

Plascon

SUSTAINABLE INFRASTRUCTURE

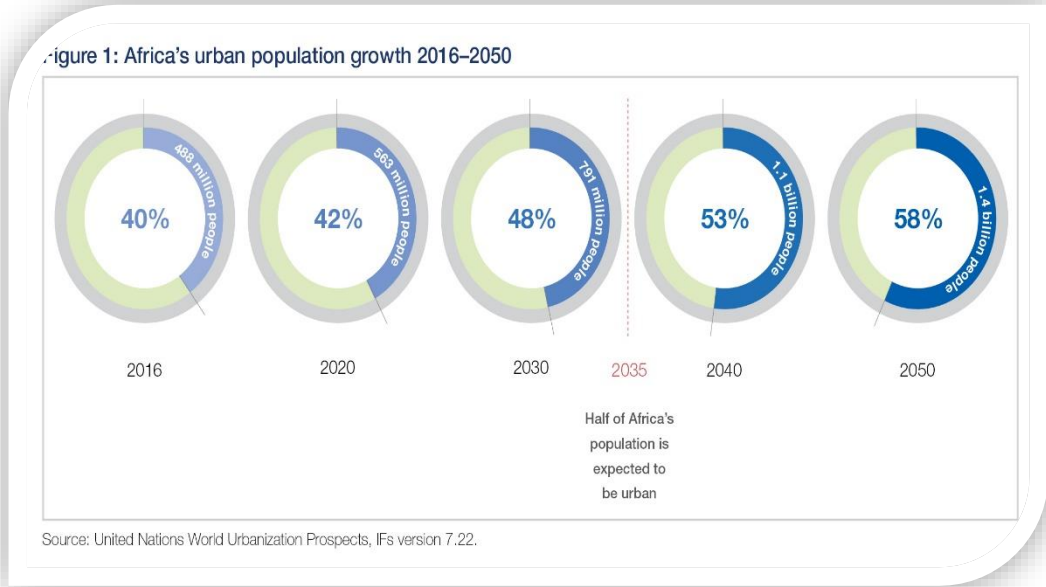
What does Smart Infrastructure mean in the context of African cities?

2 December 2020

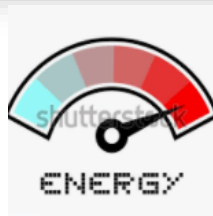
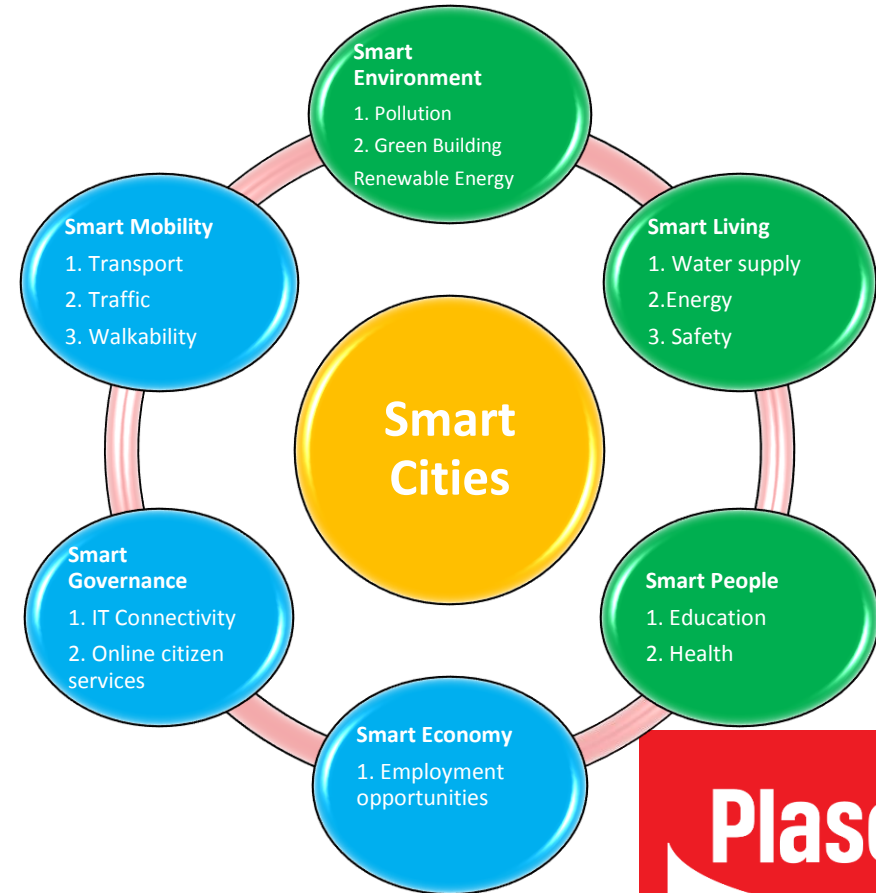


What does Smart Infrastructure mean in the context of African cities?

- It is the deployment of ICT platforms to improve operational efficiencies, share information and improve the quality of government services and residents' welfare
- Why smart infrastructure for African cities?

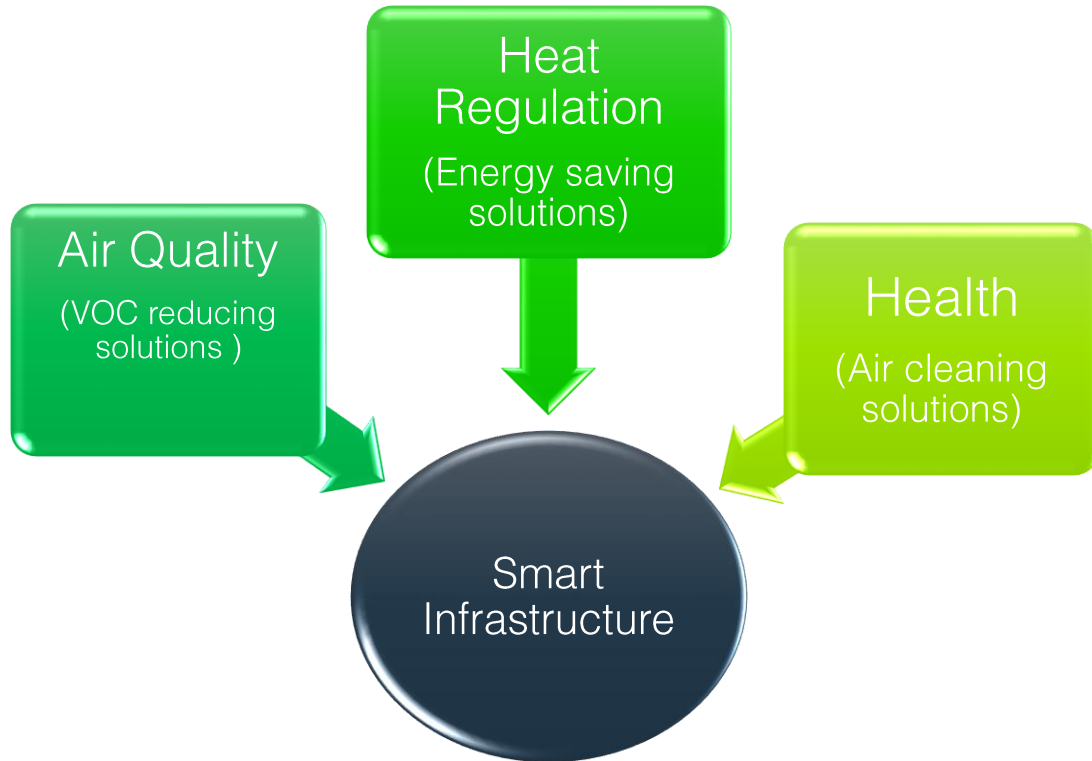


- What components will contribute to smart cities?



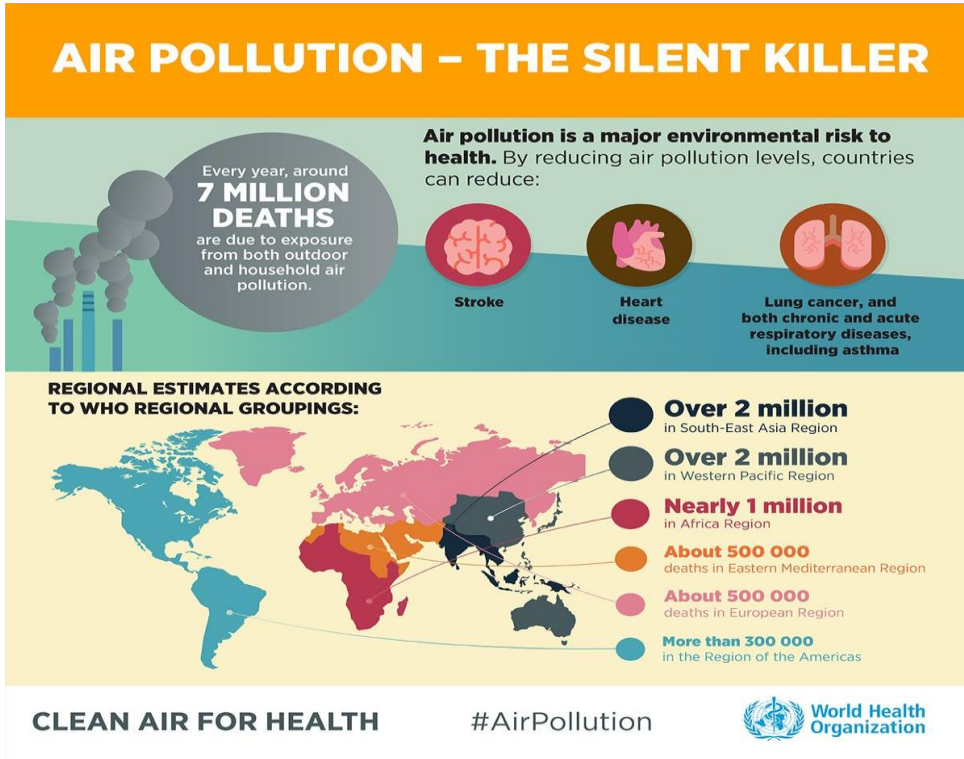
What does Smart Infrastructure mean in the context of African cities? (cont.)

- Coatings Industry Initiatives
 - Sustainable coatings (Green & Functional)



Air Quality (Indoor) / Health

- Air pollution



Air cleaning technology (formaldehyde abatement)

- Air cleaning technology that scavenges formaldehyde from the environment
- Sources formaldehyde
 - Household furniture and carpets
 - Building materials
- Effect of formaldehyde
 - Skin, eye and respiratory irritation
 - Cancer
- Solution – (Coatings view)
 - A coating that reacts with formaldehyde and break it into harmless components



Air Quality / Health (VOCs)

- Volatile organic compounds found in coatings
- Source of VOCs in paint?
 - Additives, resins, solvents, binders etc
- Why are VOCs bad?
 - Nausea
 - Dizziness
 - Headache
 - Asthma and allergic air way diseases
 - Cancer
 - Ozone layer depletion
- Solution
 - Low VOC technologies
 - VOC free
 - Solvent based to water based technologies



▪ GBCSA Guidelines on TVOC in Coatings

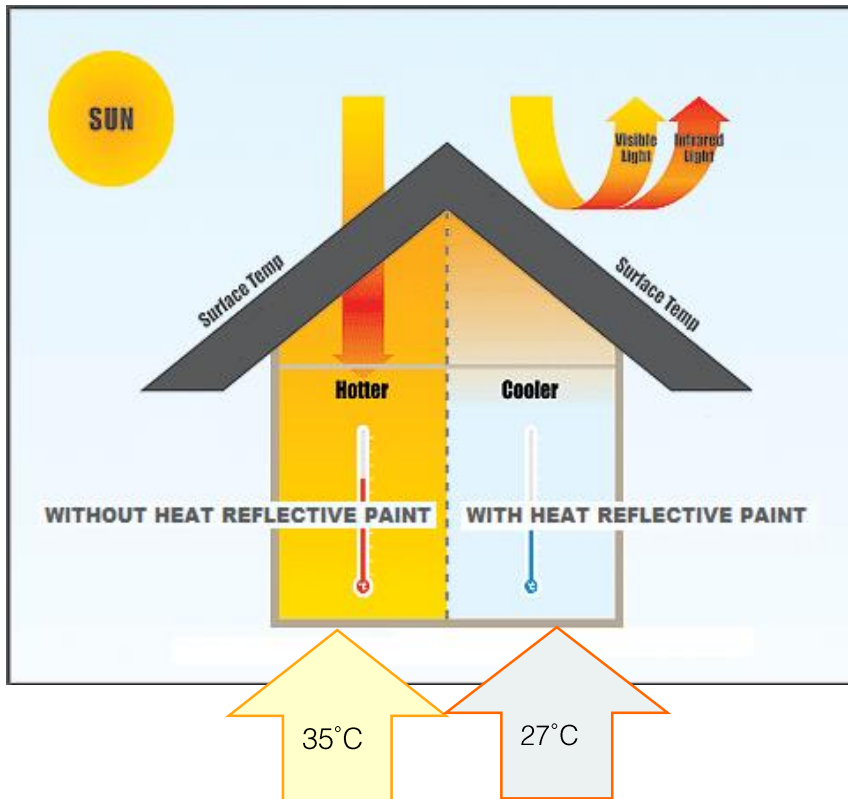
Product Type/ Sub Category	Max. TVOC Content
Walls & Ceilings - Interior semi-gloss	16
Walls & Ceilings - Interior low sheen	16
Walls & Ceilings - Interior flat-washable	16
Ceilings - Interior flat	14
Trim – gloss, semi-gloss, satin, varnishes & wood stains	75
Timber & building primers	30
Latex primer for galvanized iron and zincalume	60
Interior latex undercoat	65
Interior sealer	65
One & Two pack performance coatings for floors	140
Any solvent based coatings whose purpose is not covered in table	200



Temperature Regulation

- Heat reflective coatings
 - Reduce surface temperature
 - Improves insulation of buildings
 - Longer lasting coating (roofs)
 - Energy savings

- Plascon application project at Chubby Chicks new Machavie farm (2018)



Up to 8°C Cooler

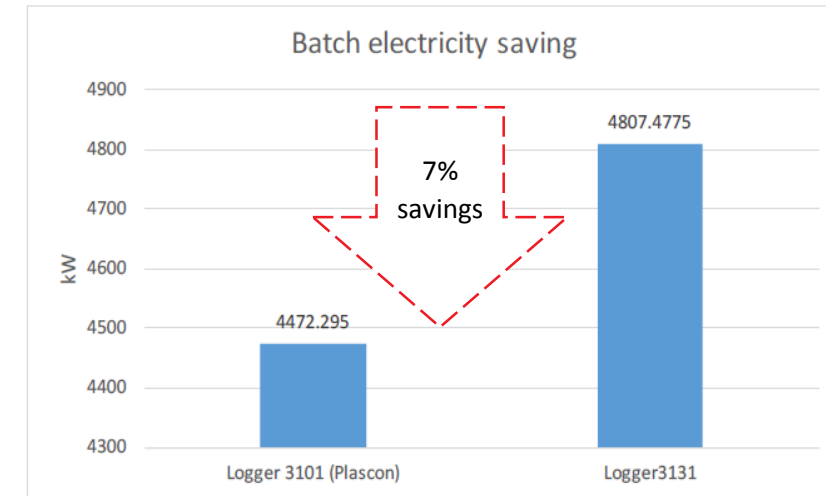


Figure 38: Electricity savings January to February 2018





Thank You