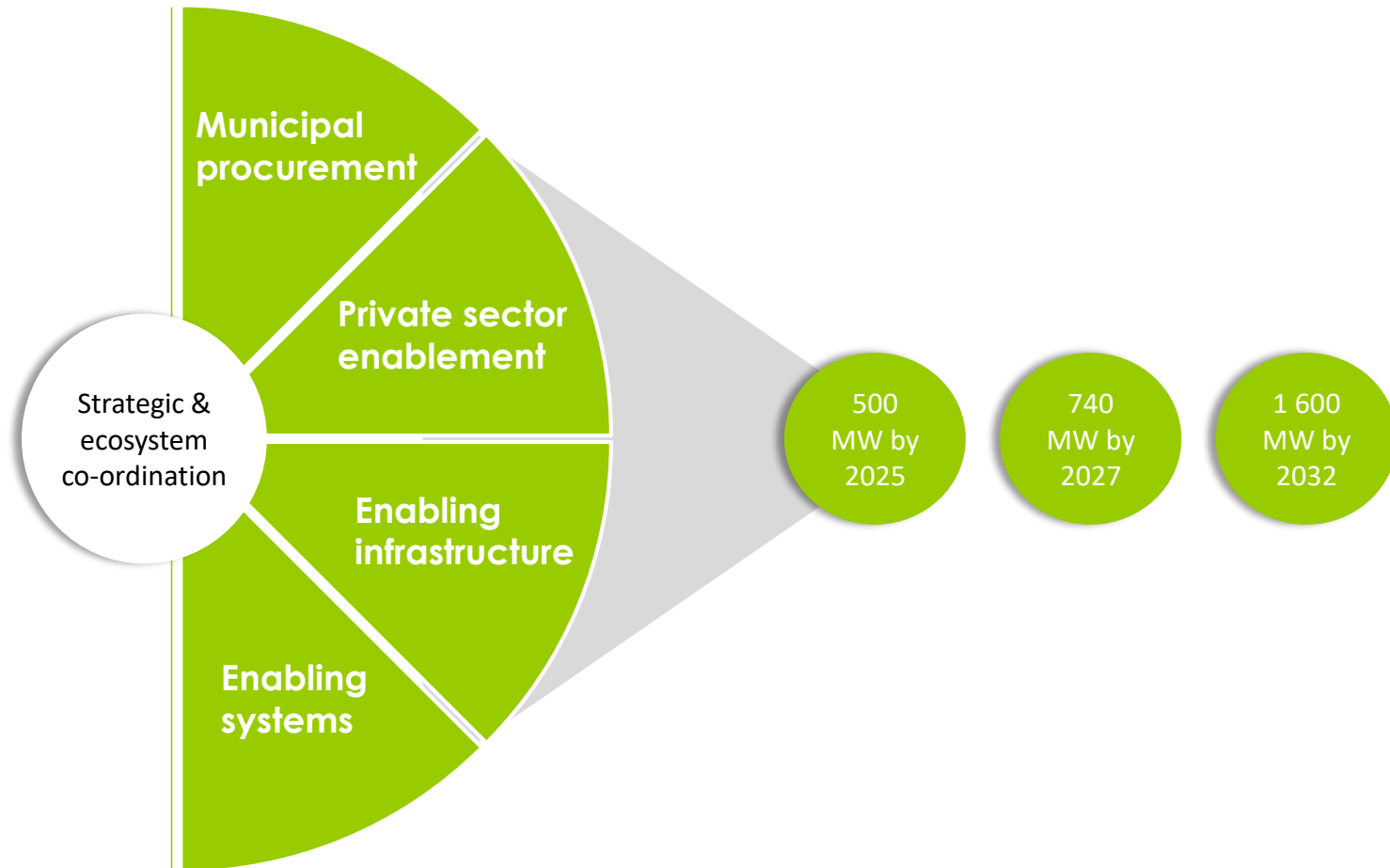
Enabling systems

- Municipal pooled buying facility
- Financial and funding systems
- Demand and supply enablement

Strategic development & management

Support & co-ordination

MER Initiative structure

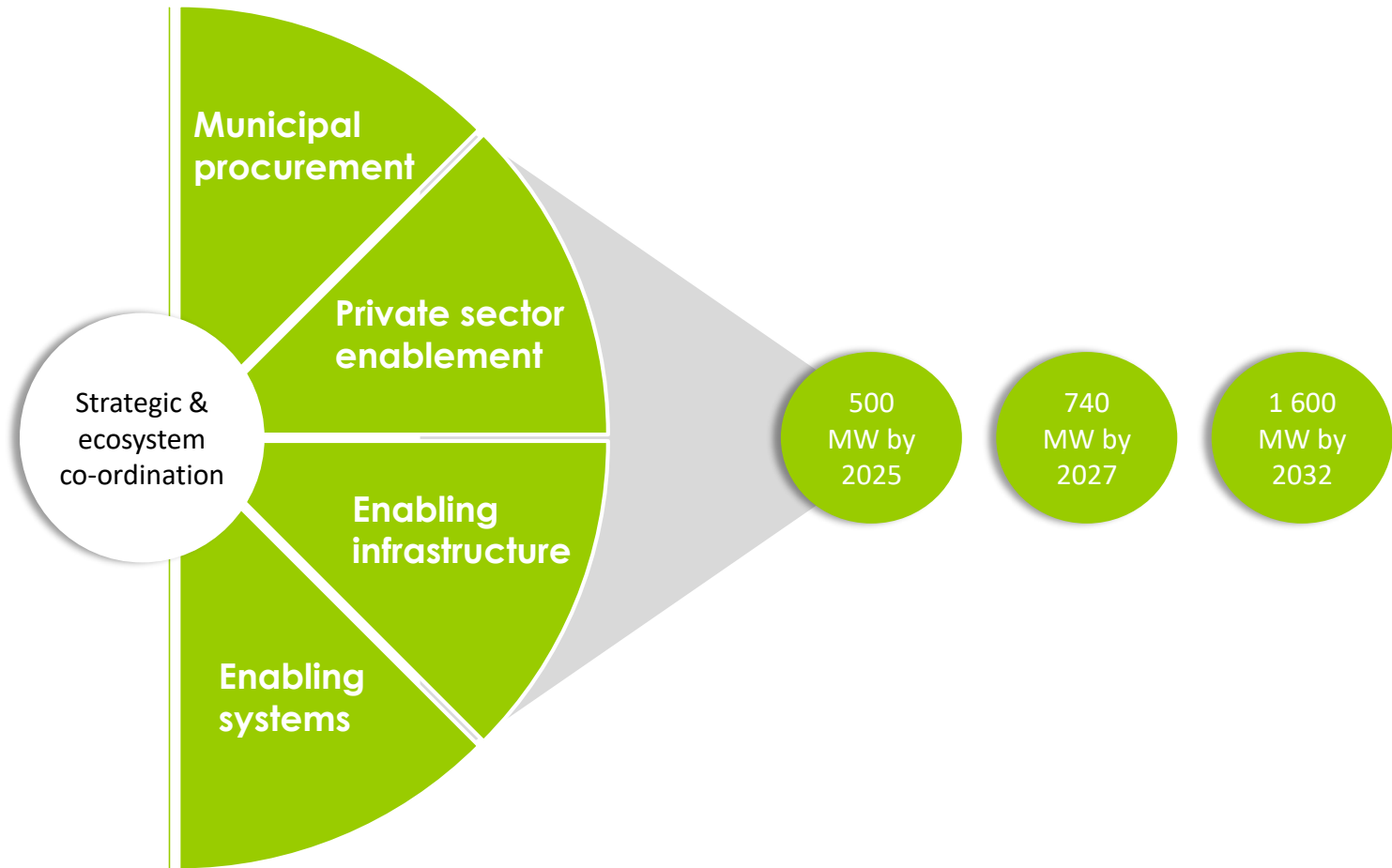
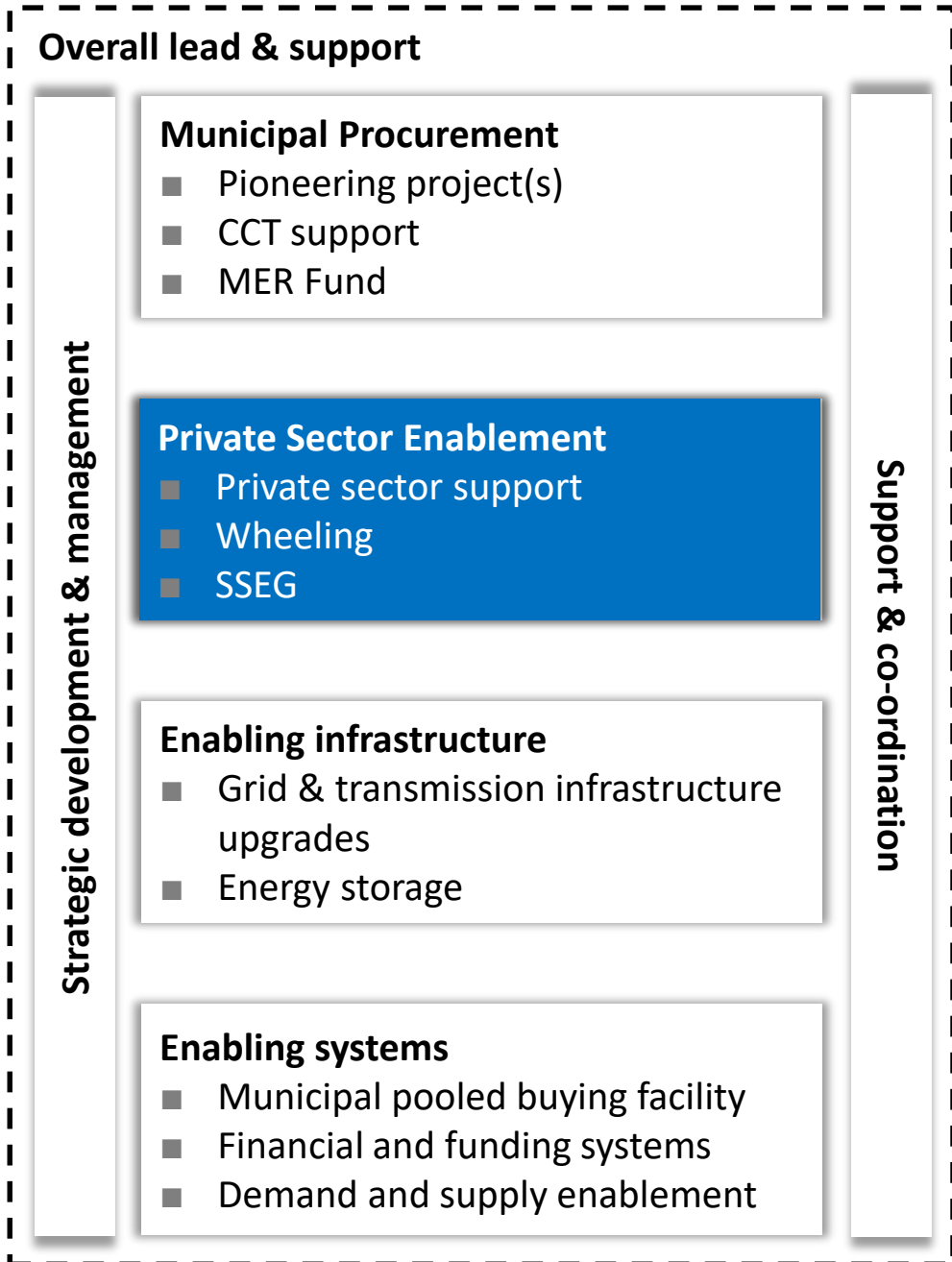


Municipal Procurement - Sub-component: WC MER Fund – foundational energy studies

Cost of Supply Study (CoSS)	Determine the current cost to supply electricity & the anticipated cost of service for the next financial year -> enable the municipalities to move towards cost-reflective tariffs within the subsidised model to be in a better financial position to render services (including scaled renewable energy). Including tariff application based on COSS ready for submission to NERSA
Electricity Master Plan (EMP)	Mapping out the municipal electrical distribution grid to identify areas for strengthening, capacity constraints and capacity availability.
Mini (local) Integrated Resource Plan (IRP)	To identify the preferred future pathways in the electricity sector that allows the municipality to meet the forecasted demand while aligning to the municipality's strategy. Electricity generation allocation and plan for implementation and integration into existing electricity network.

	CoSS	EMP	Mini IRP
Stellenbosch	X	X	X
Mossel Bay	X	DLG FUNDING	
Saldanha Bay		DLG FUNDING	
Overstrand	X		
Swartland		X	
Drakenstein		DLG FUNDING	
Cape Agulhas	X	X	
George		X	
Witzenberg	X	X	
Bitou	X	X	

MER Initiative structure



Private sector enablement

Private sector support

Support to energy sector & other businesses

Understanding top private sector electricity users (20 City & 5 / WC local municipality) – energy demands, forecasts, renewable energy projects – feed into municipal & WCG planning & ID any support required

Wheeling

Municipal wheeling framework & tariff support

Wheeling use of systems agreements for private sector utilisation of municipal grids – incl national wheeling colloquium

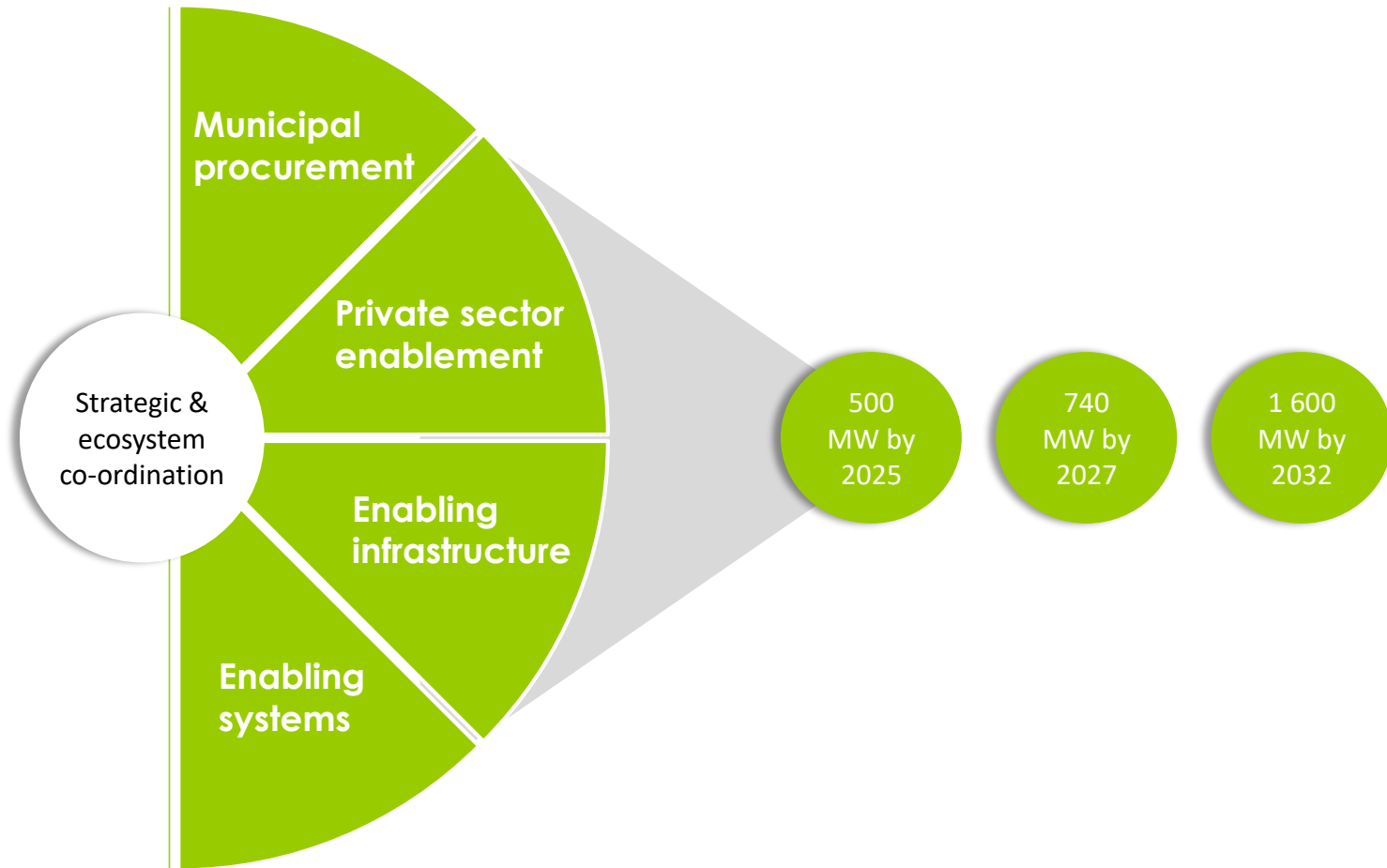
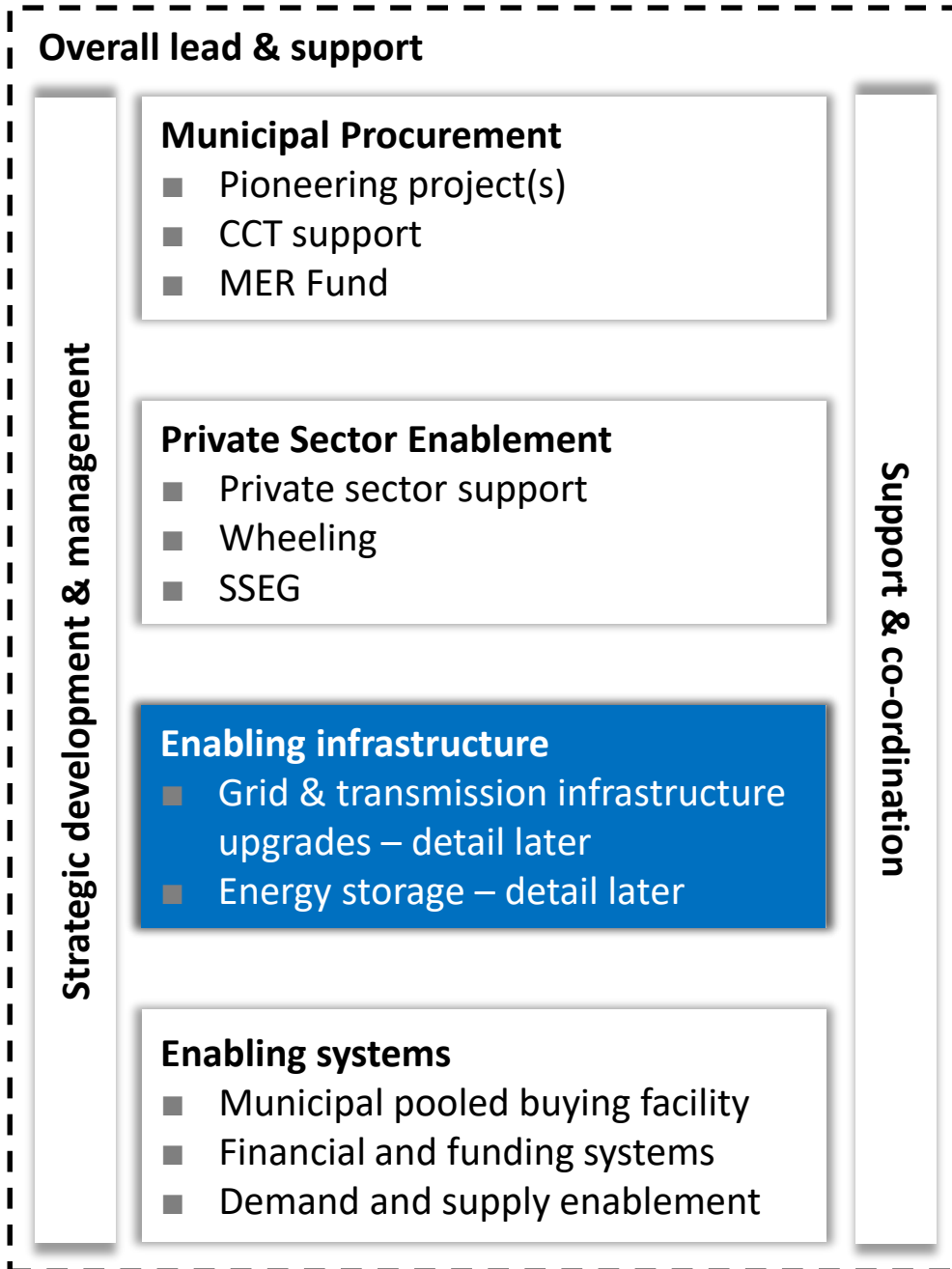
Municipal wheeling revenue impact assessment model -> inform municipal decision-making re levels of wheeling provided or planned for

SSEG

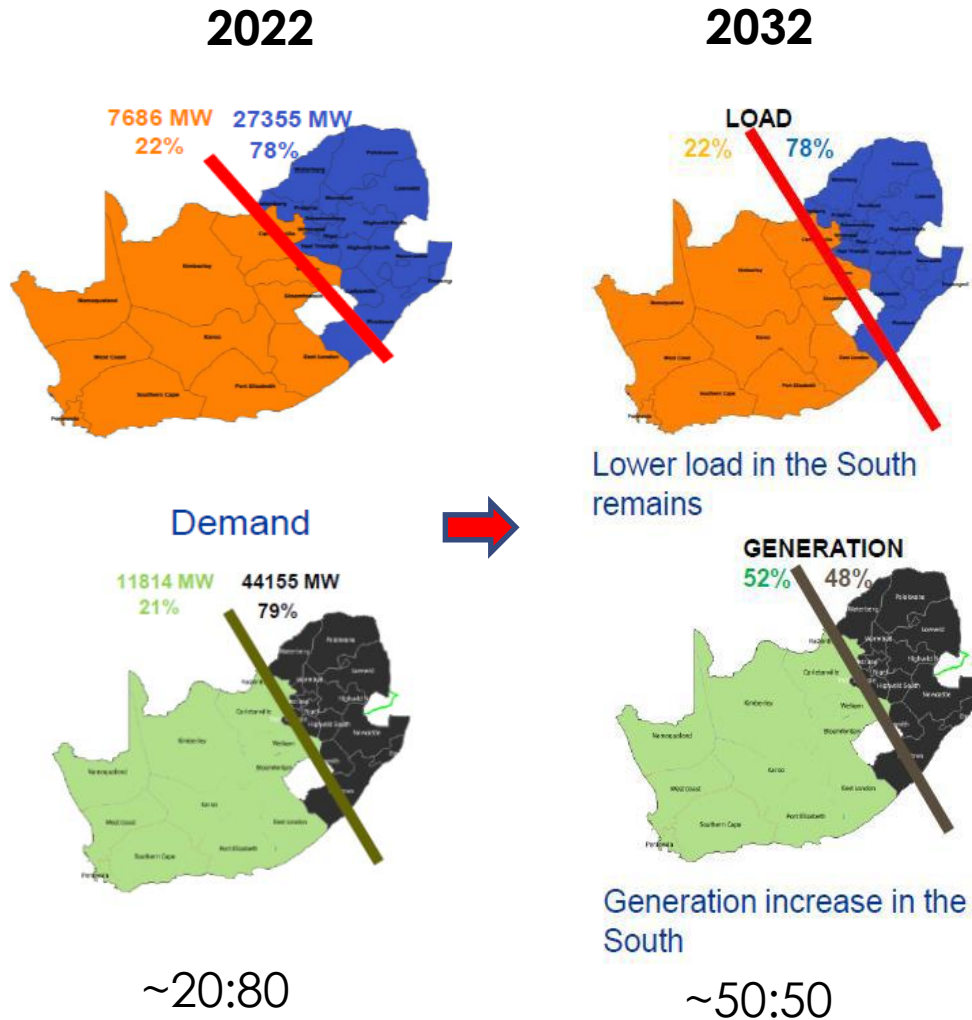
Municipal support on SSEG feed-in tariffs, frameworks & streamlining of SSEG registration processes

Business support to enable take up

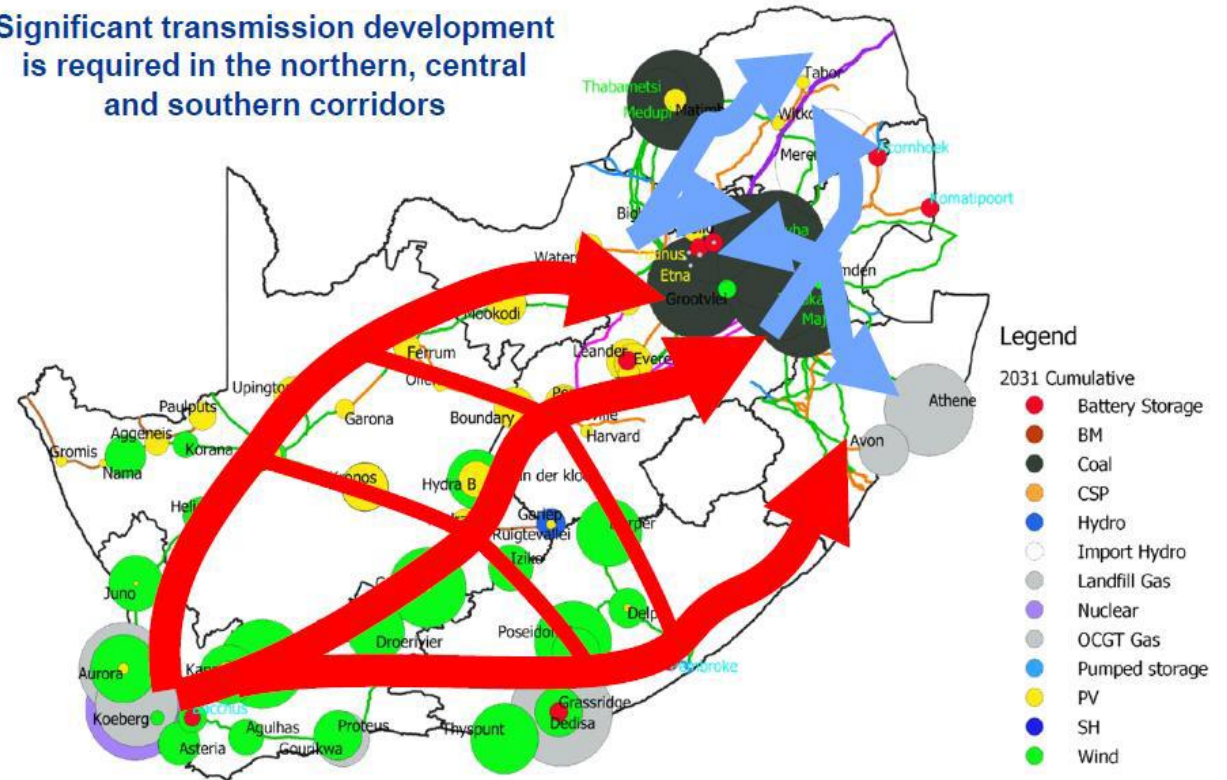
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Enabling Infrastructure – the changing shape of energy generation in South Africa



Significant transmission development is required in the northern, central and southern corridors



The work underway is aimed at enabling the upgrading and/or development of energy infrastructure and improved grid stability for increasing low carbon energy penetration.

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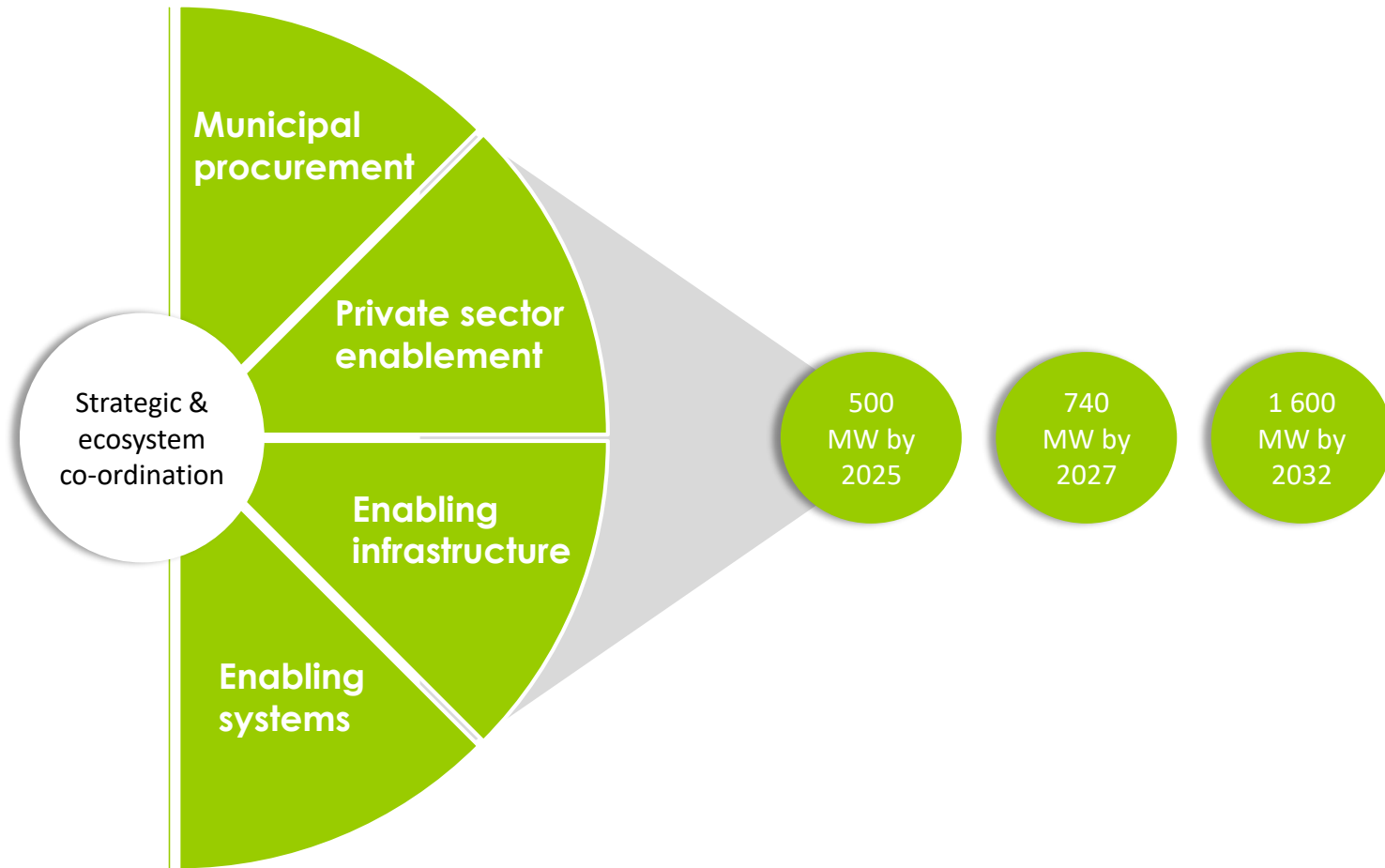
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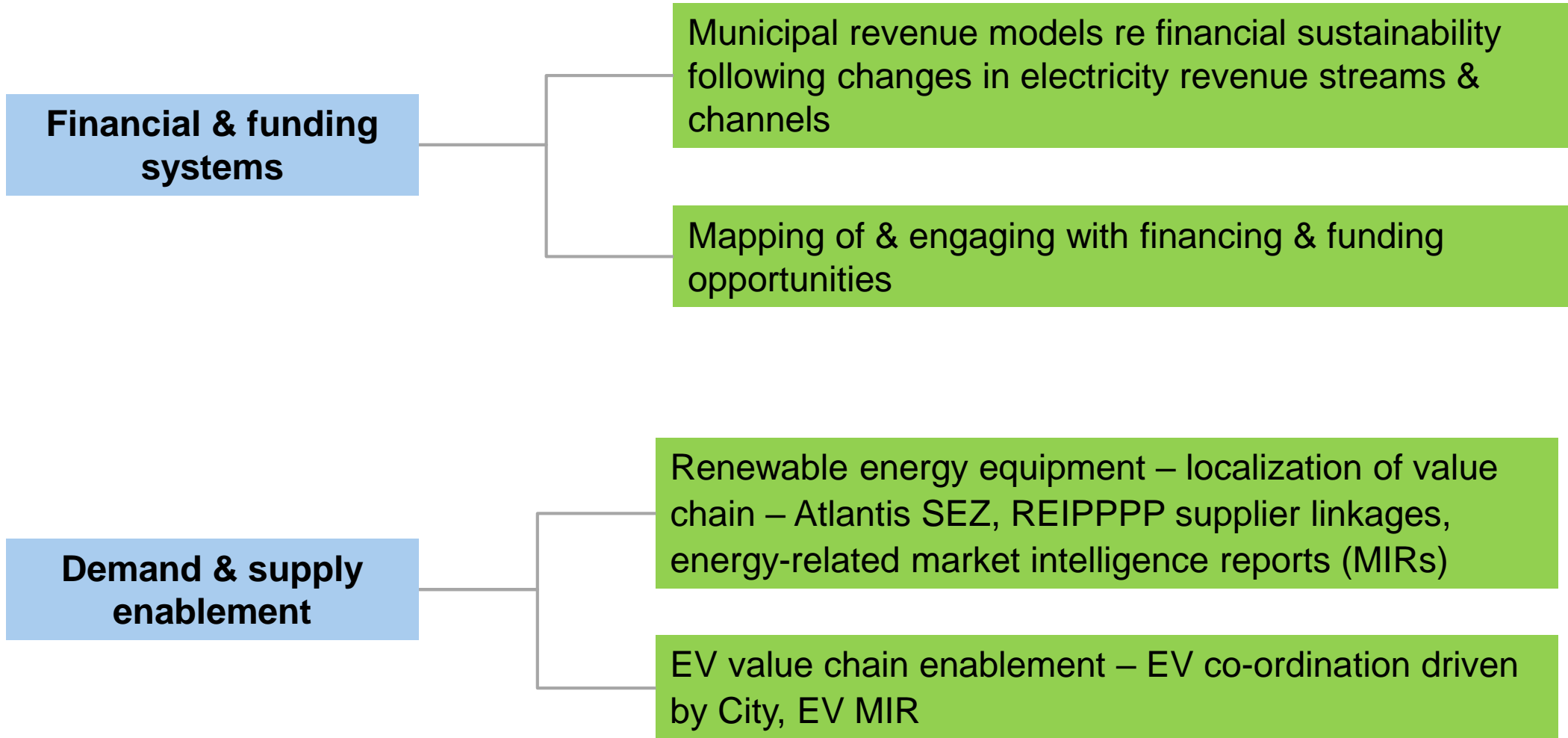
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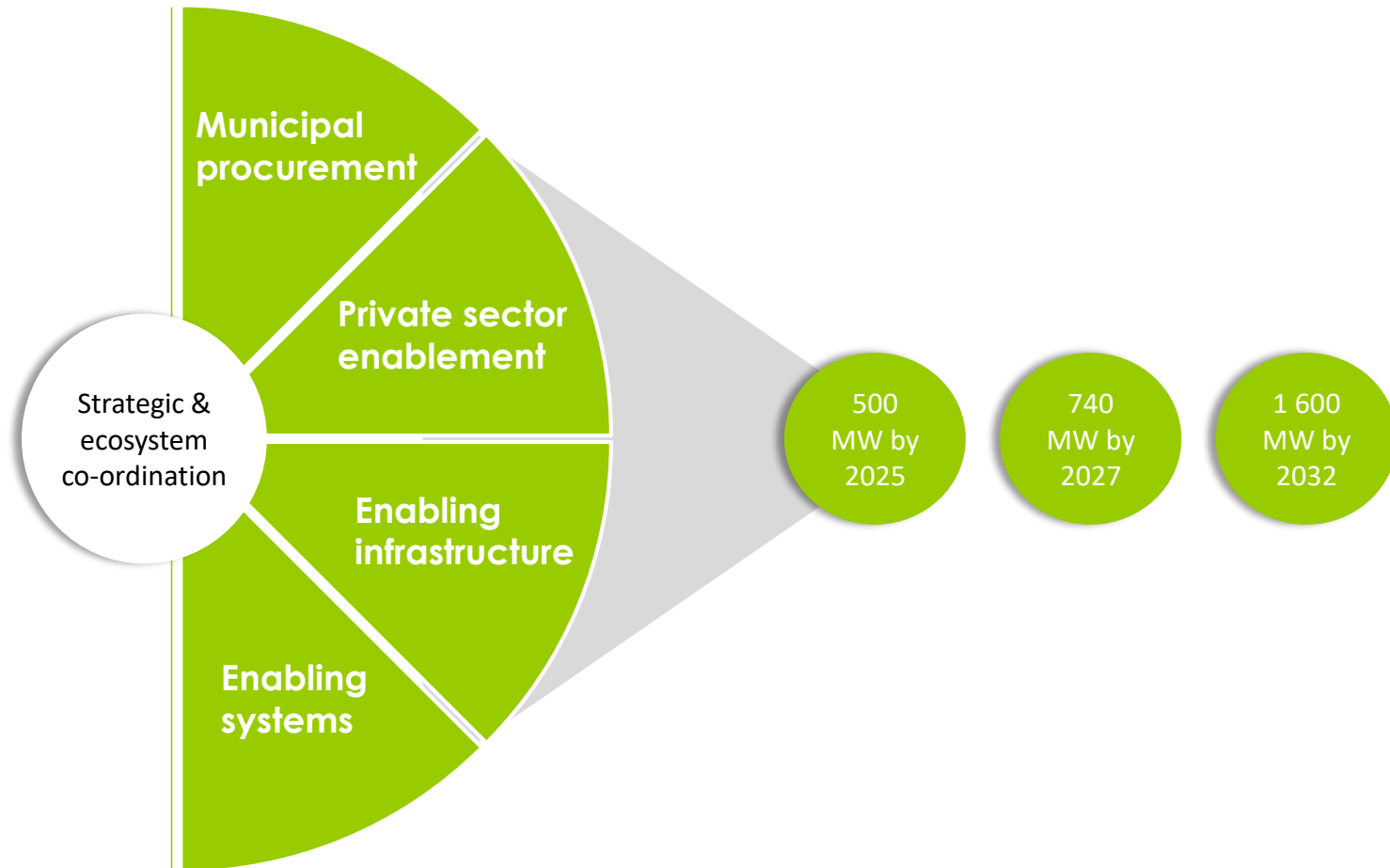
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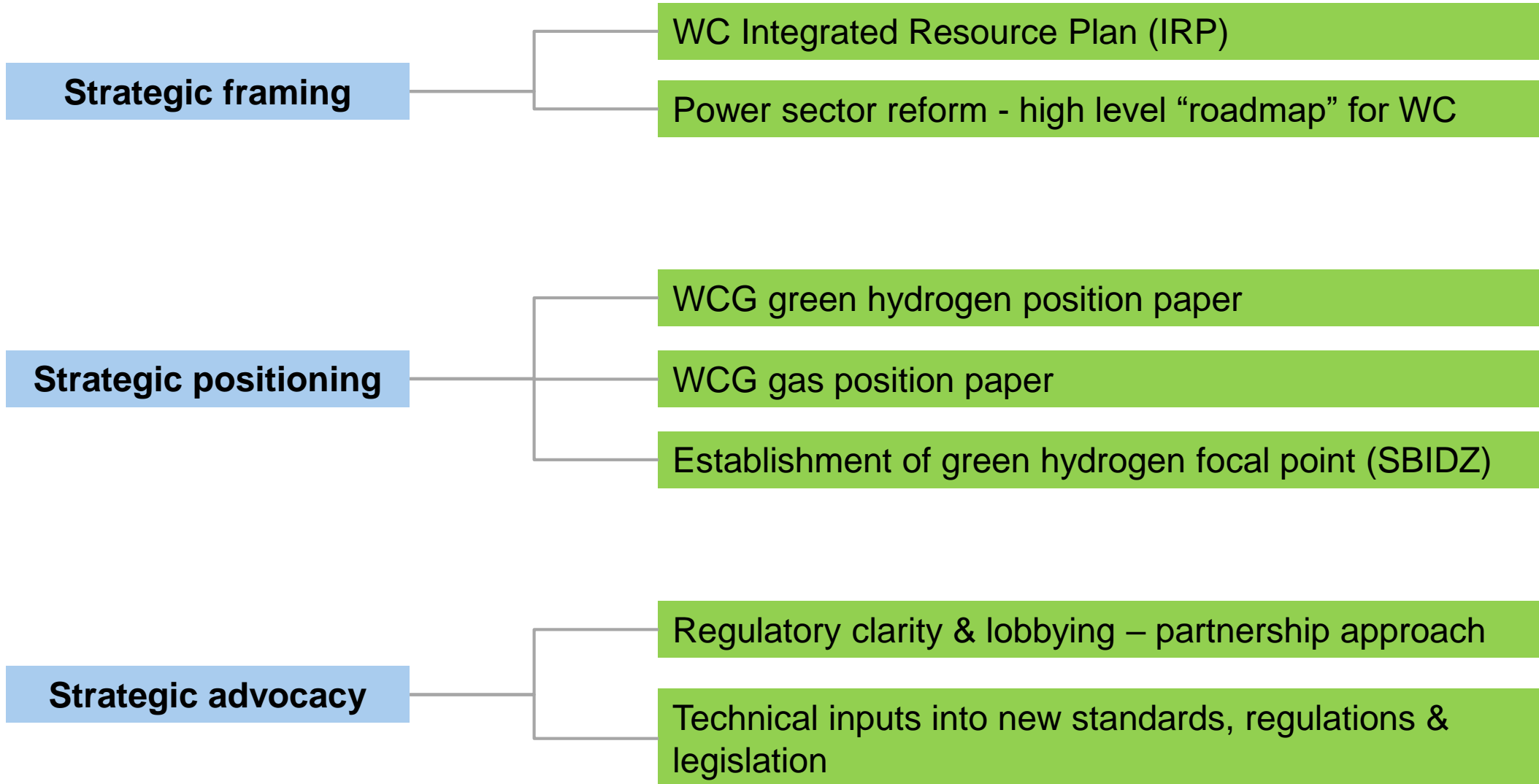
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Strategic development & management



Thank you

Email:

helen.davies@westerncape.gov.za

Ajay.Trikam@westerncape.gov.za

mer-initiative@westerncape.gov.za

Website:

<https://www.westerncape.gov.za/110green/energy-overview>