



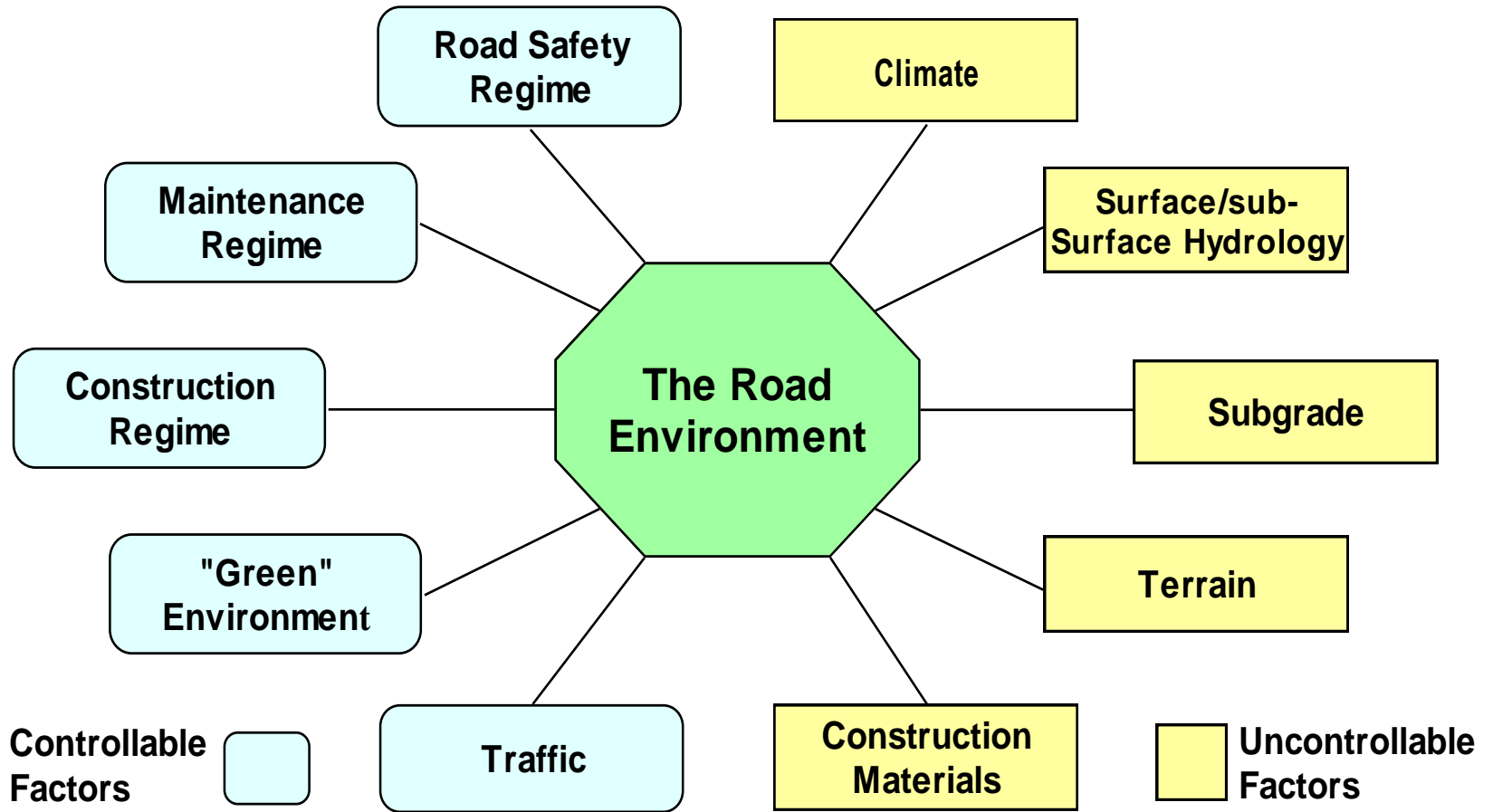
## **5th Africa Transportation Technology Transfer (T2) Conference Arusha, Tanzania, 21-25 November 2011**

# **Design of Low Volume Roads**

**AFCAP Workshop on Rural Accessibility and Mobility  
Feedback from Site Visit**

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# Road Environment Factors



**Pavement design process must be fully responsive to the road environment**

# Issues for Discussion

- **Alignment**

- horizontal
- vertical

- **Road Safety**

- urban and peri-urban areas (x-section, etc)
- rural areas
- road width – curves, straights, 3m? 4m?
- passing bays

- **Environmental issues**

# Issues for Discussion

- **Social issues**

- Access to adjacent property

- **Traffic over design life**

- Motorised, non-motorised (over design life)

- **Pavement design**

- Efficacy of design (multi-layered, traditional approach)

- **Materials**

- lab testing (BS methods)
- wearing course gravel
- pavement layers

# Issues for Discussion

## ● Surfacing options

- Rationale for selection (gradient related)
- Use of other options (e.g. cobblestones, armouring)

## ● Materials

- lab testing (BS methods, adequacy, utilisation)
- wearing course gravel assessment
- pavement layer assessment

## ➤ Drainage

- drainage rating
- lined drains, unlined drains, scour checks
- turnouts (direction, grade)

# Issues for Discussion

## ● Construction

- Interface between flexible and rigid
- Use of other options (e.g. cobblestones)

# Outline of Presentation

**PTPCE**

**BANQUE MONDIALE**

**INFRASTRUCTURE ENTRETENUE=INFRASTRUCTURE DURABLE**

**INYUBAKWA IBUNGABUNZWE = INYUBAKWA IRAMBA**



**Typical cobblestone surfacing on urban collector road in Bujumbura**





**Urban road surfacing: AC on urban arterials and cobblestone on urban collectors**



**Close up of cobblestone surfacing**



**Cobblestone speed reduction measure (road hump)**



**AC-cobblestone joint**