



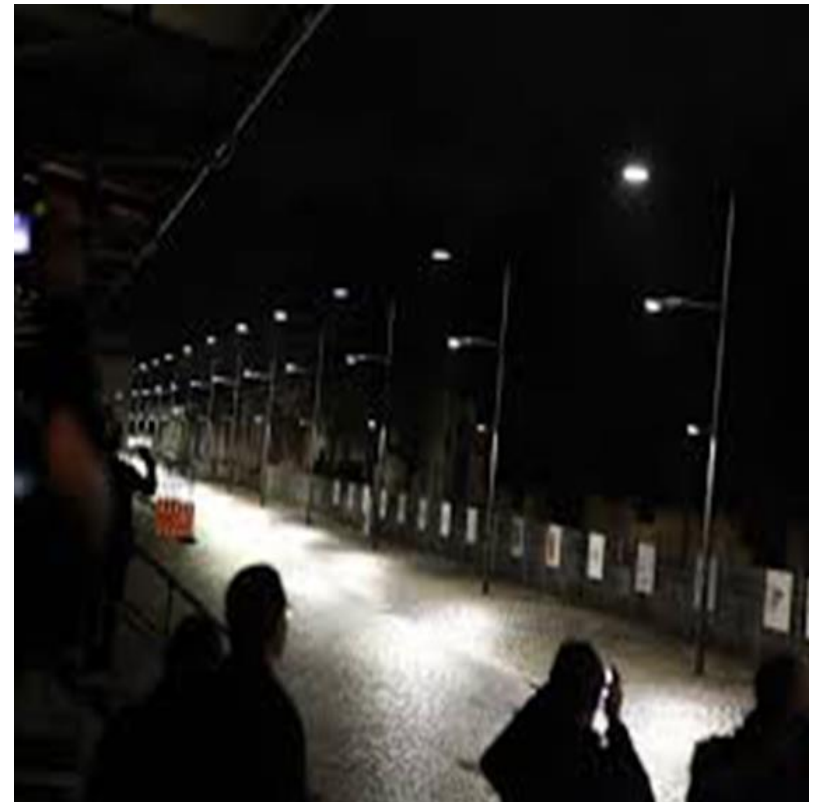
# Building Additional Energy Efficient Lighting Demonstration in South Africa

Driving the expansion concept by municipalities  
and Special Economic Zones (SEZs)



## Presentation outline

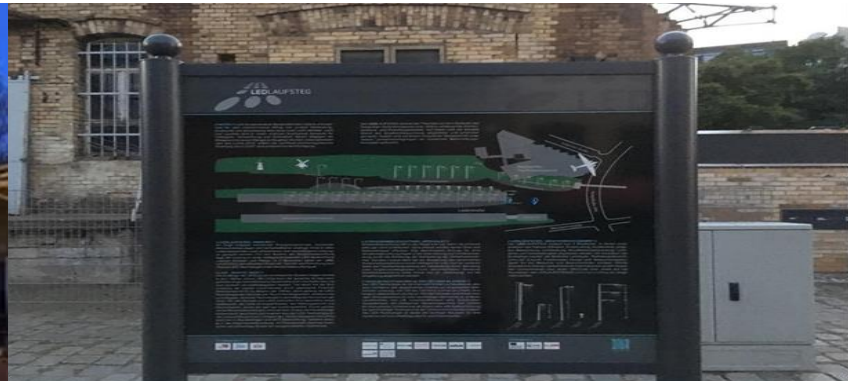
- The blueprint: The Berlin LED Walkway
- The need for energy efficient lighting demonstration site
- Adopting the concept: The Innovation Hub
- Expansion Concept: municipalities and SEZs
- What is next





## The blueprint: The Berlin LED Walkway project

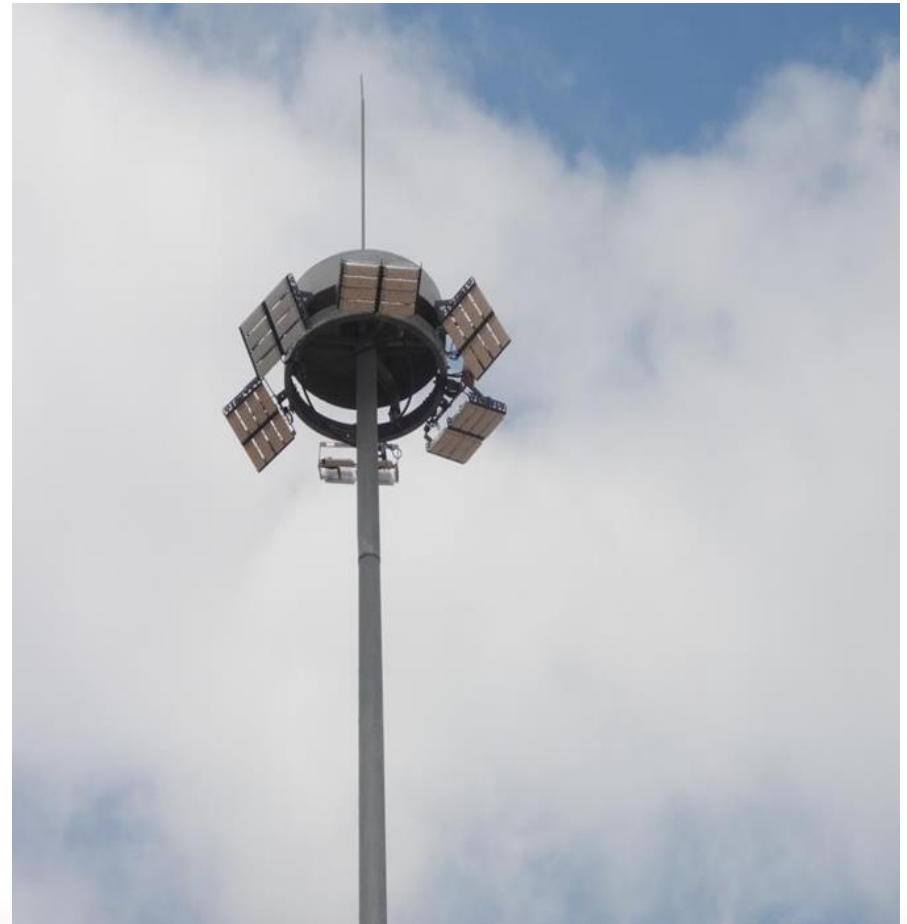
- The “LED Walkway Berlin” has 77 masts and 184 lamps lining a 1.5 km street
- It is a constant exhibition of innovative LED street lighting technology solutions. This LED Walkway is an unique “Outdoor Showroom” that promotes and demonstrates the advantages of LED lighting solutions in a real-life situation
- It also serves as a research facility: The Technical University of Berlin has a team of 20 research associates and 2 professors working on the LED Walkway Berlin
- Time-frames: Technical preparation phase (from 2013), Opened to the public (March 2015), Scientific operating and evaluation phase (2014 – 2017)





## The need for energy efficient lighting demonstration site

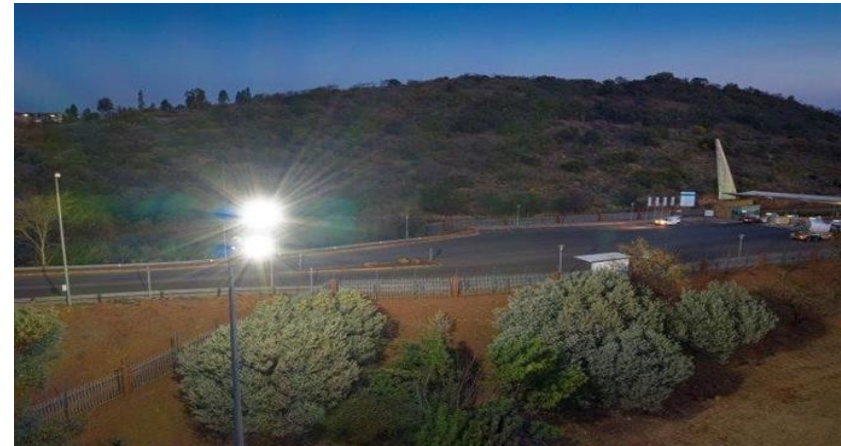
- The EEDSM programme provides over R200m for energy efficiency projects in municipalities
- One third of municipal energy expenditure is for street lighting
- LED technologies can achieve 60% to 70% savings; longer lifespan; and better lighting
- Latest and tested technologies can be demonstrated, reducing the level of reluctance from municipalities to install.





## Adopting the concept: The Innovation Hub LED Walkway

- MoU signed between the DMRE and Innovation Hub
- Request for Proposal issued to manufacturers to volunteer their technologies
- Installation has been completed - includes 27 lighting fixtures on 24 poles
- Strategic marketing plan for the site developed
- Plans to venture into the second phase of the project





## Expansion Concept: Municipalities and SEZs

- The expansion concept seeks to drive the second phase of the LED Demonstration at the Innovation Hub and further collaborate with municipalities and SEZs to establish new sites.
- Collaboration with municipalities and SEZs will be mainly be driven under the DMRE's EEDSM process
- Targeted sites: Atlantis SEZ (WC); Nkomazi SEZ (MP); East London IDZ (EC); Dube Trade Port SEZ (KZN); and Maluti-A-Phofung SEZ (FS).
- The DMRE, supported by GIZ, is engaged in ongoing stakeholder engagement with identified SEZs and municipalities within which these are located



## ...Ongoing work with City of eThekweni and DPT

- Engagements with both the city and DTP
- Energy audits undertaken in **July 2021**. Site consists of 135 LED fittings, mainly 250W HPS.
- Four options proposed: LED fittings; LED with DALI dimming function; Solar LED streetlight with backup power; and smart city ready streetlighting.
- Tender documents and specifications currently being finalised.
- In addition to demonstration purposes, measures are expected to result in energy savings of **141.6 MWh/a**; monetary savings totalling **R313, 183** for the first year; and **140 tons of CO2** emissions per year;



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