

The background of the slide is a grayscale aerial photograph of a city, showing a dense grid of streets and buildings. The text is overlaid on this map.

**SAICE**

**BRIDGING THE GAP**

**SYMPOSIUM ON NATIONAL GUIDELINES AND REGULATIONS  
FOR ROAD ACCESS MANAGEMENT IN SOUTH AFRICA**

# **URBAN DESIGN AND PLANNING CONSIDERATIONS**

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**our aim is to achieve ...**

a sustainable  
city ...

which balances  
land development  
and  
transportation  
planning



**... through integrated planning and design**

## realities of the SA context ...

- a growing informal economic sector but high unemployment and low economic growth
- large numbers of commuters utilizing public transport
- a growing demand for new housing, shops, facilities and employment



**... which create an increasing demand for movement and access**



## SA cities experience ...

- serious peak hour congestion on major roads
- high accident rates – especially pedestrians (more than 40%)
- long daily commuting distances
- over 70% of South Africans don't own cars (30 million people, 1996 census)



**... which result in high costs to individuals and communities**

## SA cities have ...

- inherited an uneconomical and inefficient structure
- limited amenity and opportunity for the poor
- a structure that is inflexible to change



**... thus a need for appropriate solutions**

## SA cities are difficult places to live because ...

- major roads create barriers to pedestrians and divide communities
- the poor generally live far from opportunities
- *"if cities don't deal constructively with the poor, the poor will deal destructively with the city"*  
(McNamara)



... so the structure of the city must change

## a sustainable city should ...

- be integrated with few dividing barriers
- provide good access for pedestrians, cyclists and cars
- minimise congestion on routes that connect places across long distances
- use “congestion” to reinforce economic activity where appropriate



... therefore



## recognise complexity to ensure flexibility ...

- "A city is not a tree ... The lack of structural complexity ... cripples the conception of the city."

(Christopher Alexander 1972)

*"It is vital that we discover the properties of old towns which gave them life and get it back into our artificial cities, but we cannot do this merely by remaking English Villages, Italian Piazzas, and Grand Central Station."*





## **a sustainable city needs ...**

- **a 'flexible' city structure  
(balance "open" and "closed" networks)**
- **a mixed range of land uses ...**
- **located in appropriate positions ...**
- **for exposure and accessibility**

**... this can be achieved through integrated planning and development**

## principles of integrated planning and development ...

- integration of social, economic, institutional, environmental and physical aspects
- encouraging diverse and mixed land use
- providing residential and employment opportunities in close proximity
- optimal utilisation of resources (including land, roads and transport facilities)



**Development Facilitation Act (67/95),**

**Western Cape Planning and Development Act (7/99),**

**White Paper on Spatial Planning and Land Use Management,**

**Land Use Bill (03/2001),**

**Local Govt Municipal Systems Act (32/00)**

## other principles include ...

- discouraging urban sprawl and ensuring more “compact cities”
- correct historically distorted spatial patterns
- ensuring environmentally sustainable development.
- adequate participation of affected communities



... therefore



## **spatial planning, land use management and land development must be ...**

- **sustainable**
  - protection of natural and cultural resources
- **equal**
  - no unfair allocation of resources
  - disadvantaged communities to benefit and share opportunities
- **efficient**
  - minimum consumption of resources
  - compact settlements
- **integrated**
  - functionality efficient settlements
- **fair**
  - good governance, democratic, participatory

## 'moving SA' directives ...

- densification through land-use mechanisms
- urban corridor model as the linchpin of urban strategy



**... which requires restructuring of SA cities**

## important concepts underpinning the corridor model ...

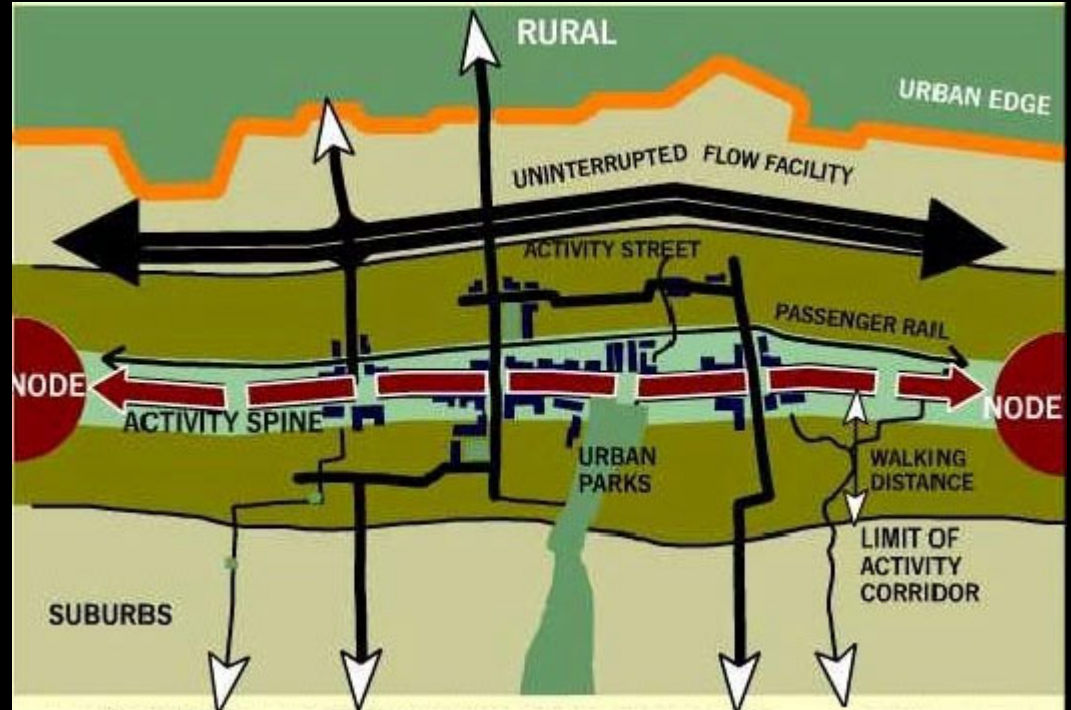
- **growth management approach** : guide, control, mitigate. partnerships, continuing process of change
- **the "compact city"** : minimise sprawl, urban edge, intensive development corridors
- **public transport oriented development** : walkable neighbourhoods
- **densification** : economic and transport thresholds, range of opportunities
- **mixed land-use** : especially concentrated around public transport interchanges
- **design for multiple modes of movement** : especially walking and cycling

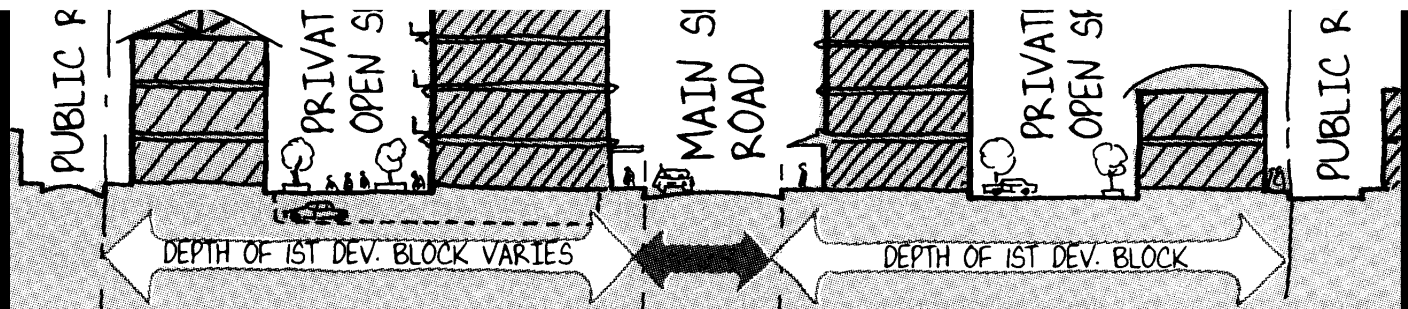
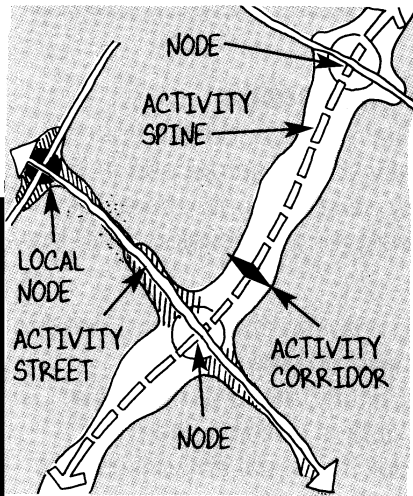
**... which result in a particular city structure**



## a development corridor is ...

- a regional / metropolitan scale, linear zone connecting economic activity centres (nodes)
- contains more than one individual linear movement element
- concentrates mixed land-use and high density living
- width varies but is based on walking distance
- transport and land-use supports economic opportunity
- various typologies  
(Dept of Transport, 2001)





## activity nodes ...

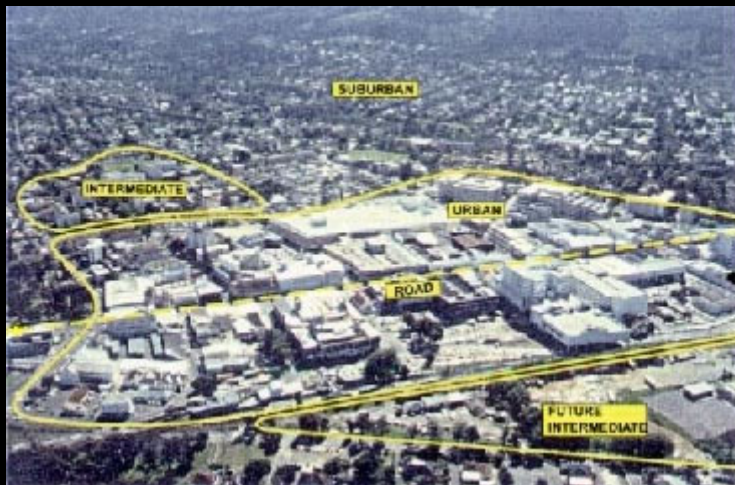
- are places of highest accessibility and activity where public and private investment concentrate
- are 'magnets' which stimulate movement through development corridors
- can be of metropolitan, regional or local significance



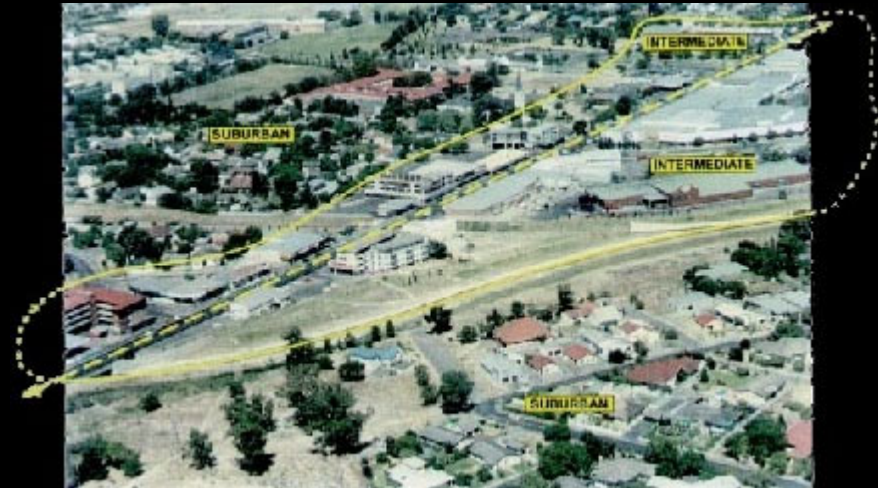


## roadside development environments ...

- support development objectives whilst maintaining operational and safety standards
- urban and rural form, density and transport system are interdependent
- road access guidelines should be sympathetic to various environments



urban environment



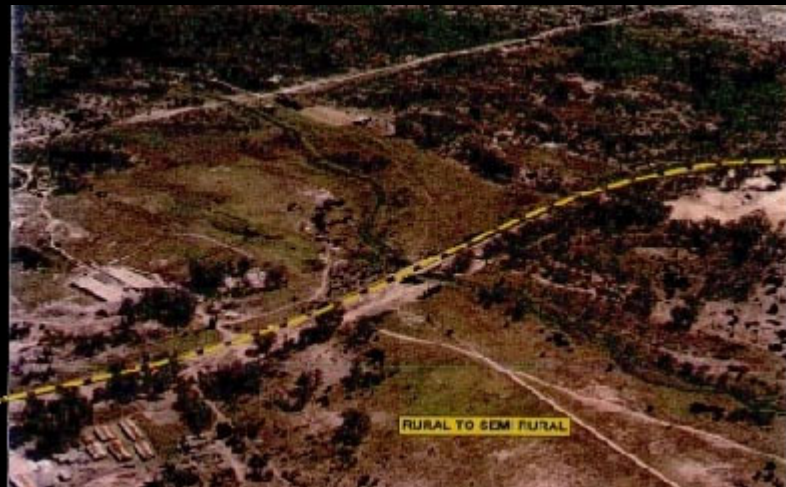
intermediate environment



- suburban environment
- primarily residential land use



- semi-rural environment
- typically at edge of urbanised area

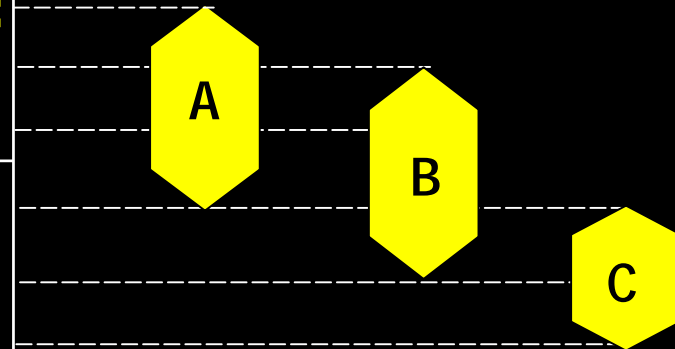


- rural environment
- natural, extensive and intensive agricultural areas

## corridors and the functional road hierarchy ...

class

1	Freeways, expressways, trunk roads	National RAM Guidelines
2	Arterials (major, primary, principal)	
3	Minor arterial, major collector	
4	Minor collector, local distributor	Local Areas
5	Minor and local streets	

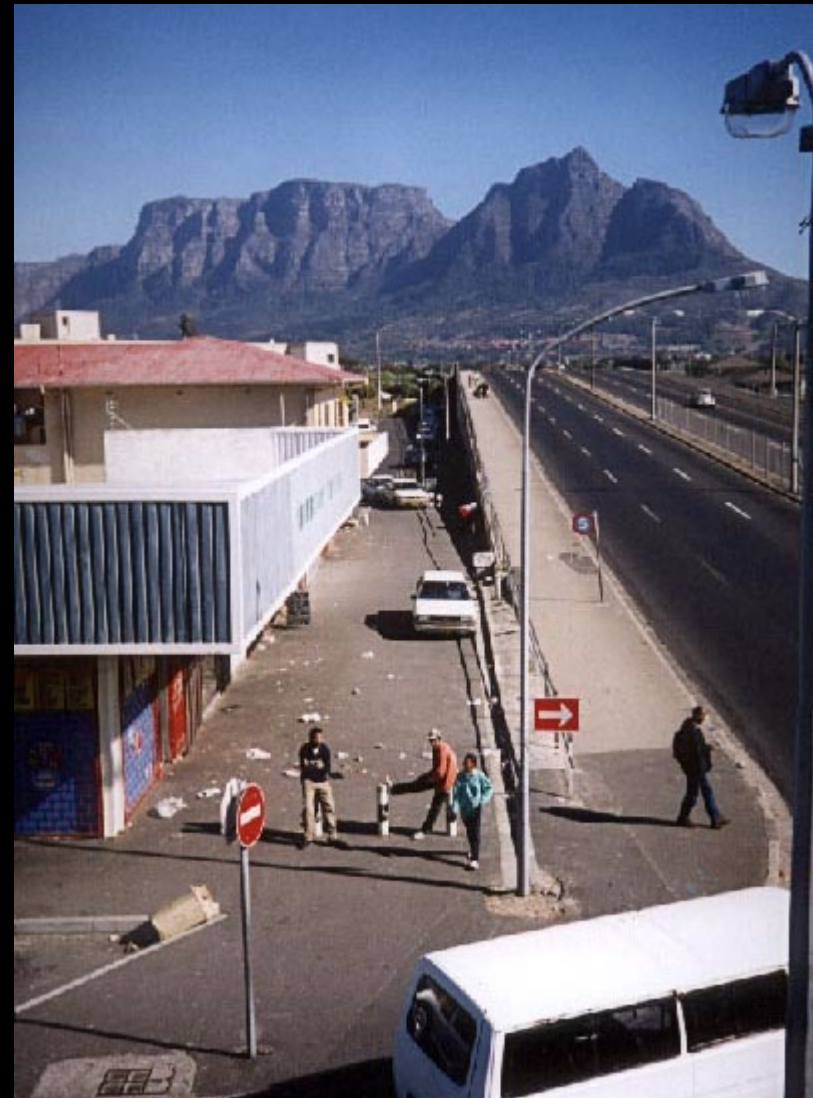


- A Metropolitan Activity Spine**
- B Sub-metropolitan Activity Street**
- C Local Activity Street**



## urban design issues related to access management on class 2 and 3 arterials ...

- overcoming and accommodating roads that divide communities
  - accommodate pedestrians and cyclists on bridges and other structural linkages
  - recognise the need for at-grade pedestrian solutions
  - locate land-uses to avoid desire for pedestrians to cross





## urban design issues related to access management on class 2 and 3 arterials ...

- designing a supporting road network and accommodating activities and access requirements along arterials



## urban design issues related to access management on class 2 and 3 arterials ...

- creating a sense of place
  - design roads with a pleasant and distinctive character
  - design arterial routes to orientate and provide landmarks
  - the importance of landscape



... (principles and criteria in working paper)

## urban design issues related to access management on class 2 and 3 arterials ...

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... (principles and criteria in working paper)

## some concerns regarding access management are ...

- can access management find the balance between urban development objectives and transport efficiency?
- how to apportion the costs of access management and associated design features?
- how to make access management relevant in existing areas?
- can access management be incrementally applied?
- how will access management affect property values?
- who will implement the RAM guidelines?
- how to ensure integrated decision making to facilitate sustainable development?



## in conclusion ...

- access management provides a valuable opportunity for integrated planning and design
- it provides a tool to restructure the city to become more sustainable
- access management must be applied through a process of integrated planning and design for development



