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Issues of alignment: linking transport planning to integrated development planning

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Scoping of land use transport research priorities

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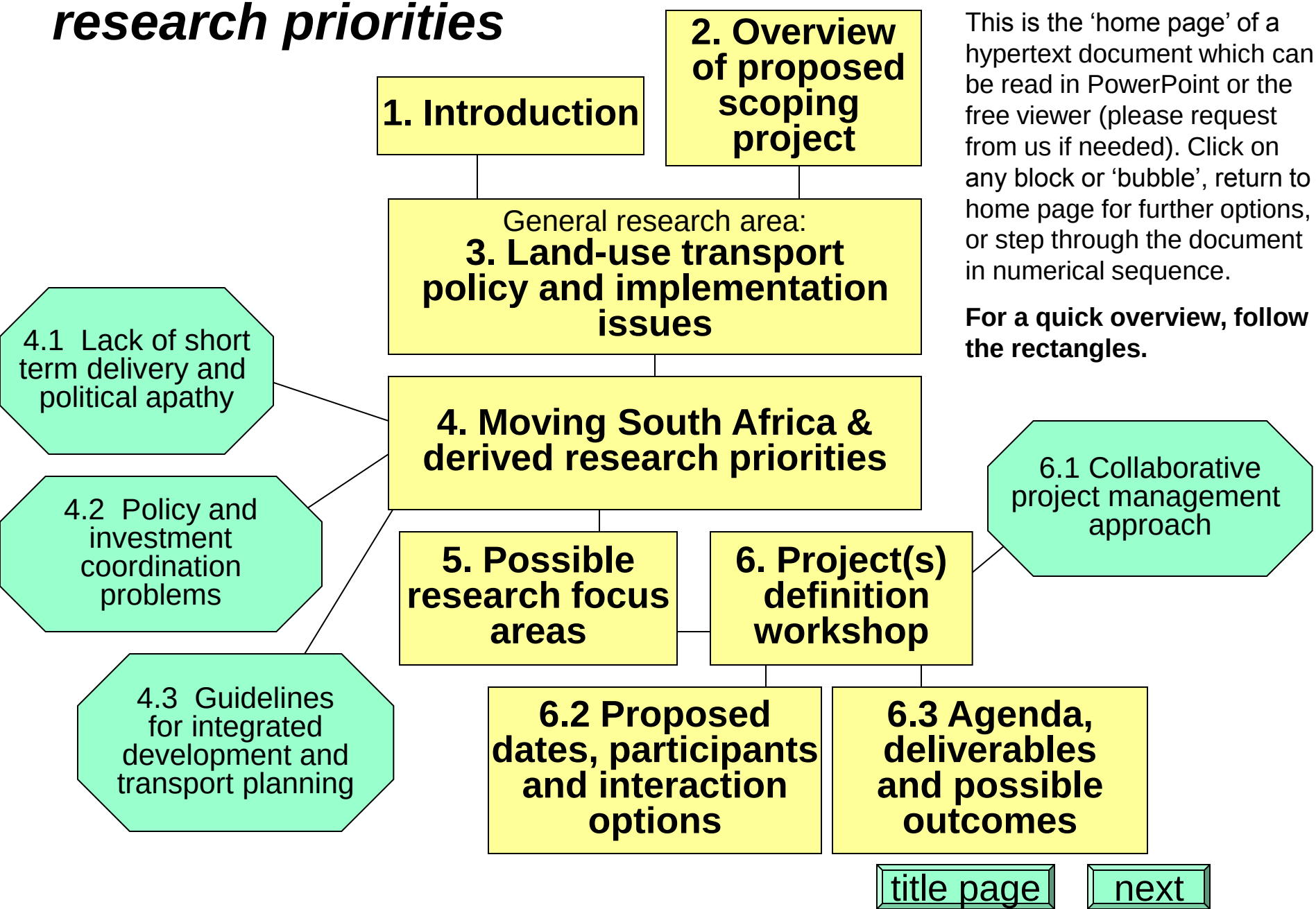
September 2000

Scoping of land use transport research priorities



This is the 'home page' of a hypertext document which can be read in PowerPoint or the free viewer (please request from us if needed). Click on any block or 'bubble', return to home page for further options, or step through the document in numerical sequence.

For a quick overview, follow the rectangles.

1. Introduction

This document provides an overview of a proposed project which could be the first of a **collaborative, phased set of projects on land use transport policy and implementation issues.** This proposed project is a "**scoping project"** which is aimed at clarifying some of the research and development work needed to, in the first instance, refine the land use transport aspects of the Moving South Africa transport strategy as it moves into its implementation phase.

The scoping project could be a joint initiative by the NDoT and CSIR Transportek. The NDoT's interest in the project is primarily related to the above policy and strategy implementation issues, whereas CSIR Transportek's motivation is mainly to improve the relevance and wider implementation of its research and development (R & D) work in this field. Most of its past work has been funded internally and by the NDoT, but provincial, metropolitan and local councils could be playing an increasing role.

Besides CSIR Transportek's internal investment allocation process and the ongoing interaction about research priorities between CSIR Transportek and the NDoT, it is felt that there are various other stakeholders that could assist these two organisations to define and prioritise relevant projects, as well as identify opportunities for collaboration.

Therefore, the aims of the scoping project are:

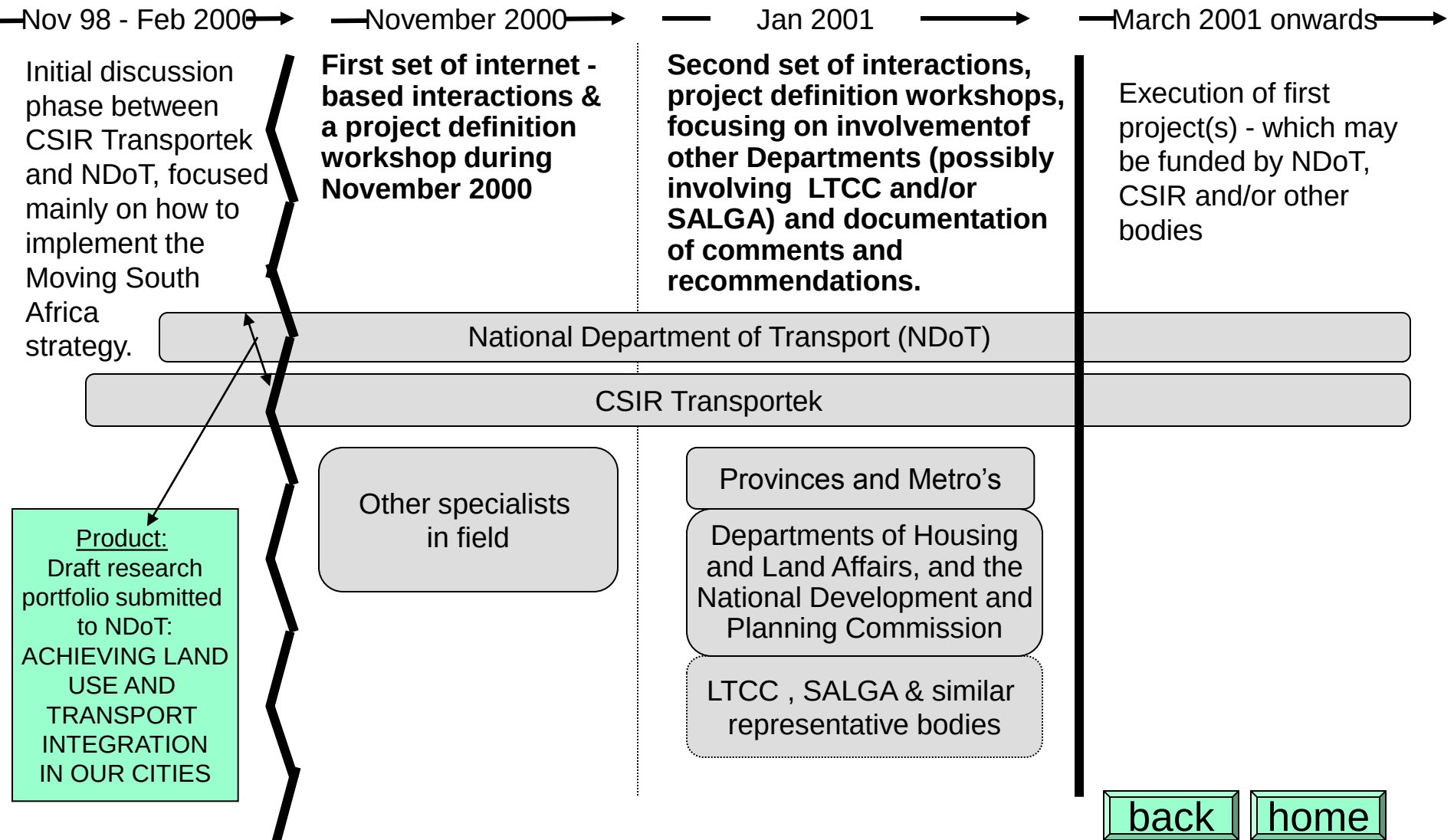
1. Obtain an overview of different stakeholder perspectives on key land use transport issues and derived research needs.

2. Obtain comments and recommendations on the specific land use transport R&D focus areas in support of Moving South Africa, as identified by NDOT and CSIR Transportek.

3. Identify collaboration and funding opportunities in the different focus areas.

2. Overview of proposed scoping project

The first step in the process outlined below has already been taken. The second step is to undertake two series of interactions via the internet and at project definition workshops. The intended outcome is to start the new financial year with a clearly defined **collaborative, phased set of projects on integrated land-use transport planning approaches, procedures and support systems** which may be funded by the NDoT, CSIR, SALGA and/or other bodies.



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General research area:

3. Land use transport policy and Implementation issues

According to the ***Moving South Africa project***, - which sets out to frame an ongoing strategic debate around the transport strategy for South Africa and, ultimately, to align all stakeholders behind this strategy as it moves into implementation - there are four significant strategic challenges facing the current (urban land use transport) system:

•Lack of affordable basic access for the 2,8 million “stranded” passengers;

•Ineffective public transport with high journey times and high costs;

•Increasing car dependence;

•Poor spatial planning.

Various attempts at integrated or co-ordinate planning are being advocated through legislation, for instance the Development Facilitation Act, the Local Government Transition Act and the Land Transport Bill.

In most of these, the issues relating to integrated planning and specifically the relationship between transportation and land-use planning and implementation have been identified, but the **practical approaches, procedures and support systems** to ensure effective integration and implementation is still lacking at all levels.

The relationship between transportation and land-use planning is highly complex and so is integrated management of the land-use and transport system. Roads are more than channels of movement for vehicles and land use is more than just zoning and development control: both are interwoven with the social, political, economic and physical environments. Various relationships exist and they operate at different levels (national, regional and local). Integrated management is caught up in a complex web of stakeholders with different agendas, inter-linked organisations with different objectives, and influenced by community values and political perceptions.

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4. Moving South Africa & derived research priorities

One of the key priorities identified in terms of the "Moving South Africa" project (MSA) is to restructure South African cities in terms of the ***corridor city*** concept. According to MSA "The focus of activity in the short term, should be on reigning in the centrifugal tendencies of location decisions. It is essential to prevent the further dispersion of development, and to create incentives for any decentralisation away from the CBD to occur within a corridor context."

To support the above, a comprehensive ***research portfolio*** was compiled by Transportek in November 1998 and submitted to the NDOT. The proposed short term research and development foci are summarised below. The present discussion document mainly relates to Areas D,E and F, but the specific focus has changed, and other issues have also come to the fore.

- **A:** investigate the current systems for acquiring land-use ***development rights*** in urban areas, and the current pattern and level of ***public investment*** in the urban areas in relation to identified urban corridors
- **B:** investigate and understand the ***key trends and driving forces in the property development industry***, the *investment and location criteria* for the various property development sub-sectors and the *incentives and policy instruments* that would discourage dispersal and attract property development to identified corridors
- **C:** specify appropriate ***KPIs for urban development*** in support of the the "Moving South Africa" strategy and establish a strategic level ***KPI database*** for all the major urban areas in South Africa

- **D:** investigate appropriate **approaches** for integrated urban (land use- transport) management
- **E:** investigate the practical *implications of the* ***"Integrated Development Planning" (IDP) process*** for transport planning
- **F:** develop a "***toolkit" of decision support systems*** for managers involved in integrated urban management

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4.1 Lack of short term delivery and political apathy

There needs to be a sober assessment of the ability of "technicians" such as urban planners, researchers, and government officials to overcome **public/political apathy about land use transport issues** and achieve the lofty aims that are stated in the various framework documents, white papers, bills and acts.

Given the current slow, insufficient growth in formal sector housing and job opportunities, the increasing unemployment and associated petty crime,as well as the virtual explosion in violent, organised crime, it could appear that there are a wide range of much more pressing urban problems which are claiming the attention of local communities, politicians and urban managers.

The emerging consensus on the need for "corridor cities" and related policies such as "fundamental public transport restructuring", is still only an emerging consensus among a small group of "progressive" planners, transport engineers, and government officials. By implication, a widely shared political will is lacking; or still needs to be articulated.

There are increasing criticisms - even from specialists working in the field of land use transport planning - that too much effort is being devoted to *illusory integrated land use transport plans* and to long-term planning in general.

On the other hand, *current trends* such as continuing security-driven urban sprawl and automobile dependence are almost certainly likely to reduce accessibility and equality of access, and - eventually - the wealth generating capacity of our cities.

Two (partly contradictory) issues need to be addressed to resolve this dilemma:

- **more attention should be given to *short term* delivery, effective law enforcement, and associated *operational* land use transport management issues;**

- **the ultimate consequences of current trends need to be quantified and illustrated in a much more "graphic" way that will grab the attention the general public and generate the require political will for fundamental structural change**.

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4.2 Policy and investment coordination problems

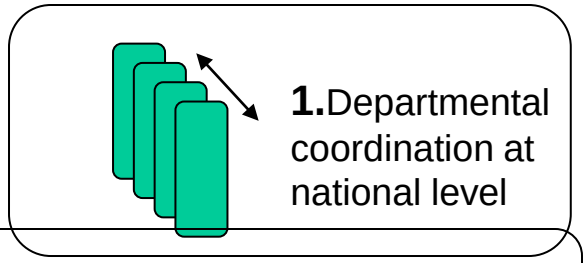
Given that the policy context is crowded with competing or overlapping policies and strategies - of which only a small proportion stand any chance of being fully implemented - the need for **improved coordination of policies and investment decisions** is a major issue at all levels.

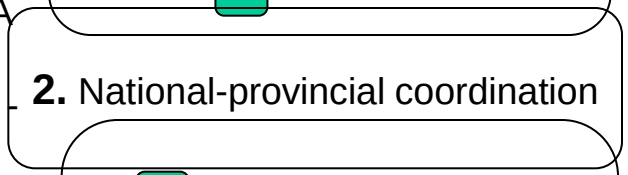
Level 1. There is an obvious need to achieve better inter-departmental coordination between major spatial, economic and transport policies and development initiatives at a national level. One posssibilty is to extend the national spatial guidelines initiative of the President's Office, revisit and find common ground between the national Urban Strategy, theSDIs, and the MSA spatial policy recommendations.

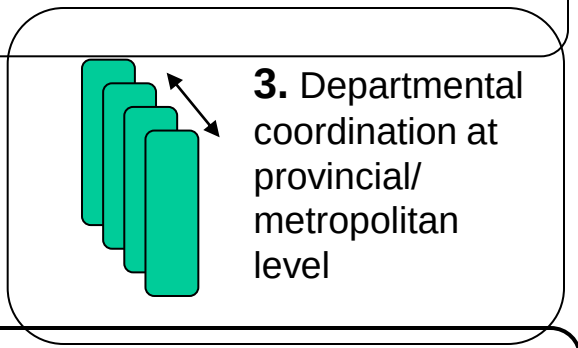
Level 2. At this level, COLTO and similar structures have a major role to play - some organisational issues however still need to be resolved.

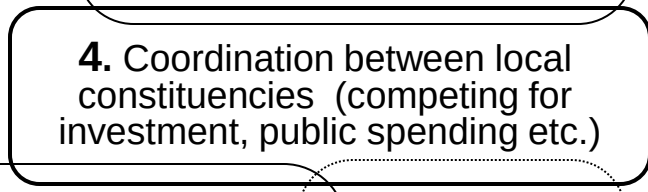
3 (and 5) Legislation to restructure and create one-tier metropolitan structures could mean that Coordination Problems 3,4, and 5 all become departmental coordination problems at the metropolitan level (i.e.Level 3 problems)

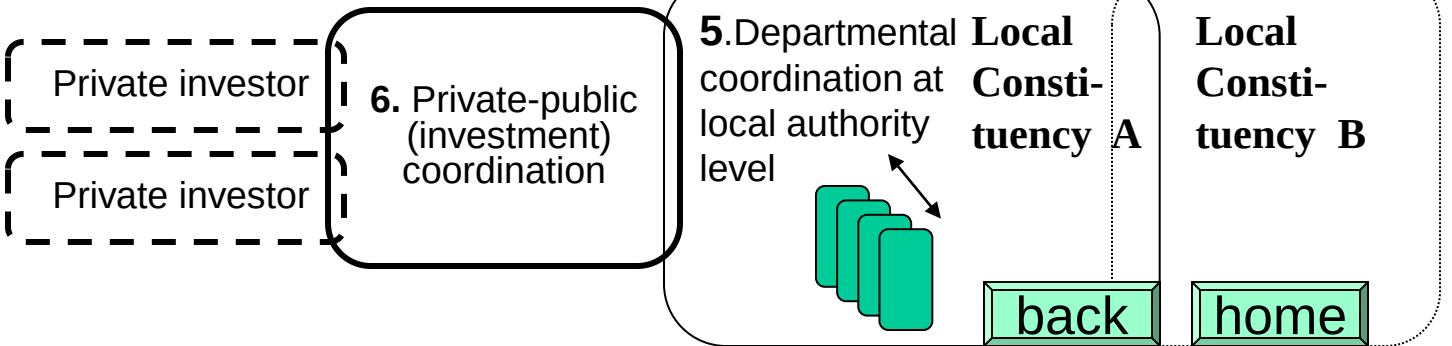
4 and 6. Most departmental coordination problems could be partly resolved through more effective application of IDP procedures (e.g. resulting in coordinated three-year investment plans). However, a number of (spatial) conflicts and (investment) coordination problems will remain between competing local constituencies and private sector interests within a given functional or metropolitan region.











4.2 Policy and investment coordination problems (continued)

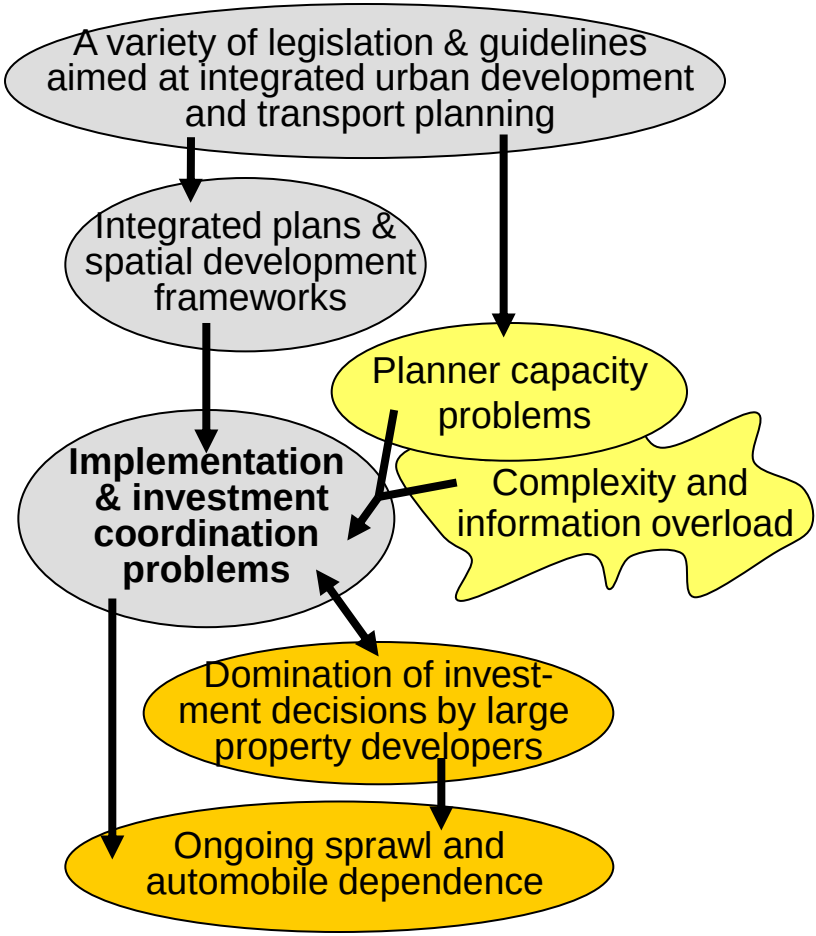
POWER OF "MEGA-PROJECT DEVELOPERS"

Most decisions about the location, composition and scale of urban development projects are driven by the profit considerations of large property developers, and few local authorities have the means (or the will) to impose any penalties on proposed "maga projects" that are not consistent with their spatial development frameworks.

DISPERSAL OF MAJOR TRAFFIC GENERATORS

Although certain major new office and commercial nodes are developed in and around established nodes that are well-served by public transport (e.g. the redevelopment of Hatfield in Pretoria and Claremont in Cape Town), most large-scale projects of this type tend to occur on large 'greenfield' sites that not on the existing primary public transport network. Over time, the network may adjust or feeder services may be introduced to serve these areas, but this only serves to further complicate and dissipate public transport movements, making it difficult to achieve the necessary economies of scale and service level frequencies. Faced with a choice between a car or lift club and a relatively infrequent and expensive public transport service requiring the user to make one or more transfers, it is to be expected that most commuters or shoppers then tend choose the former mode of transport as soon as they can afford it.

In this way, the vicious cycle of increasing automobile-dependency and public transport deterioration is only further entrenched.



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4.3(a) Guidelines for integrated development planning

Need to link these

4.3(b) Guidelines for integrated transport planning

Under the theme **"one process, many products**", guidelines for preparing an integrated development plan (IDP) has been prepared by the Department of Constitutional Development, the CSIR and GTZ. It provides municipalities with a single, integrated planning process to satisfy the requirements of different laws, Acts and Bills, and to produce several products or plans.

The contents of a water services plan can, for example, be extracted from the integrated development planning process, so that local authorities are able to fulfil the requirements of the Department of Water Affairs and Forestry without having to embark on a separate planning process.

Two of the key products in the IDP process are: a) a **spatial development framework** and b) **land development objectives** (LDOs). Some of the required components of an integrated transport plan could (theoretically) be extracted from the spatial development framework and/or the LDOs.

?

A number of guidelines have been drawn up and approved by COLTO (Committee of Land Transport Officials) to ensure that the provinces execute their public transport management responsibilities and allocate tenders for public transport service contracts in a consistent and accountable manner.

A further set of guidelines ("the TPG series") are being prepared to ensure better integration between those processes (data collection, needs assessment, land use prediction, travel demand forecasting, etc) that are common to all of the following functional or specialised transport plans:

- public transport plan
- transport infrastructure plan
- travel demand management plan

The Gauteng Province has undertaken the development of Guidelines on Spatial Planning (TPG 5), aimed at "integrating **the spatial framework for transport and land use** with the LDOs for Transport Authorities". [*The exact links with the IDP's spatial framework is however not clear*]

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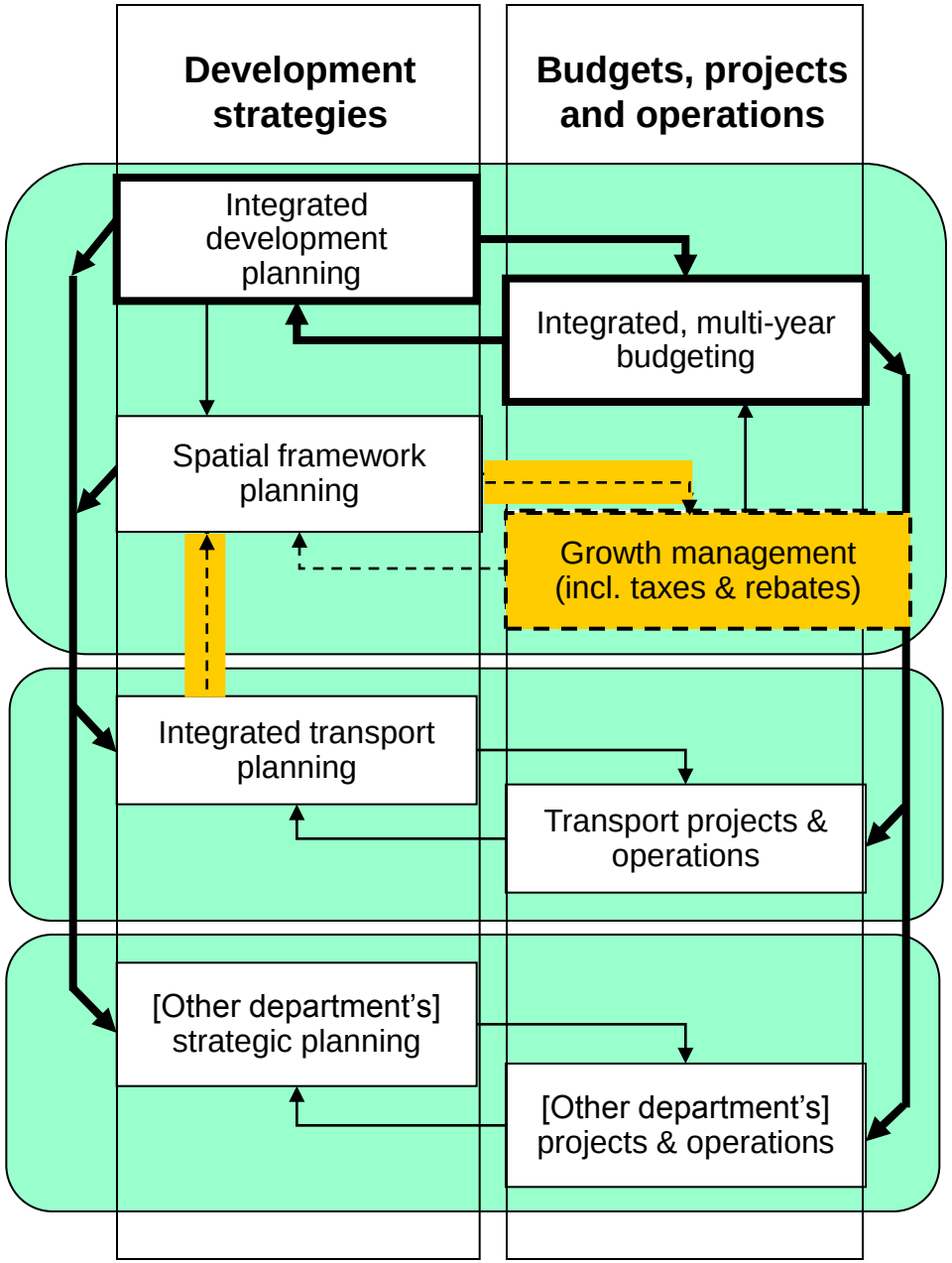
4.3(c) Guidelines for integrated development *and* transport planning

The advantage of the IDP process is that a much closer link is established between the development strategies of local government, and the budgets, project and operations that are required to implement these strategies. The emphasis on spatial framework planning can also ensure that there is much better spatial integration between the investment plans and projects of different departments.

There however seems to serious gap with respect to the (operational) management of urban growth or spatial development processes (*growth management* in the diagram).

With reference to the issues discussed on the previous page, **urgent attention also needs to be given to the "feedback link" from integrated transport planning to spatial framework planning…..**

….which, in turn, should influence how the growth and location of employment-intensive land uses (in particular), are managed.



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5. Possible research focus areas

SUMMMARY OF KEY PROBLEMS:

•POLITICALLY CORRECT, BUT UNACHIEVABLE SPATIAL DEVELOPMENT GOALS AND PLANS
There is a huge gap between *politically correct* land use-transport plans or urban restructuring interventions (such as the various urban node and corridor initiatives), and the *politically achievable* outcomes, given the prevailing political apathy and the domination of the urban land use and investment decision process by market forces, the profit considerations of large property developers, and the NIMBY factor*;*

•INADEQUATE IMPLEMENTATION SUPPORT SYSTEMS
Even if plans were more realistic, there will still be inadequate policy instruments and information support systems to manage and facilitate development in support of these plans*.*

•LAME, UNSPECIFIC TRANSPORT PLANNING CONTRIBUTIONS to integrated development or spatial planning processes, manifested by vague statements about "need to consider land use-transport interactions"

Proposed research focus area 1:
Scenario-based debates and consensus-building with multi-media tools*.* The use of "what-if models", multi-media tools, the internet and TV to explore and illustrate the consequences of trend scenarios in a "graphic" way, and build consensus around a *"progressive middle road"* between current trends and the politically correct future vision. MOTIVATION

Proposed research focus area 2:
Decision Support Systems and Policy Instruments to explore and manage urban development . A "toolkit" of decision support systems and poicy instruments which can be used both at the strategic/ political level (see above) and the operational level (see below). MOTIVATION

Proposed research focus area 3:
Demarcation of land use growth policy zones and incentives from a transport/ accessibility perspective. As in the case of the Dutch ABC land management system, this can provide the basis for clearly communicating to land use developers and the general public where development will be facilitated (e.g. zones where positive incentives such as additional housing subsidies are provided), or discouraged (e.g. zones where punitive development fees are applied) and what the applicable land use controls or impact assessment procedures are likely to be. MOTIVATION

(CONTINUED)

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OTHER RESEARCH FOCUS AREAS
(to be further elaborated and motivated)

POOR INVESTMENT COORDINATION
Most services such as electricity and water connections, education, and health facilities are still being planned in isolation of each other and in reaction to demands for services exactly where people are currently settled. This sometimes creates the problem where one department may be providing services (e.g. water), whereas another department is rationalizing and cutting back its services (e.g. subsidised transport). Another consequence is that the apartheid settlement patterns are simply being reinforced, which is unlikely to be either financially or environmentally sustainable.

→

Research focus area 4:
Spatial investment coordination and prioritisation. How to inform and/or supplement the national spatial guidelines of the President's Office, possibly building on the typology of magisterial districts and the multi-criteria analysis developed as part of a recent NDOT project (see separate file / e-mail: "Typology Project")

OVERLAPPING LEGISLATIVE AND REGULATORY REQUIREMENTS FOR MORE INTEGRATED PLANNING … IDP legislation…..ITP Guidelines… …Integrated Environmental Assessment… National Spatial Guidelines…possible guidelines on integrated growth management…

…causing increasing complexity, information overload and planner capacity problems, (especially since integrated planning and management is - by its very nature - a complex, easily politicised process involving a complicated web of stakeholders with different agendas, values and perceptions)

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Research focus area 5:
Clarification of linkages between Integrated Development Planning (IDP), other integrated planning and assessment requirements, and integrated transport planning (ITP)

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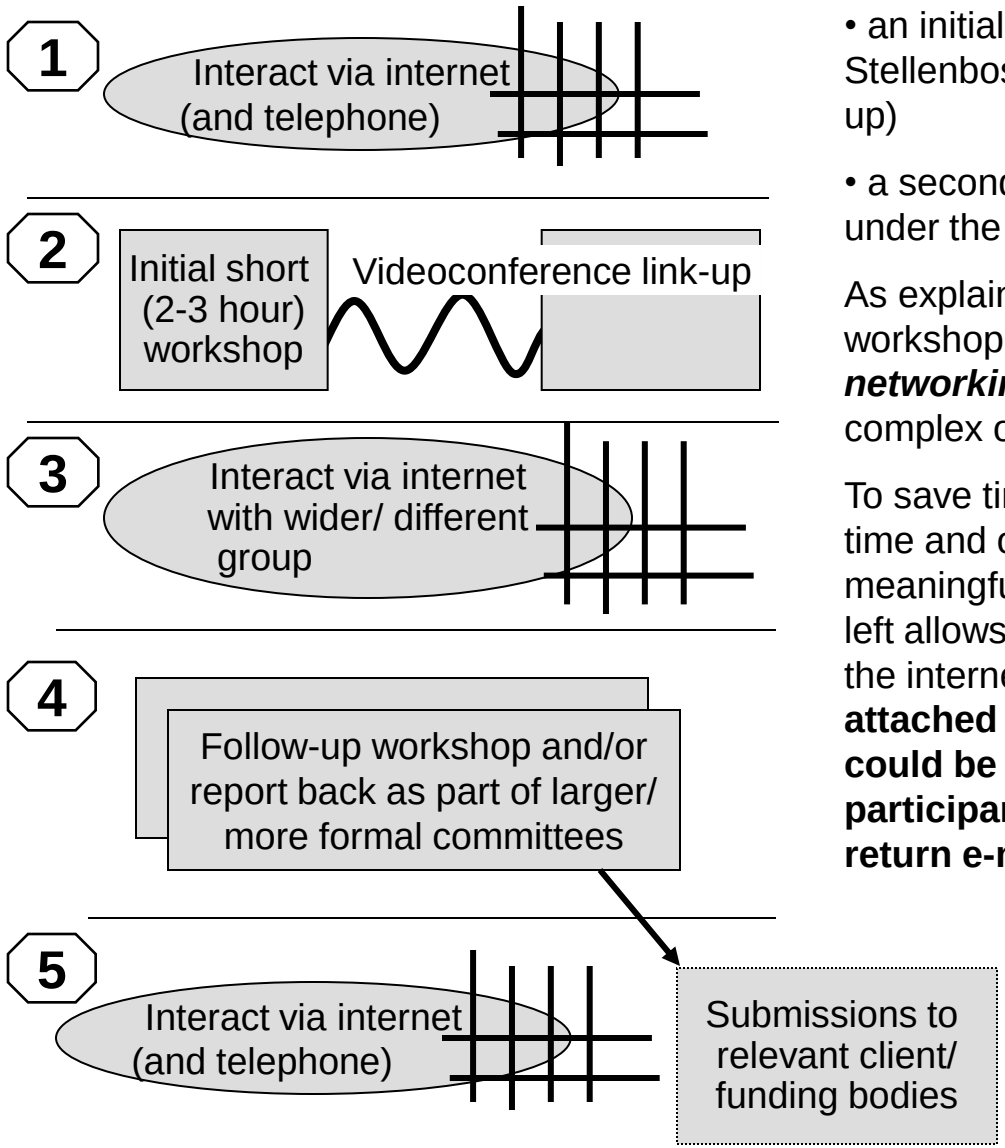
6. Project definition workshop(s)



The ***proposed process outlined earlier***, makes provision for involving stakeholders at two possible project definition / planning workshops:

• an initial or first workshop in April 1998 convened in Stellenbosch and Pretoria (with video-conference link up)

• a second workshop in May 2000, possibly convened under the auspices of LTCC

As explained on the next page, a project definition workshop is a key step in the ***recommended networking and project management approach*** for complex or fuzzy (research and development) problems.

To save time and costs, whilst also allowing sufficient time and opportunity for stakeholders to provide meaningful inputs, the proposed process outlined on the left allows for considerable interaction or networking via the internet before and after the workshops. **The attached comment templates (not included yet) could be used for initial comments/ interactions, or participants could simply provide comments by return e-mail.**

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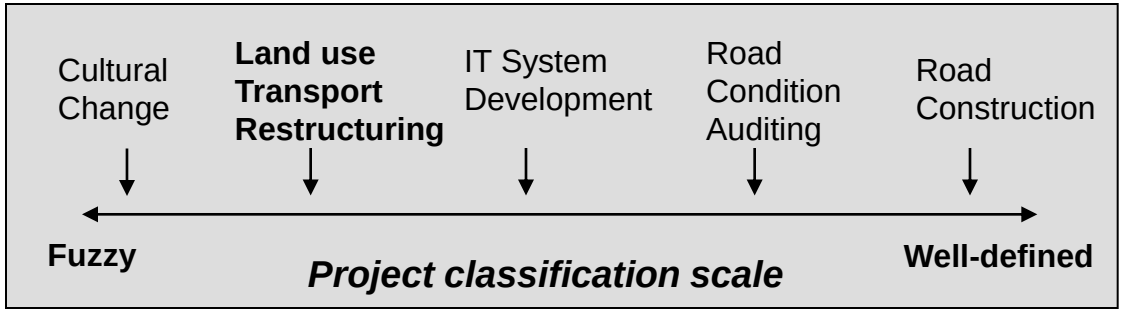
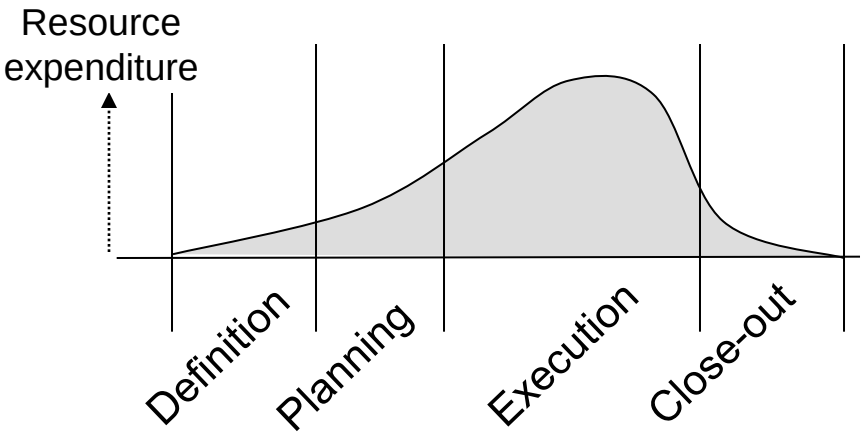
6.1 Collaborative project management approach

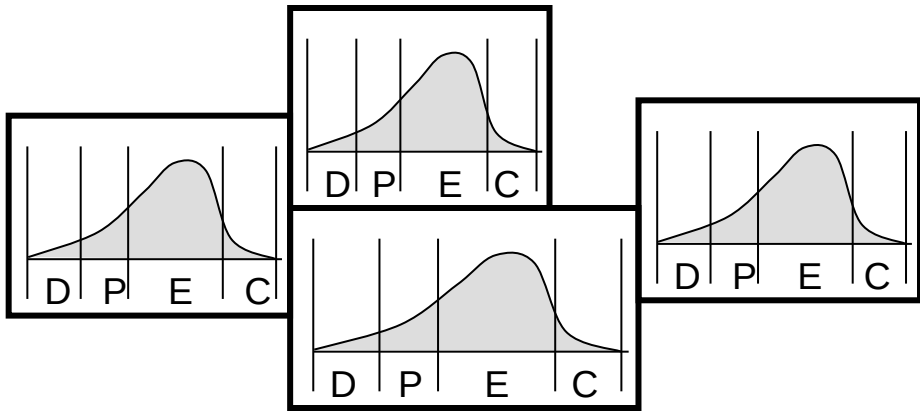


The need to define and manage most research and development projects in the field of integrated land-use transport planning as **collaborative, phased projects,** stems from the fuzzy, complex nature of the issues involved. According to the ODPM project management approach (DENZO Management Systems) such projects should be "progressively elaborated" during fairly extensive **definition** and **planning** stages (before the actual **execution** stage of the project). Besides the client organisations (existing or potential clients) various project stakeholders should be involved during these stages.



Project definition and planning workshop(s) can be very effective, but interaction through the internet (virtual workshops) should also be used.

With complex subject areas it is usually not possible to foresee and clearly specify all deliverables up-front, even if high-level stakeholder involvement is achieved. Hence a **phased approach** - where the first phase deliverable could simply be a scope analysis - is recommended.



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6.2 Proposed dates, participants and interaction options

1) Review the present documentation / slide show and interact via the internet (see attached comment templates)

2) Hold a 2-3 hour project definition workshop on **[date in April still to be determined]** at CSIR Stellenbosch with video-conference link to CSIR Pretoria.

3) Summarise and interpret results as part of second-round interaction via the internet

4) Follow up with second workshop in May

First project definition workshop

Second project definition / planning workshop involving other departments, metros, provinces and/or LTCC and SALGA

DoT: **Andrew Shaw and other NDOT personnel**

CSIR Transportek/UP project team: **Andries Naude, Lizet Meyer, Mark Oranje, Brian Marrian (and Emil Schnackenberg, Cheri Green,Willem Badenhorst, Ntsotiseng Morojele)**

Other specialists in Land Use Transport:
Roger Behrens (UPRU);
Kaba Kabagama (Gautrans);
Maria Coetzee (CSIR Boutek);
Bill Cameron (TRC Africa);
Ann Bernstein (CDE);
Others.

Department of Land Affairs: **Two nominees**
Department of Housing: **Two nominees**

LTCCTransport Planning Sub-Committee & SALGA: **Selected members**

Prov. and Metro's: **Thami Manyathi, Peter Clark, other nominees from Metros and provinces**

November 2000 → Jan 2001 →

6.3 Agenda, deliverables and possible outcomes

AGENDA (OF FIRST WORKSHOP):

1. Brief presentation and clarification of main points in the current set of slides (E-mailed beforehand to all participants).

2. Presentation and reply by Andrew Shaw (representing NDOT)

3. Replies and comments on key land use transport planning issues, research needs and the specific R&D foci (5-10 minute mini-presentations by participants who have volunteered or accepted an invitation beforehand).

4. General discussion.

5. Identification of project and collaboration options

6. Way forward.

DELIVERABLES:

•**Overview of different stakeholder perspectives on key land use transport issues and derived research needs**.

•**Comments and recommendations on the specific R&D focus areas identified by CSIR Transportek and NDOT**

•**Agreements on projects and/or other follow-up interactions via the Internet and/or workshops.**

Effective follow-up and cost-effective research, development and implementation of the identified approaches, procedures and support systems could yield the following **principal outcomes**:

• contribute to the ongoing strategic debate around the (urban) land-use transport strategies for South Africa's metropolitan areas and their implementation

•articulate realistic strategies and the required political will for fundamental structural change (urban restructuring towards "corridor cities", etc)

•develop the capacity for better *operational* land use transport management**.**

Addenda

Addendum 1:
Scenario-based debates and consensus-building with multi-media tools

Addendum 2:
Decision Support Systems and policy instruments to explore and manage urban development

Addendum 3:
Demarcation of land use growth policy zones and incentives from a transport/ accessibility perspective

Addendum 1:
Scenario-based debates and consensus-building with multi-media tools

THE POWER OF SCENARIOS

The need to use scenarios and multi-media tools to pro-actively engage decision makers and the general public is tied to the fact that there is general political apathy about long-term, cumulative impacts that are difficult to quantify, visualise and relate to ones own circumstances or future quality of life.

Scenarios are a potentially powerful means of overcoming apathy (or resistence) and generating the necessary political will for fundamental structural change. In terms of practical proof of its potential to facilitate structural change, the use of scenarios has already influenced the course of South Africa's history in a dramatic way. Most of the dramatic political changes that have occurred since 1990 have been attributed to bottom-up pressures for change and to political upheaval. But this denies the importance of the scenario-based "social learning" process that was started by Clem Sunter and others in the late 1980s, and led to wide-spread public knowledge and broad acceptance of the High Road and Low Road Scenarios for South Africa.

FOCUS OF DEBATE (1)

alternative implementation strategies to achieve →

- ***sustainable cities***
- ***viable public transport***
- ***improved access to jobs***
- ***reduced poverty & unemployment***

80-20 strategy

- (further) densification along corridors
- attraction of large scale (fomal sector) investment to poor, unsafe areas

20-80 strategy

- controls on the proliferation of activity nodes
- employment training and logistical support centres

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FOCUS OF DEBATE (2):
The desirability and efficacy of policy interventions in urban land markets.

There are ongoing debates about the extent to which it is desirable and/or feasible to intervene in market forces and attempt to restructure cities. On the one hand, there is the **normative interventionist approach** represented by the Urban Strategy, and by the various Integrated Development Plans or Spatial Development Frameworks. The main driving force is undoubtedly the national government's drive to promote integrated development planning and to enforce this with legislation such as the Development Facilitation Act (DFA) and Second Amendment to the Local Government Transition Act.

Internationally, this approach is strongly aligned with the so-called "new urbanists". A typical statement:

> "*The idea that town and regional development dynamics should be guided (possibly using new instruments) is once again 'acceptable', after the ideological infatuation with deregulation" (Cecchini, CUPUM 99).*

The opposing **market-oriented approach** is internationally aligned with "pragmatists" or "skeptics" such as Harry Richardson. The opposition is not necessarily with the goals that are being pursued, but rather with the possibility of obtaining sufficient buy-in from the private sector and other interests, and implementing the integrated policies at the sufficient rate and scale in order to fundamentally restructure cities. As noted by Cameron (1997) - who is highly critical of what he calls *illusory integrated plans* - the emphasis should shift from long term planning to the development of computerised management information systems (on market trends). He motivates this by noting that:

> *"Good information showing market trends and patterns will be of far greater value to society at large, than were the physical blueprint plans of the past, which were never adequately programmed or funded".*

The issue is to find ways of reconciling the ideal of integrated development planning and fundamental restructuring with the necessity of achieving improved monitoring, understanding and management of market forces. This can be partly achieved by **a shift from overly normative, interventionist approaches to strategically well-informed, trend-modifying approaches**. Explorative, what-if modelling can play a major role in this regard.

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Addendum 2:
Decision Support Systems and policy instruments to explore and manage urban development

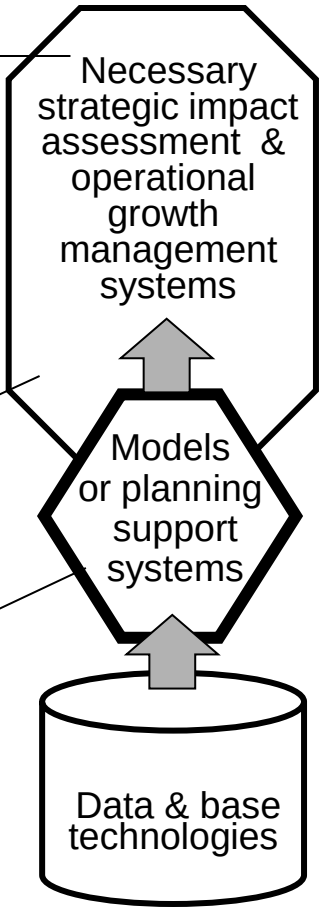
One of the reasons why planners still find it difficult to rapidly explore, quantify and illustrate the impacts of certain decisions (or the failure to make a decision is that they do not have ready access to the necessary **strategic impact assessment systems.** A related problem is the absence of the necessary **(operational) growth management systems.**

he needs for improved *strategic* and *operational* systems are interrelated. Without well quantified and illustrated impact assess-ments, it is often difficult to overcome stakeholder objections and make hard implementation decisions. On the other hand, without effective operational systems to screen, classify and (almost automatically) approve proposed developments with minor impacts, excessive time and cost burdens will be imposed on the strategic impact assessment systems.

Strategic impact assessment
e.g. the consequences of a failure to make decisions and the resulting "lame duck" or "trend" scenario

(Operational) growth management and "hard" implementation decisions
e.g clearly defined land use growth policy zones and development targets

A "toolkit" of models and planning support systems
which can be used :
- at the strategic/ political level
- at the operational level
- for learning about complex interrelationships



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Addendum 3: Demarcation of land use growth policy zones and incentives from a transport/ accessibility perspective

As in the case of the Dutch ABC land management system, a well-designed policy zoning system system can provide the basis for clearly communicating to land use developers and the general public where development will be facilitated (e.g. zones where positive incentives such as additional housing subsidies are provided), or discouraged (e.g. zones where punitive development fees are applied) and what the applicable land use controls, development levies or impact assessment procedures are likely to be.

Policy zones should be classified and rated in terms of transport/accesibility criteria (see below) as well as the likely developmental impacts (location in corridors, contribution to urban restructuring objectives, contribution to achieving a better balance between jobs and economically active population,etc)

Assessment matrix for classifying policy zones into accessibility classes

Public transport accessibility

B1	A2	A1
B2	A4	A3
D	C2	C1

Poor or potentially OK, subject to considerable investment in primary road network / departures from policy

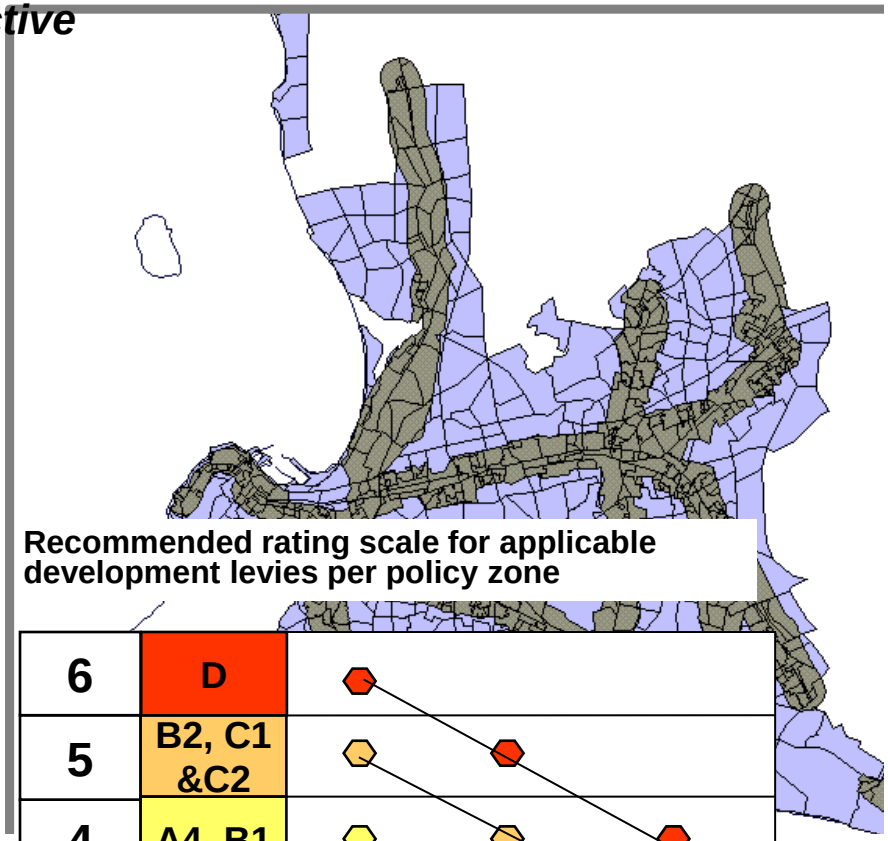
Good but congested

Good

Freeway access, parking, & compliance with road access policies

Private transport accessibility

Possible "development policy zones" for the Cape Metropolitan Area



Recommended rating scale for applicable development levies per policy zone

6	D	
5	B2, C1 &C2	
4	A4, B1	
3	A1- 3	
2	Access-ibilty zone	
1		
Rate		High Med Low Developmental impacts

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