# Pre-commercial procurement: Goods and services guide

## Introduction

Find out how to procure solution development for goods and services.

## What is pre-commercial procurement in goods and services?

Pre-commercial procurement is buying solution development for goods or services to meet your agency’s requirements that:

* do not exist;
* are not commercialised and require further research, development or innovation; or
* are commercialised but need more innovation or further development to meet new or enhanced requirements such that they become new goods or services.

The pre-commercial stage of the lifecycle for goods or services spans:

* defining the problem, need and requirements;
* proposing a concept solution;
* developing the solution (design, prototyping and testing); and
* preparing the solution for production/delivery.

Pre-commercial procurement may begin at any point of the pre-commercial lifecycle.

**Why buy pre-commercial goods and services?**

Pre-commercial procurement is an opportunity to meet the outcomes your agency needs.

Sometimes, solution development or doing nothing are the only choices. At other times pre-commercial procurement will compete with existing solutions. Your agency may buy solution development when a business case shows expectations of net benefits that exceed other options.

**When to buy pre-commercial goods and services**

Generally, you will need to buy pre-commercial goods and services when market analysis determines that the market does not have commercial-off-the-shelf goods or services available to fully meet the outcomes needed.

The outcomes sought by your agency may be new or enhanced outcomes. At other times the outcomes needed may be the same, but new technologies or innovations offer the opportunity to improve achievement of those outcomes.

The need for solution development is clear when a solution does not exist in the market. However, the need for solution development may not be clear when a solution involves integration or customisation of existing commercialised goods and services. You will need to understand the scope, risk and complexity of what a supplier refers to as integration or customisation and manage it accordingly.

If solution development is needed but is either underestimated or not included in the contract(s), it may have adverse impacts on the buyer and supplier, including major contract amendments, or contract termination.

Pre-commercial procurement is applicable to [unsolicited proposals](https://www.buyingfor.vic.gov.au/managing-unsolicited-proposal-goods-and-services-procurement-guide) where the proposed goods or services have not been commercialised.

**What to consider**

### Risk and complexity

Buying pre-commercial goods and services may be riskier and more complex during solution development than buying existing commercialised goods and services, even if the resulting solution is not risky or complex.

Importantly, there is no guarantee that goods or services can be developed to meet performance requirements. The risk of a pre-commercial procurement should align with your agency’s risk appetite and ability to manage the risk with the supplier.

The importance of managing risk is underscored in pre-commercial procurement. In addition to risk to scope, performance, budget and schedule, the risk of not achieving a suitable outcome may represent operational and reputational risk for your agency.

The foundations for treating risk should be a:

* robust governance and contract structure,
* a risk management strategy, and
* a procurement team with the necessary capability.

A risk management strategy will guide key elements of your pre-commercial procurement. Common strategies include:

* staging development with appropriate deliverables and exit points; and
* encouraging a range of solution options at the early stages and progressively focusing development effort on the more promising solutions.

Allocate risk to the party best placed to manage it. Transferring all risk to the contractor is unlikely to be the best approach. Transferring risk to a contractor will normally result in a cost to your agency, and potentially a higher cost than if your agency bears risk it is better placed to manage.

### Capability

The capability needed to conduct pre-commercial procurement should be appropriate to the level of risk and complexity. The level of risk and complexity is likely to need:

* management by advanced procurers, and
* support by technical, legal, and commercial experts.

Your agency should also consider the capability of the governance structure. The governance structure must have:

* appropriate expertise; and
* the authority and delegations to make timely decisions.

### Scope of solution development

The scope of solution development for a pre-commercial procurement may include:

* problem definition;
* requirements definition;
* concept or preliminary design, perhaps with mock-ups;
* detailed design;
* prototyping;
* testing and trials;
* final design and design approvals; and
* readiness for manufacturing (resources and procedures).

When you buy commercialised goods and services, your agency specifies its requirements and chooses between offers of commercialised solutions. However, at the commencement of a pre-commercial procurement, the problem and requirements may not be well-defined, and the solution may not be known.

How mature is your procurement activity prior to commencement in terms of the list below?

* the need or problem is not defined;
* the requirements and outcome are not defined;
* the solution is not defined;
* the solution does not exist;
* the solution is a concept;
* the solution is a prototype; or
* the solution is developed but requires modification.

These will inform the scope of the solution development needed.

You may find it useful to consider the maturity of a solution using either Technology Readiness Levels or the Commercial Readiness Index, both of which are searchable online.

### Market analysis and review, and market approach

Your level of knowledge of your agency’s needs, and the possible solutions, will affect your ability to identify and analyse the market(s) to buy from. If your agency has conducted [early market engagement](https://www.buyingfor.vic.gov.au/early-market-engagement-goods-and-services-guide), you may have detailed information to inform your [market analysis and review](https://www.buyingfor.vic.gov.au/market-analysis-and-review-goods-and-services-policy-and-guides). Conducting a Request for Information may also be useful to aid in defining your agency’s requirements, and to better understand what is possible from the market and how to specify it.

If market analysis is not able to adequately determine the capability of the market or identify possible solutions, it may be appropriate to conduct a multi-stage procurement commencing with an Expression of Interest. An Expression of Interest is typically followed by a selective tender to the shortlisted respondents.

There are many ways to structure the market approach, guided by your risk strategy. Indicative options could involve:

* conducting one market approach for the full scope of solution development activities with a single supplier;
* conducting one market approach for the full scope of solution development activities with multiple suppliers competing to advance through several stages of solution development; or
* dividing the scope into multiple approaches to the market, potentially contracting with a number of suppliers, and perhaps different markets.

An example is a Victorian Government program to engage start-up businesses in Information Technology to solve challenges. Known as [CivVic Labs](https://civvic.launchvic.org/), Government challenge owners collaborate with start-up businesses to develop innovative solutions through a facilitated accelerator process. This process is conducted in three development stages during which the field of participants from the market is progressively down-selected as follows:

* 1 – a challenge is offered to the open market and up to nine respondents are selected to participate in collaborative problem and requirements definition, and concept design;
* 2 – three of the companies are then selected to develop their concept designs into prototypes; and finally
* 3 – one company is selected to develop their prototype into a final design.

If the final design is suitable, the Government challenge owner places an order for the solution, which allows the start-up to commercialise it.

### Contracting

You will need to determine the appropriate contractual mechanisms to support your market approach. You may include clauses to terminate the contract at nominated stage milestones/deliverables if:

* solution development is not meeting requirements, or
* is exceeding budget or schedule.

You will need to determine the payment structure for development activities and deliverables. To facilitate participation of l businesses in the pre-commercial stage, some payment may be needed, regardless of whether the solution development is successful. If you engage multiple suppliers in a competitive development process, you will likely have to pay all parties for their participation and any deliverables, even though not all of what you pay for will be used in the final solution. The contract structure may also need to account for a partnership or similar operating structure where contractual risk and responsibilities are shared by two or more suppliers.

### Intellectual Property Rights

Consideration of intellectual property rights is critical in pre-commercial procurement. You should seek expert advice to ensure that the intellectual property rights in your contract(s) are appropriate and aligned with the Victorian Government’s intent.

It is the [Victorian Government’s intellectual property policy](https://www.dtf.vic.gov.au/funds-programs-and-policies/intellectual-property-policy) intent that:

* the State grants rights to its intellectual property, as a public asset, in a manner that maximises its impact, value, accessibility and benefit consistent with the public interest; and
* the State acquires or uses third party intellectual property in a transparent and efficient way, while upholding the law and managing risk appropriately.

The State’s Intellectual Property Policy provides that procurement agreements must address any rights to intellectual property that may arise from the procurement. Agreements should normally address at least the following intellectual property rights:

* **Background intellectual property:** existing intellectual property owned by the agency or the contractor and brought to the agreement as a tool or building block, such as pre-existing business processes;
* **Third Party intellectual property:** intellectual property brought to the agreement by one of the parties to the contract but owned by a third party, such as software programs;
* **Foreground intellectual property:** intellectual property generated as a result of the agreement (sometimes referred to as Project,Contract intellectual property or Developed intellectual property);
* **Data:** Any information, data, datasets or databases created by or on behalf of the contractor in the course of providing the services.

Under a procurement agreement, Background and Third Party intellectual property should normally remain the property of the party that owned them prior to the agreement.

In most cases, Foreground intellectual property should be owned by the contracting party, and the State should seek a licence to use it. Given that the State has paid for the development of the Foreground intellectual property, its licence to use it should be royalty free.

The State may only acquire ownership of intellectual property under a procurement agreement where the agency has a specific purpose for use of the intellectual property that cannot be achieved under a licence. This may include:

* where development of the intellectual property is the purpose of the contract;
* where an existing agreement requires the State to retain ownership of the intellectual property; and
* where there are compelling reasons for the State to acquire or retain ownership of intellectual property, such as privacy, public safety, security and law enforcement, public health and compliance with the law.

All data generated for the purpose of the procurement, or which arises incidentally, should be owned by the State.

Your agency must have the intellectual property owner’s permission to use intellectual property. You should expect to pay for rights to use a supplier’s intellectual property. This can become complicated when your agency wants to use intellectual property from a supplier whose offer has not been selected. In pre-commercial procurement, this may arise in a competitive development process.

### Procurement project management

This section comments on the fundamental elements of project management (scope, budget, schedule and performance) as they apply in pre-commercial procurement. It also highlights the importance of implementing a methodology for solution development.

### Scope. A clear definition of scope is important in any procurement. Scope may be more challenging to define and control in a pre-commercial procurement. The less mature key elements of your procurement are at the outset, the more challenging it will likely be to define and control scope.

### It is important to understand that the scope may need to change as the solution development progresses. Solution development often enhances understanding of the need, the problem and the solution. This may cause scope to evolve with impacts on budget, schedule and performance.

### Budget. You will need to estimate how much budget is needed to fund the solution development of the goods or services. The less defined the solution development scope is, the more challenging cost estimation becomes.

### You should request a detailed cost breakdown from suppliers to help better understand and manage the budget. Prior to selecting a supplier(s) to develop the solution, complete a review of the detailed cost breakdown. The review may reveal where a supplier has under- or over-estimated the amount of resource required for an activity. The budget should be validated throughout the development process. It may need to change or risk subsequently constraining development.

Buying pre-commercial goods and services generally costs more overall than buying existing commercialised goods and services. This is because the first buyer often bears much or all of the costs of solution development.

If there are other agencies or jurisdictions with the same needs, there may be an opportunity to share the costs of development. The supplier’s ability to spread the costs of development across other customers may affect the price you pay for solution development.

The cost of solution development should be in proportion to the benefits.

**Performance.** Pre-commercial procurement offers an opportunity to develop a custom solution for your agency’s needs, while at the same time presenting a risk that the performance requirements will not be met. Performance may be achieved iteratively. Budget and schedule may constrain performance.

**Schedule.** It is common sense that the schedule for a pre-commercial procurement will take longer than a similar procurement where the solution is already developed and available to be supplied. You should plan for the impact of risk on schedule. To achieve performance levels, you may need to add resources (increase budget) to maintain schedule or lengthen the schedule to remain within budget.

**Methodology.** You will need to agree with your supplier(s) on a project management methodology for the solution development. Solution development may progress through a linear process or be undertaken through a series of development cycles/iterations. The methodology should be appropriate for the scope, risk and complexity of the procurement.

For example, a linear methodology such as Systems Engineering may be appropriate where the requirements and the solution technologies are known. The process begins with requirements analysis, progresses through design stages to a final design that is confirmed as fit-for-purpose.

Where the requirements and solutions are not well defined at the outset, an iterative approach allows evolution of the solution may be more suitable, such as Agile Project Management.

You should plan to resource your procurement team to allow it to collaborate closely with the supplier during solution development. This may require key government personnel and other resources for significant periods.

## Value for money

Achieving value for money in pre-commercial procurement follows the same principles as for any other procurement. As with every procurement, your agency must assess the risk and complexity, and

resource the procurement with the appropriate capability to obtain value for money.

If your agency is not experienced in pre-commercial procurement, it may be challenging. Your agency may need to engage external experts to avoid the potential traps and pitfalls that arise in pre-commercial procurement, including unfounded project office optimism.

## Using this guide

This guide accompanies the Victorian Government Purchasing Board’s goods and services supply policies.

This guide should be read in conjunction with:

* [Market analysis and review](https://www.buyingfor.vic.gov.au/market-analysis-and-review-goods-and-services-policy-and-guides) policy
* [Market approach policy](https://buyingfor.vic.gov.au/market-approach-goods-and-services-policy)
* [Innovation and the procurement process – goods and services procurement guide](https://buyingfor.vic.gov.au/innovation-and-procurement-process-goods-and-services-procurement-guide)
* [Managing an unsolicited proposal – goods and services procurement guide](https://buyingfor.vic.gov.au/managing-unsolicited-proposal-goods-and-services-procurement-guide)
* [Victorian Government Intellectual Property Policy Intent and Principles (IP Polic](https://www.dtf.vic.gov.au/funds-programs-and-policies/intellectual-property-policy)y)

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