



Hot Topics in British Regulation

Finding Efficient Outcomes in Changing Conditions

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ACCC/AER Conference, Brisbane, Australia

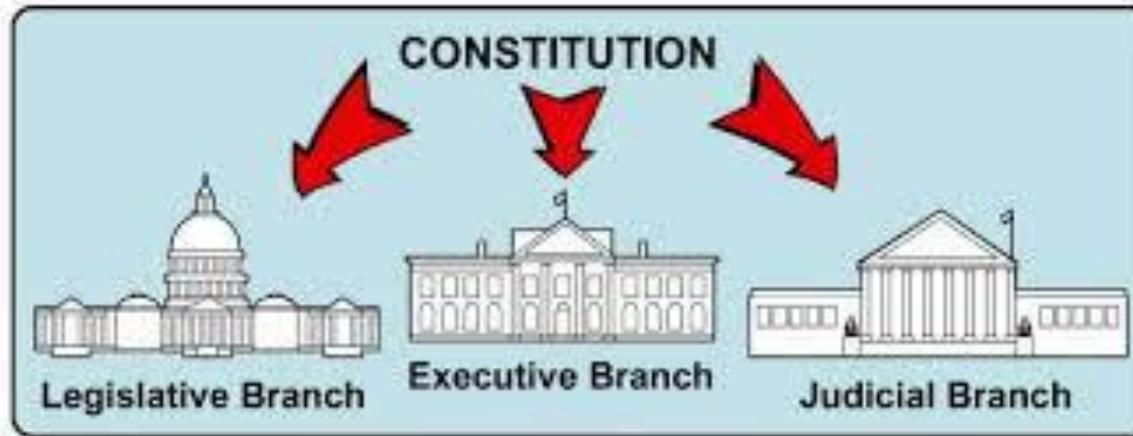
7 August 2014

1) Independence from government strains the British body politic



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- **US**



not UK

- **EU: 3rd Package of Directives (2009) guarantees:**

2009/72/EC (Electricity), Clause 35.4;
2009/73/EC (Gas), Clause 39.4

“Member States shall *guarantee the independence of the regulatory authority* and shall ensure that it exercises its powers impartially and transparently.....”

2009/72/EC (Electricity), Clause 37.17;
2009/73/EC (Gas), Clause 41.17

“Member States shall ensure that suitable mechanisms exist at national level under which a party affected by a decision of a regulatory authority has a *right of appeal to a body independent of the parties involved and of any government.*”

UK Governments have struggled to reconcile the independence of regulators with the “sovereignty of Parliament”

2) UK regulators serve two masters: consumers and the environment



- Water and Sewerage Companies – EU-Imposed Clean-up
 - Cleaner beaches - who should pay?
- Energy Sector – Evolving Duties of the Regulator
 - Balancing interests – who matters in regulation?

Electricity Act 1989: The regulator must have regard to the need:

- (a) “to secure that all reasonable demands for electricity are met”; and
- (b) “to secure that licensees can finance their licensed activities”

Utilities Act 2000: Created a regulatory authority with a new “principal objective”:
“protect the interests of [existing and future] consumers”

Energy Act 2004, s83 (as amended 2008): Imposed environmental concerns:
the authority must also have regard to:
(c) “the need to contribute to the achievement of sustainable development.”

**Regulators must now balance consumers’ interests
against the special interests of “the environment”**

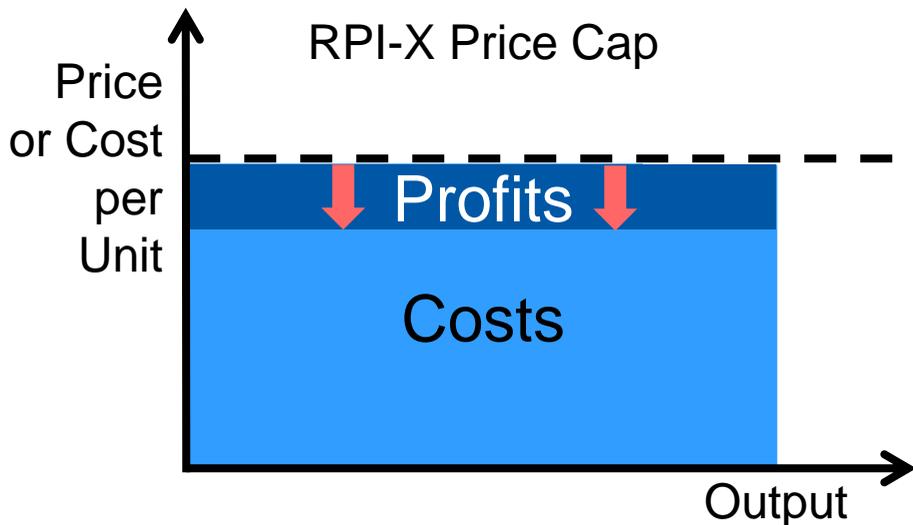
3) Regulators set incentives to cut costs and incentives to spend



- In the UK, regulation is no longer simple or light-handed

“RPI-X” Used the Profit Incentive to Encourage Cost Minimisation

“RIIO” Rewards Telling the Truth, Forecasting Lower Costs, Spending (40%) and more....



IQI Matrix of Cost-Based Rewards

IQI MATRIX (For information only)										
DNO:Ofgem Ratio	90	95	100	105	110	115	120	125	130	
Efficiency Incentive	70%	68%	65%	63%	60%	58%	55%	53%	50%	
Additional income (£/100m)	1.5	0.7	0.0	-0.9	-1.8	-2.8	-3.8	-4.9	-6.1	
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	6.7	6.6	6.5	6.1	5.7	5.1	4.5	3.6	2.7	
95	3.2	3.3	3.2	3.0	2.7	2.3	1.7	1.0	0.2	
100	-0.3	-0.1	0.0	-0.1	-0.3	-0.6	-1.1	-1.6	-2.3	
105	-3.8	-3.5	-3.3	-3.2	-3.3	-3.5	-3.8	-4.2	-4.8	
110	-7.3	-6.9	-6.6	-6.4	-6.3	-6.4	-6.6	-6.9	-7.3	
115	-10.8	-10.2	-9.8	-9.5	-9.3	-9.2	-9.3	-9.5	-9.8	
120	-14.3	-13.6	-13.1	-12.6	-12.3	-12.1	-12.1	-12.1	-12.3	
125	-17.8	-17.0	-16.3	-15.7	-15.3	-15.0	-14.8	-14.7	-14.8	
130	-21.3	-20.4	-19.6	-18.9	-18.3	-17.9	-17.6	-17.4	-17.3	
135	-24.8	-23.7	-22.8	-22.0	-21.3	-20.7	-20.3	-20.0	-19.8	
140	-28.3	-27.1	-26.1	-25.1	-24.3	-23.6	-23.1	-22.6	-22.3	
145	-31.8	-30.5	-29.3	-28.2	-27.3	-26.5	-25.8	-25.2	-24.8	
150	-35.3	-33.9	-32.6	-31.4	-30.3	-29.4	-28.6	-27.9	-27.3	

As Investment needs rise, UK regulators put greater emphasis on incentives to *spend*, whilst trying to preserve incentives for efficiency

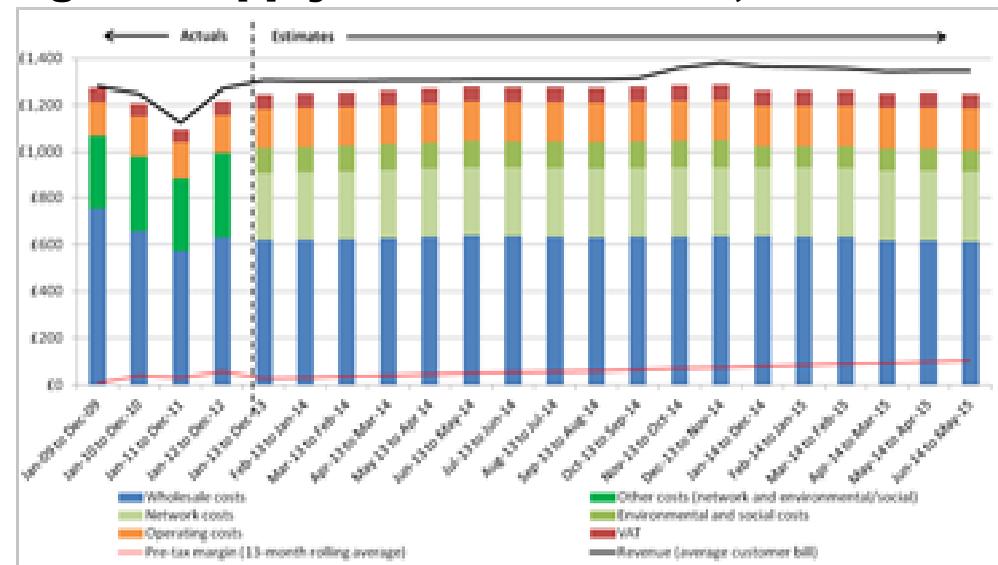
4) Retail utility markets represent a challenge for competition policy

- Six competing energy retailers are not enough to keep everyone happy



- 24 September 2014 – Opposition promises to “freeze energy prices” for 20 months
- 1 January 2014 – Ofgem limits number and form of tariffs
- 26 June 2014 – Ofgem refers energy markets to the CMA, mostly because of rise in profits and “consumer distrust”

Ofgem: Supply Market Indicator, June 2014



Many problems reside in the relationship between the customer and the supplier, not in competition between suppliers

Efforts to pursue efficiency risk being overtaken by politics



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- The UK government finds it hard to live with:
 - Independent executive agencies
 - Efficient, competitive energy markets
 - Split jurisdiction with Europe
- Either the UK government will push for more political control and state ownership;
- Or independent institutions will defend their roles and continue to seek efficient outcomes



The UK may preserve past gains - or charge forward to the 1970s



Annex A: RIO Incentive Mechanisms

Providing incentives for multiple outputs

Since 2010, Ofgem has abandoned “RPI-X” in favour of “RIIO”

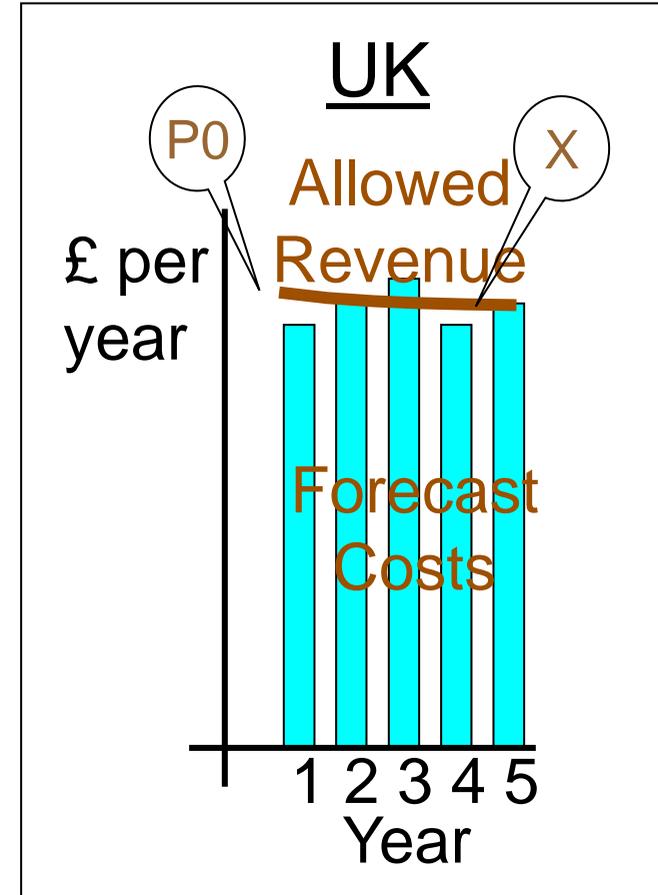
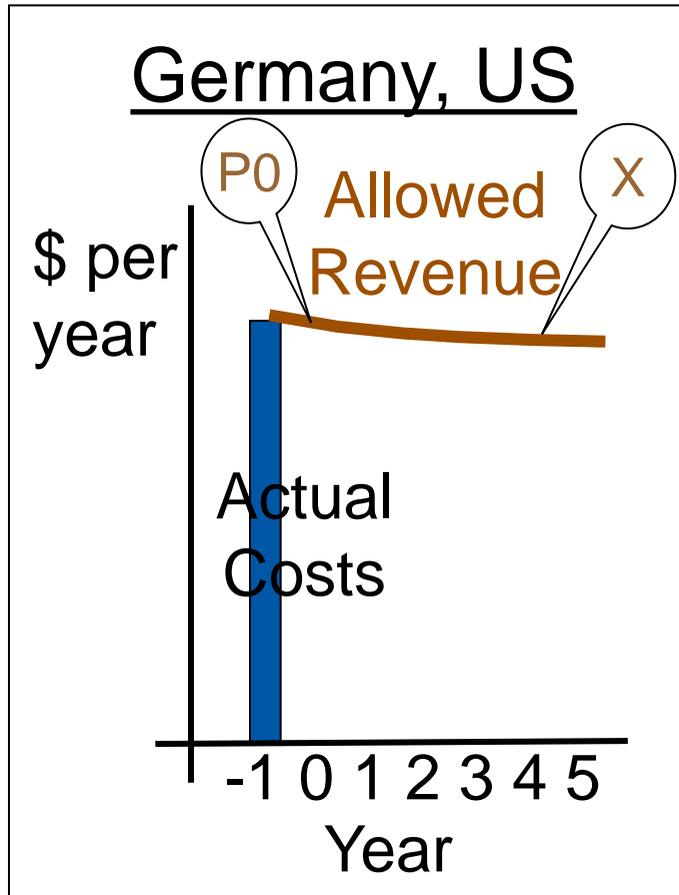


- RIIO stands for “Revenue=Incentives+Innovation+Outputs”
 - **Incentives** = Additional revenue for specific incremental costs
 - **Innovation** = Explore new ideas – smart grids and demand-side
 - **Outputs** = Firms must provide cost-benefit analysis:
 1. how planned expenditures increase outputs; and
 2. how these outputs benefit consumers (or the environment)

- RIIO Reviews to Date:
 - RIIO-T1 (2011-13) – elec. and gas transmission 2013-2021
 - RIIO-GDN1 (2011-13) – gas distribution 2013-2021
 - RIIO-EDN1 (2013-2015) – electricity distribution 2015-2023

Other regulators might take the new aspects of RIIO for granted....

UK regulation has always used “forward-looking” costs (forecasts)



The UK regulatory system suffered at the start from a lack of rules to define costs, set review procedures or update revenues

RIO still relies on forecasts of expenditure – now for 8 years



- 1. Definition of Costs:** as before, but
 1. asset lives extended from 20 years to 40/45 years,
 2. 85%/15% instead of capex/opex
- 2. Conversion of Costs into Revenues:** as before, but more attention on linking forecast costs to outputs
- 3. 8-Year Revenue Formula (+ 4-year Mini-Review):** multiple incentives and c. 40% cost pass-through

RIO Categories of “Primary Output”

Customer satisfaction

Reliability and availability

Conditions for connection

Environmental impact

Social obligations

Safety

**Revenue comprises: RPI-X Fixed Revenue + 2.5% for “Fast-Tracking”
+ Debt indexation + IQI pass-through at c. 40%
+ Revenue for defined outputs + Reopeners for change in law**

RIO aims for stable definitions of costs, through new accounting rules



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1) Definition of Costs

- RAB value is taken from the previous review:
- Depreciation: Asset lives extended from 20 years to 40-45 years
- Capex/Opex distinction replaced by splitting all expenditures c. 85/15
- WACC for a notional balance sheet, as before:
 - c. 65% Debt: 10-year trailing average
 - c. 35% Equity: CAPM using historic averages

NB: Ofgem continues to shy away from detailed scrutiny of accounts

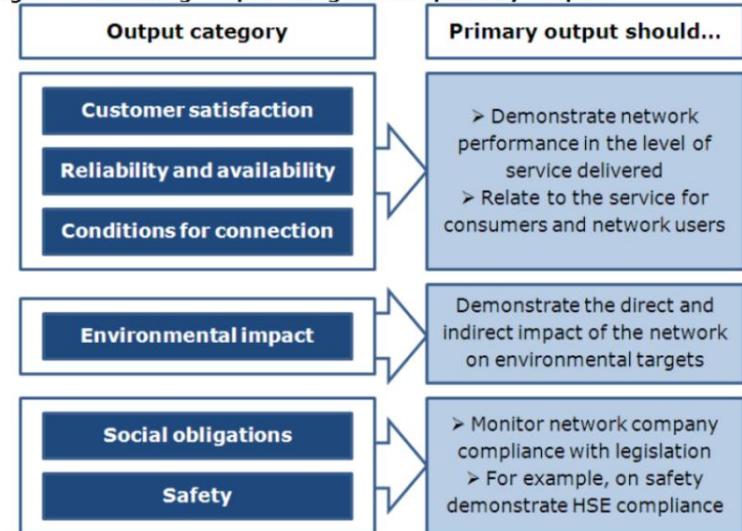
RIO still relies on forecasts of capex and opex – now for 8 years



2) Converting Costs into Revenues at Review

- Regulated firms must submit detailed business plans for the coming regulatory period:
 - Forecasts of all expenditure and “outputs”
 - Explanations of cost-benefit analysis
 - Evidence of “stakeholder consultation” to establish values
- Outputs may be “primary” (see figure) or “secondary”:
 - managing network risk;
 - projects for delivering primary outputs in future periods; and
 - technical and commercial innovation projects

Figure 15: Linking output categories to primary outputs



Source: Ofgem, RIO Handbook, 2010

A RIO review still takes two years, except for companies that are “fast tracked” for providing good business plans

Each company's revenue formula is now highly complex



3) RIIO's 8-Year Formula for Updating Revenues

- Basic RPI-X Fixed Revenue (or a basket of price caps)
- Reward for “Fast-Tracking” (ED1 - 2.5% of totex)
- Debt indexation (10-year average cost, updated annually)
- Information Quality Incentive (IQI) = cost pass-through at c. 40%
- Revenue adjustments for specific outputs (some *ex post*)
 - Quality of service (reliability, availability of capacity, “asset health”)
 - Customer satisfaction; network losses
 - Environmental outputs (CO2 reductions, SF6 control)
 - Safety – HSE says GDNs must replace iron mains;
 - Low Carbon Network Fund / Network Innovation Competition
 - Reopeners for change in law

The mid-term “mini-review” after 4-years is intended only to update revenues for changes in required outputs – but may be broader

The IQI now sets a general rate of cost pass-through for most costs



The “Information Quality Incentive” defines costs as “% of Ofgem’s cost forecast”

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Ofgem, Strategy Consultation for ED1, 28 September 2012, Table 9.2, p94

- Each **column** offers a different rate of cost pass-through (= 100% - “Efficiency Incentive”), e.g.
 - If DNO Cost forecast = 110% of Ofgem cost forecast
 - Basic “Allowed expenditure” = 102.50% of Ofgem cost forecast
 - Pass through of additional costs = 100% - 60% = 40%
- Each **row** represents a possible outcome for “Actual Expenditure”
- Each **cell** defines a reward (+) or penalty (-) relative to 100% recovery of “Actual Expenditure”
 - If DNO Cost Forecast = Actual Expenditure = 110:
 - Allowed revenue = $110 - 1.8 - ((110 - 102.5) \times 0.60)$
 - $= (110 \times 0.4) + (102.5 \times 0.6) - 1.8 = 110 - 6.3 = 103.7$
 - Each additional 5 of costs increases revenue by 2 (=40%)
- Companies maximise profit by:
 - Reducing forecast costs to what they expect to spend; and
 - Reducing actual costs

The IQI encourages companies to raise Ofgem’s cost forecast, reduce their cost forecast, declare a truthful plan, and minimise actual costs

Networks have many “outputs” and incentives (some ex post)



RIIO-GD1: Gas Distribution

Category of Output	Output Measure or Target	Incentive
Customer Satisfaction	Customer satisfaction survey; Complaints handling metric; Stakeholder engagement measure	Revenue drivers (+/- 1% of revenue)
Reliability and Availability	Primary: Loss of supply (number of interruptions); Network capacity (1 in 20 peak day). Secondary: Asset health/risk; asset/capacity utilisation	P: Compensation; Ex post review/penalty; S: Ex post review
Conditions for Connection	Guaranteed standards of performance (on responses to requests);	Compensation
Environmental Impact	15% reduction in gas transport losses (“shrinkage”); Enabling connection of biomethane; Discretionary rewards up to £12 million	Revenue drivers
Social Obligations	Address fuel poverty by connecting up to 80,000 fuel poor households; Raise awareness of the risks of CO poisoning	Ex post review; rewarded via stakeholder engagement
Safety	Mandatory replacement of iron mains (km volume driver): “tier 1” and “high risk tier 2” 40-60% improvement in safety risk (expected incidents p.a.)	Revenue driver; Ex post review and penalty

Source: Ofgem, RIIO-GD1: Final Proposals – Overview, 168/12, 17 December 2012

Difficulty with measuring outputs may turn the ex post incentives into reviews of actual costs and inputs

Annex B: About Our Firm

The Company Overview





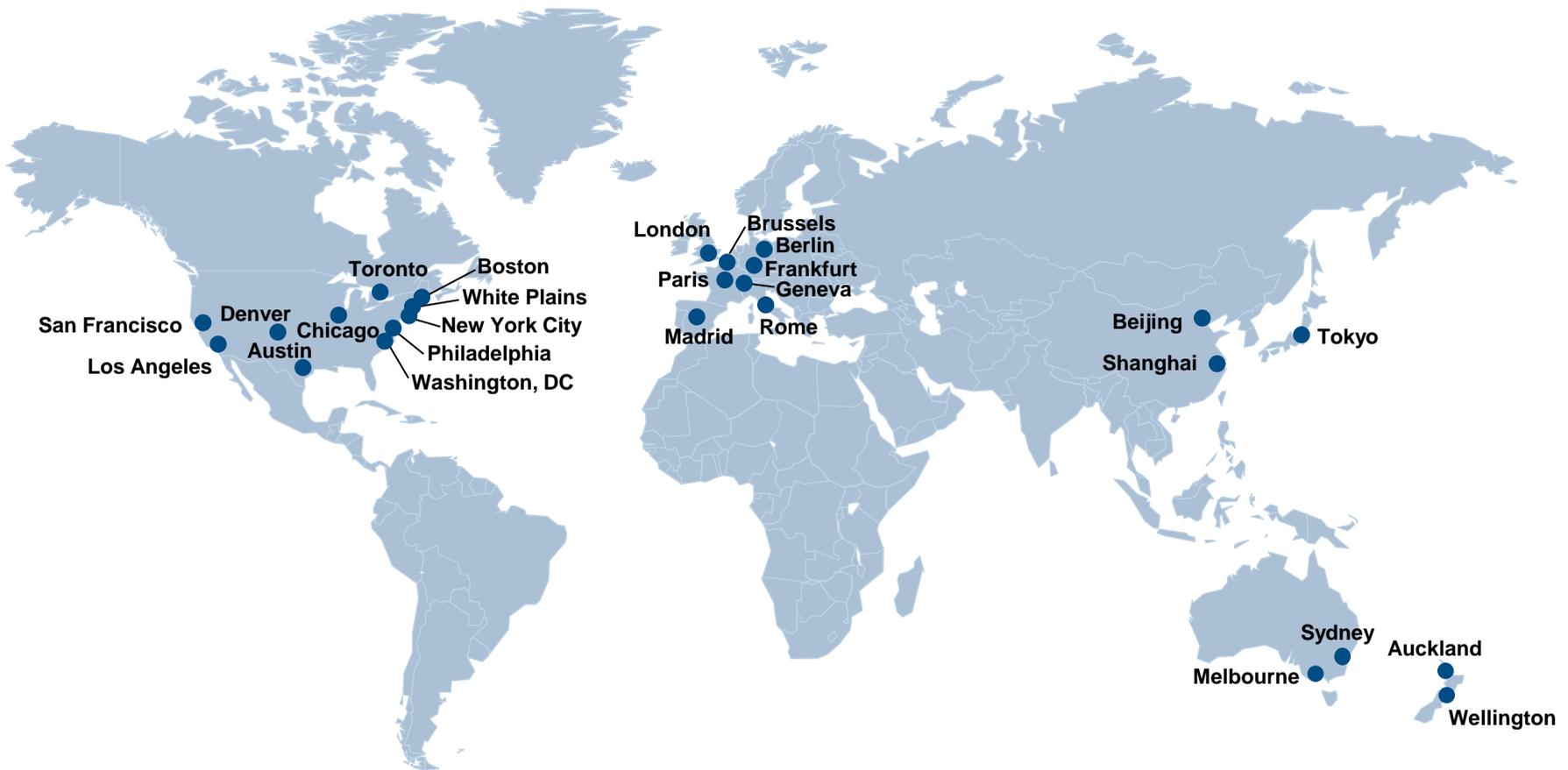
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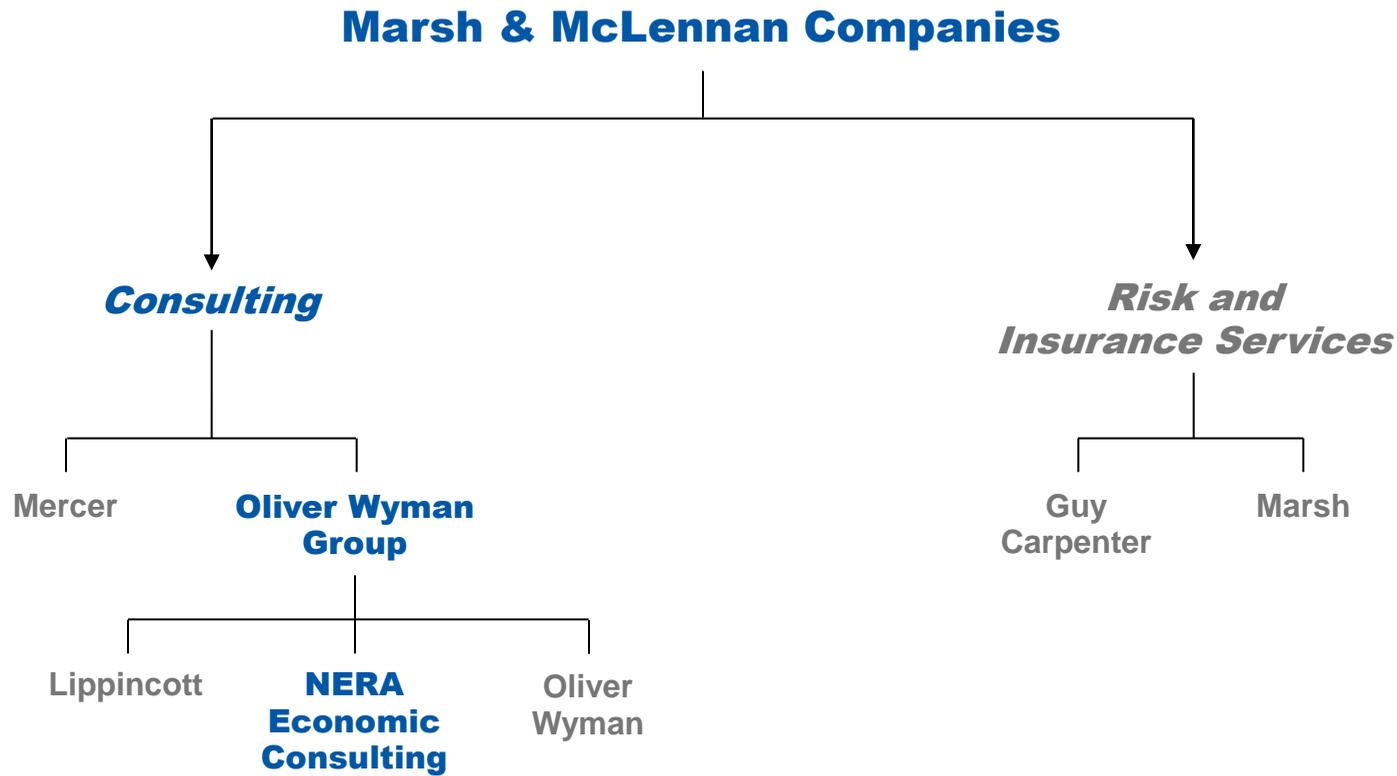


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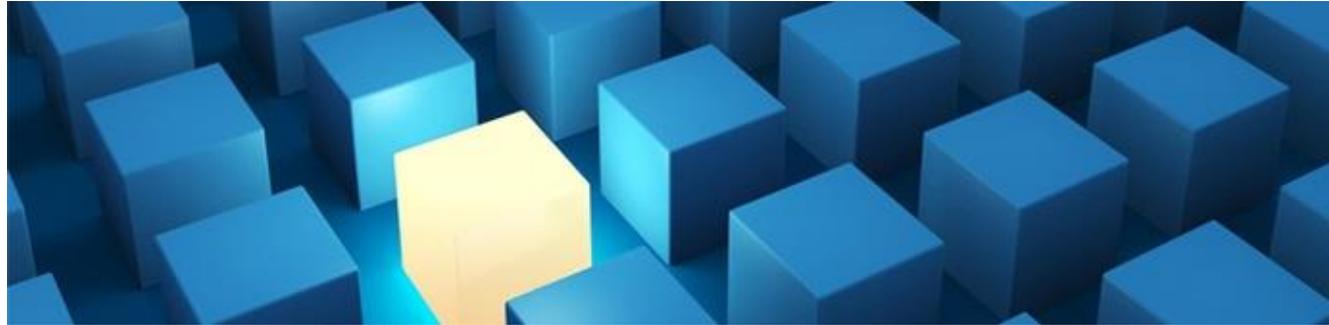


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