ITU / BDT regional seminar
Network Planning for the CEE, CIS and Baltic

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Network Planning Tool Specs
Overview

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Network Planning Tools Specs (NPTS)
Content

- **Objectives of the specs**

- **Need for multiple tools and support**

- **Document structure**

- **Type of requirements**

  - Technical requirements per domain

  - Tendering requirements

Network Planning Tools Specs
Objectives

- **Context**
    - Today the higher number of options for telecom solutions and services with the complexity of planning increases the needs for a systematic and reliable planning methodology

- **Objective**
    - Following ITU mandate and agreements, the Reference Document, Network Planning Tool Specs (NPTS) is defined to meet countries' requests for assistance in the field of Network Planning for Developing Countries and Countries with economies in transition.
    - Document will provide support in the network planning activities, technical requirements for tools and selection criteria for tools that fulfill the requirements

Network Planning Tools Specs
Users

- **Users of the NPTS**
    - The Reference Document on NPTS is intended for use by network planning experts and managers from telecom operators, policy makers and regulators

- **Reference document**
    - *- Reference Manual on Telecom Network Planning for Evolving Network Architectures* Version 02, ITU, Geneva, 2005
      link : http://www.itu.int/ITU-D/tech/network-infrastructure/index.html

    - Background for the content is the experience on planning projects, the needs by operators in competition and the know-how of capabilities of new technologies

Network Planning Tools Specs
Need for multiple tools

- **Multiple dimensions of the planning activities**

    - Due to timeframe for planning at short, medium or long term

    - Due to variety and complexity of network solutions

    - Due to new technologies

    - Due to different network layers

    - Due to planning type: strategic, tactical or operational

- **Need for combination of tools**

    - Tools should specialize to solve different problems

    - Interrelation is needed to combine evaluatons and decisions

    - Assessment is required to select and combine most appropiate tools

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Network Planning Tools Specs
Document Structure (I)

1.- Introduction and scope

1.1.	ITU Vision on Network Planning
1.2.	Who should use this Reference Document
1.3.	Content of the Reference Document
1.4.	Relation to other ITU documents

2.- Needs for planning by ITU members

2.1.	Needs for assessment on proper tools and tool combination
2.2.	Needs for training on tool applicability and capabilities
2.3.	Needs for documentation
2.4.	Needs for tool support, updates and maintenance
2.5.	Selection criteria for planning tools

Network Planning Tools Specs
Document Structure (II)

3.- Network planning problems to be addressed

      3.1.   Network planning problems and activities

      3.2.   Network planning types and domains

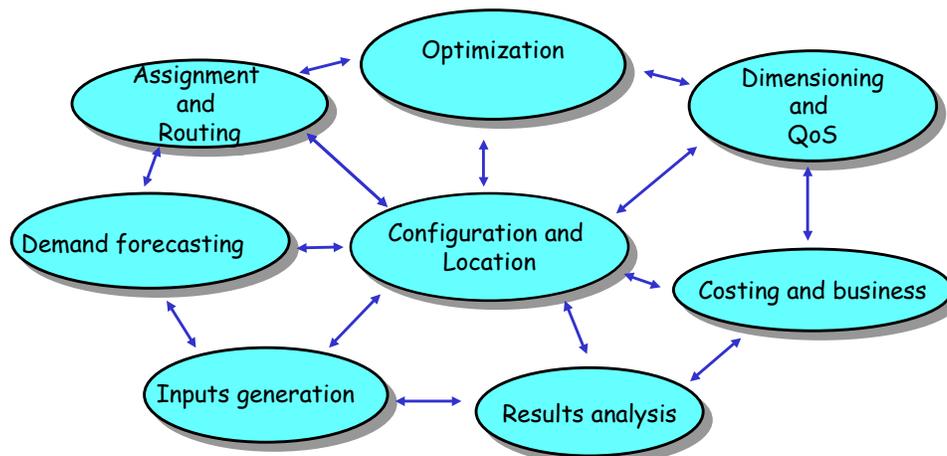**4.- Technical requirements per planning domain**

      4.1   Business

      4.2   Fixed switching and routing

      4.3   Transmission

      4.4   Fixed access

      4.5   Signalling, control and NM

      4.6   Radio access

      4.7   Core radio

      4.7   IT,OSS and Applications

Annex: Example of RFP for a planning tool

Network Planning Tools Specs
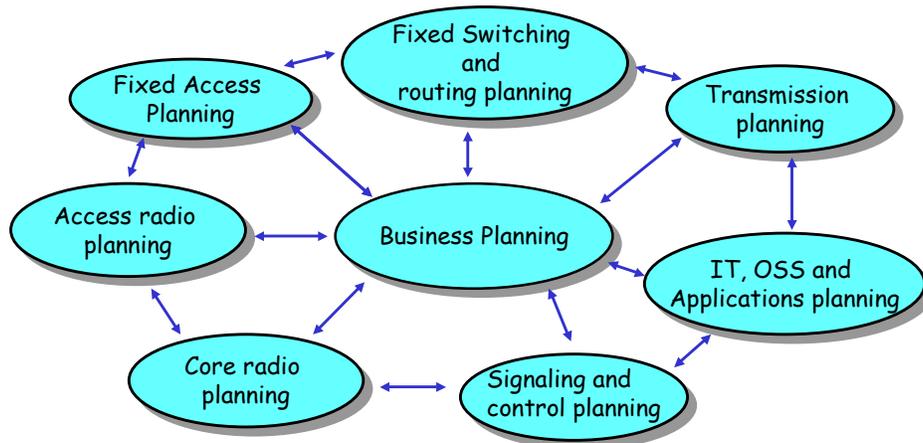## Type of requirements

A large variety of Planning activities needed

Network Planning Tools Specs
Type of requirements

Interrelation among planning domains to be addressed

Network Planning Tools Specs
Technical requirements per domain

- Scope and main characteristics

- Network model - network architecture, customers, services, traffic, etc.

- Forecasting - services, traffic matrix, users distribution and user segments

- Calculation modules, network dimensioning and optimization

- Input/output data- GUI, maps, reports

- Platform- tool archuitecture and system requirements

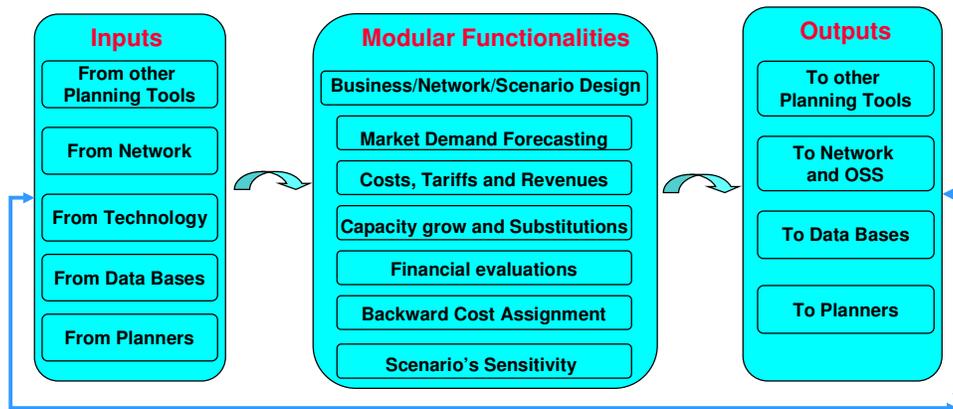- NGN- requirements related to NGN and new technologies

Network Planning Tools:
Overview of modular requirements

Illustration of functional requirements for the business planning domain

Inputs
- From other Planning Tools
- From Network
- From Technology
- From Data Bases
- From Planners

Modular Functionalities
- Business/Network/Scenario Design
- Market Demand Forecasting
- Costs, Tariffs and Revenues
- Capacity grow and Substitutions
- Financial evaluations
- Backward Cost Assignment
- Scenario's Sensitivity

Outputs
- To other Planning Tools
- To Network and OSS
- To Data Bases
- To Planners

Network Planning Tools Specs
Tendering requirements

Requirements to observe and criteria for the tool selection

- Capability to model modern technologies and technical requirements
- Commercial availability
- Capability to interrelate different planning tools
- Explicit documentation of models, inputs and results
- Commitment for periodical updates and maintenance
- Training program with reference cases
- Validation process for a range of cases
- Being well proven in the field