ITU ADVANCED LEVEL TRAINING

Strategic Costing and Business Planning for Quadplay

WINDHOEK, NAMIBIA

6-10 October, 2014

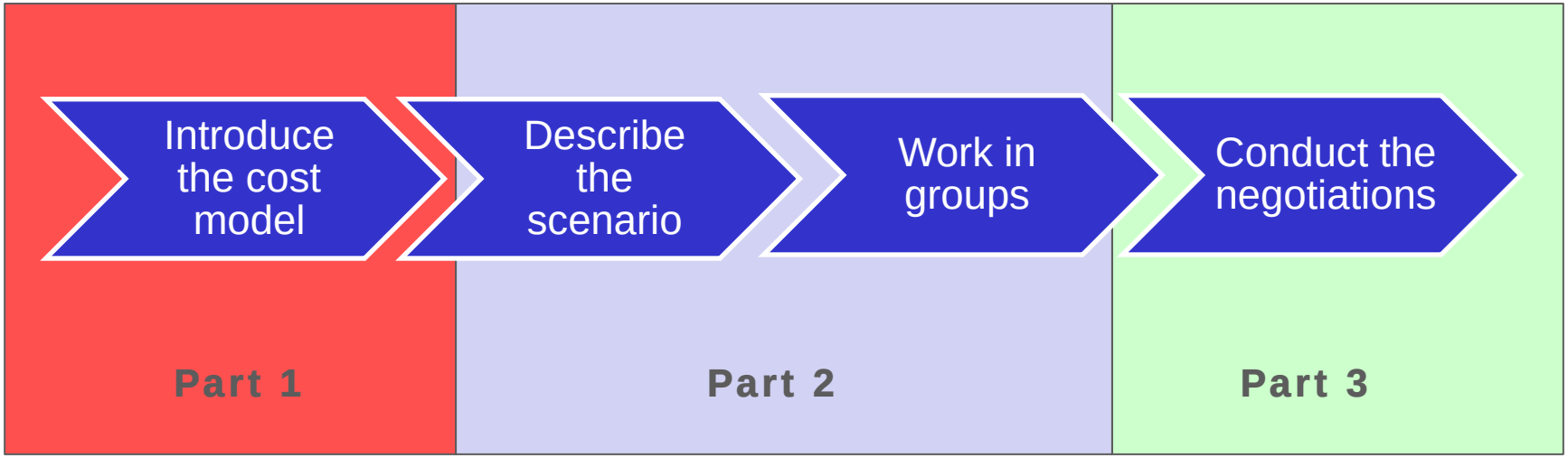
David Rogerson and Harm Aben

ITU Experts

Session 8:
Practical exercise 3: quadplay costing using NGN cost model

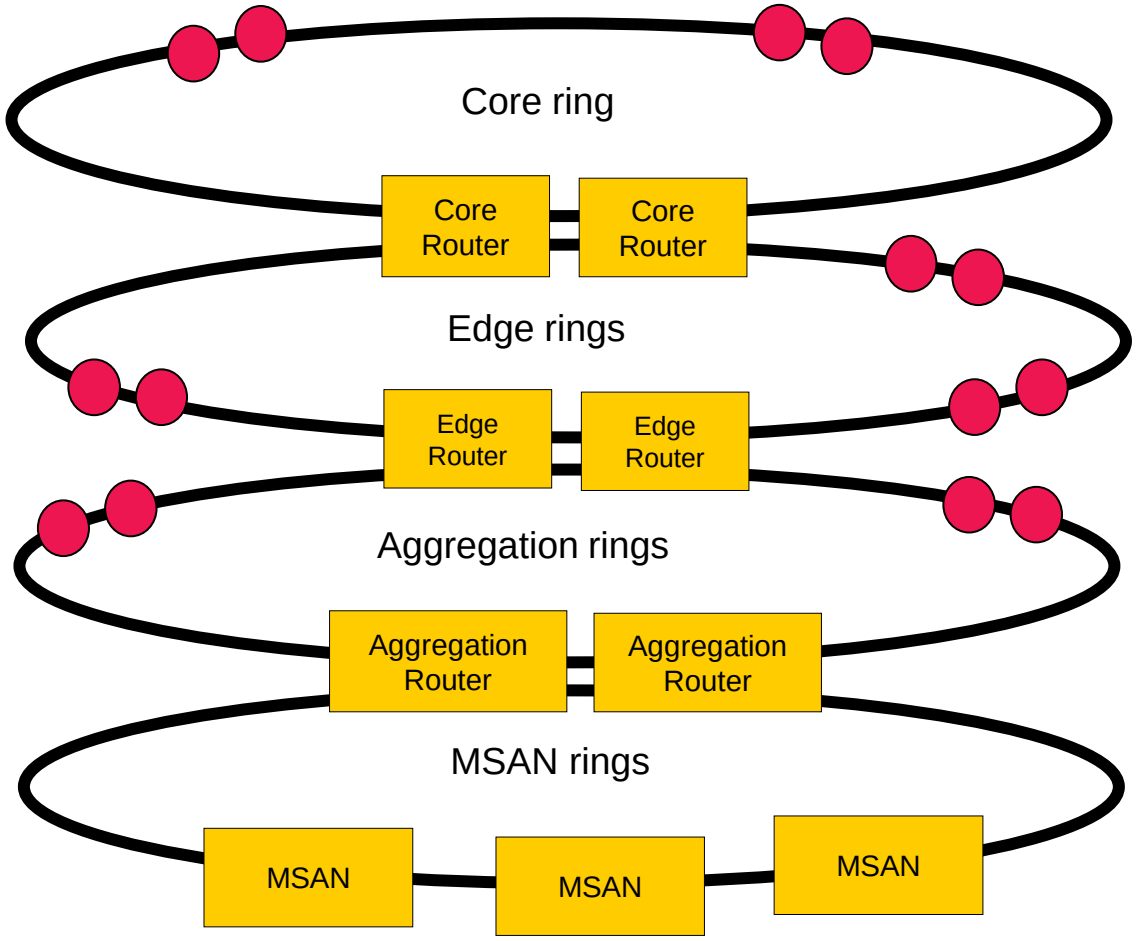
Agenda

Aims and objectives for these sessions



The core network NGN cost model

A typical NGN Architecture

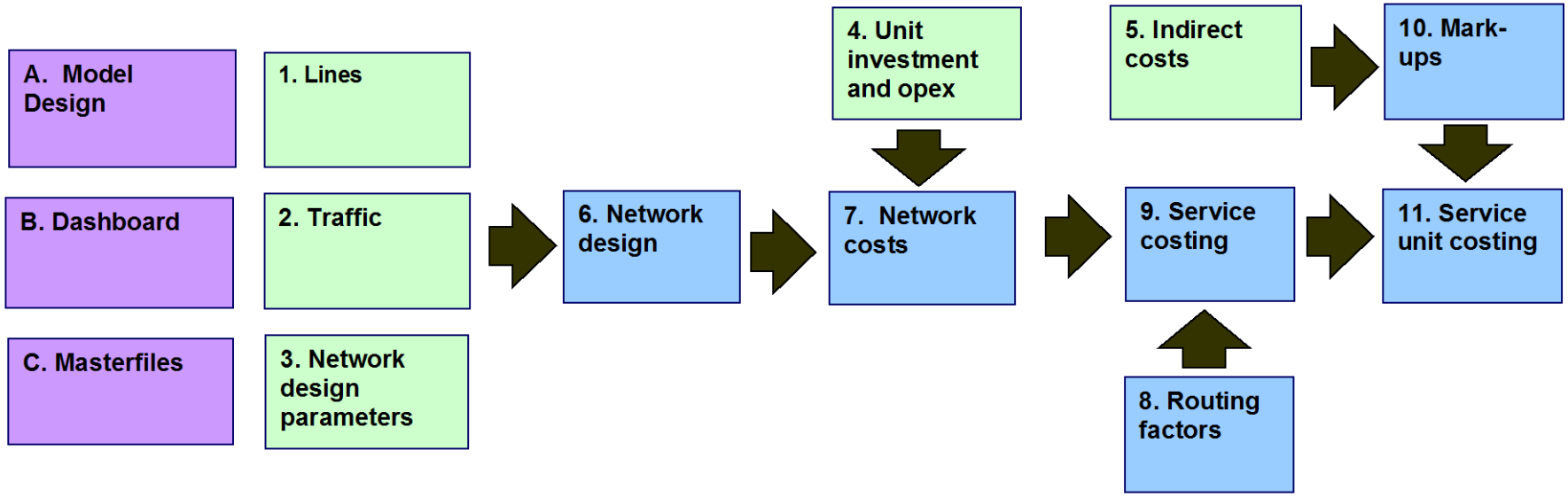


Nodes deployed in redundant pairs

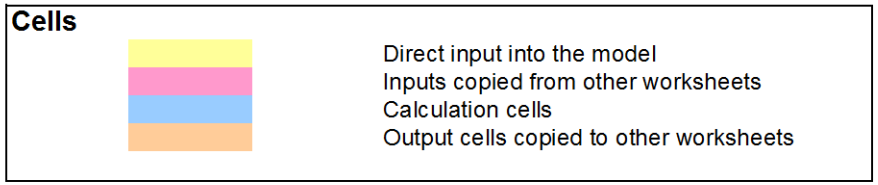
Three-tier ring topology

19 MSANs

ITU IP Core Network LRIC Training Model







Back to Normalia

- This practical exercise concerns the fictitious country of Normalia.
- Normalia is a typical ("normal") country with regulatory challenges similar to those in your country.
- The details required for each practical exercise are presented in the slides / handouts.



Telecoms in Normalia

Regulator - TRAN

(Telecom Regulatory Authority of Normalia)

Fixed Telecoms

- 4m subscribers
- Telecom (75%)
- Newtel (25%)

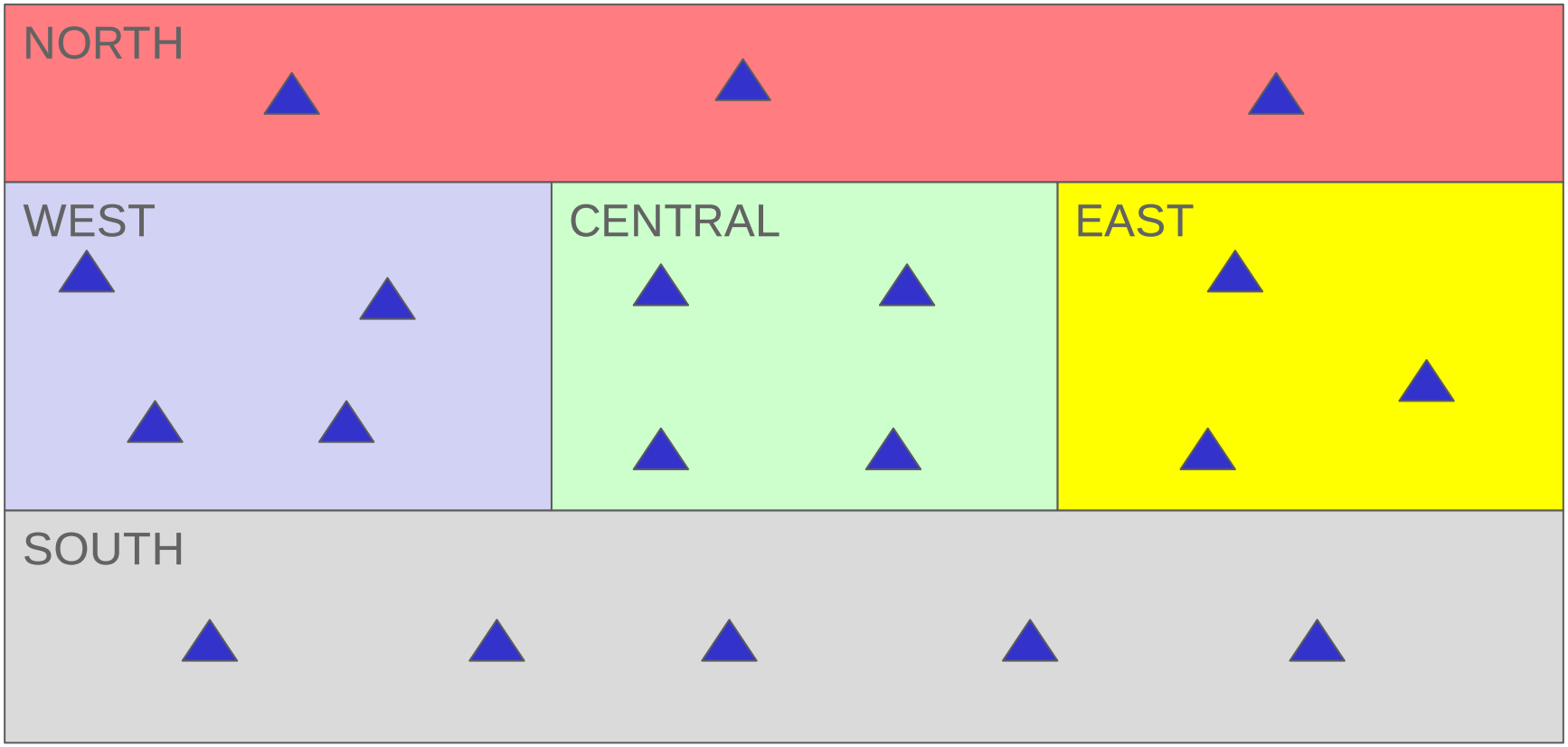
Mobile Telecoms

- 10m subscribers
- Telecom (60%)
- Normcell (40%)

Content and service providers

(various including **Cloud;** an ambitious entrant providing digital TV services)

Topology of the Telecom's new fibre network



Service nodes

Quad-play pricing: a regulatory hearing

The story so far …

- Cloud is a new digital TV company in Normalia that is seeking a telecoms network partner.
- It entered into negotiations with Telecom, but failed to reach a deal that was acceptable to both parties.
- Subsequently it approached Newtel and Normcell and collectively they have reached an exclusive agreement for carriage of Cloud TV.
- The deal involves payments to Cloud of:
  - $90m (Normcell) and $30m (Newtel) upfront investment
  - $6 per subscriber per month
- The three companies have submitted their proposal to TRAN for regulatory approval.

TRAN consults and Telecom objects

- TRAN has sought public and industry opinion on the proposed deal in line with statutory requirements
- Telecom has launched an objection on the basis of anti-competitive behaviour and predatory pricing.
  - It has advised TRAN of its own negotiations with Cloud and its inability to reach a deal that covered its costs
  - As Telecom has significantly greater economic of scale than its rivals, it concludes that the deal must be below the network operators' costs
  - The below-cost prices are predatory because this is an *exclusive* deal clearly designed to lock Telecom out.
- TRAN has therefore challenged Normcell and Newtel to demonstrate that the deal is cost justified.

TRAN's requirements

- Use the ITU fixed core network training cost model to demonstrate that:
  a. The proposed price of $6 per subscriber per month will cover the incremental costs of the Cloud service
  b. No increase in internet access tariffs will be required either to subsidise Cloud or to cover additional network investment that may be required.
- TRAN has available market data and commissioned two independent pieces of market research to help with this task.
- It has asked Newtel to use this data to demonstrate the cost basis for its proposed tariff; and Telecom to use the same data to back-up its claim that the proposed tariff is below cost.

Relevant market data - Newtel

Service	Newtel monthly tariff (USD)	Newtel subscribers 2014	Telecom subscribers 2014
Vitesse 2M	10	200000	500000
Vitesse 10M	20	120000	300000
Vitesse 25M	35	60000	150000
Vitesse 100M	50	20000	50000
TOTAL		**400000**	**1000000**

Market development indicators	Research survey 1	Research survey 2
% annual growth in broadband subscribers	10%	12%
Additional % annual broadband growth with IPTV services	12%	15%
% of existing broadband subscribers liable to take IPTV each year	10%	8%
% of broadband subscribers liable to upgrade broadband service each year	10%	9%
Additional % of broadband subscribers liable to upgrade broadband service for IPTV	3%	5%
% of broadband subscribers liable to change supplier each year for quad play offer	2%	3%

Quad-play revenue and cost workbook

TRAN asks the operators to use this workbook to establish Newtel's costs and revenues.

The aim is to show whether the Cloud-Newtel deal covers costs.

QUAD-PLAY REVENUE AND COST WORKSHEET

STEP 1	Fill in the Assumptions shaded green
STEP 2	Review the calculations shaded blue (no need to change these cells)
STEP 3	Copy the key outputs into the Fixed Core Network Cost Model (shaded yellow)
STEP 4	Copy the key results from the Fixed Core Network Cost Model (shaded orange)

1. Assumptions

Current market situation

Service	Newtel monthly tariff (USD)	Newtel subscribers 2014	Telecom subscribers 2014	Total subscribers in 2014
Vitesse 2M	10	200000	500000	700000
Vitesse 10M	20	120000	300000	420000
Vitesse 25M	35	60000	150000	210000
Vitesse 100M	50	20000	50000	70000
TOTAL		**400000**	**1000000**	**1400000**

Market development indicators	2014	2015-2018
Annual growth in broadband subscribers (without Cloud)	1%	1%
Annual growth in broadband subscribers (with Cloud)	1%	1%
% of existing broadband subscribers taking Cloud services	1%	1%
% of broadband subscribers upgrading broadband (without Cloud)	1%	1%
% of broadband subscribers upgrading broadband (with Cloud)	1%	1%
% of Telecom's broadband customers that move to Newtel (quad play)	1%	1%
Retail revenue ($p.m.) for Cloud subscribers	1	1
Wholesale cost ($p.m.) for Cloud subscribers	1	1

Efficient operator inputs

- TRAN is satisfied that Telecom's core network design is that of an efficient operator. It notes that Newtel has a similar topology, and therefore advises that the number of nodes and rings should remain unchanged.
- TRAN's technical department seeks guidance from the operators regarding:
  - The contention ratios used for broadband subscribers, both for internet access and for IPTV. TRAN is aware of network design rules ranging from 10:1 to 100:1. What should they be?
  - The busy hour (peak load) requirement for broadband. TRAN is aware of operators using a 2%-5% peak load for leased lines. Does this figure apply for broadband also?

Other resources and assumptions

- Both Newtel and Telecom now claim that their fibre network passes all sites in Normalia.
  - The incremental cost of a new broadband subscriber may therefore be taken as the cost per site connected - which in the NGA Cost Model is $88 p.a.
- Two possible discount factors for the NPV calculation have been suggested, and operators should explain their choice:
  - Annual inflation (forecast by the Central Bank at 5%)
  - WACC (set by TRAN at 12%).

The regulatory process

