

Spatial Information Pricing Methodology

Published to accompany the Spatial Information Pricing and Licensing
Guidelines for Victoria

The Victorian Spatial Information Strategy 2004-2007 is a whole-of-Government strategy concerned with all aspects of Victorian's spatial information industry. It considers roles and requirements of the public and private sectors and academia in advancing Victoria's social, economic and environmental goals through the provision and application of spatial information.



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INTRODUCTION

The Victorian Spatial Information Management Framework

The Spatial Information Management Framework articulated in the Victorian Spatial Information Strategy 2004-2007 (VSIS) is based a distributed network of custodians managing their spatial datasets according to a set of management principles that support access to and availability of spatial information. The core elements of the Framework are:

1. institutional arrangements for developing spatial information – governance, custodianship;
2. requirements for creating and maintaining spatial information – framework and business information, data quality;
3. mechanisms for making spatial information accessible and available – metadata, awareness, access, **pricing** and licensing, and privacy;
4. strategic development of technology and applications.

As part of putting this Framework in place, the Victorian Spatial Council has published a set of *Spatial Information Pricing and Licensing Guidelines* to provide custodians with a basis for setting a price for spatial information (and licensing its use), starting from the basis of Government policy.

This Pricing Methodology has been published to accompany the *Spatial Information Pricing and Licensing Guidelines*, and should be read in conjunction with the Guidelines.

How to approach the pricing decision

For any specific spatial product or service, the nature, scope, detail and rigour of the price calculation will vary depending on the role of the agency in supplying spatial products and services, the characteristics of the products and services, and the likely demand for them. The extent of effort and resources allocated to the setting of prices should reflect the value of the product and service, ie annual cost to maintain and potential for cost recovery.

In general, the default pricing approach is cost recovery.

Detailed guides to determining price are found in the following documents published by the Department of Treasury and Finance:

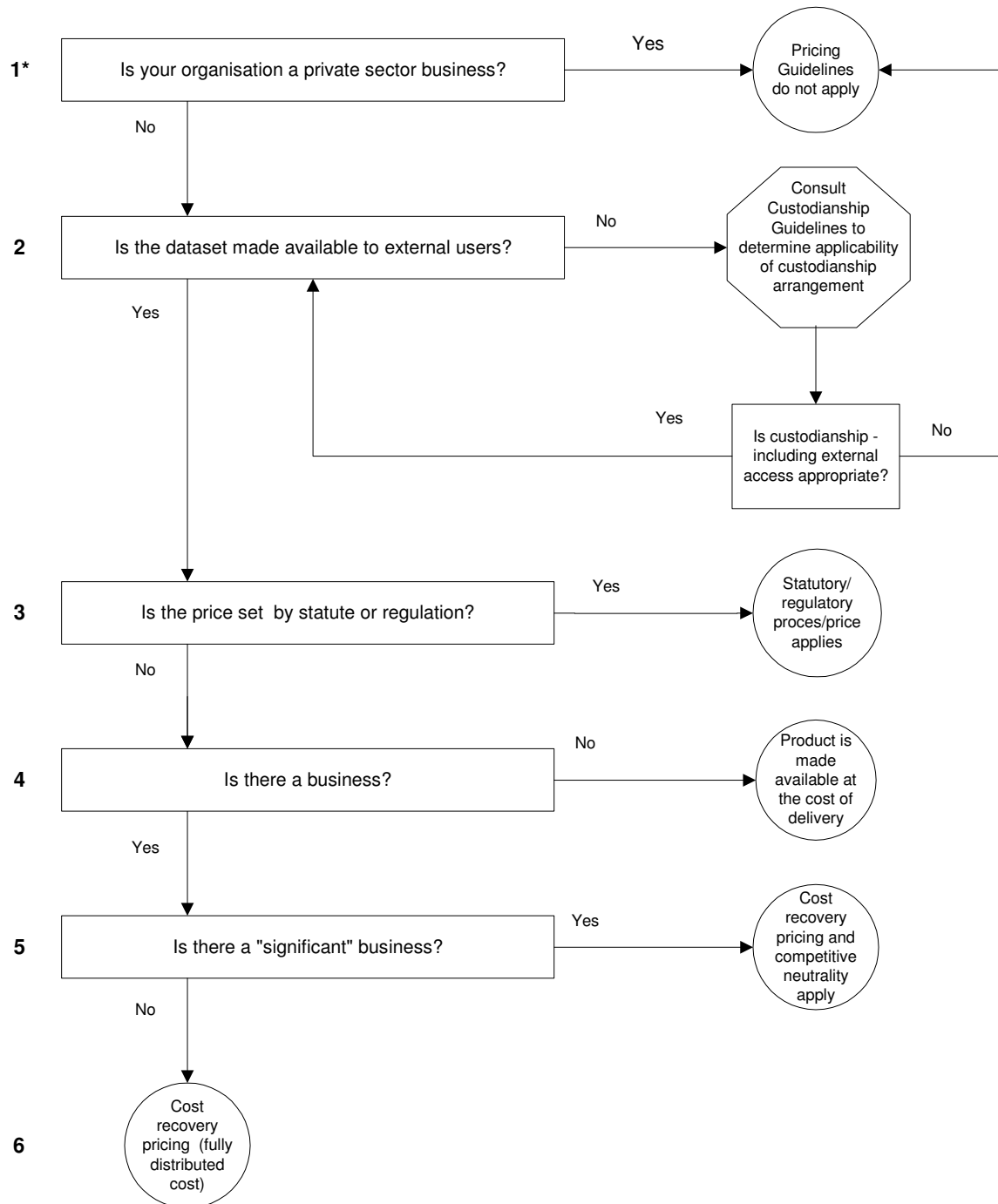
- *Guidelines for Setting Fees and User Charges*
- *Competitive Neutrality Policy for Victoria and Competitive Neutrality Policy Guide to Implementation*
- *Output Costing Guide*.

The Pricing Methodology set out in this document has been based on these guides and can be used by custodians as an introduction to the steps to be followed when determining the price for spatial products or services. It has been published on www.land.vic.gov.au or is available on application to the Spatial Information Infrastructure branch (SII) of the Department of Sustainability and Environment. Custodians should also contact SII at the address inside the front cover for assistance in setting prices for spatial products and services.

Figure 1 on the following page sets out the key questions that facilitate the decision on when to set a price for access to a spatial product or service, and the appropriate methodology that should be adopted.

The reasons for any relaxation of the cost recovery price should be documented and published. Custodians must determine, based on departmental and State government policy requirements and objectives, whether such relaxations can appropriately be made. These determinations must be publicly available.

Figure 1: Determining an appropriate pricing approach for spatial products and services



* See the Notes on the following page for further explanations of each of the numbered items.

Explanatory Notes

1. Refer to 'Who this Guideline applies to' on page 10 of the *Spatial Information Pricing and Licensing Guidelines*.

2. If the product or service is developed for internal use only, ie it is not shared or exchanged with users outside the organisation, there is no need to set a price.

The objective of the Victorian Spatial Information Strategy 2004-2007 is that as much data be made accessible as possible. Agencies in this position should consider whether there is potential for the product or service to be made available externally. The *Spatial Information Custodianship Guidelines* set out the criteria for determining whether a custodianship arrangement should apply to spatial products and services.

3. A product or service whose fees are set by regulation will be defined in the regulation and the price will be set in accordance with the legislation and/or regulation.

4. If the provision of a product or service is fully funded through the State budget, then there is not likely to be a 'business' activity. For a business to exist there must be a potential for user charging.

In this case, provision of the product or service to external users can be made at the cost of delivery.

5. The *Competitive Neutrality Policy* recommends that assessing whether or not a business activity is 'significant' should be done on a case by case basis. 'Significance' will be based on a number of considerations, including:

- the size of the relevant business activity in relation to the size of the relevant market;
- the influence or competitive impact of the business activity in the relevant market;
- the resources the business activity commands and the effect of poor performance; and
- whether the costs of providing the goods or services by the entity are being predominantly met by users.

See the *Competitive Neutrality Policy*, page 16 and *Competitive Neutrality Guide to Implementation*, page 3.

The procedure for calculating the competitively neutral cost and price is defined by the *Competitive Neutrality Policy Guide to Implementation* as defining the output; attributing full costs; adding competitive advantages; subtracting competitive disadvantages; deriving the competitively neutral cost; and setting the price to recover net competitively neutral cost.

6. The fully distributed cost method of calculating the cost recovery price forms the basis of Victoria's pricing and costing policies and guidelines (eg see *Competitive Neutral Policy Implementation Guidelines*, page 10).

The Fully Distributed Cost method (also known as 'full cost reflective pricing', or 'full cost pricing') calculates all costs required to produce the product, whether direct or indirect.

Indirect costs are those that are not incurred exclusively in the development of the product, eg overheads.

They may be allocated as a proportion of:

- staff involved in the activity as a percentage of total staff;
- the direct resource use of the activity as a percentage of total resource use; or
- the budget for the activity as a percentage of the total business budget.

Other methods that can be used are 'marginal cost' pricing, which calculates the cost of producing an additional unit of the product or service, and 'avoidable cost' pricing, which calculates the cost of the activity by considering the additional direct cost that the agency could avoid if it did not undertake the activity. These are described on page 9 of this document.

The following methodology assumes that parts 5 and 6 of the decision tree apply to the spatial data custodian.

COST RECOVERY PRICING

The following description of the methodology for calculating the cost recovery price of spatial information is intended as an overview to the range of considerations that could be taken into account. For any specific dataset, the nature, scope, detail and rigour of the price calculation will vary depending on the role of the agency in supplying spatial information, the characteristics of the dataset, and the likely demand for it.

Pricing methodology

The default pricing approach is cost recovery. The following pages outline a 6 step methodology for calculating the cost recovery price.

Detailed guides to determining price are found in the following documents published by the Department of Treasury and Finance:

- *Guidelines for Setting Fees and User Charges*
- *Competitive Neutrality Policy for Victoria and Competitive Neutrality Policy Guide to Implementation*
- *Output Costing Guide.*

Readers should consult these guides when determining the price for their spatial data products or services. The following model is a compilation of the material provided in these guides and should be taken as indicative only.

The six-step approach to calculating the price for spatial information products and services

1. Define the product/service
2. Choose the appropriate costing approach
3. Determine the cost of producing the product and calculate the unit cost
4. Adjust for Competitive Neutrality
5. Determine the Price
6. Setting the Licence Fee

Step 1: Define the product/service

Defining the product/service is necessary to be able to determine what it costs to produce – particularly if producing it is only one activity conducted by the agency or division of an agency – and to ensure an appropriate pricing approach is adopted. [In the following, the term ‘product’ refers to both product and service.]

Is the product a regulated or a non-regulated product?

A product whose fees are set by regulation will be defined in the regulation and the price will be set in accordance with the legislation and/or regulation.

What are the characteristics of the product?

What is the actual product sold? This will be important in determining the costs involved in producing and maintaining it.

What is the timeframe in which the product is sold or provided? Pricing decisions should be made according to a three to five year time horizon; this will facilitate identification of ongoing and one-off costs in [step 3: determining the cost of the product.](#)

How is the product is sold? The method of sale will influence the cost structure eg on-line vs over the counter.

Is the product a core agency product?

Whether the product is core or value-added will be important in completing [step 3.](#)

A core product is provided by policy directive or charter. It may be defined in legislation.

A value-added product is complementary and not essential to the agency's business. It may include providing additional data analysis and dissemination of improved products to private firms and individuals.

Further questions to ask about a value-added product are:

- is it a one-off product?;
- will its supply impact on the delivery of a core product?; and
- does the production of the product represent a small or large proportion of the agency's workload?

Is the product part of a 'significant business'?

The purpose of addressing this question is to determine whether competitive neutrality will apply and whether [step 4: adjust for competitive neutrality](#) will be required.

- [Is there a business?](#)

The first question is whether a 'business' exists.

If a product is fully budget funded then there is not likely to be a 'business' activity. For a business to exist, there must be a potential for user charging.

- [Are there actual or potential competitors?](#)

A further element in determining whether there is a 'business' activity is to consider whether there are any actual or potential competitors.

If there are no competitors, but if competitors would enter the market over, say, a two to three year period

- if the price rose by ten percent (if a price is currently being charged), or
- if a 'reasonable' price were charged (if no price is currently being charged),

then the product is provided as part of a business operation.

- [Is the activity 'significant'?](#)

The *Competitive Neutrality Policy* recommends that an assessment of whether or not a business activity is 'significant' should be done on a case by case basis. The considerations may include:

- the size of the relevant business activity in relation to the size of the relevant market;
- the influence or competitive impact of the business activity in the relevant market;
- the resources the business activity commands and the effect of poor performance; and
- whether the costs of providing the goods or services by the entity are being predominantly met by users.

See the *Competitive Neutrality Policy*, page 16 and *Competitive Neutrality Guide to Implementation*, page 3.

If the product is identified as being a significant business activity then [step 4: adjust for competitive neutrality](#) will need to be undertaken.

Step 2: Choose the appropriate costing approach

What is the appropriate costing approach?

The second step in pricing a product is to determine which costing approach to use to identify the costs attributable to the product. There are three that may be applied:

- Fully Distributed Cost
- Marginal Cost
- Avoidable Cost

• Fully Distributed Cost

The Fully Distributed Cost method (also known as **full cost reflective pricing**, or **full cost pricing**) calculates all costs required to produce the product, whether direct or indirect.

Indirect costs are those that are not incurred exclusively in the development of the product, eg overheads. They may be allocated as a proportion of:

- staff involved in the activity as a percentage of total staff;
- the direct resource use of the activity as a percentage of total resource use; or
- the budget for the activity as a percentage of the total business budget.

It is a relatively simple method to use. It forms the basis of Victoria's pricing and costing policies and guidelines (eg see *Competitive Neutral Policy Implementation Guidelines*, page 10).

• Marginal Cost

Marginal Cost pricing calculates the cost of producing an additional unit of the product or service.

Marginal Cost pricing should be used with caution – if all activities were priced this way there is a risk that insufficient revenues would be generated to finance the indirect costs of the business. Therefore, it should only be used in the following circumstances:

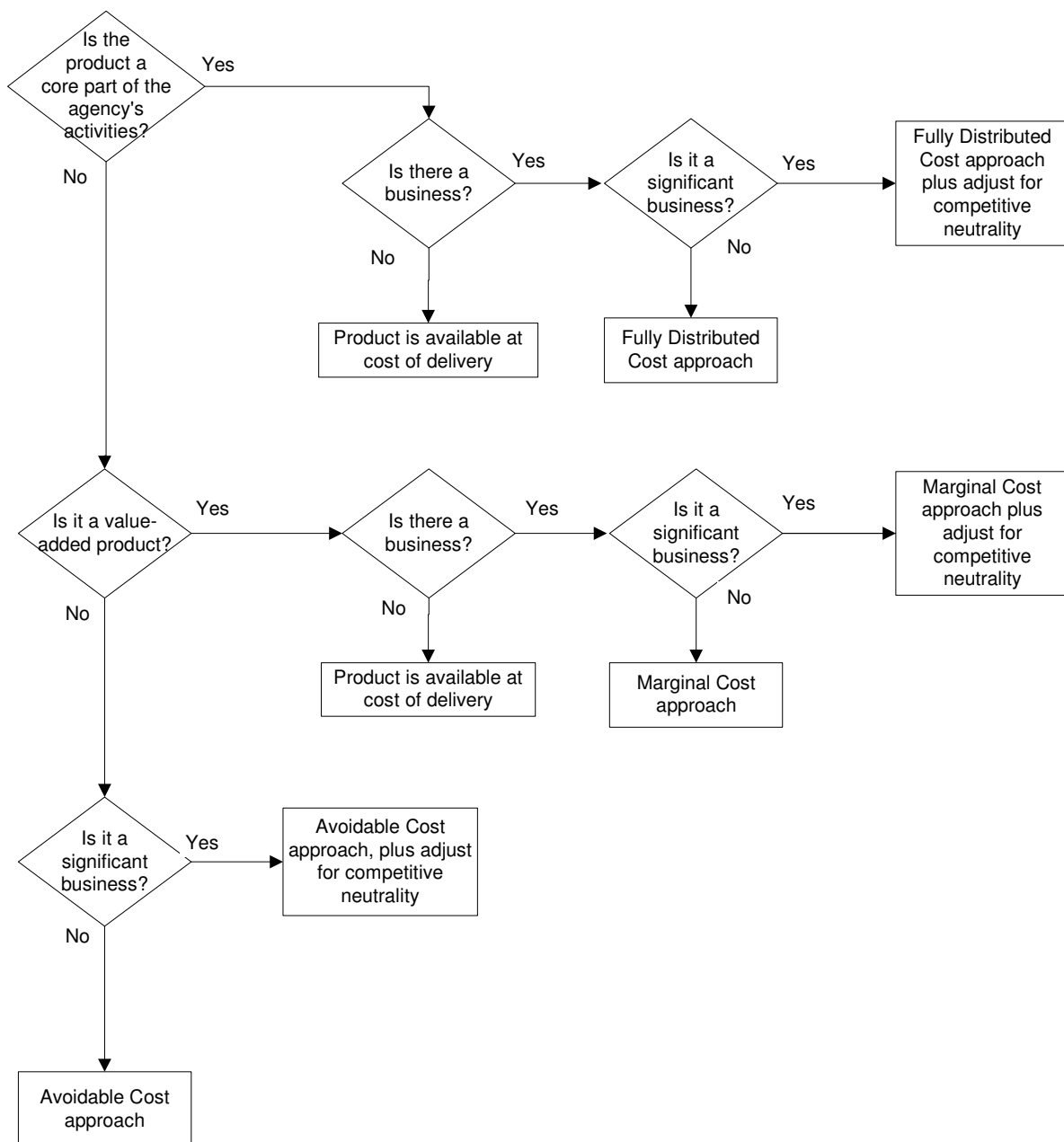
- the proposed activity is for a once-off contract that is fairly short-term in nature,
- pricing the activity at marginal cost will not affect the price charged for the mainstream provision of the same activity, and
- the proposed activity is a fairly small proportion of the existing workload of the agency.

• Avoidable Cost

The Avoidable Cost method could be used when the primary activity of an agency is non-commercial. In this case, the costs of the business activity, ie the development of the product, are calculated by considering the additional direct costs that the agency could avoid if it did not undertake that activity. In many cases, the indirect costs, eg agency overheads, would be incurred whether or not the business activity was undertaken. However, to the extent that they are affected by the business activity, they must be taken into account. (*Competitive Neutrality Policy Implementation Guidelines*, page 10).

On the basis of the above, in most cases the most appropriate costing approach will be the **Fully Distributed Cost** method.

Figure 2: Defining the product and selecting the appropriate costing approach



Source: Land Victoria, 2001

Step 3: Determine the cost of producing the product and calculate the unit cost

Whatever the costing approach adopted, all costs associated with producing the product, whether direct or indirect, must be calculated. A simple approach is outlined below.

Estimate volume of outputs to be produced in the timeframe (3-5 years)

The volume of outputs is usually the number of units sold. In the case of spatial information, where licences are issued for use (see Part C), volume is the number of licences.

On the other hand, where data is supplied on a transaction basis (eg via the internet), the volume of outputs would be the number of transactions.

Calculate direct costs	Direct costs are those specifically incurred in the production of the product, eg employee related costs, materials, travel, consumables. They may be assigned to the product through using the agency's chart of accounts to identify the relevant cost centre, program or project; through time recording systems; or resource consumption accounting.
Calculate indirect costs	Indirect costs are costs that contribute to producing a product but, unlike direct costs, are not incurred exclusively in the production of that product. Indirect costs include those costs that are traditionally referred to as overheads and corporate support functions such as financial and administrative services. Each indirect cost needs to be calculated through a pro-rata contribution to the creation of the product.
Determine Full cost of the product	Full cost = TOTAL DIRECT + INDIRECT COSTS

Step 4: Adjust for Competitive Neutrality

As defined under [step 1](#), competitive neutrality applies if the production of the product is part of a 'significant business activity'.

The procedure for calculating the competitively neutral cost and price is defined by the *Competitive Neutrality Policy Guide to Implementation* as:

- Define output
- Attribute Full Costs
- Add competitive advantages
- Subtract competitive disadvantages
- Derive competitively neutral cost
- Set price to recover net competitively neutral cost

The following cost adjustments are considered when determining competitive advantages and disadvantages.

GST	The GST is a value added tax on the consumption of most goods, services and property in Australia.
Stamp Duties	Stamp duties are State Government taxes imposed on a wide variety of transactions, including land transfers, leases of land, marketable securities and mortgages.
Cost of capital	The cost of capital reflects the opportunity cost of funds provided to government agencies. Government agencies are expected to earn a rate of return to cover the opportunity cost of capital.
Land Tax	Land tax is an annual tax levied by the State Government, based on the total unimproved value of all Victorian land owned by a taxpayer. If the calculation of full costs includes an estimate of commercial rent, no adjustment needs to be made.
Local Government Rates	These are rates levied by local governments on land holders within their municipalities. As is the case with land tax, if calculation of full costs includes an estimate of a commercial rent no adjustment needs to be made.

Debits Tax	Debits tax is levied on all debits transactions of accounts with cheque-drawing or payment order facilities. The adjustments for debits tax involve a single adjustment based on 0.1% of sales revenue from the output.
Pay roll Tax	The State Government levies this on Victorian wages paid by an employer to its employees.
Workcover Insurance	WorkCover is compulsory insurance for injured workers, which must be taken out by all Victorian employers.
Borrowings	These adjustments relate to lower interest rates on loans obtained by government agencies that are not obliged to pay the Financial Accommodation Levy.
Additional private sector regulations and requirements	This adjustment requires a comparison of compliance cost differences between the public and private sector in meeting regulatory requirements in a particular area.
Free or Below-Corporate overheads	A public sector business should take account of all the overhead costs involved in producing a good or service.
Superannuation	Superannuation includes a contribution paid by employers into a fund to provide an income for workers after their retirement. While the legal requirement for employer contributions is eight percent of an employee's salary, some public sector employees receive higher levels of superannuation payments under defined benefit schemes.
Government awards	A public agency may find that its wages and/or salaries are higher than the private sector competitor. However, this cost disadvantage cannot be reflected in the competitively neutral price unless the employer can demonstrate that it is bound by law to pay a higher award than the private sector.
Inherited higher cost structure	Government agencies that have recently been commercialised may inherit higher or less efficient cost structures than their private sector counterparts.
Accountability costs and legislative and regulatory restrictions	These costs may arise because government agencies face accountability or regulatory requirements not imposed on private sector competitors undertaking the same activity (eg. quarterly reporting to government).

The methods for calculating these adjustments are explained in the *Competitive Neutrality Policy Implementation Guide*, pages 19 to 31.

Step 5: Determine the Price

The simplest way to calculate the price is to express it in terms of unit cost.

Calculate the unit cost of the product	<p>Where data is supplied on a transaction basis, unit cost is expressed as:</p> <p>Unit cost = FULL COST / NUMBER OF TRANSACTIONS</p> <p>It may also be expressed as the number of licences issued:</p> <p>Unit Cost = FULL COST / NUMBER OF USERS</p> <p>A simple example of this would be a spatial information product costing \$100,000 annually to maintain and having 1,000 users; in this case, the annual licence fee would be \$100.</p>
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Adjust for GST

Under the provisions of *A New Tax System (Goods and Services Tax) Act 1999*, fees and charges paid to a Government agency are subject to the GST unless they are exempt under Section 81(5) of the *Act*.

Therefore its impact must be incorporated into the price of the product. This will require an adjustment upwards of up to 10% to reflect the GST rate.

Step 6: Setting the Licence Fee**Calculate the licence fee per user**

Having determined the unit cost, the Licence Fee for the user can be calculated. Each user is considered on an individual basis.

The value of the Licence Fee can be calculated using the following formula:

Licence Fee = Number of concurrent users * Unit Price * Proportion of the data set

Number of concurrent users (1 – 500,000+)

This is represented by the number of ‘seats’ required by the business. If more than one person will be using the dataset at a time individual ‘seats’ are required. In an Internet environment this figure is the expected ‘hits’ on the site during the term of the licence.

Unit Price

As previously calculated

Proportion of the Dataset (5%-100%)

There are two main types of spatial information datasets: image format and text format.

- For information kept in image format use the proportion of the land area of the dataset, eg an image of salinity effected areas across Victoria. A user may only require the section of the image picturing the northern Mallee region. This is approximately 10% of the dataset.
- For information in a database use the percentage of the database required, eg address points across Victoria. A user requiring address points only for the Melbourne area is seeking approximately 70% of the dataset.

There may be a number of reasons why an agency may choose other strategies for setting the price. The following examples may be considered. (*Note: The following simple descriptions of different techniques for pricing are presented for illustrative purposes only; no single one is recommended over another. The agency establishing prices for their spatial data and choosing pricing techniques must do the necessary investigation to determine the best approach.*)

<i>Market-based pricing</i>	Prices are set by reference to prevailing market conditions – eg, competitive pressures will force the price down and demand will force the price up. The market based price attempts to set the price somewhere between the two.
<i>Competition-driven pricing</i>	Pricing is effectively driven by what competitors charge and setting the price just over or under.
<i>Lump-sum pricing</i>	A variety of goods or services are packaged together and offered at one price.
<i>Piece-rate pricing</i>	Breaking a service down into, for example, daily rates – usually used in pricing consultancy services.
<i>Psychological pricing</i>	Adopting price thresholds that customers consider important. For a data custodian it may be worthwhile thinking about the effect of a series of small price increases rather than one large price increase, and conversely one large price reduction rather than a series of smaller reductions in price.
<i>Block pricing</i>	The provider sets a single price to cover a variety of similar but slightly different products. For example, the custodian may decide to price all its maps at the same rate. Within this price there will be higher and lower cost maps but by charging just one ‘block’ price for all maps the data custodian is assuming it will recover more income than it would through a range of different prices.
<i>Loss leaders</i>	To attract customers in the hope that they will continue to buy from you (at a higher price) in the future
<i>Premium pricing</i>	Setting the price above the competition is usually associated with positioning the good or service as being of higher quality and possibly of limited appeal.
<i>Discounting</i>	Discounting is often undertaken through negotiation. The common forms of discounting are: <ul style="list-style-type: none"> • volume discounts – where the more the customer buys the greater the discount on price; • promotional discounts – where there is a need for a custodian to ‘push’ a particular good or service; • cash discounts – frequently used to achieve early repayment.

These strategies must be set in the context of a solid understanding of costs and recognition of the agency’s policy objectives.

Other considerations

- The extent of effort and resources allocated to the setting of prices for spatial information products should reflect the value of the product, ie annual cost to maintain and potential for cost recovery.
- The development and publication of reasons for the relaxation of license fees is a requirement of these guidelines. Custodians must determine, based on departmental and State government policy requirements and objectives, whether such relaxations can appropriately be made. These determinations must be publicly available.
- Prices may be monitored and reviewed annually to take into account variations in cost and market size or composition.

FURTHER READING

Department of Treasury and Finance, 2000, *Competitive Neutrality Policy Victoria*

Department of Treasury and Finance, 2000, *Competitive Neutrality Policy Guide to Implementation*

Department of Treasury and Finance, 2005, *Guidelines for Setting Fees and User-Charges*

Department of Treasury and Finance, 2005, *Output Specification Guide*,

Department of Treasury and Finance, 2005, *Output Costing Guide*

Links to the above documents can be found on the Budget and Financial Management Resources web site at:

<http://hoddle.dpc.vic.gov.au/BudgetGuide/default.htm>

Land Victoria, 2001, *Pricing Framework for Property Information Services*, November

Victorian Spatial Council, 2006, *Spatial Information Custodianship Guidelines*, June 2006

Victorian Spatial Council, 2006, *Spatial Information Pricing and Licensing Guidelines*, August 2006

Victorian Spatial Information Strategy 2004-2007

The Victorian Spatial Information Strategy and accompanying Guidelines are available at:

http://www.land.vic.gov.au/spatial_policy