

Enhancing access to submarine cables for Pacific Island Countries

Sessions 8–9: How to determine cost based access prices

Suva, Fiji

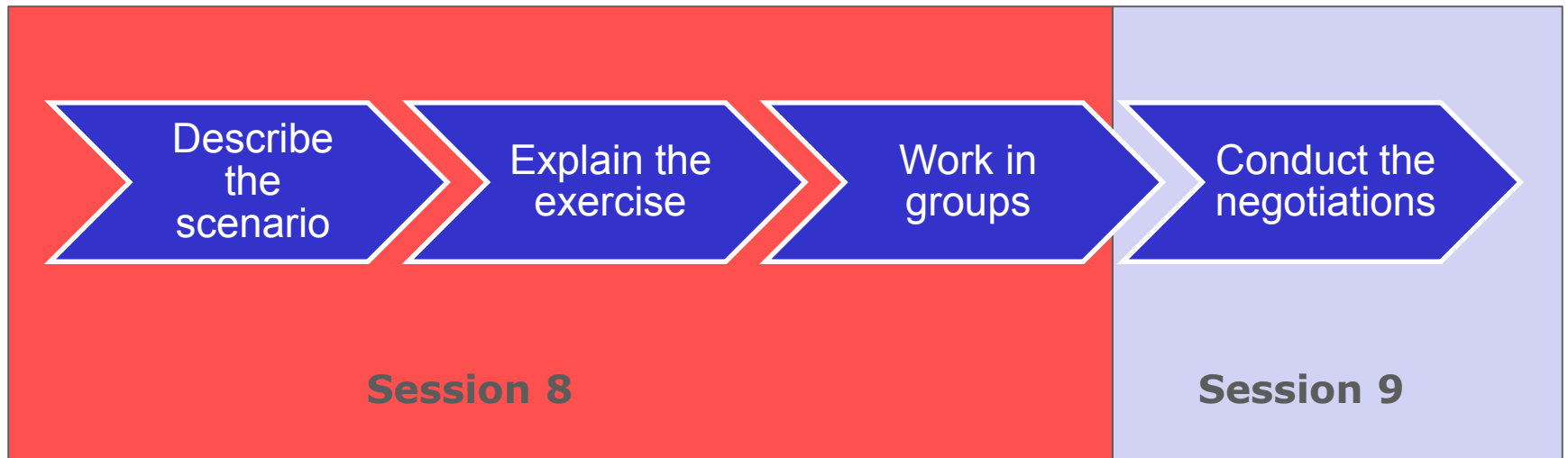
31st July–3rd August, 2017

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Sessions 8-9: Adapting a Cable Landing Station pricing model to develop regulatory positions

Agenda

Aims and objectives for these sessions



Remember 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

- Telecom (100%)

Mobile Telecoms

- Telecom (70%)
- Normcell (30%)
- Mobilco (entrant)

Submarine Cable (CLS operator)

- ABC (Telecom) – current monopoly
- JKL (Normcell) – due to start end 2013

Various service providers

(including **ServCo** an ambitious ISP)

TRAN's CLS pricing consultation

TRAN's main concern – Normalia is lagging

- Normalia's neighbours have recently taken major strides forward in offering low-cost broadband internet access
- They have achieved significantly higher broadband penetration:
 - 15% fixed broadband penetration versus 4% in Normalia
 - 32% mobile broadband penetration versus 12% in Normalia.
- They have access to the same submarine cables (ABC and JKL) and have only slightly larger national markets.
- Immediate action is needed to stop Normalia falling further behind and suffering economic consequences.

TRAN's regulatory objectives

- TRAN has two major and inter-linked objectives: lowering prices and increasing market demand.
- It has set the following targets:

	2017	2022	2026
Total service demand in Mbps	1,200	10,000	20,000

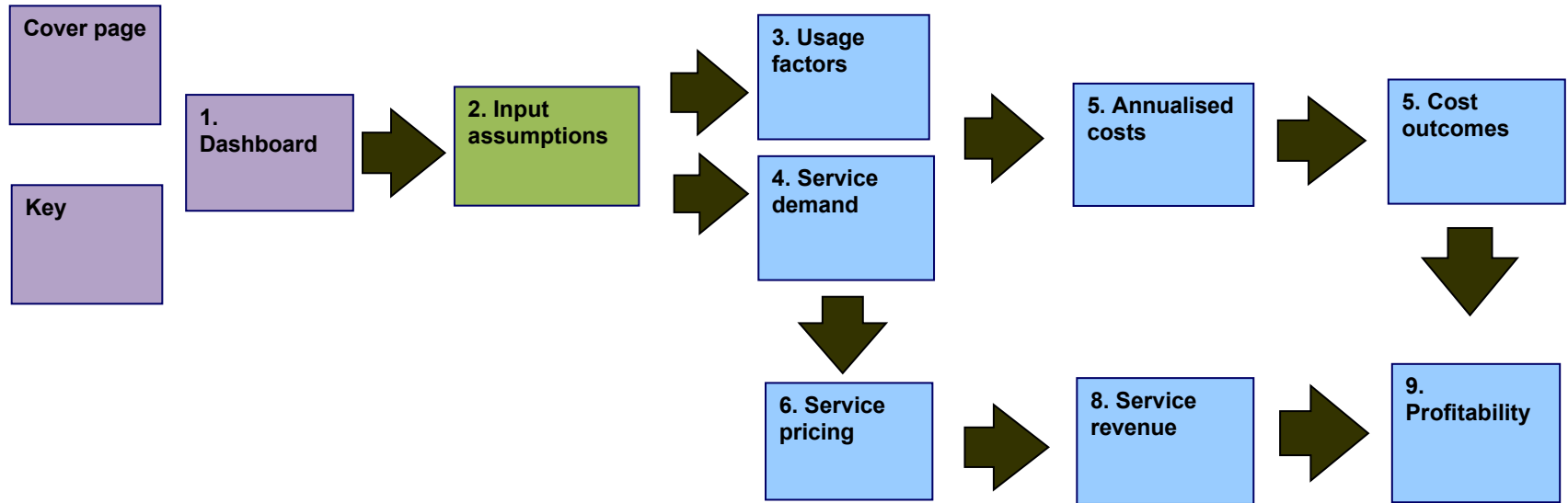
	2017	2018	2018
Average price per Mbps (USD)	160	<100	<20

Acquisition of a cost model

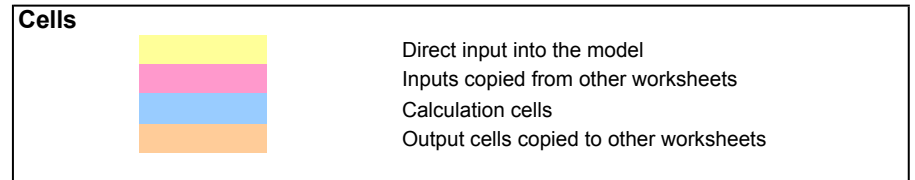
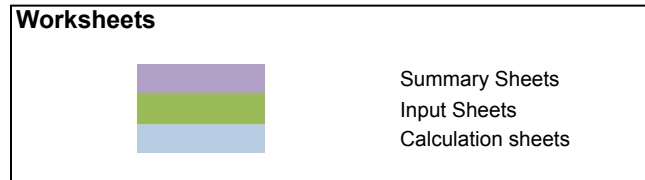
- TRAN has discovered a very helpful model (*the ITU training CLS cost and pricing model*) which it believes will help in meeting its regulatory goals.
- The model has been made available to the operators and service providers, but TRAN is aware that much of the data in the model may need to be adapted.
- It challenges the industry to use the model to help bring prices down and increase demand.
- However, TRAN recognises that the CLS operators do need to make a reasonable rate of return over the lifetime of the assets.

Introducing the costing and pricing model

Model Structure



Model Conventions



A regulatory hearing will be held tomorrow

- Normcell to offer its view as the JKL landing station operator.
- Telecom to offer its view as the ABC landing station operator.
- ServCo and Mobilco will not be at the hearing but have already said that TRAN's objectives are the minimum they would expect.

Q1: Are TRAN's objectives achievable?

Q2: If not, why not, and how close can we get to the targets?

Q3: Please back up your position by editing the model's data inputs.

Q4: What regulatory action (if any) does TRAN need to take?

Methodology and assumptions

- Each group (representing either Telecom or Normcell) will receive a briefing paper setting out the terms of reference from its respective Board.
- The aim is find a way to meet the Board's objectives (as well as those of TRAN) and then “sell” that approach to TRAN by way of a short presentation.
- Assume that:
 - TRAN will not accept market forecasts lower than the LOW or higher than the HIGH scenario in the model.
 - The cable investment costs in the model are accurate.
- Any other assumptions may be changed. If you do so please colour it **red** so that TRAN can see the changes as well as the impact on the model results.

TRAN's opinion

How the task might have gone

Telecom's challenge

- Defend the prices that it is planning to establish on 1st January 2018:
 - \$293 pm for E1
 - \$1,083 for E2
 - \$2,933 for E3
 - \$12,907 for STM1
 - \$29,333 for STM4.
- Achieve a NPV of free cash flow of at least \$6m over the period to 2026.
- Achieve a ROCE of at least 1% over WACC
- And meet TRAN's targets for bandwidth demand and cost per Mbps price.

Telecom's suggested approach - 1

- Set the CLS Operator scenario to **Total Market**
- Set to the option of **Cost+Mark-up+Gradient**
 - The gradients should be set to equate with 2018 prices

Capacity services offered	E1	E2	E3	STM-1	STM-4
Price gradient Year 1	30%	15%	-13%	-15%	-43%

- The mark-up should be set to achieve the margin demanded by the Board = **10%**.
- Adjust the WACC
- Which brings the 2018 prices in line with Board plans.

Service	2017
Annual lease - E1	293
Annual lease - E2	1,068
Annual lease - E3	2,975
Annual lease - STM-1	12,384
Annual lease - STM-4	29,794

Telecom’s suggested approach - 2

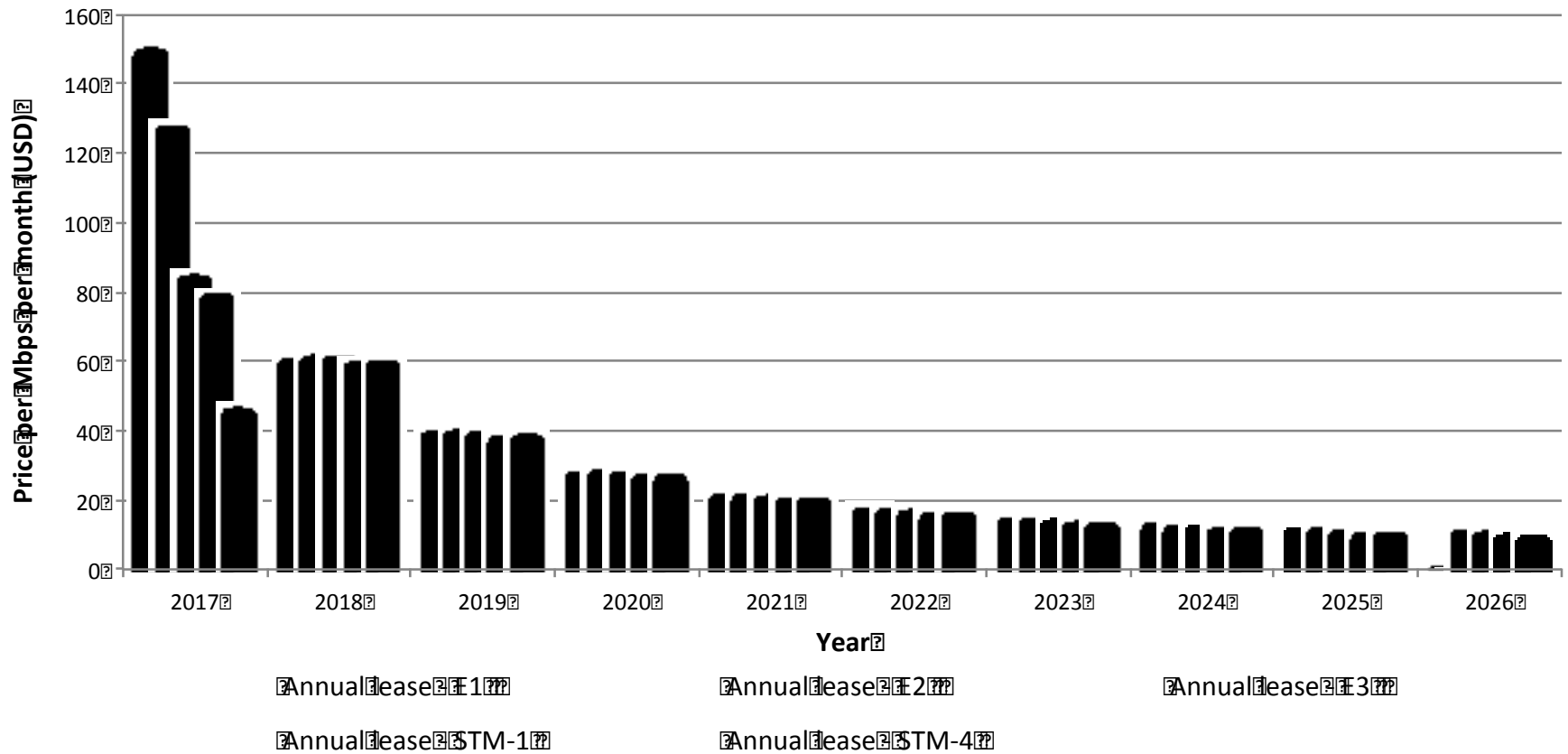
- To obtain service demand levels required by TRAN set Baseline Service Demand to HIGH and adjust forecasts downwards:

Licensee	2018	2019	2020	2021	2022	2023	2024	2025	2026
Annual growth rate	86%	70%	55%	43%	34%	35%	27%	18%	12%

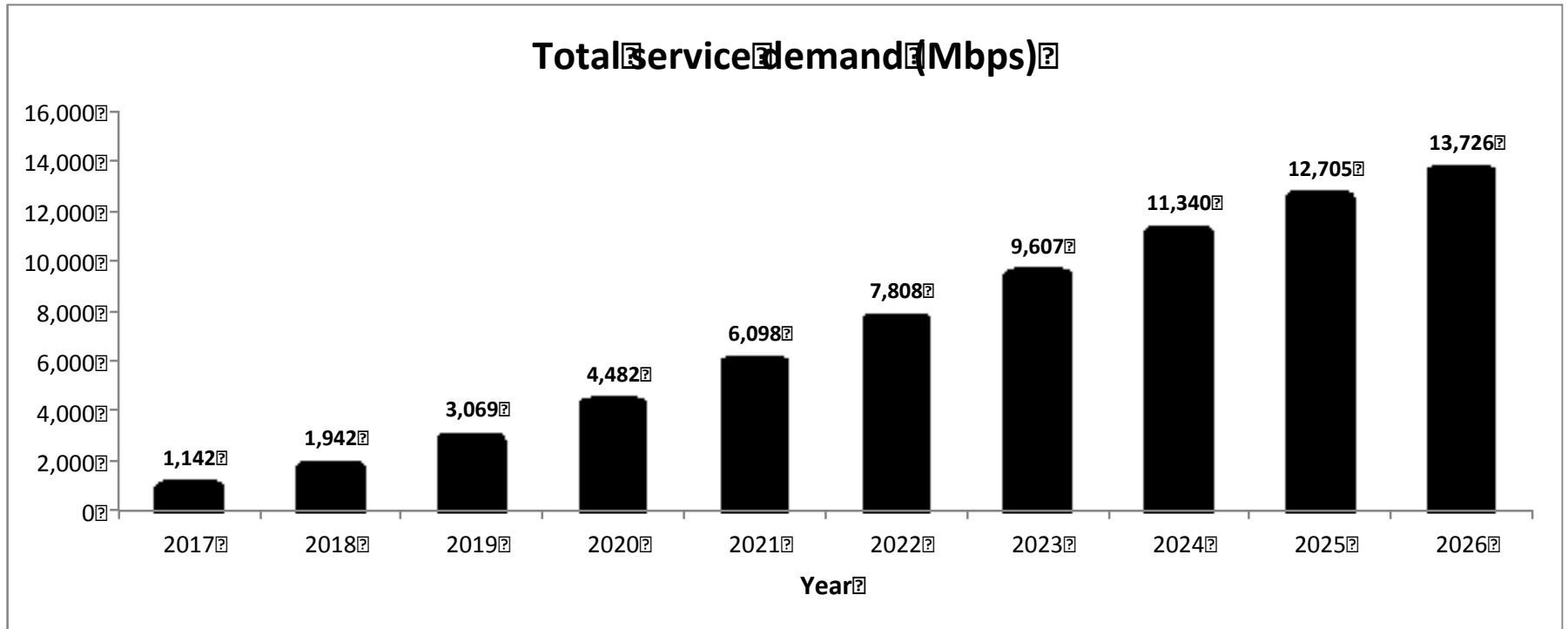
- To boost profitability:
 - Remove the tariff gradient quickly – e.g. 2019
 - Seek that TRAN removes revenue-based licence fee.

Telecom's outcomes - 1

Price per Mbps per month (USD)



Telecom's outcomes - 2



Telecom's outcomes - 3

- Results under **Telecom (ABC)** CLS scenario are:
 - NPV of free cash flow of \$6.1m over the period to 2026.
 - On average a ROCE of 0.84% over WACC.

- Possible solution to improve ROCE over the longer term is to reduce prices more slowly (after the initial period of regulatory scrutiny).
 - For example, a mark-up of 12% rather than 10% will provide ROCE of 1.07% over WACC
 - Under this scenario TRAN's demand and price scenarios will still be achieved.

Normcell's challenge

- Defend the prices that it is planning to bring to market on 1 January 2018:
 - \$250pm for E1
 - \$3,000 for E3
 - \$10,000 for STM1
 - \$25,000 for STM4.
- Achieve profitability by 2022 at the latest.
- Achieve an average ROCE of at least equal to the WACC over the period to 2026
- And meet TRAN's targets for bandwidth demand and average price per Mbps.

Normcell's suggested approach

- Set the CLS Operator scenario to **Total Market**
- Set to the option of **At Cost with a Price Gradient**
 - The gradients should be set to equate with 2018 prices

Capacity services offered	E1	E2	E3	STM-1	STM-4
Price gradient Year 1	30%	0%	0%	-17%	-44%

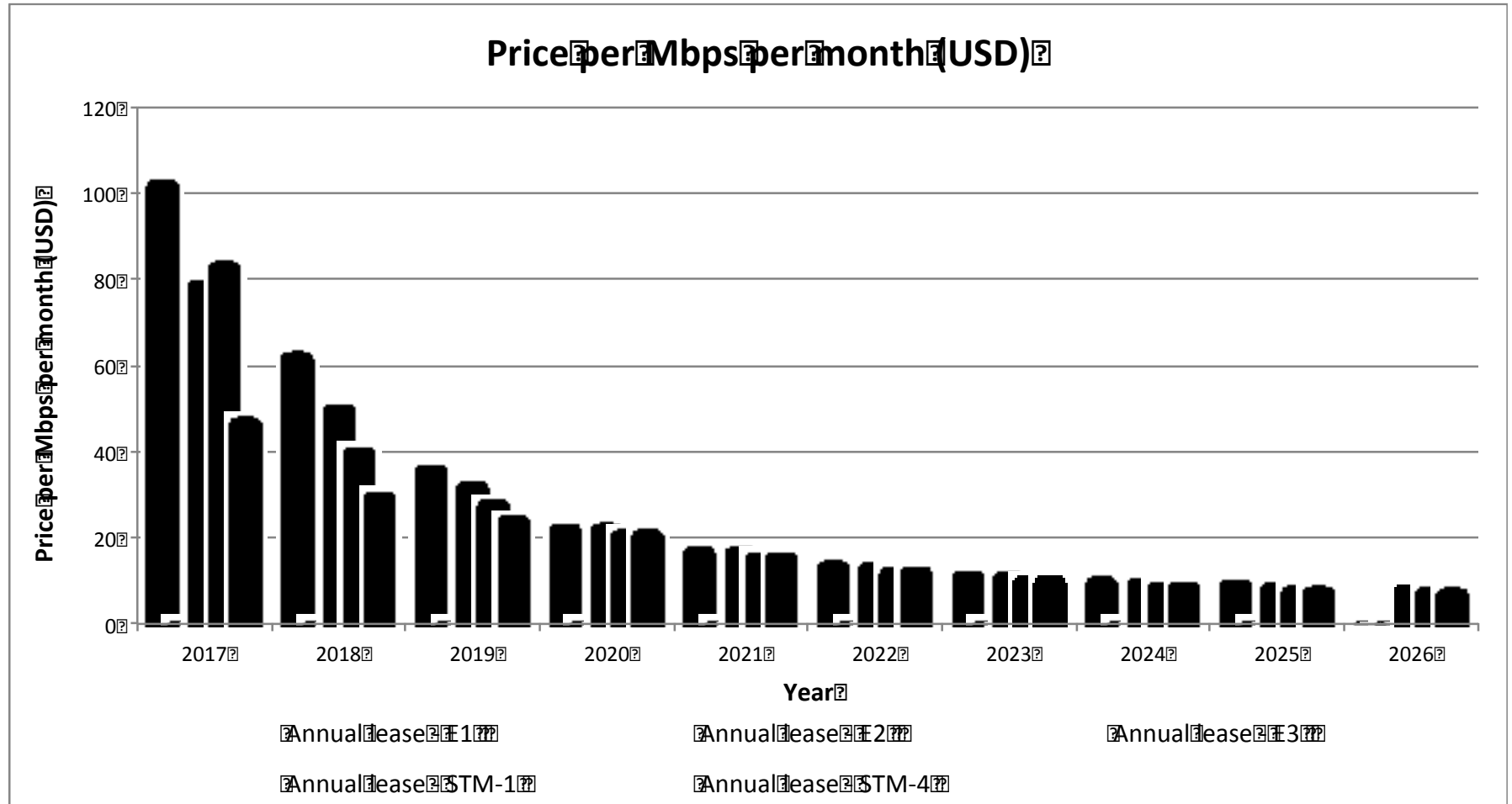
- Adapt the proportion of demand by service to reflect the fact that E2s are not provided.

Proportion of demand by service bandwidth	2017	2021	2026
E1	30%	17%	0%
E2	0%	0%	0%
E3	50%	38%	25%

- Which brings the 2017 prices in line with Board plans.

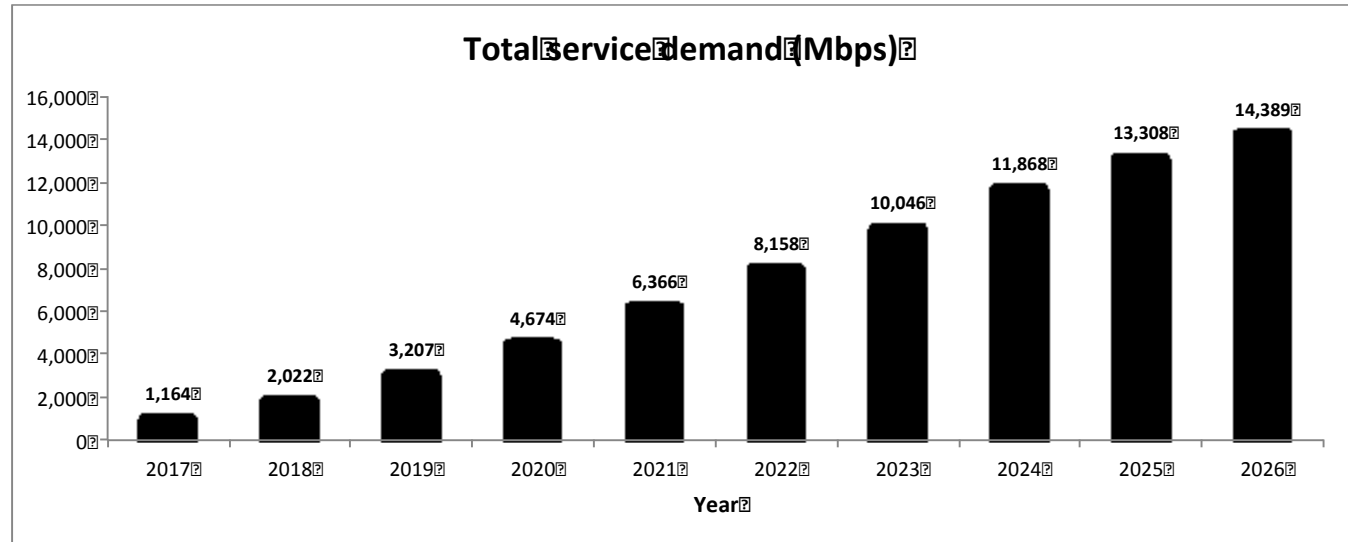
Service	2017
Annual lease - E1	241
Annual lease - E2	0
Annual lease - E3	2,931
Annual lease - STM-1	9,802
Annual lease - STM-4	23,857

Normcell's outcomes - 1

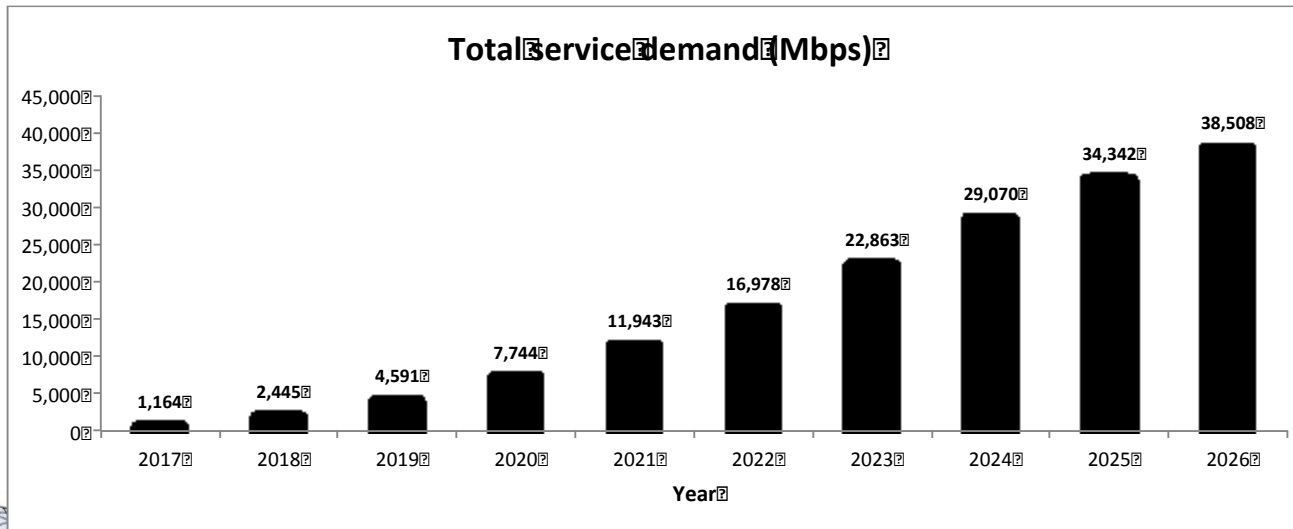


Normcell's outcomes - 2

Medium demand scenario



High demand scenario



Normcell's suggested approach - 2

- Results under **Normcell (JKL)** CLS scenario, even with High demand, leave negative ROCE and unprofitable until 2026.
- However if:
 - Licence and regulatory fees are removed
 - Tariffs are changed to **Cost + mark-up + gradient** (after the first year)
 - The mark-up is set at 15%
 - The tariff gradient is removed in 2020.
- Then:
 - Profitability is reached in 2021
 - Average Normcell ROCE is 0.29% over WACC
 - TRAN's service demand targets are broadly met.

Normcell's outcomes - 3

- Normcell's proposed Year 1 prices are below required level:

- \$250pm for E1
- \$3000pm for E3
- \$10,000 for STM1
- \$25,000 for STM4.

Service	2017
Annual lease - E1	227
Annual lease - E2	0
Annual lease - E3	2,957
Annual lease - STM-1	14,129
Annual lease - STM-4	32,115

- Prices in subsequent years can be increased a little above the model outputs to compensate.
- NPV of free cash flow of at least **\$5.5n** over the period to 2026.
- On average a ROCE of **0.29%** over WACC.

What regulatory action may be needed?

- The key to achieving the demand increases is to achieve the price falls.
- No-one knows for sure how price will affect demand, but TRAN could impose a price-cap at a level it deems suitable (based on the model results).
- There are dangers with such an approach:
 - The price cap may not generate sufficient demand increase.
 - The price cap may limit the effectiveness of competition and thus act as a floor as well as a ceiling to prices.
- It is probably better to keep a watching brief, asking the operators to report back monthly/quarterly on tariffs and demand.