Cities and Active Transport

Cataloguing Assets

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Technical Guidance

This technical guide outlines an approach to cataloguing information on assets in smart places to set up the foundations to maximise the deployment of digital connectivity, reduce construction and street clutter and leverage commercial opportunities. It should be read in conjunction with the relevant standards and legislative requirements.

The assets associated with smart places include the following:

- physical infrastructure such as land and buildings
- enabling digital infrastructure including connectivity, conduit, pit and street furniture
- sensors and controllers
- data and software.

Some of these are displayed in Figure 1 below.

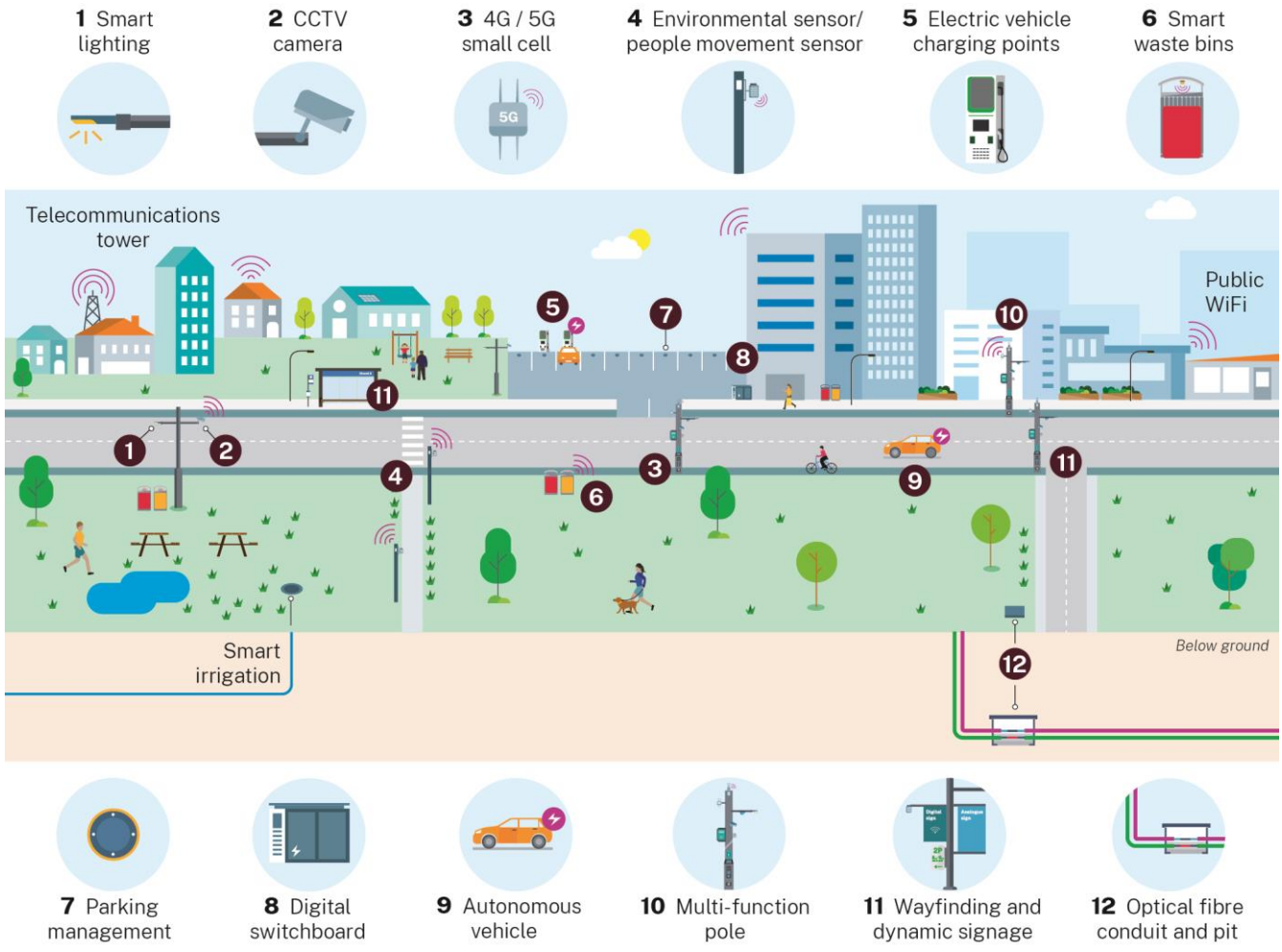

Figure 1 Examples of smart technologies

A proactive and strategic approach to managing asset in smart places can maximise deployment of digital connectivity infrastructure while reducing street clutter, by leveraging enabling digital infrastructure in place rather than every telecommunications provider installing new conduits and pits (refer to Technical Guidance: Digital Infrastructure).

It can also provide local councils and place owners with opportunities for commercialisation of their assets by leasing them for the hosting of connectivity equipment.

In order to realise this opportunity however, a digital record of the location and attributes of the assets in a place should be developed and maintained. At a high level there are two parts to developing a useful asset catalogue. The first is to identify land, buildings, enabling digital infrastructure and street-level assets that have the potential ability to host digital connectivity equipment.

Table 1 outlines an example of high-level information that could be recorded for an asset including the current owner of the asset, the potential hosting opportunity, and the current attributes, such as the capacity to safely support the weight of equipment (weight bearing) or whether it is connected to optical fibre and power.

Table 1 Example of an asset catalogue for hosting opportunities

Hosting asset description	Owner (Typical owner types listed below)	Hosting opportunities	Telco requirements for asset suitability
Land	• Council • State Government • Private owners	• 5G small cells • 5G macro tower	• Fibre / conduit • Power
Building	• Council • State Government • Private owners	• IoT Gateway • 5G Macro • 5G small cell	• Fibre / conduit • Power
Streetlight pole	• Electricity utility • Council (greenfield)	• Wi-Fi • IoT gateway • IoT sensors • 5G small cells	• Fibre / conduit • Power • Weight bear
Smart poles	• Council • 'As a Service' owner	• EV Charging • Wi-Fi • IoT gateway • IoT sensors • Edge compute • 5G small cells	• Fibre / conduit • Power • Weight bear
Bus shelters	• Council • Main Roads / Transport Authority	• EV Charging • Wi-Fi • IoT gateway • IoT sensors • Edge compute • 5G small cells	• Fibre / conduit • Power
Bins (fixed position)	• Council	• IoT Sensors • 5G small cells	• Proximity to fibre / conduit • Power

Table 2 below is a template that could be used to begin capturing more detailed information of specific assets, other headings can be added as needed. This is an extension of traditional asset data capture to include connection or proximity to power and telecommunications and additional weight bearing capacity of the assets.

Table 2 Template for more detailed asset catalogue

Asset name	**Geographic information of the asset** (coordinates for geotagging)	**Asset owner**	**Height**	**Connection or proximity to power**	**Power capacity**	**Connection to or proximity to fibre or telecommunications conduit**	**Fibre type**	**Additional weight bearing capacity**
Example: Smart Bin (01)	00.00000, 00.00000	Waste Services	1.3m	Connected	210W	Connected	nbn Smart Places Fibre	200kg

This information can then be used to begin discussions with telecommunication providers and other interested parties as to whether particular assets/sites are worth exploring for suitability for hosting their connectivity equipment and/or other technologies and services.

More technical guidance

Unlock the full potential of connected smart places with our SmartNSW Playbook and other Technical Guidance documents. Consult your organisation for the relevant industry standards that apply to your development.