



Summary - Smart Lighting Feasibility Study.

What is smart lighting?

'Smart Lighting' describes LED lighting which has the ability to be controlled by a Central Management System (CMS). These systems provide operators with intelligent and flexible lighting control, individual control to street lights, dimming, and asset management.



Many smart lighting products have inbuilt connectivity that can help connect other Smart City uses and products to the Internet. For example, a smart parking system can connect to the Internet via a smart lighting system to send data back to council officers or to car park users.

	
Level 1	Level 2
Traditional Lighting	LED

Generally, traditional sodium lighting, mercury vapour or fluorescent.

Replacement of LED's creates notable energy savings, changes in lighting profile, compared to sodium lighting.

These efficiencies and advantages are well understood, and are not the focus of this study.

	
Level 3	Level 4
Smart Lighting	Smart Lighting with Smart City Connectivity

Connecting lighting (generally LED lights) to each other and to the Internet to enable operational efficiencies for lighting owners. Incorporates a lighting Control Management System (CMS).

Connectivity can also be used to provide network connection for other smart city uses and products (e.g. smart parking).

Street lighting can be an enabler of these sensors/hardware, due to cities being conveniently scattered with light poles, attachment locations and a reliable power supply.

What is this study about?

Broadly, the objective of this study is to help local councils in Victoria to understand the opportunity surrounding smart lighting, and the role of smart lighting in enabling wider smart city technologies.

This study incorporates a suite of documents:

- A **Feasibility Study**, looking at high level costs and benefits, and suggested next steps to trial smart lighting.
- A **Smart City Concept Deck**, that helps to understand the role of smart lighting in enabling other smart city technologies.
- Two **Mini Business Cases** for smart city technologies that might benefit from smart lighting deployment.

What are the key conclusions?

Some of the key conclusions and recommendations of this study include:

- Deploying smart lighting widely across distributor (DNSP) owned lighting could come with challenges - including fees, data ownership and benefits realisation issues.
- Many smart city use cases or products considered would not necessarily benefit from smart lighting. There are alternative power and connectivity sources that are more suitable.
- Pilots for Level 4 smart lighting should focus on council owned lighting in activity centres. An initial focus on these assets will both minimise risks and challenges associated with deploying smart lighting on DNSP assets, while maximising benefits to the local community (by focusing on high impact areas).
- From there, councils can build a case for a roll out, on council assets or DNSP assets in the longer term, and start experimenting with smart lighting and smart cities.
- There is currently insufficient evidence to suggest that deploying smart lighting en masse across large residential areas, on DNSP assets, would lead to significant community or council benefit, relative to the risks and costs.