

Let us find out more about ...

Infrastructure Professionals

The last section covers the roles played by the various infrastructure professionals.

- Who decides how the development should look?
- Who designs the roads and water services?
- Who makes sure we get electricity?
- Who builds the project?
- What does a Municipal Engineer do?

A comprehensive look at the cost of various types of systems gives an insight as to how they are chosen for various areas.

Let us think more about ...

The Future

When decision-makers and professional staff are committed to providing infrastructure together, they can plan realistically and ensure that they provide affordable, efficient and appropriate infrastructure throughout its lifespan - in other words, infrastructure that is sustainable.



Funding

Although there is no national funding for this programme, there are several methods of accessing funds for hosting an event such as this. For more information please contact Carla de Jager or Lungelwa Lamani on Tel: (011) 805 5947 or email: cdejager@saice.org.za.



A message from the SAICE President - Trueman Goba

President Mbeki recently emphasised that urgent attention is needed to address the lack of capacity at lower levels of government.

This lack of capacity is retarding the efforts to provide desperately needed infrastructure for our urban communities, and SAICE has responded by developing this programme to enable local authority councillors to take better-informed decisions about the provision of municipal services.

It is my sincere hope and expectation that this initiative will facilitate the development of a pool of knowledgeable decision-makers, who will then be able to make timeous and informed decisions about engineering infrastructure. This will lead to accelerated delivery of the much-needed services. Furthermore the course is designed to develop the ability to manage these valuable assets through efficient operation and appropriate maintenance. Ultimately, this will lead to improved quality of life for all our citizens, especially those from disadvantaged communities.

I believe that sustainable engineering is the key to sustainable development. Through this programme SAICE is taking another step towards the African Renaissance. I commend it to all institutions in the third tier of government.

SAISI SAICE



This brochure was funded by the DBSA Development fund



Sustainable Infrastructure for South African Towns & Cities

Now Available

A programme to empower Local Authority Councillors to make informed decisions about the provision of infrastructure

President Mbeki recently emphasised that urgent attention is needed to address the lack of capacity at lower levels of government.

The decision-maker in Local Government is at the forefront of the drive to improve the quality of life for all citizens. Many processes on which he will be challenged upon to make decisions, are a mystery to the layman. The provision of infrastructure is the domain of the engineering professional, who is seldom a politician. He needs direction from representatives of the public, the decision-makers, in order to perform.

The South African Institution of Civil Engineering (SAICE) has developed an infrastructure orientation programme for Local Government decision-makers, which is now available and has been successfully delivered to several Councils through various funding mechanisms.

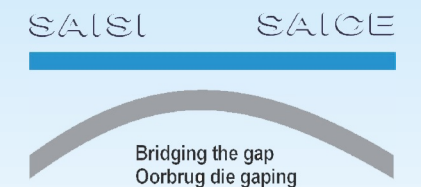
The programme enhances understanding about infrastructure-related issues. Infrastructure components such as water supply, sanitation, roads, electricity, refuse management and maintenance; the processes for infrastructure delivery such as tendering, budgeting, etc; and the professionals involved in these projects; are workshopped in a small-group, interactive, participative environment.

"It is not wealth which makes good infrastructure possible - It is good infrastructure which makes wealth possible"

Paraphrased from John F Kennedy.

This programme is a joint initiative of:

- Department of Provincial and Local Government
- South African Local Government Association
- South African Institution of Civil Engineering



With the support of:

- Department of Housing ■ South African Association of Consulting Engineers ■ South African Federation of Civil Engineering Contractors ■ CSIR ■ Development Bank of Southern Africa
- Construction Education & Training Authority ■ Eskom ■ Department of Water Affairs and Forestry ■ The Institute of Municipal Engineering of Southern Africa

The orientation programme

The orientation programme is structured into three modules covering infrastructure, the delivery process and the infrastructure professional team. Participants are initially asked to contribute their understanding of each topic and then through interaction with the lecturers, the complete picture is developed.

The orientation programme takes the form of a two day seminar which can be presented at any suitable venue for groups of between 15 and 30 participants.

- Portfolio Councillors will particularly benefit
- Ward Councillors and Ward Committee Members will also find the content beneficial.

The programme continues to open the eyes of both decision-makers and officials as they begin to understand the problems that they are facing, and forges relationships, which were previously considered impossible.

A selected subset of topics are described to offer insight into the orientation programme content.

Let us find out more about ...

Water Supply

Some of the many questions asked include:

- What do we use water for?
- How does water get to your tap at home?
- Why can water be dangerous?
- Why does water cost money?

Recognised as top of the list for the survival of modern civilization, clean drinkable, affordable water is discussed in detail, covering the delivery process, charges, structured tariffs, and the need to save water and educate the constituents on water conservation. A further module addresses sewage and sanitation in similar detail.



Let us find out more about ...

Roads

Outcomes of this module include:

- How are roads made?
- What materials make a strong road?
- What purpose is served by the 'tar' surface?
- Who pays for roads?



The importance of good road design and adequate expenditure on maintenance is explored in detail. Further modules looking at drainage, traffic and transportation complete the whole picture in relation to the vital role in wealth creation, played by our roads.

Let us find out more about ...

Refuse and Litter

Topics explored include:

- Is collection of refuse an important issue?
- How is modern refuse treated?
- What are other means of safe disposal?
- Can we eliminate refuse by recycling?
- Who pays for waste disposal?



This in-depth look at a topic rarely considered, also looks at problems such as scavengers, illegal dumping and littering.

Let us find out more about ...

Electricity

Outcomes of this module include:

- Where is electricity generated?
- How do our lights come on?
- Why are there different types of street lights?
- Why are there different cabling systems?
- Why does electricity cost money?

A comprehensive look at the cost of various types of systems gives an insight as to how they are chosen for various areas.



Guidelines are also given on how to reduce electric consumption, which should be conveyed, particularly to the low income constituents.

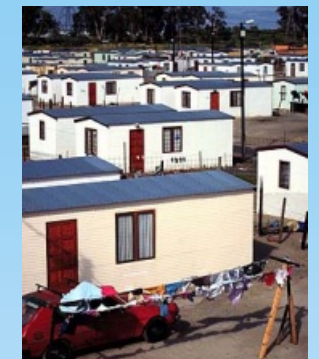
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Townships and Housing

Some of the many questions asked include:

- How are houses designed?
- What are the engineering problems?
- What planning is required?
- What facilities can the homeowner expect?
- Who pays for housing?

The aspirations of the homeowner and associated problems of cost and responsibilities are studied so that decision-makers can better advise and educate their constituents on the right choices in relation to their income groups.



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Maintenance and IDP's

It must be understood that planned maintenance is less costly than having to deal with emergencies as a result of failures. Topics include road resurfacing and potholes, white line painting and signage, drainage cleaning, mechanical and electrical inspections, dam inspections, bursts, blockages, collapses, floods and fire fighting. The need for IDPs is discussed, with particular emphasis on long term sustainability.

The infrastructure section examines many other topics including parks, sport facilities, cemeteries, community centres, environmental issues and more.

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Infrastructure Processes

The next module covers the project process, including:

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|---|--|---|
| ■ Project initiation
Identifying the need
Budget approval | ■ Design Phase
Preliminary design
Detail design
Budget for construction | ■ Construction Phase
Tender process
Contract procedures |
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