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Working Group for Sustainable Cities / Smart Cities

Institution of Engineers Malaysia (IEM)

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Development of Guideline

- Preferred Policy Issues
  - Policies in place within each country and state within the country. How do we move in parallel with these policies and become a pillar/think-tank for this with our pool of resources/engineers
  - To work together with the relevant government bodies and include and refer to the Engineering Institutions in policy making
  - To work together with other professional institutions like the Architectural Institution, Landscape Institutions, Surveyors, Master Planners etc.

Preferred Organization Setup

- This should encompass the following aspects:
  - Social
  - Environmental
  - Economic
- Focusing on one aspect alone, will not significantly move our initiatives
- More detail to be outline during the next CAFEO meeting

Master Planning

- Major part of the sustainability is contributed by Urban Development and Master Planning
- This contributes towards early stages of planning where most of concept level planning can be made.

Infrastructure System Design for Integration with Master Plans

- This will ensure the sustainability concepts are planned early
- Trigeneration to be incorporated where there's incorporation of Power Supply and Resources, Water Supply and Resources, Waste Water
- District Energy, Decentralised Energy etc.
- Sufficiently Clean Rivers and Drains- River Restoration

Preferred Key Performance Indicators

- Comprehensive & Efficient Public Transport System
- Sufficiently Clean Rivers and Drains
- Garden City /Pars – green space and comfortable connecting footpaths
  - Ecological Benefits – shading, intercepting pollutants,, attenuating noise, absorbing CO, ,emitting O_2, pedestrian routes, green corridor
  - Grenn Corridor
- Population Growth

Preferred Key Performance Indicators

- % of city population served by wastewater
- Emission of Greenhouse Gases
- Noise level
- Protected areas as % of developed areas
- Solid waste generation per capita
- Travel time
- Transport modes
- Domestic Water Consumption per capita
- Number of days when urban air quality index reaches Class 2 or better
- Proportion of urban drinking water supply that is safe to drink according to the national standards
- Per capita CO_2 emissions

Preferred Key Performance Indicators

- Proportion of centralized sewage treatment
- Per capita park and green areas
- Share of renewable energy sources in total energy use
- Areas covered with public transportation
- Enforcement of local Environmental Plans
- Environmental and Ecological budget ration to total budget
- Quantity of municipal solid waste
- Total remaining landfill capacity
- Proportion of natural resources

Practical & Effective Sustainability Practices

- Comprehensive & Efficient Public Transport System

Going Ahead

- Sustainability is a broad topic. What needs to be developed:
  - Practical KPIs within ASEAN nations
  - Goals for future based model cities
- Analyze and review other Sustainability initiatives within ASEAN nations to work together and complement where necessary to avoid duplication