



## OVERVIEW OF GB RIIO FRAMEWORK

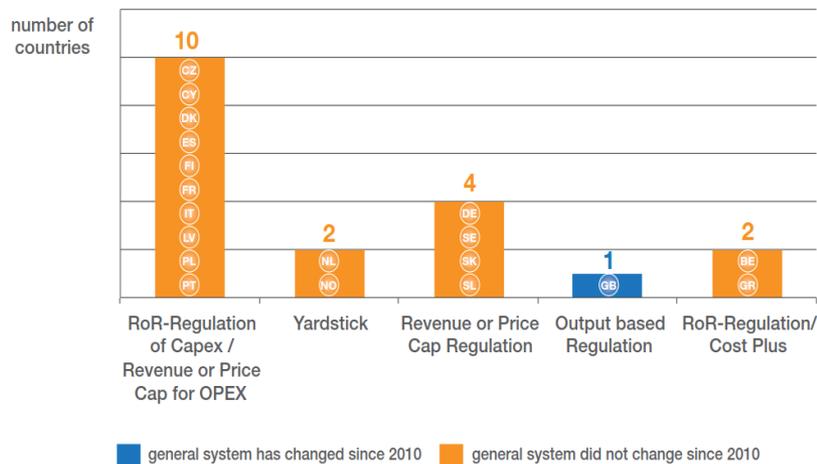
Approccio totex nel settore elettrico

Milan, 15 November 2017



# ONLY ONE EXAMPLE OF A TOTEX APPROACH EXISTS IN EUROPE

## Comparison of EU Regulatory Systems



## Comments

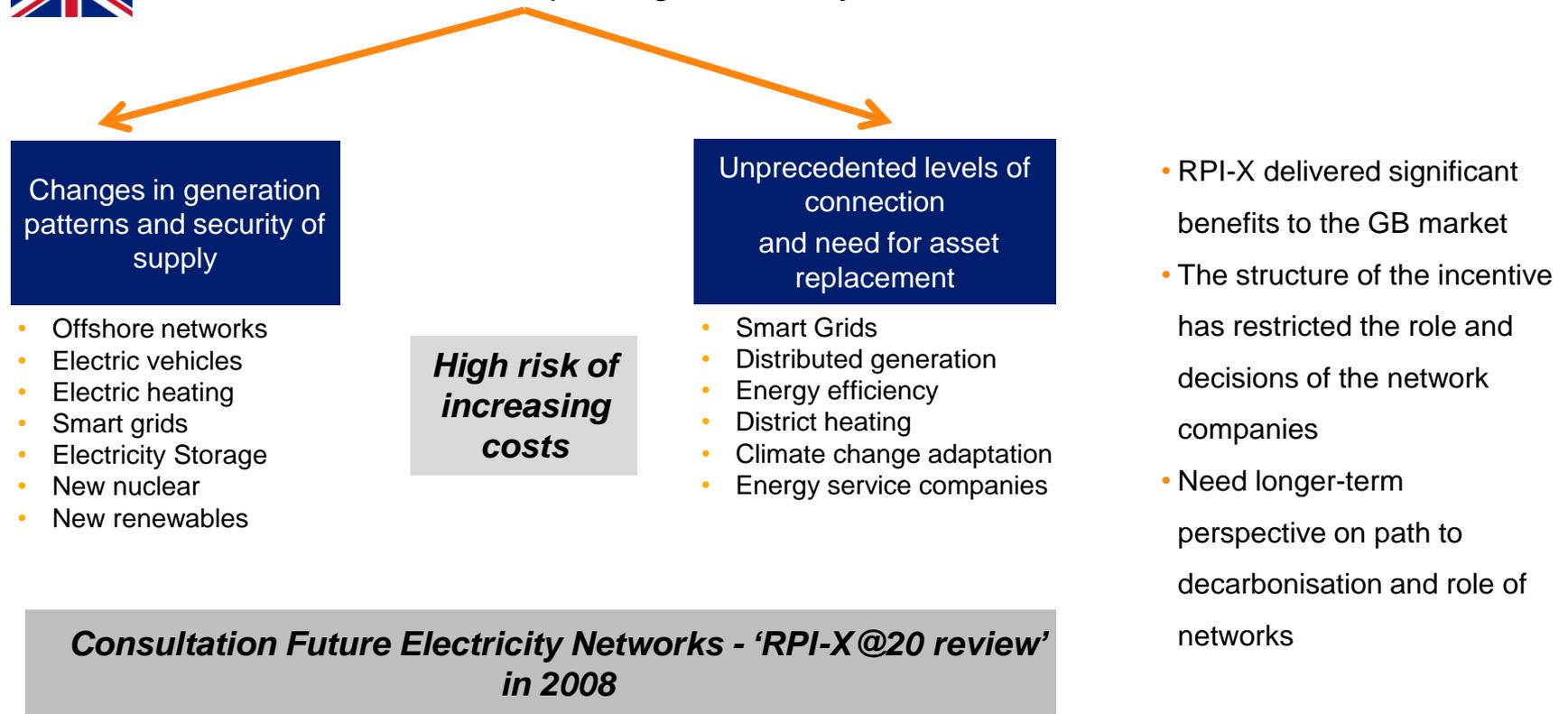
- Ex ante incentive schemes are commonplace across Europe but there are **limited examples of a TOTEX-type approach**
  - Most comprehensive regime is Ofgem's RIIO price-control
- The implementation of a TOTEX-based incentive regime represents a **major change** for the companies and the regulator
  - Some experience through the second generation smart metering regulatory settlement
  - Challenge of current business planning and regulatory reporting

Source: Eurelectric (2016)

# IN GB, FUTURE CHALLENGES FOR NETWORKS WERE EXPECTED TO HIGHLIGHT THE WEAKNESSES IN THE RPI-X FRAMEWORK



*Decarbonisation of power generation by 2030*

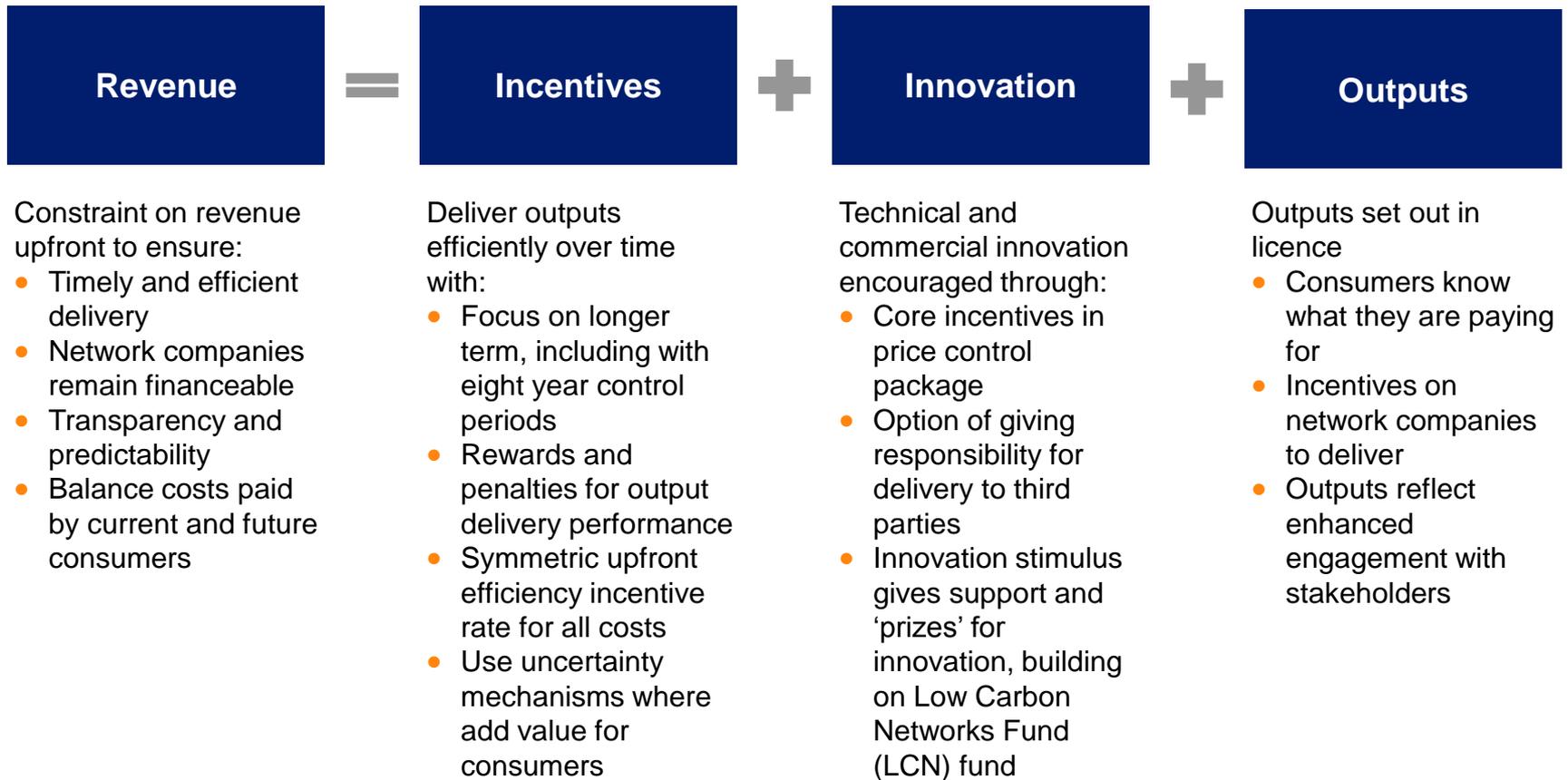


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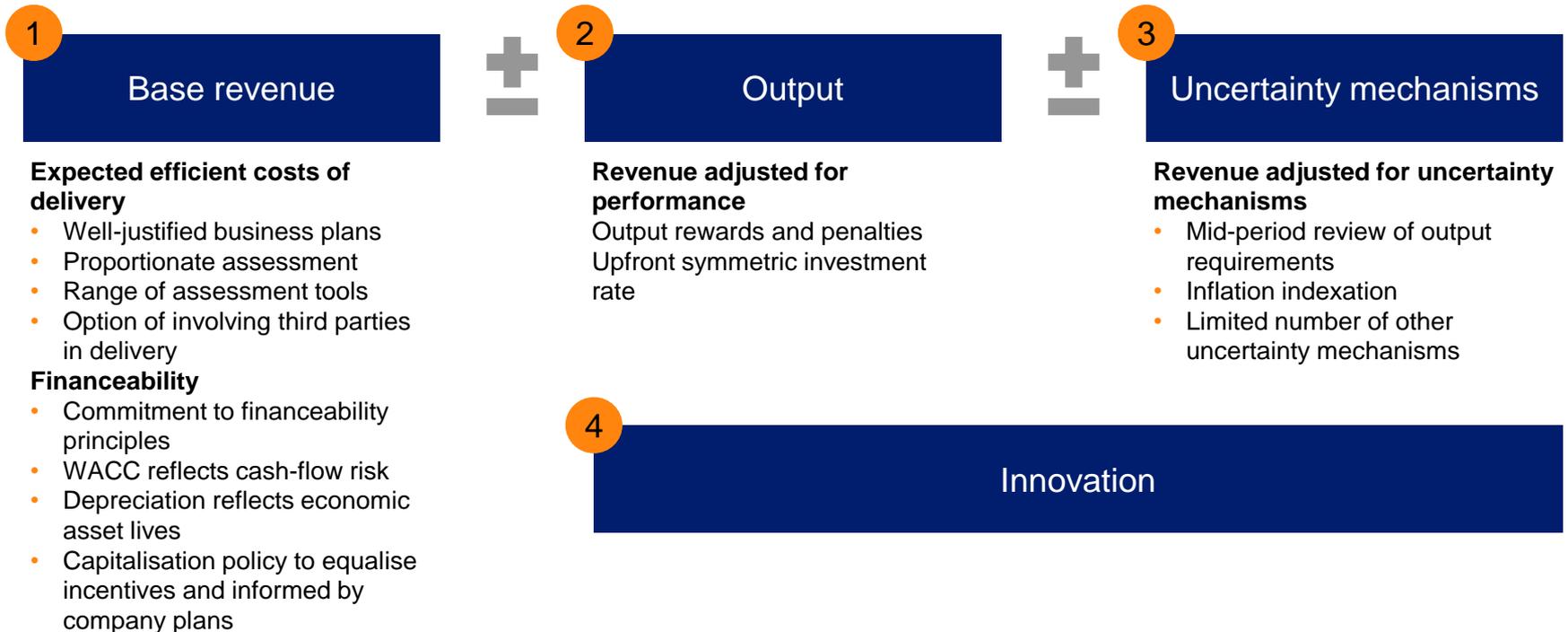
# AGENDA

1. The RIIO framework
2. The process and the building blocks

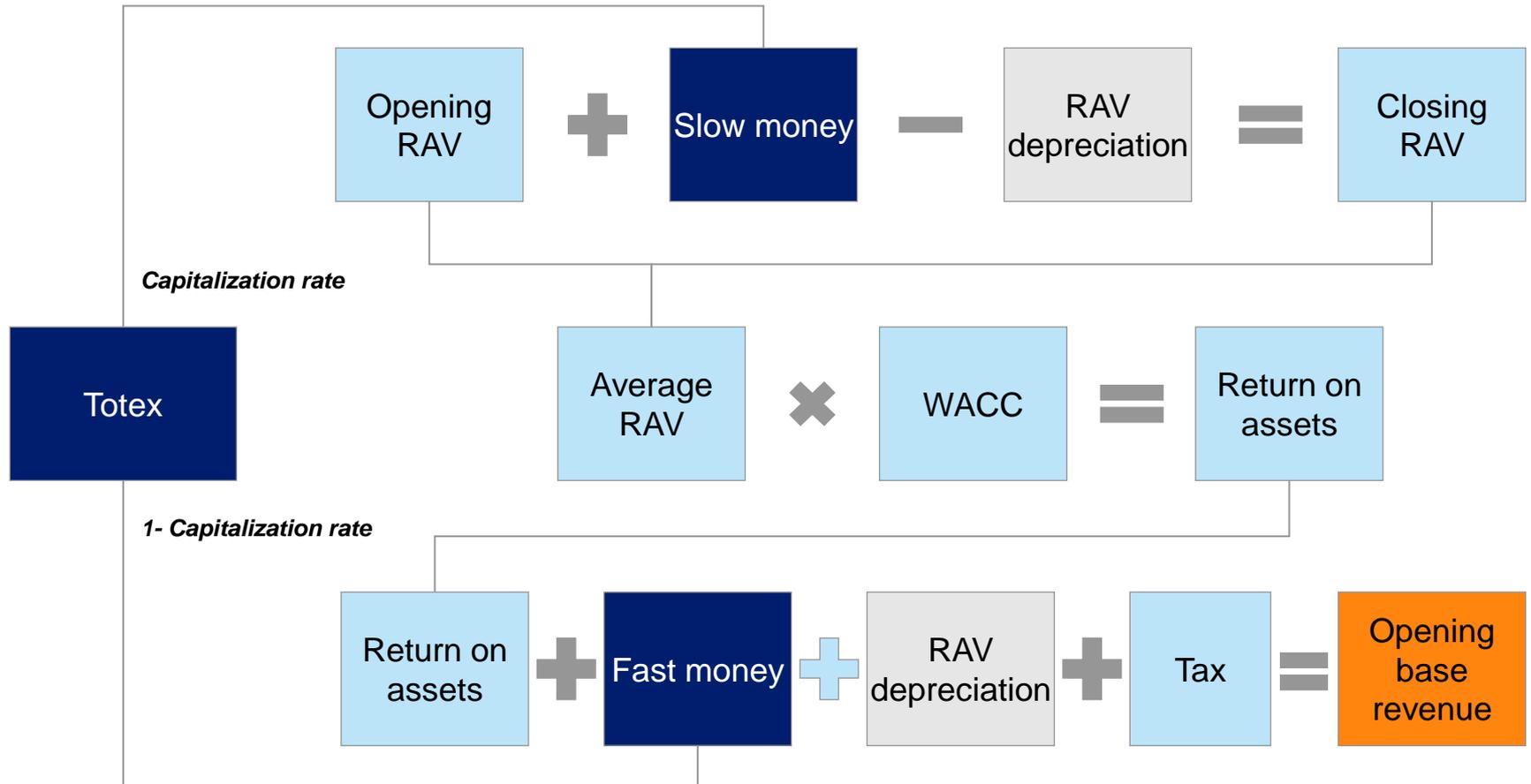
# THE RIIO FRAMEWORK – REVENUE, INCENTIVES, INNOVATION AND OUTPUTS



# THE ALLOWED REVENUE IS COMPOSED OF FOUR ELEMENTS: BASE REVENUE, OUTPUTS, UNCERTAINTY MECHANISM AND INNOVATION



# 1 BASE REVENUE - THE DIFFERENCE WITH STANDARD BUILDING BLOCK APPROACH IS IN THE RAV ADDITIONS



## 2 RIIO IS AN OUTPUT-LED SYSTEM

### Building blocks

#### Output categories

Customer satisfaction	Safe network services	Environmental impact
Reliability & availability	Connection terms	Social obligations

#### Primary outputs

- Reflect 'service' that customers of network services experience
- Priorities and level informed by stakeholder engagement
- Limited number in each category
- Rewards and penalties related to delivery performance
- Ofgem set sectorial level, with potential variation by company
- Common industry metrics developed at price control review (where feasible)
- Companies expected to deliver over long term

#### Secondary deliverables

- Deliverables that companies can be 'held to account on' that relate to (a) management of network risk and hence long-term delivery of primary outputs; and (b) anticipation of future needs
- Company-specific levels, tied to costs in business plan
- Monitored on ongoing basis
- Ofgem consider whether and how to take action if and when concerns with delivery arise
- Signal in price control proposals what action might be taken and under what circumstances

### Rewards & Penalties

**Table 6: Output incentive mechanisms – indicative cumulative revenue rewards and penalties for 2013-16<sup>29</sup>**

Mechanism (£m 2015-16 prices)	Cumulative reward or penalty			Total
	NGET	SHE Transmission	SPT	
Energy Not Supplied	10.3	3.0	8.5	21.9
Customer and stakeholder satisfaction surveys	22.4	1.6	1.8	25.8
Stakeholder engagement discretionary reward <sup>30</sup>	0.0	0.0	0.0	0.0
Sulphur Hexafluoride, SF <sub>6</sub>	6.8	-0.4	0.1	6.5
Environmental Discretionary Reward	2.02	0.0	3.95	5.97
Timely connections	0.0	0.0	0.1	0.1
Network Output Measures <sup>31</sup>	-	-	-	0.0
<b>Total all mechanisms (£m)</b>	<b>41.5</b>	<b>4.2</b>	<b>14.5</b>	<b>60.2</b>
<b>Amount earned in 2015-16 (£m)</b>	<b>10.8</b>	<b>1.4</b>	<b>2.9</b>	<b>15.1</b>

- Overview of the cumulative rewards/penalties for electricity transmission under T1 to date
- Note that some aspects (e.g. the Network Output Measures) are assessed at the end of T1 and any reward/penalty applied in T2

3

## UNDER RIIO, UNCERTAINTY MECHANISMS COVER AROUND 20-30% OF BASELINE TOTEX ALLOWANCE

### Uncertainty mechanisms

- Volume drivers
- Revenue drivers
- Re-openers
- Pass through costs
- Indexation
- Mid Period Review

### Benefits

- Lower cost of capital
- Reducing consumers' exposure to forecasting uncertainty

### Potential issues

- Potential to undermine efficiency incentives
- Added complexity to the regulatory regime
- Risks of unintended consequences
- Price volatility

*The overarching principle for uncertainty mechanisms is to **allow the network companies to manage the uncertainty** they face and should be limited to instances that will deliver value for money for consumers while allowing the networks to finance efficient delivery*

## SEVERAL MEANS OF INCENTIVISING INNOVATION BY COMPANIES

*No additional return for strategic/innovative investments, but ...*

Wider framework has three core elements helping innovation

Time-limited additional innovation stimulus is also included in the first RIIO control

- TOTEX cost assessment to encourage innovative solutions that could lower the lifetime costs of the system
  - Longer price-control periods to increase rewards for successful innovation
  - Emphasis on output delivery means new business models can be applied
- 
- Network Innovation Allowance (0.5% - 1% of base revenue)
  - Network Innovation Competition
  - Innovation Rollout Mechanism (accessed through re-opener windows)

# DIFFERENT CHALLENGES AND REQUIREMENTS AROUND INDIVIDUAL AREAS NEED TO BE CONSISTENTLY DESIGNED

## IQI matrix

- Decision on efficient expenditure
- Allowed expenditure (linked to difference between regulator and regulated projections)
- Income adjustment (linked to incentive compatibility)
- Sharing rule (efficiency incentive)

## Output/performance indicators

- Agreement on measurable outputs
- Determination of revenue at risk
- Monitoring and reporting on performance
- Link back to business plan
- Reporting vs financial incentives

## TOTEX cost incentives

- Removal of distortion between opex/capex decisions
- General efficiency rate for over and under-recovery

## Mechanisms to manage uncertainty

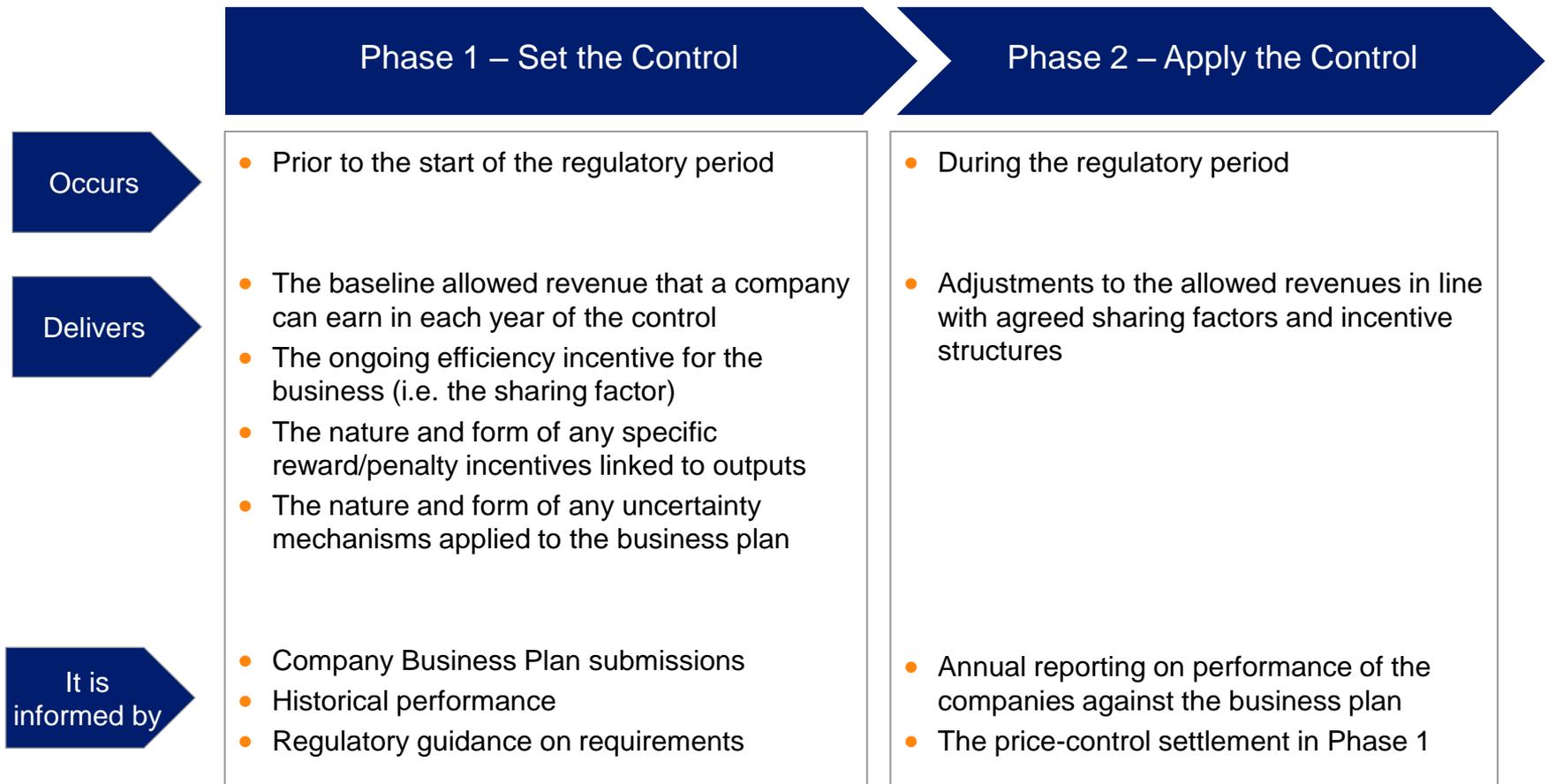
- More about 'baseline' than incentives
- Volume/revenue drivers
- Re-openers
- Logging up
- Indexation
- Cost pass-through
- Mid-term reviews

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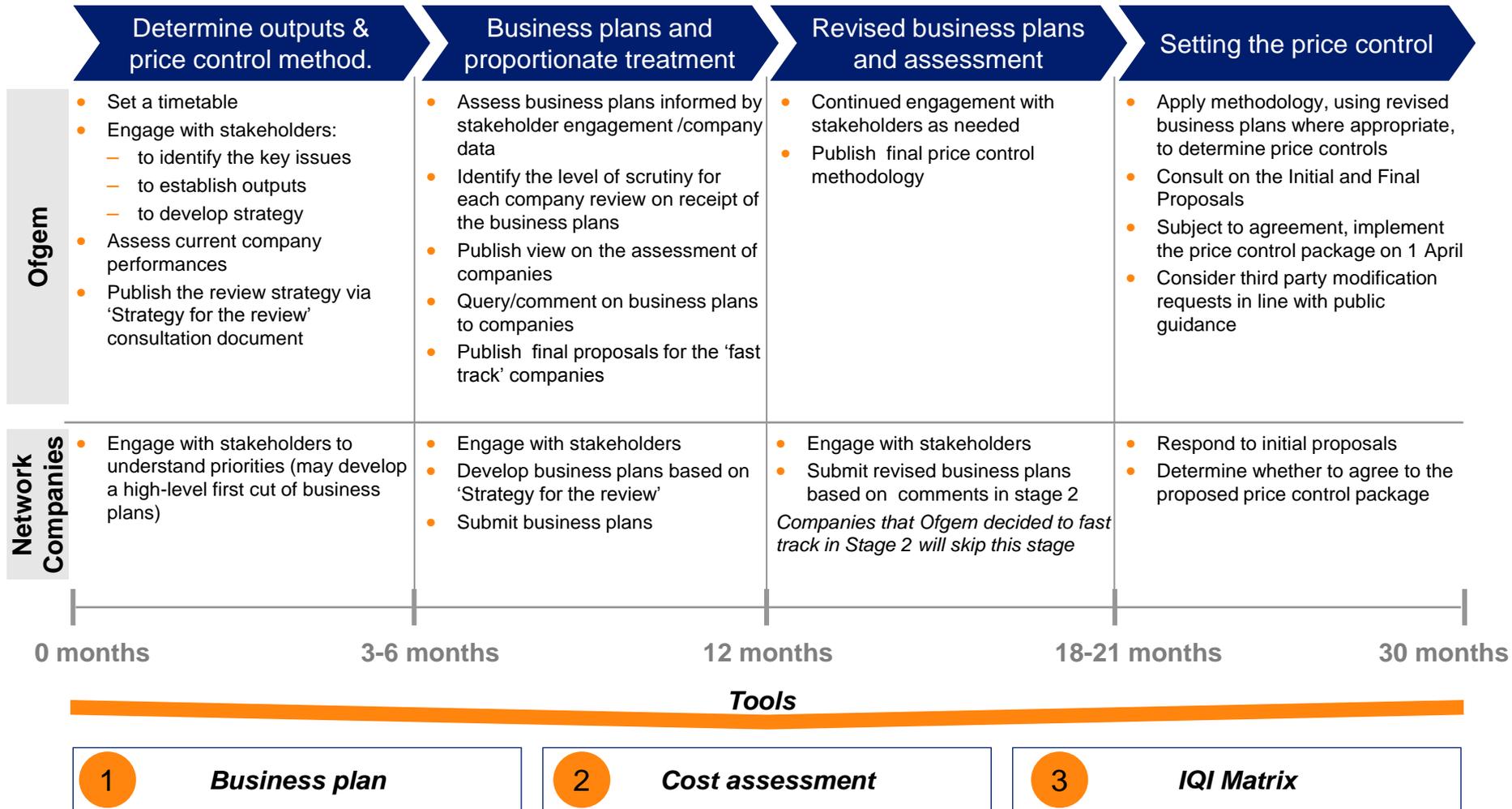
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# THE PROCESS CAN BE DIFFERENTIATED INTO TWO MAIN PHASES: SET THE CONTROL AND APPLY THE CONTROL



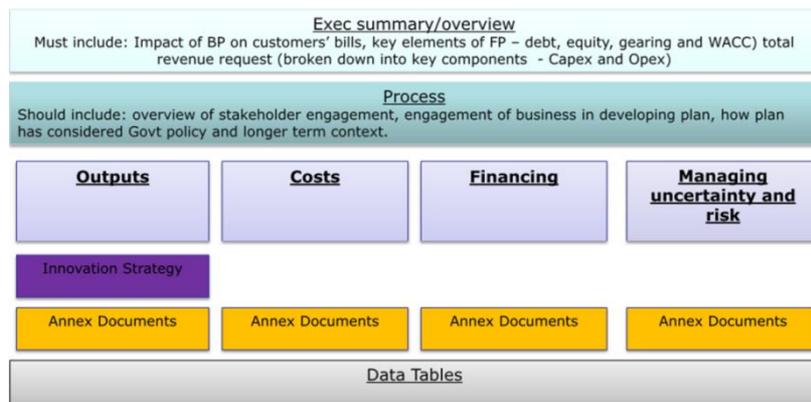
# PHASE 1: SET THE CONTROL - HIGH LEVEL OF STAKEHOLDER ENGAGEMENT IN EACH STAGE OF THE PROCESS



1

# THE BUSINESS PLAN IS A CORE DELIVERABLE UNDER THE RIIO FRAMEWORK

## Business plan structure



## Comments

- Presentation of the projections of activities, costs and outputs of the business
- Ofgem did not impose a reporting template for company business plans as it wanted the companies to provide all the information they believed was necessary to justify their plan
  - High level structure is proposed
  - Price-control financial model (PCFM) excel is published
  - Expectations are set (as to what constitutes 'well-justified')
  - Primary outputs are well-defined
- Production of a well-justified business plan has additional 'fast-tracking' incentives
  - Additional base revenue allowance
  - Higher efficiency incentive rate

## 2 COST ASSESSMENT STAGE OF RIIO PROCESS HAS FOUR ELEMENTS

### Comparative Cost Assessment

Toolkit approach' is followed using three models (see next slide for details):

1. A top-down Totex model
2. A bottom-up Totex model
3. A disaggregated activity-level model

### Smart grids/innovation benefits

Ofgem innovation funding mechanism called the Network Innovation Allowance (NIA), with the purpose of funding the companies for:

- The additional cost of using smart grid solutions and wider network innovation
- The preparation of submissions to the Network Innovation Competition (NIC)

### Real Price Effects (RPEs)

- NC allowances are indexed by RPI, however some of the costs are expected to change at a different rate than the RPI, termed as 'RPE'
- Efficiency assumptions based on expected improvements (i.e. potential reductions in each type of input volume) are determined
- RPEs of each input are weighted to derive a single RPE assumption

### Information Quality Incentive (IQI)

- Companies receive an up-front financial reward or penalty based on the deviation of their forecast from Ofgem assessment
- Companies with better forecasts receive a higher efficiency incentive rate (sharing factor)
- Allowed expenditure is based 75% on Ofgem benchmark view and 25% on the DNOs' forecasts

## 3

## MENU-BASED SOLUTIONS ARE USED TO ENCOURAGE REALISTIC COST PROJECTIONS

### IQI Matrix example

DNO:Ofgem Ratio	90	95	100	105	110	115	120	125	130
Efficiency Incentive	65%	63%	60%	58%	55%	53%	50%	48%	45%
Additional Income (£/100m)	3.1	2.4	1.7	0.9	0.1	-0.8	-1.8	-2.8	-3.9
Rewards & Penalties									
Allowed expenditure	97.50	98.75	100.00	101.25	102.50	103.75	105.00	106.25	107.50
Actual Exp									
90	7.95	7.9	7.7	7.4	7.0	6.4	5.7	4.9	4.0
95	4.7	4.76	4.7	4.5	4.2	3.8	3.2	2.5	1.7
100	1.5	1.6	1.7	1.6	1.5	1.1	0.7	0.1	-0.6
105	-1.8	-1.5	-1.3	-1.2	-1.3	-1.5	-1.8	-2.2	-2.8
110	-5.1	-4.6	-4.3	-4.1	-4.1	-4.1	-4.3	-4.6	-5.1
115	-8.3	-7.7	-7.3	-7.0	-6.8	-6.7	-6.8	-7.0	-7.3
120	-11.6	-10.9	-10.3	-9.9	-9.6	-9.4	-9.3	-9.4	-9.6
125	-14.8	-14.0	-13.3	-12.7	-12.3	-12.0	-11.8	-11.7	-11.8
130	-18.1	-17.1	-16.3	-15.6	-15.1	-14.6	-14.3	-14.1	-14.1
135	-21.3	-20.2	-19.3	-18.5	-17.8	-17.2	-16.8	-16.5	-16.3
140	-24.6	-23.4	-22.3	-21.4	-20.6	-19.9	-19.3	-18.9	-18.6
145	-27.8	-26.5	-25.3	-24.2	-23.3	-22.5	-21.8	-21.2	-20.8
150	-31.1	-29.6	-28.3	-27.1	-26.1	-25.1	-24.3	-23.6	-23.1

### Comments

- Three components – the allowed expenditure (based on weighting between regulator and company forecasts); efficiency incentive rate (how much over- or under-performance is retained by the company); additional revenue (reward/penalty)
- Realised revenue = Actual expenditure + Pay-off
- Pay-off = ((Allowed expenditure – Actual expenditure) x Efficiency Incentive) + Additional Income

## PHASE 2: APPLYING THE CONTROL

Companies

**Report** on their performance every year in line with the Regulatory Instructions and Guidance (RIGs). If the companies have not delivered then the regulator can take action

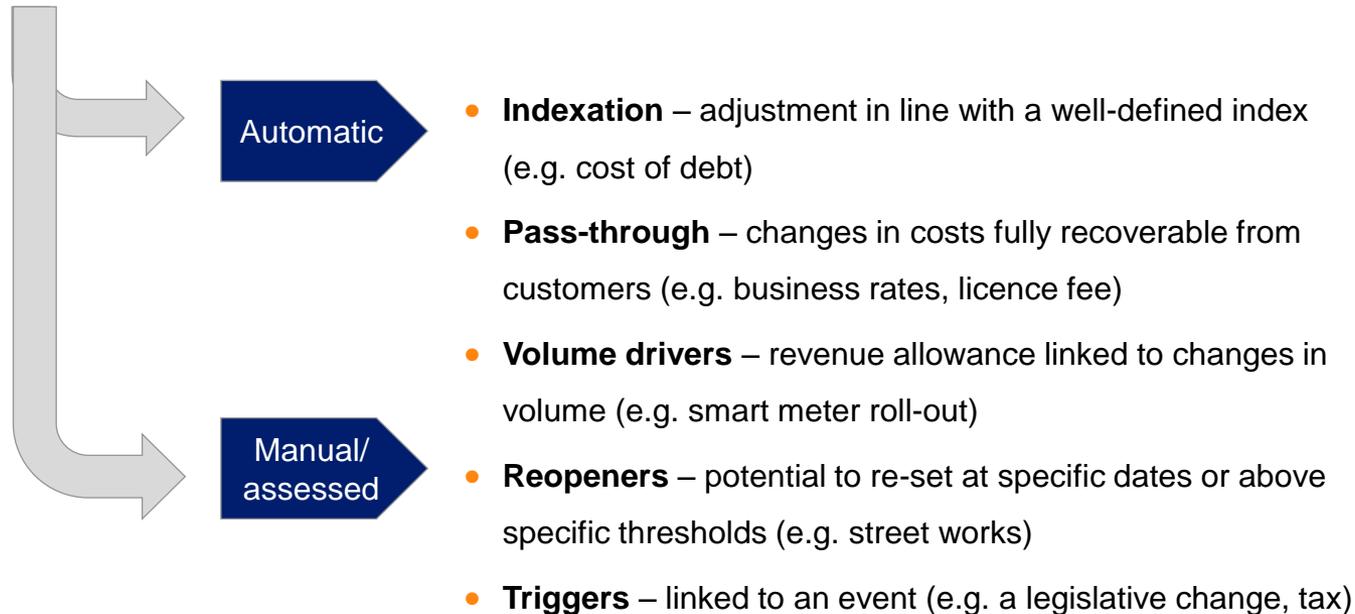
Regulator

By end November calculates and publishes the **change to the base allowed revenue** using the information provided and the Price Control Financial Model. The adjustment is applied from the following April (i.e. the start of the next regulatory year)

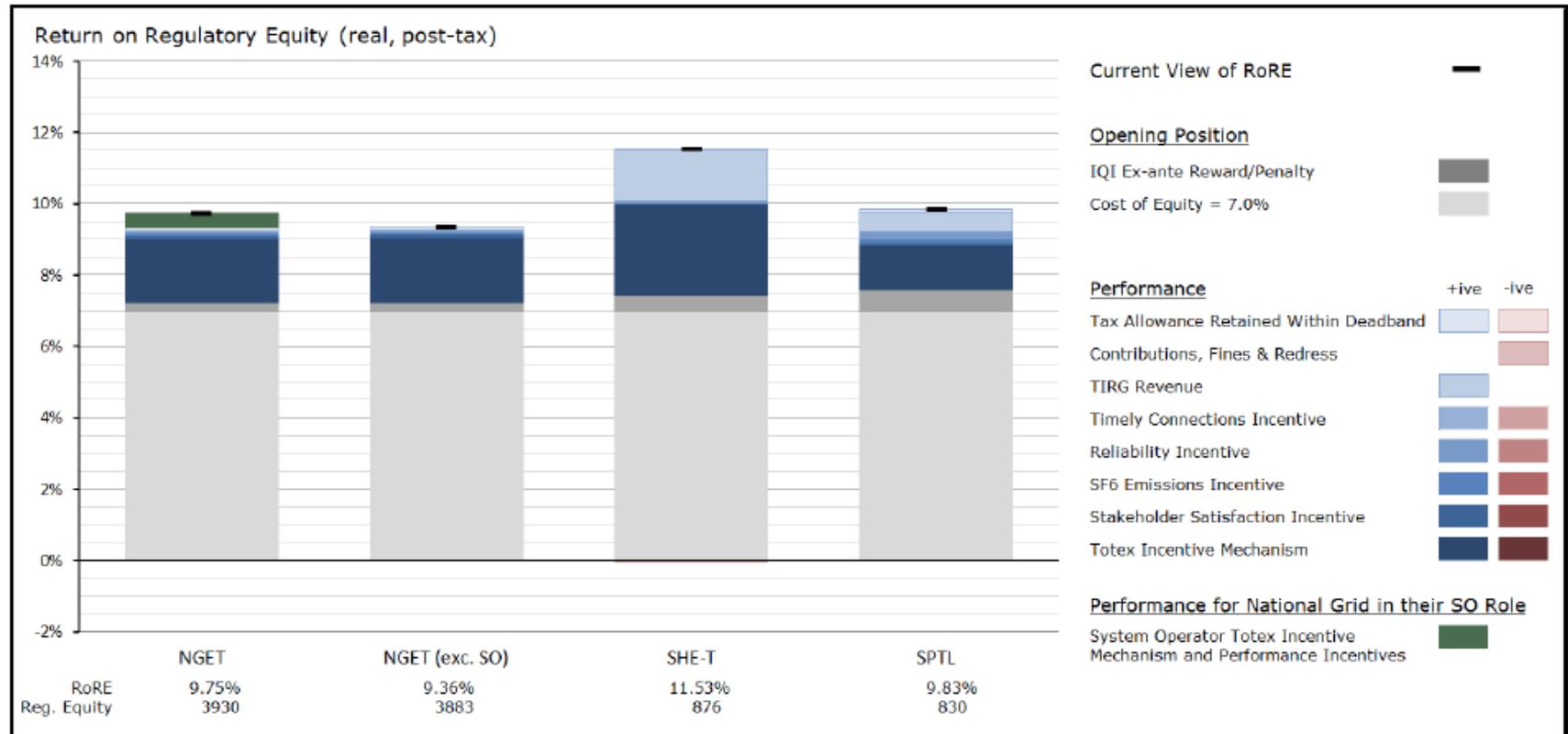
- Publishes an annual report on the activities of the companies, performance to date and forecast performance over the remainder of the price-control
- Maintains an ongoing/interactive set of network indicators covering:
  - Customer satisfaction
  - Network connections
  - Return on Regulated Equity
  - Expenditure vs allowance
  - Network costs per domestic consumer
  - Energy not supplied
  - Sulphur Hexafluoride emissions

# REVIEWING THE BASE ALLOWED REVENUE

- Apply where changes in cost or output/activity are (a) **outside of the control** of the companies; and (b) have a **material impact** on the cost of operation
- Window and/or threshold for review is set by the regulator through consultation
  - e.g., X% of revenue (1% of average annual revenue for NGET), time periods



# ABILITY TO EARN A HIGHER RETURN CAN BE A CONSEQUENCE OF INCENTIVE MECHANISMS



- Companies have tended to outperform on RoRE
- Incentive mechanisms manage this outperformance through sharing factors (adjusted for timing impacts), ratchet effects across price-control periods and focus on value for money in rewards

# THERE ARE SEVERAL LESSONS FROM THE GB EXPERIENCE

## Set the Control

- **Long lead times** for developing framework and business plans
- **Quality and quantity of information** become key to success
- **Robust business plans and engagement with stakeholders/consumers** reduce level of scrutiny and timescale of engagement
- **Innovation** is seen as a key deliverable from the incentive framework so there is an expectation of removal of specific incentives

## Apply the Control

- **Consistent enforcement** of rules set up ex ante
- **Continuous maintenance** of the system
  - Ofgem is still refining the framework
    - Presentation of business plans
    - Effective stakeholder engagement
    - Managing complexity
    - Definition of outputs
    - Proportionate regulatory burden

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# Q&A



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