INTRODUCTORY HANDBOOK FOR UNDERTAKING REGULATORY IMPACT ANALYSIS (RIA)

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1. WHAT IS RIA?

Governments need to work systematically to ensure that the regulation they develop and implement is of high quality, since the costs to society of poor quality regulation are substantial. Poor quality regulation increases compliance costs for business and other groups, leads to unnecessary complexity and associated uncertainty as to regulatory obligations and reduces the ability of government to achieve its objectives.

This handbook provides practical guidance on using Regulatory Impact Analysis (RIA) as a way of improving regulatory quality and, as a result, government effectiveness and efficiency. RIA systems are fundamental to initiatives pursuing a comprehensive improvement in regulatory practices and performance for both OECD countries and countries in transition.

RIA is a process of systematically identifying and assessing the expected effects of regulatory proposals, using a consistent analytical method, such as benefit/cost analysis. RIA is a comparative process: it is based on determining the underlying regulatory objectives sought and identifying all the policy interventions that are capable of achieving them. These "feasible alternatives" must all be assessed, using the same method, to inform decision-makers about the effectiveness and efficiency of different options and enable the most effective and efficient options to be systematically chosen. According to the OECD[1]:

"…RIA's most important contribution to the quality of decisions is not the precision of the calculations used, but the action of analyzing – questioning, understanding real-world impacts and exploring assumptions".

RIA should be integrated with a public consultation process, as this provides better information to underpin the analysis and gives affected parties the opportunity to identify and correct faulty assumptions and reasoning. RIA is now used in virtually all OECD countries and in many developing countries.

[1] *Regulatory Policies in OECD Countries: From Interventionism to Regulatory Governance*. OECD (2002), p 47.

2. WHY SHOULD I CONDUCT RIA?

Regulations are an essential part of the "toolkit" of policy instruments governments can use to achieve their objectives, but regulations usually have widespread effects: they affect many different groups in society and the effects may be of many different types. Many of the effects are "hidden", or at least are difficult to identify when a regulation is being considered. RIA can help to ensure you have a good understanding of who will be affected by a regulation and how.

2.1. What will RIA help me to achieve?

RIA can help you to ensure that regulations are as efficient and effective as possible. Effective regulation is regulation that achieves the policy objective that led to it being made. Efficient regulation achieves these objectives at the lowest total cost – to all members of society.

Efficiency and effectiveness are important because there are limits to the amount and type of regulation able to be absorbed within economies and enforced effectively by governments. Regulation has costs as well as benefits, and inappropriate regulation can stifle economic growth by putting obstacles in the way of doing business and by creating perceptions of a negative environment. As well, making and enforcing regulation places large demands on government administrations. It is important therefore that it is well designed.

2.2. How does RIA improve efficiency and effectiveness?

By using RIA, you can help to improve the decision-making process that shapes the final regulation. In particular, RIA helps to promote systematic decision-making and a comparative approach to policy decisions. RIA requires you to ask:

- What, in general terms, is the problem to be addressed?
- What is the specific policy objective to be achieved? and
- What are the different ways of achieving it?

You should ask these questions before proposing to make a regulation. Starting with these questions, you can ensure that you identify as many different practical ways of achieving your objective as possible, which is necessary if you are to identify the best option.

A common mistake when starting your analysis is to confuse the "means" and "ends". The policy objective is the "end" outcome that the government wants to achieve. This should not be confused with the "means" of achieving it or you will not be able to give full consideration to the merits of alternative approaches. For example, a policy objective is to reduce the number of deaths due to road accidents. Reducing speeding is just one means of achieving the objective – but is not the objective itself – other

means could include requiring safety harnesses or improving road conditions. There will almost always be several options to achieve a policy objective.

Once you have identified all the possible options, the RIA approach requires them to be compared in terms of their benefits and costs. That is, you should try to identify all the likely impacts of the different options. Once you have identified the effects of several different approaches, you can analyse each to provide information about which is likely to be most effective and efficient.

3. HOW CAN I DETERMINE WHEN IT IS APPROPRIATE TO REGULATE?

In some cases, your initial analysis using RIA tools will lead you to the view that is not desirable to regulate. You may find that another type of policy tool is likely to achieve the objective more effectively or efficiently. In such cases RIA can assist in providing an understanding of the likely impacts of alternative approaches to regulation to achieve government policy objectives. Alternatively, your analysis may reveal that there is no strong case for any government action

Advice not to take any action in response to a policy problem would follow:

- When the size of the problem is shown to be too small to justify the costs of government action; and
- Where your analysis shows that no feasible regulation – or other policy action – is likely to address the problem effectively and at a cost that is reasonable in relation to the expected benefit of the regulation.

3.1. What information do I need to make this judgment?

Once you have identified the objective of the proposed regulation (or policy action) you should focus on assessing the nature and the size of the policy problem that is intended to be solved by the regulation or policy action. This involves identifying:

- What groups in society are being affected;
- What is the size of each group;
- What is the nature of the impact on each group;
- How large are these effects; and
- How long will these effects persist?

To determine the size of the problem, you should consider all the effects on the different parties, in the context of the identified objective.

3.2. How can I tell if regulation is justified?

There is no specific rule to be applied to determine whether a problem is large enough to justify government action. However, you should consider:

- The limited ability of government to make and enforce regulations effectively;
- The size of the identified problems as compared to others being considered as possibly requiring regulation;
- The ability of affected groups to take actions themselves to address the problems identified;

- Whether the problems are likely to be long-lasting, or whether they may change relatively quickly due to external factors.

If, having considered all these issues, you believe regulation may be justified, the question of whether regulation is likely to be able to address the problem, at a reasonable cost compared to alternative approaches, must be considered.

3.3. Maximising "economic welfare"

However, regulation should only proceed if it is expected to improve society's "economic welfare". This condition is met if the total benefits of the regulation, for all members of society, are larger than the total costs (again, considering all likely impacts on all members of society). A basic aspect of RIA is that it must be conducted with this "whole of society" view in mind, rather than paying undue attention to impacts on individual groups that may be lobbying for regulation.

Market failure

When citizens are able to satisfy their needs through participation in well functioning markets for the supply of goods and services, based on an informed assessment of the quality of the product and its value, the involvement of the government is not generally required, beyond setting the rules of the market. However, these conditions do not always apply and regulation is often considered in response to a "market failure". Where market failures exist the usual assumption, that competitive markets will yield good outcomes for society, may not be borne out. Thus, regulation may be required to improve the efficiency of markets in these cases.

Market failures commonly occur where there are "externalities" – that is, other people bear costs when someone produces or consumes a good, and the producer and consumer do not take these costs into account in determining how much of the good to produce or consume. For example, a factory may discharge pollution into a river, reducing fish stocks downstream and making river water unsuitable for use. Because the producer does not pay the cost of the pollution, the price of the good is lower than would otherwise be the case and consumers demand more of the good. This leads to inefficient overconsumption of the product, since not all costs to society are being weighed. That is, the producer is not taking these additional costs to society into account when deciding how much of the good to produce so the full cost is not reflected in the price that is paid by the consumer. Regulation may be necessary to safeguard these other uses, either by directly limiting toxic emissions or by taxing them and so affecting the price paid and the quantity consumed. This will fall because the product will only continue to be purchased by consumers that value it highly enough to pay the new, higher price that represents the full cost of its production, including the costs to the environment and society.

Another cause of market failure is a lack of information to guide the choices that people make in the market (due to their inability to obtain information, or the high costs of doing so). Well functioning markets require informed buyers and sellers, governments may improve the information available to buyers through regulation (for example mandatory product labelling) or by providing information directly.

If market failure exists, there may be a good argument to regulate to improve the availability of information. However, it is still necessary to show that the regulation can address the market failure effectively without creating other, substantial costs.

Equity and other social goals

Not all regulation responds to market failure. Often, regulation is made as a way of improving the situation of particular groups in society, including the poor and other vulnerable groups. In some cases, it

may be appropriate to proceed with regulation even though the costs appear to be greater than the benefits – this may occur if most benefits are gained by the target group. If this kind of decision is made, we are effectively making a choice to rate benefits received by these vulnerable groups more heavily than costs incurred by other groups. RIA helps to make transparent who benefits from regulation and who pays the costs, so that these value judgements can be made more reliably.

Regulatory failure

Identifying one or more significant sources of market failure provides evidence of a potential case for regulation. However, regulation frequently fails to address the identified market failure effectively and efficiently. There is a risk that market failure may be supplanted (or compounded) by *regulatory failure*.

There are several sources of regulatory failure. Most obviously, the regulatory process can be subverted by lobbying from the regulated group, so that the regulations made serve their interests instead of those of the broader society. This is termed regulatory capture. Second, problems with regulatory design, implementation and/or enforcement can mean that there are low levels of compliance with the regulation. Third, poor regulatory design may mean that it does not properly address the problems initially identified. Perhaps most importantly, the behaviours that give rise to the market failure may not be capable of being addressed effectively by regulation – that is, there may be no feasible regulatory design that will resolve the problem. In such cases, policy-makers must look to alternative tools to achieve their objectives.

In sum, policy-makers need to be aware of the risks and causes of regulatory failure when determining whether, and how, to regulate.

3.4. What kinds of costs should I consider?

When evaluating the cost that regulation imposes, you should consider both the "direct" and "indirect" costs of regulation. The direct costs of regulating are those that businesses or people face as a direct result of complying with the regulations and the cost to government of administering and enforcing the regulations. They include the costs of:

- buying new equipment needed to comply with regulations;
- employing additional staff to work on regulatory compliance;
- employing consultants or other sources of expertise to help with regulatory compliance;
- changes in production processes made necessary by regulations;
- other increases in the costs of producing goods; and
- collecting and storing information that the regulations require them to report or keep.

You should remember to include the indirect, or overhead costs associated with the additional labour costs identified. These include items such as allowances for the costs of office accommodation and non-wage labour costs.

Competition related costs

Some regulations can reduce the amount of competition in markets. This is a particularly important cost impact. Regulation can reduce competition by:

- making it more difficult for new competitors to enter the market, by creating regulatory requirements that are difficult for them to meet;
- prevent firms competing strongly – for example by setting rules that reduce price competition or restrict advertising;
- by creating a negative impression of a highly regulated market in which it is difficult to do business profitably.

The issue of how to assess whether major anti-competitive effects are likely is discussed further below.

Substitution effects

Regulation will often cause people to change their behaviour and it is important to try to understand these changes. If regulation increases the price of a product (by increasing product standards), people will usually respond by buying less of that product and switching instead to other substitute goods. Such substitution activity reduces the costs in utility terms to consumers, at least in the first instance. However, substitution effects may create unintended problems. For example reducing the risks in one area may create higher risks in another.

An example of this is increasing the stringency of airline safety regulation. Such an action can be expected to reduce the number of deaths due to plane crashes. However, it will also increase the cost of flights. This increase in the cost of flights will cause some people to decide that they can no longer afford to fly and to drive to their destination instead. However, because car travel is much less safe than air travel, the increase in the number of road crash victims may well be greater than the reduction in air crash victims.

Because of the importance of these substitution effects in determining the overall impact of the regulation, you should try to identify likely changes of this sort and estimate how significant these changes are likely to be

3.5. How can I decide on the best kind of regulation (or other policy tool)?

If you decide that government action is likely to address the problem at an acceptable cost, you should identify different possible actions – including regulation and other tools – and compare their benefits and costs.

Direct regulation is often the only tool considered by policy makers, perhaps because of long-standing habit within government favouring this approach. However, a consideration of alternative policy tools is necessary to identify if there are other non regulatory approaches that are better suited to the specific circumstances of the problem.

Box 1: Different kinds of policy tools

In some cases, you may find that one or more of these tools is preferable to the direct style of command and control regulation:

- Establishing a general public information campaign to educate and warn people about the problem;
- Providing specific information directly to consumers to allow them to look after their own interests;
- Requiring suppliers of goods or services to give information to consumers before they buy their goods;
- Imposing a tax to discourage an activity;
- Applying a subsidy to encourage more of a particular behaviour
- Promoting the development of a scheme of "self-regulation" within an industry or group

Appendix 2 contains a list of different policy tools governments can use and discusses the circumstances in which each is likely to be appropriate. In general, where a reasonably competitive market exists, you should favour policy tools that will disrupt those markets as little as possible. Competitive markets are usually most efficient at allocating resources and achieving the ends that citizens desire.

You may find it wise to move first to a "light handed" approach, such as requiring consumers to be given certain information that does not disrupt market behaviour. You can adopt regulation at a later point, if it is concluded that the "light handed" approach has not been effective enough in dealing with the problem. However, if there is a serious and urgent problem, you may decide it is necessary to move straight to regulation.

4. HOW CAN I COMPARE THE BENEFITS AND COSTS OF REGULATION AND OTHER TOOLS?

Information on benefits and costs can be of two basic types: quantitative and qualitative. Quantitative information is that which is expressed in numerical (sometimes monetary) terms. It is most useful to policy-makers in that it is effective in allowing the size of the benefits and costs being analysed to be understood readily and – especially where effects are expressed in dollar terms – in allowing the impacts of different regulations or policy proposals to be compared.

This means that you should try to obtain quantitative information on the size of the policy problem, the costs of regulatory action and the expected benefits wherever possible. However, in most cases it will not be possible to assess all of these issues quantitatively. Thus, qualitative information must also form an

important part of your analysis. A potential problem with qualitative information is that it may be evaluated quite differently by different readers. It is therefore important to try to present this information in as clear and objective a way as possible. Multi-Criteria Analysis, which is discussed below, is one way of achieving this.

4.1. What is benefit/cost analysis?

Cost/benefit analysis (CBA) can be considered both in general terms as an approach to guiding decision-making and as a specific methodology for conducting RIA. All RIA can be considered to be based on the use of the benefit/cost principle. This means that the objective of conducting RIA is to try to ensure that regulation is only made when the benefits of the regulation are larger than the costs it imposes. This must be the case if society as a whole is to be made better off by the regulation. Thus, decision-makers must assess requests for new regulation by asking whether they are confident that the total benefits of the regulation are larger than the costs. If it is not clear that this is the case, regulation should usually not be used.

Without the use of RIA, there is a real risk that regulation will unintentionally result in costs being imposed that are larger than the benefits obtained. This is likely to occur because those who stand to benefit from a regulation will often push strongly for it to be made. On the other hand, those that bear the costs may not be aware of the extent of these costs, or they may not individually bear a very large cost – though collectively the costs may be great. In these circumstances, those that bear the costs may not lobby against the regulation – particularly if they are not well-organised into larger groups.

As a methodology, BCA represents the "best practice" for RIA. Because it it is based on quantifying benefits and costs in monetary terms and comparing them over a suitable period of time it provides a strong basis for comparing alternatives and for guiding decisions makers on the likely implications of different options.

Can the BCA approach be used when major benefits (or costs) cannot be quantified?

It is very common in RIA to find that important benefits and costs cannot be quantified. However, if the BCA approach is used in such cases, a "partial" BCA can be generated. This can still be very useful to decision-makers as it narrows the range of issues that must be dealt with through more subjective, qualitative analysis. Thus, developing even an incomplete BCA can greatly improve decision-making.

Even where you are able to quantify relatively few costs (or benefits), using BCA's systematic approach to try to ensure that all benefits and costs have been identified and assessed will help to improve the quality of advice to decision-makers. Where costs have not been quantified, it is often possible to discuss them in qualitative terms, drawing some conclusions about their relative importance.

One way of ensuring that all relevant costs are considered is to use a checklist of common types of regulatory costs as a means of thinking through the likely impacts of a particular regulation. Box 4, below, provides a basic checklist.

Box 2: Examples of common regulatory costs.

Affected group	Examples of costs
Business	Costs of familiarising with the regulations and planning how to comply (may include purchase of external advice)
	Higher input costs due to regulatory impacts on the costs of materials
	Higher production costs due to changes to production, transport or

	marketing processes required by the regulations
	Costs of lost sales due to restricted access to markets
	Licence fees or other charges imposed by the regulations
	Cost of meeting reporting or record-keeping requirements imposed by the regulations
	Cost of internal inspections, audit fees etc to ensure compliance is being achieved
Consumers	Increased prices for products or services
	Reduced range of products available
	Delays in the introduction of new products (e.g. due to the need for producers to meet regulated product testing requirements)
Government	Cost of administering the regulations: includes providing information to business, recruiting and training government staff, processing licence or product approval applications.
	Cost of verifying compliance: includes conducting inspections and audits, monitoring outputs (e.g. air quality).
	Cost of enforcement: includes investigating possible non-compliance, conducting prosecutions.
Other	Costs of reduced competition – e.g. by favouring existing producers and making entry to a market more difficult (leads to both efficiency losses and transfers from producers to consumers due to higher prices)
	Distributional costs – e.g. if some of the above costs are disproportionately borne by the poor, or some vulnerable group
	Restrictions on innovation & the ability to develop and market new products and services

Box 3: Examples of common regulatory benefits.

Affected group	Examples of benefits
Business	Reductions in workplace accidents and injuries; associated productivity gains
	Improved availability of market information, hence efficiency gains in production or distribution.
	Increased productivity/efficiency due to regulatory prohibitions on anti-competitive behaviours
Consumers	Reduced prices for products or services (e.g. through regulatory restrictions on anti-competitive behaviours)
	Improved safety of goods and services
	Provision of better information about goods and services, leading to better choices being made
	Increased minimum quality standards for goods or services
Government	Improved public health, resulting in reduced health care costs
	Improved availability of information to government, allowing for better decision-making
	Cost of enforcement: includes investigating possible non-compliance, conducting prosecutions.
Other	Benefits of improved competition – e.g. by regulating to restrict or prohibit anti-competitive behaviour

	Distributional benefits – if regulation benefits poorer groups or groups in regional/rural areas disproportionately.

Source: Adapted from the Victorian Guide to Regulation (p 5-12).

Box 4 considers the costs borne by various parties, while Box 5 identifies a range of potential regulatory benefits. However, if you are conducting a formal BCA, you should also take care to avoid "double counting" of costs and benefits. For example, regulations may increase the cost of production of goods for business. This will be reflected in higher prices for consumers. However, while both parties bear a cost, in economic terms it is the same cost and should not be counted twice.

4.1.1. How can I quantify costs?

The most effective way of calculating costs to business is likely to be to obtain (e.g. via surveys or other consultations) estimates of the amount of a particular identified cost for an individual business and then combine this with:

- an estimate of the number of businesses likely to be affected, and
- your knowledge of the number of times the regulation is likely to require businesses to incur the costs (i.e. per year).

In some cases, businesses may estimate how long a regulatory task will take to complete. In this case, you will need to estimate the average cost per hour of completing the task. Table 2 provides an example.

Table 1: Estimating regulatory costs

Cost	Time taken	Hourly cost	Frequency (per year)	Firms affected	Total cost
Monitoring emissions	2 hours	$75	Monthly (= 12 times/year)	2,000	2 x $75 x 12 x 2,000 = $3.6 million per year
Reporting to government	2 hours	$50	Twice	2,000	2 x $50 x 2 x 2,000 = $400,000 per year.
Recalibrating machinery to maintain emissions performance	3 hours	$100	Twice	2,000	3 x $100 x 2 x 2,000 = $1.2 million per year

The above approach is appropriate for ongoing costs imposed by regulations. However, some costs will be "one-off" costs. For example, a business might need to buy a new item of equipment in order to meet standards set by the regulation. These capital, or "one-off" costs must be counted separately to recurring costs like those listed above.

In order to estimate the total costs of the regulation, it is necessary to combine both the one-off and the recurrent costs identified. This must be done by selecting an appropriate time period over which to calculate total regulatory costs and then using discounting to arrive at a single monetary figure.

4.1.2. What is discounting and why is it needed?

To obtain a reasonable estimate of the total costs of a regulation it is usually necessary to compare the impacts over a long period – typically ten years or more. This is because both one-off and recurrent costs must be accounted for and because benefits and costs often occur at different times.

For example, a regulation might cause businesses to spend large sums of money within the first one or two years to purchase new equipment that will reduce pollution arising from production. The majority of the benefits in terms of cleaner rivers or air may not be felt for several years, while the benefits will last for a long time, while the costs occur in the short term. The effect of time on money makes a dollar received or spent today worth more than a dollar received (or spent) in the future.

Differences in the times at which benefits and costs occur must be dealt with through the process of discounting. This is a way of adjusting the values of benefits and costs occurring at different times by a given percentage rate to make them directly comparable by the measure of the value of today's currency. By adding all benefits and costs that arise over a set number of years and applying discounting a "Net Present Value" (NPV) can be calculated. This is a single figure that summarises the present day value of the overall impact of the regulations. If it is positive, the benefits are greater than the costs. If it is negative, the costs are greater than the benefits.

The NPV is therefore an essential decision tool which enables you to determine whether a regulatory proposal is of benefit to society and to compare two regulatory proposals with costs and benefits occurring at different times to see which will provide the greatest benefit to society.

Box 4: Why is discounting necessary?

Discounting of the value of future costs and benefits is necessary for three reasons.

First, it allows us to take account of the *rate of time preference.* That is, people place a higher value on a benefit that they obtain today than one they will obtain in the future.

Second, discounting is necessary to account for *uncertainty.* That is, there is a risk that an expected future benefit will not be obtained: in the regulatory context, this suggests that the expected benefits of the regulation in future years may not be realised. Discounting is a way of recognising this risk and factoring it into our calculations.

Third, discounting is often used to account for *price inflation.* That is, a dollar is able to buy less in the future than it buys today because of price inflation. Thus, its future value is less than today's value. When undertaking a BCA you need to determine whether all values will be expressed in today's dollar values or in the dollar values of each time period included in the analysis. If you make the latter choice, the discount rate must be used to convert these future dollar values back to today's equivalent values.

4.1.3. How can I account for regulatory benefits?

The task of identifying benefits will usually be much easier than that of identifying costs, since the expected benefits constitute the reasons that the regulations were proposed in the first place. However, determining the size of these benefits and, in particular, trying to express them in monetary terms, can be very difficult. This is because many regulatory benefits involve things that do not have an obvious market value – such as lives saved, injuries avoided and pollution or environmental degradation prevented.

However, even if benefits are not to be expressed in monetary terms, it is important to try to estimate the size of the benefits, by asking questions such as: how many lives can a regulation realistically be expected to save, or how many injuries might be avoided? How much pollution might be prevented, of what kinds and in what places?

A number of economic techniques do exist for estimating the monetary value of benefits of these kinds. While they are beyond the scope of this guide, more information on them is available in several of the RIA guidebooks listed in Appendix 1.

4.2. What is break even analysis?

In many cases, the type of the benefits expected to derive from a regulation will be clear, but the regulation's likely effectiveness in generating those benefits will be subject to much uncertainty. For example, regulating to make all people wear helmets while riding bicycles can be expected to reduce deaths and injuries to some extent, but it may be very unclear how effective such a regulation will be.

In such cases, a "break even analysis" can be useful. This is based on estimating the costs of the regulation and then asking "how effective must the regulation be for the benefits to be seen as justifying the costs?" Judgements can then be made by policy-makers as to whether the regulations are, in fact, expected to have this degree of effectiveness. In the above example, the policy-maker would ask "how many deaths and injuries would need to be prevented for their value to at least equal the regulatory costs (including buying bicycle helmets, enforcing the regulation, etc)? Based on what we know, are these benefits likely to be obtained in practice?

Conducting a full BCA is a quite technical task and may not be feasible if appropriately trained staff are not available. However, many sources of guidance on BCA exist, some of which refer specifically to its use in relation to evaluating the impact of regulatory proposals and presenting the results in an RIA. The appendix includes references to a number of these guides.

4.3. What is cost-effectiveness analysis?

Where it is not feasible to use BCA, cost-effectiveness analysis (CEA) is often used as the basis for conducting RIA. CEA is a more limited methodology than BCA and is less demanding of resources and expertise to complete. It essentially takes the benefits of regulation as given and asks the question:

"Which of the possible ways of achieving the regulatory objective has the lowest cost?"

The lowest cost option is said to be the most "cost-effective". It can also be regarded as being the most *efficient* option. The key benefit of CEA for officials conducting RIA is that there is no need to quantify benefits, or to value them in monetary terms. Instead, only costs must be considered. Valuing costs will be significantly easier than valuing benefits in most cases.

However, CEA does not answer the basic question of whether regulation should proceed at all. Instead, it answers the question:

"If regulation (or policy action) is to proceed, which option is preferable?"

This means that CEA can only be used after a clear decision has been reached that it is appropriate to regulate (or undertake some policy action). The CEA methodology does not provide assistance with this basic decision.

4.4. What is Multi-Criteria Analysis (MCA)?

Multi-Criteria Analysis (MCA) is a methodology that allows systematic and transparent decisions to be made even where quantification of major regulatory impacts is not possible.

MCA involves identifying the underlying policy objectives and then determining all of the factors (the criteria) that would indicate achievement of these objectives. These criteria re then ranked in terms of their relative importance. Once this has been done, each of the available policy options can be "scored" on each individual criterion. The weighted scores can then be added together to determine which option best meets the policy objectives.

Table 2, below, provides an example of a MCA. It considers a range of options for addressing a problem of improving dental health. The options are a) to regulate to require all water companies to put fluoride in drinking water, b) to adopt a government advertising program to encourage people to brush their teeth regularly with fluoride toothpaste and visit the dentist regularly and c) to regulate to require all local government bodies to provide free dentist visits for the poor.

Table 2: Sample presentation of a Multi-Criteria Analysis

Criterion	**Weighting**	**Fluoride regulation**	**Advertising campaign**	**Free dentist visits**
Effectiveness in improving dental health	4	5 (20)	3 (12)	3 (12)
Ability to address existing dental problems	2	0 (0)	1 (2)	5 (10)
Ability to improve dental health of the poorest groups	2	4 (8)	2 (4)	5 (10)
Ability to improve health in all regions	1	5 (5)	5 (5)	3 (3)
Cost[2]	4	5 (20)	4 (16)	2 (8)
Score		**53**	**39**	**43**

In this example, five criteria have been used. The most important are the overall effectiveness of the regulation or policy in improving dental health and its cost. Thus, these are weighted more heavily. The fluoride regulation scores most highly, largely because it is judged to be the most effective option in achieving these two criteria, while also being quite effective in improving dental health for the poorest groups.

The option of funding free dental visits is the most effective on the criterion of being able to address existing dental problems and is also most effective in improving the dental health of the poor – since the program is entirely targeted on the poor, where fluoridation assists all people. However, it will be more

[2] In this example an option which has low costs will achieve a high score, and vice versa.

costly if it is made available to all in need. The advertising campaign will be less costly than the free dental visits, but will also be less effective than fluoridation in improving dental health.

One way of testing the reliability of the results of an MCA is to compare the results of a weighted analysis with one where weights are not used. In the above example, the fluoridation regulation will still score most highly if weights are not used (19 points vs 18 points for free dental visits. This suggests that the result is quite reliable. If the results of the weighted and unweighted analysis are different, a careful reconsideration of the weights is needed to make sure that they accurately reflect real policy priorities.

MCA can be used to combine both quantitative and qualitative elements of the analysis. Thus, it is an important way of ensuring that qualitative analysis is weighed appropriately, rather than quantitative analysis being allowed to dominate. This characteristic may improve confidence in RIA for many groups, who may be concerned that "what is not countable is ignored" under RIA.

However, care should be taken that MCA is not used as an alternative to more rigorous, quantitative analysis of benefits and/or costs, where this is feasible. MCA should be seen as an additional tool, rather than an alternative to such analyses, since it necessarily provides less objective and verifiable information to decision-makers.

4.7. Should I consider the effects of regulation on competition?

Many regulations affect competition in the marketplace. In most cases, impacts on competition are unintended by-products of the regulation, although in others the anti-competitive impact can be deliberate. The impacts of a regulation on competition can be among the most important of all regulatory impacts. This means it is essential to consider any competition impacts when conducting RIA.

Completing a full competition analysis is a highly technical task that requires specialist input. However, you can complete a "screening test" without needing substantial expertise in competition policy or law. A screening test will allow you to determine whether a proposed regulation may have a significant impact on competition. If the screening test identifies a risk that there may be a major negative impact on competition, you can seek specialist assistance to complete a more detailed assessment. For most regulations, the screening test will be sufficient to show that no major anti-competitive impacts are likely.

The OECD has developed a "Competition Checklist", which is reproduced below. It is designed to function as a screening test for the impact of regulations on competition. It is based on three simple questions, which ask about the impact of the proposal on the number of firms in the market and their ability and incentives to compete. These are the major factors influencing the intensity of competition. Under each of the three questions is a list of commonly found regulatory restrictions that would have the particular anti-competitive impact.

Box 5: Competition Checklist for the conduct of competition assessments

A competition assessment should be conducted if the proposal has any of the following 3 effects:

(1) Limits the number or range of suppliers
This is likely to be the case if the proposal:

- Grants exclusive rights for a supplier to provide goods or services
- Establishes a license, permit or authorisation process as a requirement of operation
- Limits the ability of some types of suppliers to provide a good or service

- Significantly raises cost of entry or exit by a supplier

- Creates a geographical barrier to the ability of companies to supply goods or services, invest capital or supply labour

(2) Limits the ability of suppliers to compete
This is likely to be the case if the proposal:

- Controls or substantially influences the prices for goods or services

- Limits freedom of suppliers to advertise or market their goods or services

- Sets standards for product quality that provide an advantage to some suppliers over others or that are above the level that many well-informed customers would choose

- Significantly raises costs of production for some suppliers relative to others (especially by treating incumbents differently from new entrants)

(2) Reduces the incentive of suppliers to compete vigorously
This may be the case if the proposal:

- Creates a self-regulatory or co-regulatory regime

- Requires or encourages information on supplier outputs, prices, sales or costs to be published

- Exempts the activity of a particular industry or group of suppliers from the operation of general competition law

- Reduces mobility of customers between suppliers of goods or services by increasing the explicit or implicit costs of changing suppliers

If you apply this OECD checklist and all three questions are answered "no", there is unlikely to be any major anti-competitive impact due to the regulation. In this case, no further assessment is required. If one or more question is answered yes, you should seek the assistance of a competition specialist.

The fact that a proposed regulation has a major anti-competitive impact does not necessarily mean that it should not be made. However, it is important to weigh the costs of the restriction on competition against the benefits that the regulation is trying to achieve. You should remember that anti-competitive impacts can become particularly important in future years: the size of these impacts is therefore often under-estimated.

5. HOW CAN I OBTAIN THE DATA NEEDED TO CONDUCT HIGH QUALITY RIA?

Obtaining high quality data is a basic challenge for RIA. Without good data, RIA will contribute relatively little to good policy-making. But data collection can be a time-consuming and expensive exercise. This means that you must adopt a careful and strategic approach to data collection.

In general terms, the extent of the RIA conducted should be proportionate to the likely impacts of the regulatory proposal. This means that you should invest more time and resources in collecting data,

consulting stakeholders and conducting analysis when the proposed regulation is likely to have a major impact and when the extra analytical effort is likely to be used by decision makers. The following are data collection strategies that you should consider when commencing a RIA. However, the need to adopt a proportionate approach means that you should weigh carefully whether each of these strategies is appropriate to your particular RIA task. As many of these data collection methods may require considerable resources you may practically be required to rely on third party sources for information.

Surveys

By designing a questionnaire, you can ask for specific information on major elements of a proposed regulation. A well-designed survey of affected groups can provide a good basis for estimating the costs of compliance. However, care is needed in several areas:

1. The survey should be sent to a representative group of affected parties. You should try to ensure all of the main groups who will have to comply with the regulation are included.
2. The questionnaire must be *realistic.* This means the questions should be carefully considered to ensure that it is feasible for respondents to provide meaningful answers. Conducting a trial with a very small number of respondents can help to identify problems with your questionnaire.
3. The sample size must be carefully considered. On one hand, you need enough feedback to give confident that the answers received are meaningful. On the other, you must ensure that the scale of the exercise is not too demanding of scarce resources.
4. You should try to guard against biased answers: those who must comply will have an interest in over-stating the costs of compliance. Careful design of your questions can guard against this problem.

Particularly where compliance cost issues are complex, you may wish to consider direct interviews as a way of improving the quality of the data received.

Remember that surveys covering relevant issues may have been completed previously, either by government or by other bodies. You should try to identify relevant survey results that are already available to improve existing knowledge and reduce the costs of data collection on government and businesses.

Business Test Panels

An innovation pioneered in Denmark, the Business Test Panel is a list of companies that have agreed to assist government in conducting RIA by being available to provide advice on the likely costs of regulatory proposals. This group is used as the basis for administering surveys.

This model has the advantage that the businesses involved will, over time, become familiar with the RIA concept and gain a better understanding of the nature of the questions being asked and the information that is needed. However, care is needed to ensure that the answers received are not biased by the fact that a particular "insider" group is questioned on a frequent basis.

Review of experience in other countries

In many cases, a similar regulation to the one you are considering may have been adopted in a neighbouring country (or countries). Contacting government officials, or other sources, in those countries can be an effective way of obtaining information on the likely impacts of your regulatory proposal.

Other government agencies

A large amount of relevant data is typically held by government agencies. For example, the government statistical office is a rich source of general information on issues such as the number of firms in various industries, the number of people employed and the like. Other useful material may also be available within government. For example, regulations with similar features may previously have been adopted in different areas.

Therefore, you should consult within government to find out what information may already be held by your colleagues in the administration.

Literature reviews

Reviewing the existing academic literature can be an invaluable way of obtaining information on the practical performance of particular regulatory approaches. The internet can increasingly be used to conduct literature searches. Other relevant sources include market reports and other research documents commissioned by industry associations or similar groups.

Insurance companies may also have much relevant data on the size of the harms that regulations are trying to prevent. This can be used to help you to estimate the size of likely regulatory benefits.

Consultation

Consultation with stakeholder groups is one of the most cost-effective ways of obtaining data to support RIA. In addition, consultation helps to establish the legitimacy of regulation, by allowing people to raise concerns and participate in the regulatory process before regulation is implemented. This, in turn, can improve the extent of voluntary compliance with regulation.

How should I conduct consultation?

A number of different consultation tools exist. Each of these tools has different advantages and disadvantages. Often, a combination of different consultation tools is used at different stages in the regulatory process. You should select the consultation tools you employ after considering the particular purpose being filled by consultation. Major consultation tools are:

1. Notice and comment

This involves publishing a notice (e.g. in newspapers) informing people of the intention to regulate and inviting their comments. Usually, a discussion paper or other document will be provided which explains the regulatory proposal and sets out some particular issues on which comments are sought.

Notice and comment is a very open form of consultation, which allows all members of the public to participate. It may not be very effective at obtaining specific data, although including a set of specific questions as part of the written material provided may assist in this respect.

2. Circulation for comment

This differs from notice and comment in that the consultation materials, and request for comments, are sent to a selected group of stakeholders, rather than being openly advertised. Circulation for comment is often used early in the process of developing regulation, to get a clear understanding of the views of the groups most directly affected. More than one "round" of comment can be sought, as the regulatory proposal – and the impact analysis – are "fine tuned".

3. Public hearings

Public hearings allow people to comment on a proposed regulation in person. This can make it easier for some kinds of stakeholders (i.e. people affected by the regulation), who may be unlikely to draft a written submission, to participate. Public hearings also allow for dialogue. By discussion with the participants, the regulator can clarify issues, ask follow-up questions and potentially form a better understanding of stakeholder views.

On the other hand, the presence of many stakeholders with widely differing views can make it very difficult to conduct a logical and dispassionate discussion of complex and/or emotional issues at a public hearing. As well, many important stakeholders may be unable to attend public meetings for various reasons. This makes it important to consider carefully where such meetings should be held and at what times.

4. Advisory bodies.

Governments often appoint advisory bodies to assist in developing and assessing regulation. A wide range of different types of advisory body is possible. A basic distinction is between permanent bodies, that may provide advice on many regulatory issues in a particular policy area and ad hoc or temporary bodies that might be established to advise only on a particular piece of legislation.

Second, the make-up of these bodies can vary widely. In some cases, these bodies are composed entirely of stakeholders, while in others some members may be experts in a relevant field, while others may be government regulators or other public employees.

In general, advisory bodies have one of two purposes: either to provide expertise on the specific regulatory issues to government or to build consensus. That is, the advisory body can either help you to better understand the impacts and improve the technical quality of the regulatory proposal or it can help you to develop regulation of a type that will be accepted by the stakeholders. The basic purpose of the body will, therefore, have a large effect on who is appointed to the body.

Experience suggests that permanent advisory bodies tend to become consensus driven, while temporary bodies are more likely to be concerned with efficiency issues.

Regardless of what consultation strategies you employ, you should be sure that you have heard from a sufficiently wide range of groups and individuals. Consulting widely means that you will be more likely to obtain as much relevant information as possible to assist you in conducting RIA. It also means that you will have a better understanding of the views of all groups and avoid the risk that regulation is poorly accepted by major stakeholders.

How can I improve the effectiveness of consultation?

While consultation is an important way of obtaining data to help you conduct RIA, it is also necessary to give out information to support the consultation process. People will participate more effectively in consultation if they have a clear understanding of the regulatory proposal and of the underlying problems it is trying to resolve. Written material that addresses these issues should usually be made available before consultation is conducted. It is often advisable to set out specific questions that help to identify what information you are seeking as part of the consultation. However, consultation must remain sufficiently "open" to allow participants to raise their own concerns. This will make the process more acceptable to participants but will also, in many cases, alert you to issues and problems that you may not have considered.

Timing is another important issue for consultation. First, you should consult as early as possible and if possible at various stages of the process of preparing regulation so that the results can be used effectively in RIA and, potentially, lead to changes in your regulatory proposals. Second, you should make sure that you allow enough consultation time for the groups you are consulting to participate effectively.

In the longer term, people will only continue to participate in consultation if they see it as worthwhile. This means that they must be able to see that their views have been considered seriously in reaching regulatory decisions. Providing feedback to people who have participated in consultation can be helpful in this context. Ideally, the consultation document and the public responses should be published on the internet, together with details of the government's reactions to the issues raised.

6. ESTIMATING AND ENSURING COMPLIANCE

An important element of assessing regulatory impacts is making a realistic assessment of the likely rate of compliance with the proposed regulation. Regulation will obviously only have any impact to the extent that people comply with its requirements. In practice, there is a high non-compliance rate with much regulation.

You should consider the issue of compliance from two perspectives. First, if your assessment suggests there is a strong risk of a high level of non-compliance, you should consider why this is the case. This will lead you to a consideration of whether aspects of the regulation can be changed in ways that will improve compliance. This could mean changing the substance of the regulation, or it could mean changing communication or enforcement arrangements.

Second, if the risk of a high level of non-compliance remains, you should consider whether it is appropriate to continue with the regulatory proposal. Is this likely to be a case of "regulatory failure", in which regulation either fails to solve the market failure, or other identified problem, or does so at a cost that is unfeasibly high, in relation to the size of the problem?.

A systematic approach to identifying compliance issues is the "Table of 11", adopted in the Netherlands in the 1990s. This is contained in Table 3, below.

Table 3: The Table of 11 compliance determinants

Factors affecting voluntary compliance
1. How well aware of the rules is the target group and how well do they understand them?
2. What are the relative benefits and costs to the target group of complying and not complying with the rules?
3. To what extent does the target group accept the rules as appropriate and legitimate?
4. To what extent is the target group inclined to comply with rules generally?
5. How likely is it that third parties will identify non-compliance by the target group and how likely is it that they will cause the target group to suffer a penalty (e.g. by refusing to deal with them) as a result?
The influence of enforcement on compliance

6. How likely is it that non-compliance will be discovered other than through an official investigation (i.e. whistle-blowing)?
7. How likely is it that the target group will be inspected or audited by the authorities?
8. How likely is it that non-compliance will be discovered in an inspection?
9. To what extent will targeted inspections increase the chance of discovering non-compliance?

The influence of sanctions (penalties)

10. How likely is it that a sanction will be imposed if non-compliance it detected?
11. How severe is the sanction likely to be?

As the table shows, you need to consider three broad areas to consider when making a judgement about what level of compliance is likely. The first is how likely the regulated group is to comply voluntarily. They will do this if they believe the regulations are reasonable and legitimate, if the cost of doing so is not too high or if their non-compliance is likely to cause them problems with other groups in society. They are also more likely to comply voluntarily if they are a generally "law-abiding" group.

Second, you should consider how effective enforcement actions will be in increasing the compliance rate. This essentially involves determining whether enough resources can be devoted to monitoring and inspections to allow problems to be detected consistently.

Third, you should consider whether it will be feasible to apply sanctions to those who do not comply and whether those sanctions are likely to be sufficient to modify their behaviour and the behaviour of others who have not been complying.

In general, if voluntary compliance rates are likely to be low, it is essential to be able to detect and deter non-compliance through enforcement actions. If you are not confident that this can be done, regulatory failure is likely to be the result. This implies a need to reconsider your proposed regulation. Is any alternative approach to the problem likely to be more effective? If not, should policy action proceed?

7. COMMUNICATING RIA RESULTS

A good quality RIA is of little value unless its outcome can be communicated effectively to decision-makers. You should try to ensure that:

- The results of RIA are presented in a clear and easily understandable form. Because decision-makers are rarely technical analysts, you need to ensure that the results can be understood and that their importance for policy decision-making is clear.
- The results of RIA are provided to decision-makers in a timely way: that is, while they are still able to have a real impact on the resulting decisions.
- The results of RIA are published to inform stakeholders so they understand the reasons for a particular decision and to help promote acceptance of, and support for, the regulatory choice that has been made.

Presenting the results: A Checklist for the RIA

The following is a suggested format for the presentation of the results of your RIA. Each section outlines a step in the analysis so that the sequence logically demonstrates the systematic process that has been taken to identify and compare the costs and benefits of regulatory proposals.

Section Title	***Description***
1. Objective	Clearly state the policy objective(s) and goal of the regulatory proposal
2. Problem	Describe your assessment of the nature and extent of the problem to be addressed by the regulatory proposal
3. The regulatory proposal	Explain the regulatory proposal: • Describe the regulations • Outline the legal authority to make the regulation • List the groups likely to be affected by the regulation (citizens, business and within government) • Outline the enforcement regime and proposed strategy for ensuring compliance
4. Analysis of Benefit and Costs	Clearly outline the benefits and costs expected from the regulatory proposal for each group; • Administrative • Economic • Social • Environmental • Enforcement and Compliance
5. Compare the costs and benefits	Include a table comparing the cost and benefits for each of the above categories, listing the monetary values of each or providing a description.
6. Identify Alternatives	List the practical alternatives, including any non regulatory approaches that have been considered as options instead of the proposed regulatory approach.
7. Compare the costs and benefits of Alternatives	Describe the benefits and costs for each practical alternative that was considered.
8. Compare the alternatives with the regulatory proposal	Outline how and in what ways the identified regulatory proposal is superior to the alternatives that were considered.
9. Consultation	Describe the process of consultation that have been undertaken to collect stakeholder views. List all the groups that were invited to comment on the regulatory proposal and summarise their comments.

8. CONCLUSION.

The most important contribution of RIA to regulatory quality lies in its impact on policy-makers' approaches to policy decision-making, rather than in the specific estimates of benefits and costs that it yields. The adoption of RIA as an approach to decision-making favours the use of rational approaches to policy. This is because it is based on the need to consider any regulatory proposal in the context of a comparison of all different options for achieving regulatory objectives and because it requires a systematic approach to be taken to identifying regulatory impacts and comparing the various costs and benefits.

This means that the fundamental step in implementing RIA is to integrate this "rational" approach into policy-making throughout the government administration. It also means that RIA can provide important benefits for regulatory quality even where capacity to undertake sophisticated benefit/cost analysis is limited.

The process of implementing RIA is a long-term one, as shown by the experience of all countries that have adopted it, both within the OECD and within the developing world. RIA programs can and should be progressively developed over time and will yield increasing benefits in terms of better regulatory quality if this is done. However, RIA has the capacity to provide real benefits from the early stages of its implementation, provided that it is adopted in a consistent and systematic way.

APPENDIX 1: FURTHER READING

The following are published guidance documents that contain more information on conducting RIA and on related issues. They have been divided into different groups to help you to find appropriate guidance material more easily.

1. RIA guidance

RIA guidebooks are often quite wide-ranging, providing background on the purpose of RIA and on related issues such as principles of high quality regulation.

Canadian Government (1992) *RIAS Writers' Guide*
http://www.tbs-sct.gc.ca/ri-qr/ra-ar/default.asp@language=e&page=publications&doc=riaswritersguide_2friaswritersguide_e.htm

This guideline puts the RIA task into a broader policy perspective, as well as providing good practical guidance.

European Union (2005) *Impact Assessment Guidelines*
http://ec.europa.eu/governance/impact/docs/SEC2005_791_IA%20guidelines_annexes.pdf

See Section III: Analytical requirements. This is also a quite easily accessible document.

Irish Government (2005) *RIA Guidelines: How to Conduct a Regulatory Impact Analysis*
http://www.betterregulation.ie/eng/index.asp?docID=78

This guide includes information on how to conduct a "screening" RIA, to determine whether a more detailed analysis is needed.

United States Government (2003) *Circular A4: Regulatory Analysis.*
http://www.whitehouse.gov/omb/circulars/a004/a-4.html

A relatively brief and well written, but quite technical overview of the subject.

The Victorian Guide to Regulation (2nd Edition, 2007) (Australia). See: http://www.vcec.vic.gov.au Open page "regulation review.

This is a lengthy (248 page) guide with appendices dealing with a wide range of RIA-related issues including risk analysis, competition assessment, alternative policy instruments and different forms of regulation.

Australian Government *Best Practice Regulation Handbook (2007)*
http://www.obpr.gov.au/bestpractice.html

Also a lengthy document which contains guidance on a similar range of RIA-related issues to the Victorian guidebook.

2. Examples of RIA

Victorian Government (Australia). Copies of all RIA published since 2004. Go to www.vcec.vic.gov.au, open the Regulation Reform page, click on "Regulatory Impact Statements".

3. Technical guidance on benefit/cost analysis

Canadian Government (1995) *Benefit-Cost Analysis Guide for Regulatory Programs* *http://www.tbs-sct.gc.ca/ri-qr/ra-ar/docs/publications/costbenefitguideforregul/costbenefitguideforregul_e.pdf*

United States Government. *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* *http://www.whitehouse.gov/omb/circulars/a094/a094.html*

Australian Government (2006). *Introduction to Cost-Benefit Analysis and Alternative Evaluation Methodologies* http://www.finance.gov.au/finframework/docs/Intro_to_CB_analysis.pdf

The Canadian document is relatively straightforward, while the US and Australian documents are more technical in nature.

4. Guidance on multi-criteria analysis

See the Victorian Government's RIA guide (above) for basic guidance on the use of this methodology. The European Union RIA guide also includes a relatively brief discussion of MCA. For more detailed guidance see:

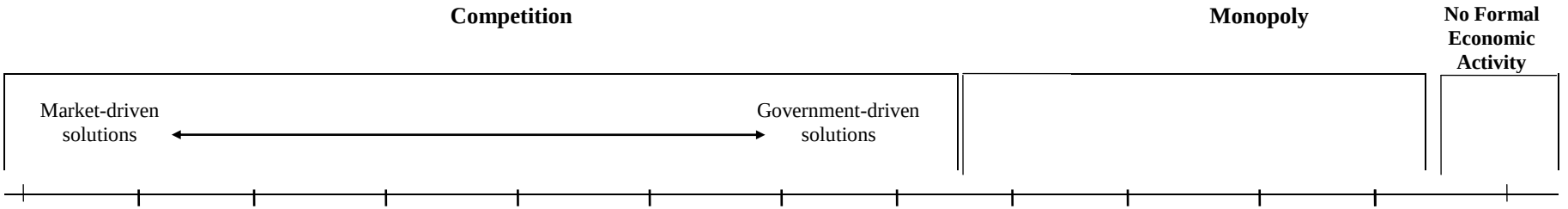
United Kingdom Government. *Department of Transport, Local Government And Regions Multi-Criteria Analysis Manual.* (undated). See:
www.communities.gov.uk/pub/252/MulticriteriaanalysismanualPDF1380Kb_id1142252.pdf

5. Guidance on other RIA related issues

United Kingdom Government (2002). *The Precautionary Principle: Policy and Application.* Inter-Departmental Liaison Group on Risk Assessment. London, 2002.
http://www.hse.gov.uk/aboutus/meetings/ilgra/pppa.htm

United Kingdom Government (2006). *Risk, Regulation and Responsibility: Whose Risk is it Anyway?* Better Regulation Commission, London, October 2006.

APPENDIX 2: THE SPECTRUM OF REGULATORY AND NON-REGULATORY POLICY INSTRUMENTS



Free market	Free market - governed only by general competition law & policy	Mandatory information disclosure (to assist consumers to make better choices)	Private sector voluntary regulation (voluntary agreements, private standards)	Market incentives established by government (taxes, subsidies, government purchasing)	Process regulation (requiring firms to assess risks and take most cost-effective action)	Performance regulation (performance outcomes set by government)	Command-and-control regulation (government sets specific compliance requirements	Regulated private monopoly	Contracting out monopoly to the private sector	Corporatised public monopoly	Public monopoly	Government ban on economic activity
When each policy instrument is likely to be appropriate												
	Effective competition possible but requires intervention to create appropriate frameworks or supports	Efficient market hampered only by info. asymmetry - disclosure requirement minimises cost of correction	A high level of good practice exists among market participants *or* enforcement difficult so consent issues are crucial	An essentially efficient market exists, so intervention is aimed at correcting externalities	Performance standards are difficult to specify, this response emphasises benefits of systemic thinking and disclosure	Specific standards easily identified but many technical solutions possible, technical change is rapid	Few acceptable options exist, high level of govt. control needed as important values or substantial risks concerned	High degree of natural monopoly, but perf. stds can be specified and monitored adequately	Some aspects of provision can be competitive but govt. control of overall process desired because of difficulty of regulating total outputs	Strong national monopoly character, plus difficulty in regulating outputs due to multiple objectives or concerns. Fundamental values involved		

Source: *Regulatory Policies in OECD Countries: From Interventionism to Regulatory Governance.* OECD (Paris) 2002, p 52