

How might building blocks be applied to telecommunications networks

September 2015

Summary

Key building blocks and how they might be set

Incentives to provide a good quality of service

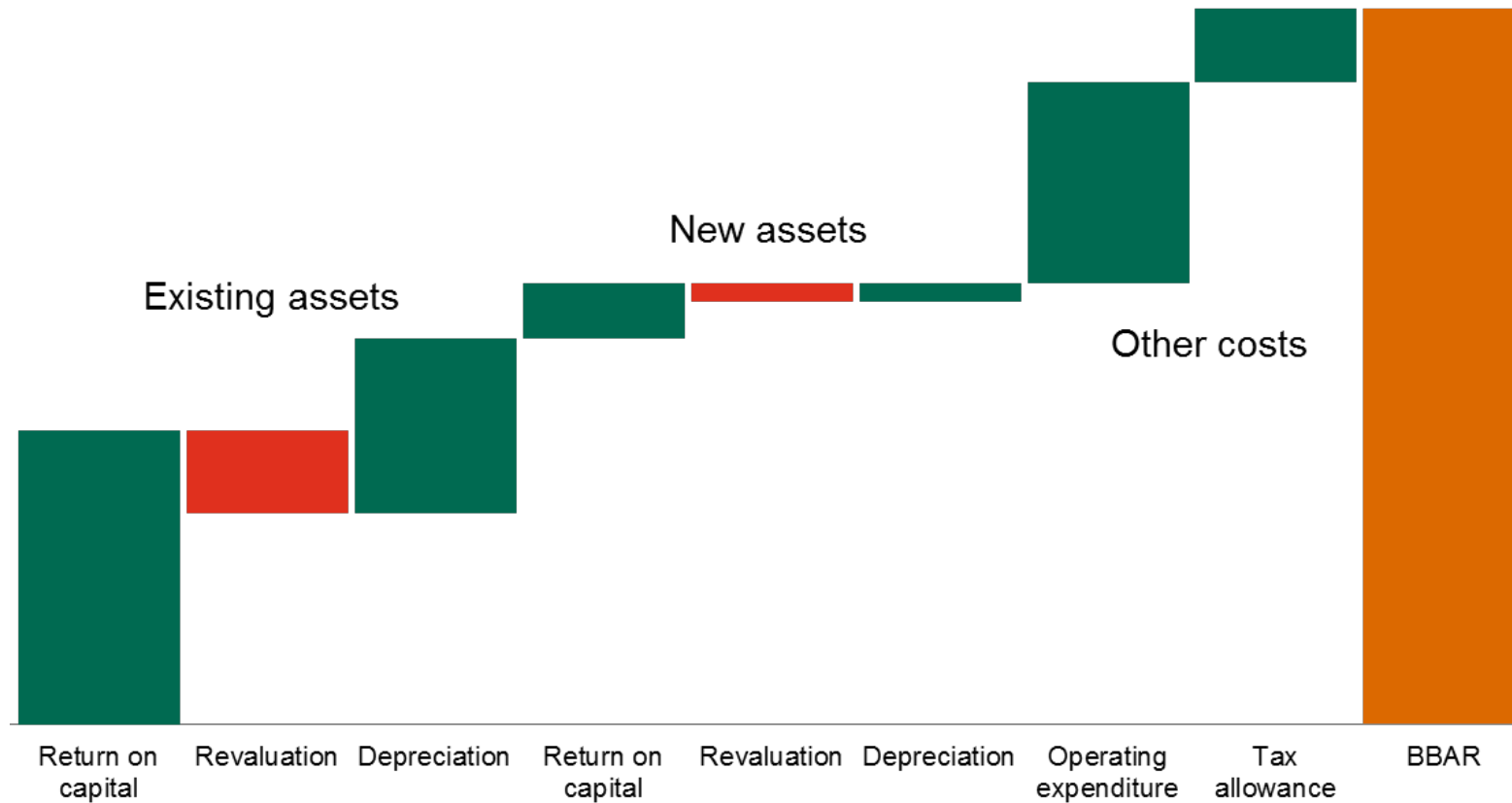
Incentives to innovate and invest

Setting prices and allocating costs for multiple services

A few other questions

Building blocks revenue illustrated

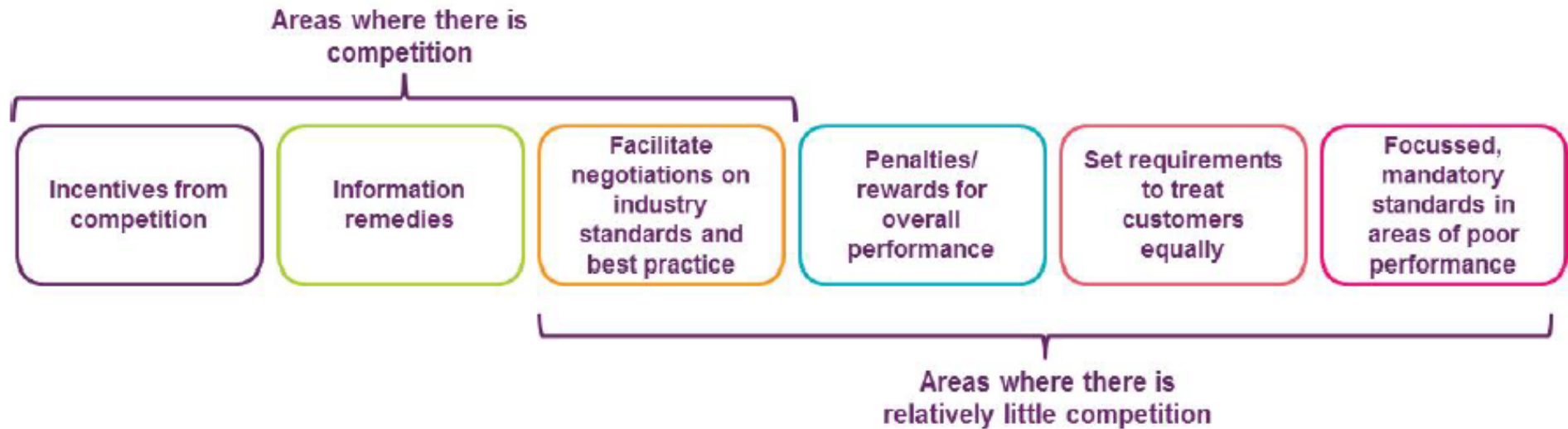
Indicative example (energy company regulated under Part 4)



How key building blocks might be set

Building block	Potential methodology
Starting asset value – fibre	Actual cost incurred by Chorus and LFCs is likely to be available
Starting asset value – copper	Starting valuation rolled forward – choice of starting value may be controversial (ACCC used DAC for Telstra in 2013)
Cost of capital	A similar approach to Chorus FPP / Part 4 regulation
Operating expenditure	Assessment of efficient costs; or escalation of current costs

Range of regulatory options for improving quality of service



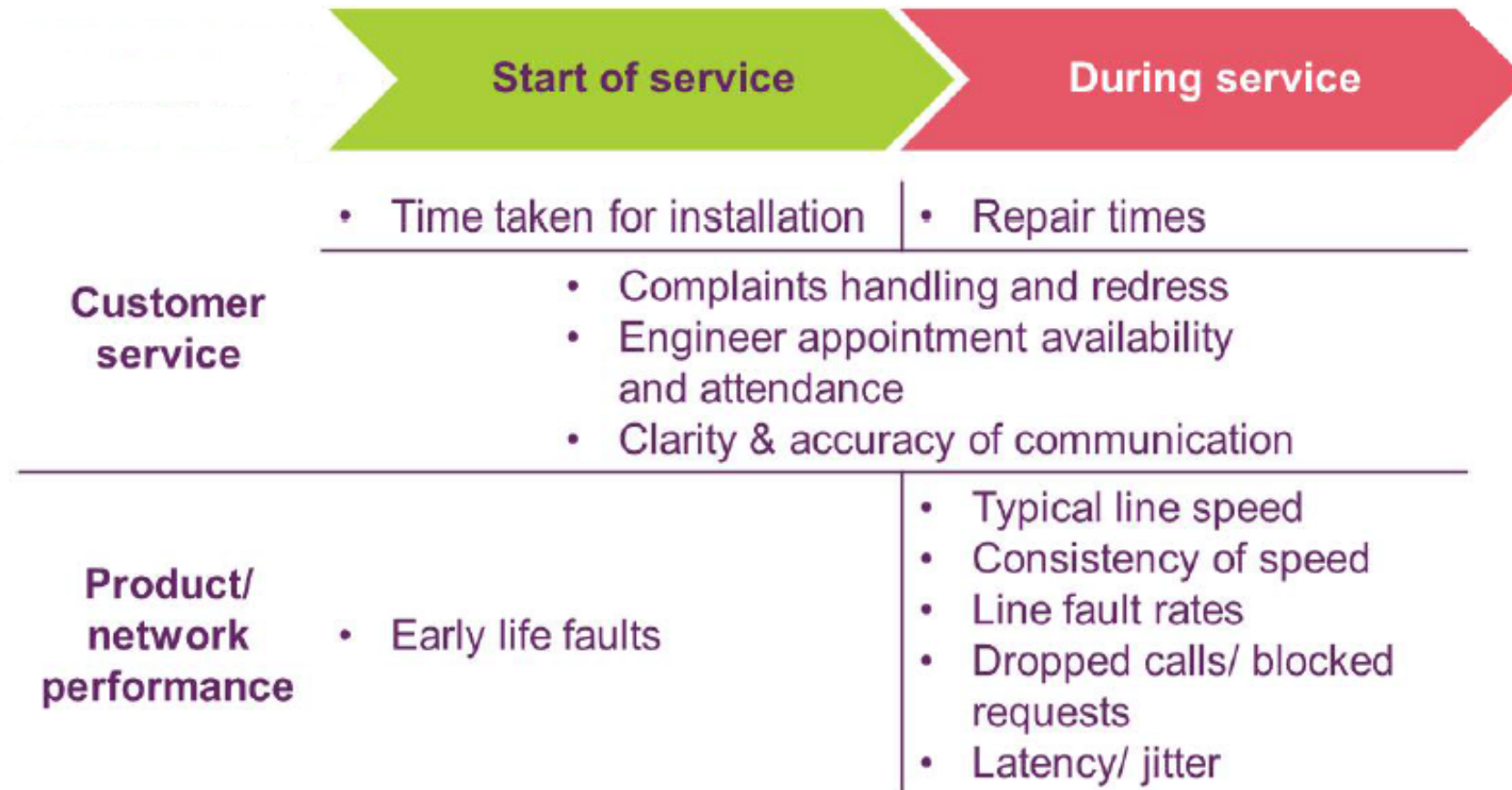
Source: Ofcom

The challenge in designing regulatory quality incentives

“Not everything that can be counted counts. Not everything that counts can be counted”

Not Albert Einstein

Features that contribute to quality of customer experience



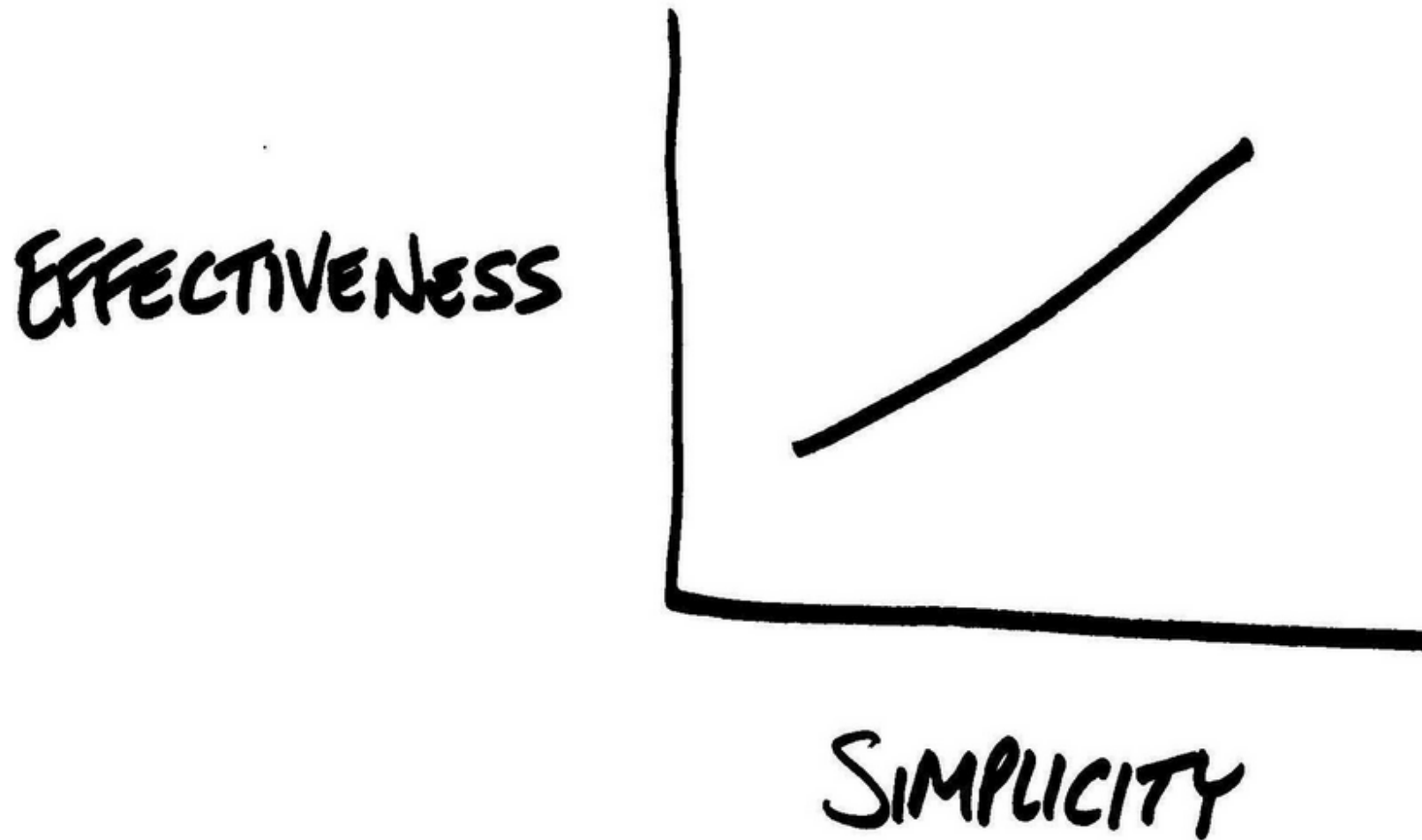
Source: Ofcom/UKRN

Incentives for innovation and investment

MBIE

“An important goal of the regulatory regime should be incentivising and facilitating the network owner to invest in delivering higher quality and innovative services over time.”

The challenge in designing regulatory efficiency and innovation incentives



Linking revenues to innovation

Australian example

- Special Access Undertaking (SAU) for NBN Co limits price increases to CPI-1.5% per year.
- ACCC considers that:
 - this means NBN Co can only increase its revenue by offering new products or increasing demand
 - therefore NBN Co has incentive to innovate and increase take-up of services

Pricing different services: potential principles

UK example (Ofcom)

Pricing and rates of return should reflect the level of risk faced when investments are made

Pricing approaches should take into account the level of demand uncertainty

Flexibility in pricing should allow experimentation, increased investment and greater take-up

Pricing approaches reflect the underlying characteristics of products

Regulation should consider the impact on investment incentives from the relative prices of different products

The costs of new investments are recovered from the services that they support

Allocating costs across services: potential principles

Australian example (ACCC, Telstra wholesale ADSL service decision 2013)

- The allocation of the costs of operating the network should reflect the relative usage of the network by various services
- Direct costs should be attributed to the service
- The cost allocation factors for shared costs should reflect causal relationships between supplying services and incurring costs
- No cost should be allocated more than once to any service

Sample cost allocation approaches

Example: Telstra proposed cost allocation framework, 2014

Overall approach: each service's share of the revenue requirement is calculated by applying cost allocation factors to the expenditure costs for each asset

Different cost allocators are applied to 22 asset classes (e.g. Ducts and Pipes, Copper Cables, Land)

Examples of allocators proposed by Telstra:

- the volume of throughput (i.e. voice call minutes or megabits of data) for a particular piece of equipment – such as the number of voice call minutes that a PSTN switch handles for different voice services
- the volume or capacity that is required to be provisioned for a particular asset to support different services, eg. the number of transmission links that are dedicated to different voice and data services

ACCC comment:

- Cost allocation factors are generally higher under Telstra's proposal compared to cost allocation factors calculated in accordance with the approach adopted in 2011 and 2013
- One reason for the different factors: Telstra has used different sources of information to reflect cost drivers for particular asset classes; eg. uses specific information on length of duct network in different geographic bands to reflect geographic cost differences. Under the previous approach, geographic cost differences were reflected using a set of geographic cost relativities.

A few other questions

Is demand forecasting viable? What are the implications if it isn't?

How would a migration from copper to fibre affect asset values and regulated revenues?

Chorus regulation vs LFC regulation?

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