Local Government
Spatial Reference
Group

GIS Good Practice Framework

Assessment: December 2017

Vision: ***Appropriate and effective spatial capability is established across all Local Councils and is recognised as fundamental to council efficiency and service delivery.***

About this Document

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Executive Summary

Reliable spatial (location) information is vital for making effective decisions on investments in facilities, asset, services; reporting to government, and responding to customers and emergencies.

In 2013 a strategic vision was developed for the Victorian Local Government spatial sector: *Appropriate and effective spatial capability is established across all Local Councils and is recognised as fundamental to council efficiency and service delivery*.

To assist Councils to assess their utilisation of Geographic Information Systems (GIS) / spatial technologies and related work practices, the MAV and the Local Government Spatial Reference Group (LGSRG) implemented the annual GIS Good Practice Framework (GPF) assessment. The GIS Good Practice Framework defines good practice for five proficiency areas. The purpose of the GPF is to assist Councils in assessing their awareness and level of adoption of sector-wide accepted 'good practices'.

In 2017, the assessment was completed by 75% of Councils. This report presents the results of the 2017 Good Practice Framework assessment and compares them to previous years. It should be noted that there was a significant shift in the councils which responded to the survey, particularly from 2016 to 2017. Some councils who responded in 2016 didn't respond in 2017 and vice versa, therefore introducing changes in trends.

The GPF results are used by Councils in many different ways. Many Council officers have reported that GPF Assessment Reports are discussed with their Council executive team and are used to support decisions regarding areas for future investment in people, processes and technologies.

Statewide averages for the five proficiency focus areas.

Proficiency Focus Areas	2013	2014	2015	2016	2017
Spatial Capability	C	C	C	C	C
Core Data Maintenance	C	B	B	B	B
Property and Rates Integration	B	B	B	B	B
Asset Management to GIS Integration	N/A	C	C	C	C
Community Engagement & Self Service	N/A	N/A	D	D	D

(Highest Grade)				(Lowest Grade)
A	B	C	D	E

The following report presents the statewide GPF assessment results. Councils that have subscribed to the Local Government Spatial Reference Group and participated in this year's GPF Assessment will also receive a report presenting their responses against statewide averages.

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1. Introduction

In 2013 a strategic vision was developed for the Victorian Local Government spatial sector.

> *"Appropriate and effective spatial capability is established across all Local Councils and is recognised as fundamental to council efficiency and service delivery"*

GIS Good Practice Framework (GPF)

To progress toward the strategic vision, the Local Government Spatial Reference Group, with the support of Spatial Vision, developed a GIS Good Practice Framework (GPF).

The purpose of the GPF is to assist Councils in assessing their awareness and level of adoption of sector-wide accepted 'good practices'.

1.1 Proficiency Focus Areas

The GPF focuses on five areas of proficiency relating to Council practices. These are presented in Table 1. The type of spatial technology used by Council is not relevant.

Proficiency Focus Areas	Description
Spatial Capability	Recognition of spatial capability to support council service delivery
Core Vicmap Data Maintenance	Support for core Vicmap data for use by Council and the public
Property and Rates Integration	Effective integration between GIS and Property & Rates data
Asset Management Integration	Effective integration between GIS & Asset data
Community Engagement & Self Service	Spatial technologies support relationships with the community and delivery of services when and where required

Table 1 - Proficiency Focus Areas

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1.2 Objectives of the Good Practice Framework

The objectives of the GPF include:

- Establishing a practical approach for councils to deliver consistent and standardised output.
- Ensuring the approach is sufficiently flexible to account for different Council capabilities.
- Enabling levels of GIS good practice adoption to be measured (and tracked).
- Developing sector influence (bargaining power) to lobby agencies, solution vendors and consultancies to recognise and adhere to agreed standards.
- Supporting future Council directions such as increasing movement towards cloud based systems and platforms.

1.3 Application of the Good Practice Framework

To date, the Good Practice Framework has received praise from many Officers throughout Victoria as this process highlighted potential areas for improvement, including the need to integrate GIS practices into the Corporate Strategy and Disaster Recovery Planning. Additionally, open data is increasingly playing a big role in how organisations share and obtain data. It is important to see how councils are using, publishing and sharing data in order to identify ways of improving spatial data transparency and accessibility.

2. Methodology

A GIS Good Practice Framework questionnaire was developed with significant input from members of the Spatial Reference Group Committee.

This years' assessment retains the same questions as the 2016 questionnaire, enabling comparison of assessment grades over time.

This year's assessment includes three new questions pertaining to *Community Engagement and Self Service* as a proficiency focus area (PFA). One question has been removed from the Asset Management to GIS Integration PFA since this was very similar to reworded questions included in this PFA.

An email was sent to each council with a link to the questionnaire. Respondents were requested to complete the questionnaire and ensure the manager oversighting GIS reviews and authorises the response prior to submission.

Reponses were received between 5 December and 19 December 2017.

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3. Findings

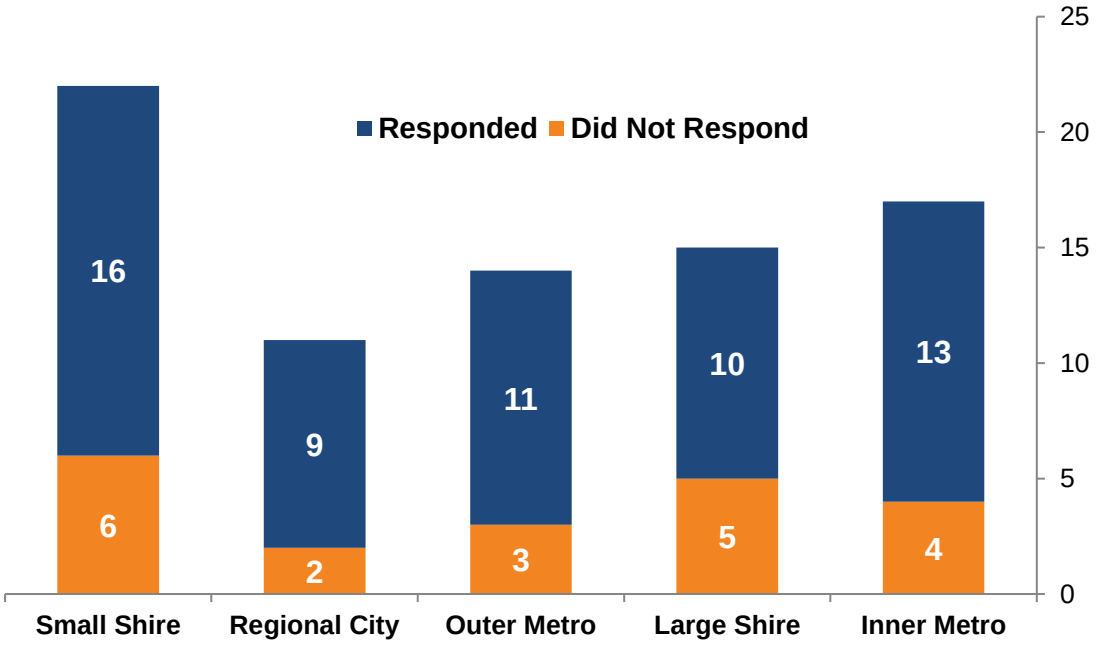
3.1 Response Overview

A total of 59 valid responses were received for 2017.
Responses from previous years: 60 for 2016, 63 for 2015, 59 for 2014, and 49 for 2013.

3.2 Council Breakdown by Type

Respondents represented a range of metropolitan, rural and regional city councils. Figure 1 below presents the count of responding and non-responding councils by the MAV council classification.

Figure 1 - Breakdown of participating and non-participating councils by classification



Assessment Legend

The following assessment legend is intended to assist councils in interpreting their summary grades for each of the five Proficiency Focus Areas: 1) Spatial Capability, 2) Core Vicmap Data Maintenance, 3) Property and Rates Integration, 4) Assets to GIS Integration and 5) Community Engagement and Self-Service, relative to the state average. These grades are provided at the beginning of Sections 4, 5, 6, 7 and 8 of this report.

(Best Grade)				(Lowest Grade)
A	B	C	D	E

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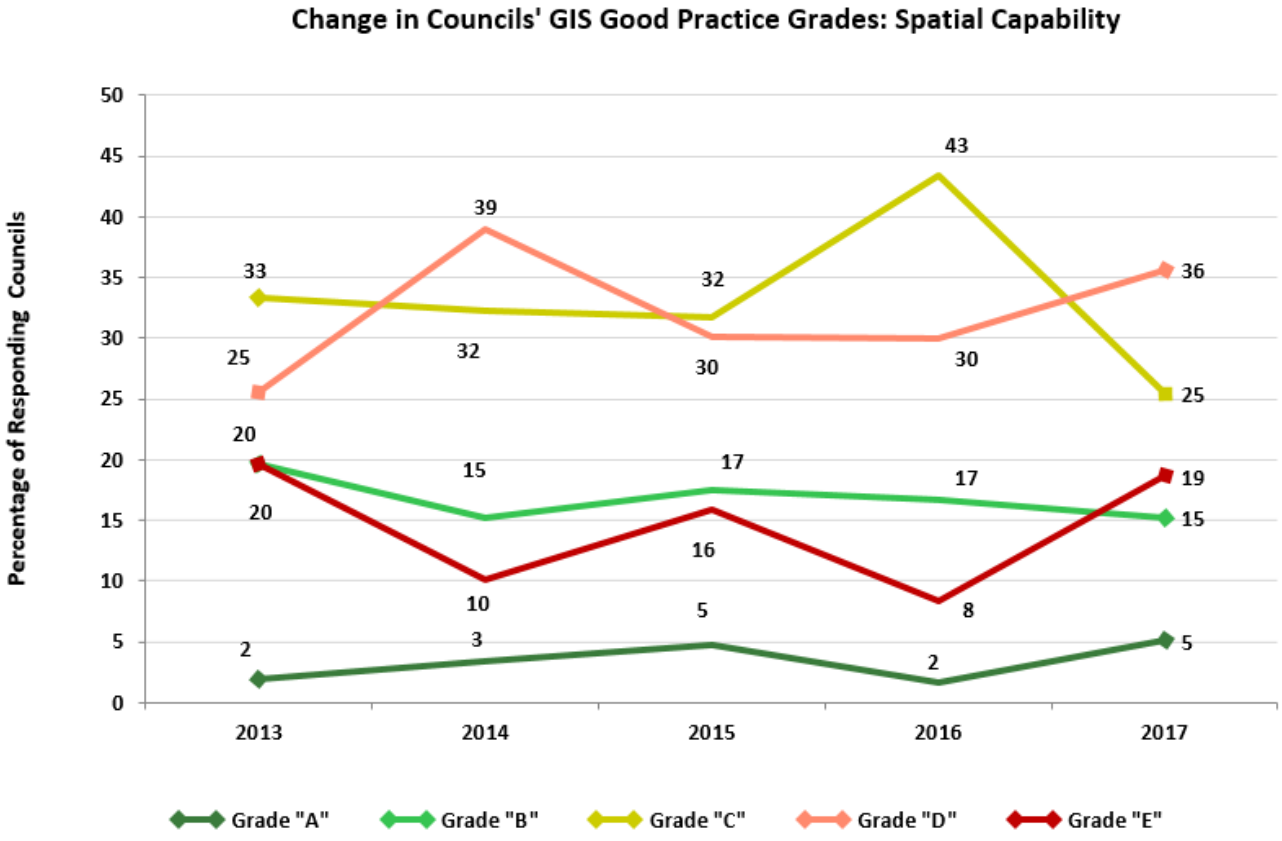
4. Spatial Capability

*Composite Score: "**Recognition of Spatial Capability to Support Council Service Delivery."***	**2013**	**2014**	**2015**	**2016**	**2017**
State average	**C**	**C**	**C**	**C**	**C**

The average Spatial Capability grade for the sector has remained steady at a "C" over the past five years. However, the figure below provides a more granular view of trends. Notably, the percentage of participating councils assessed as having a grade of "A" and "E" has increased (perhaps a change in new councils answering the survey), whilst councils receiving a grade of "C" has fallen (likely to be the result of some councils having other priorities in 2017).



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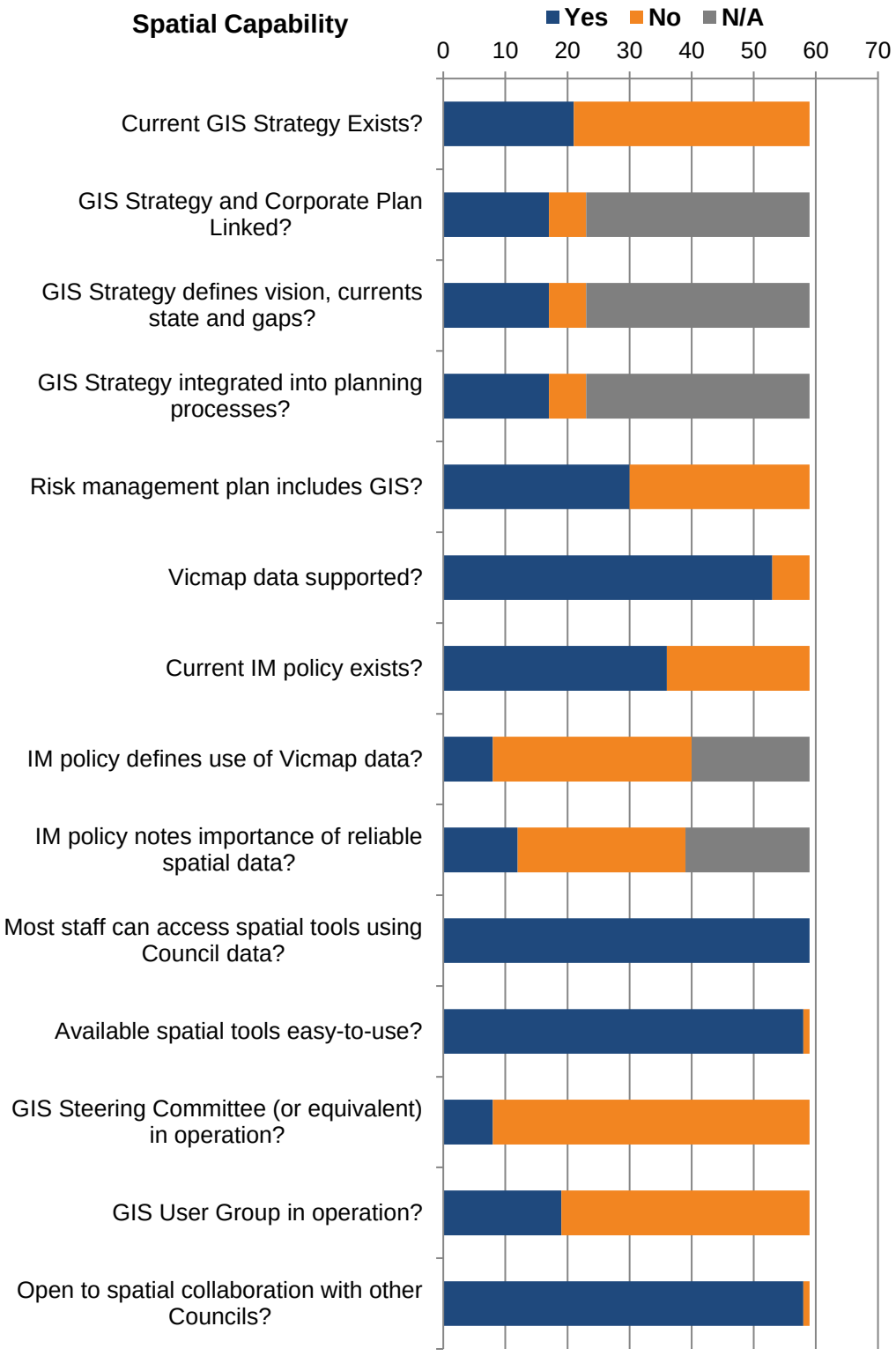
Statewide Responses (count): Spatial Capability



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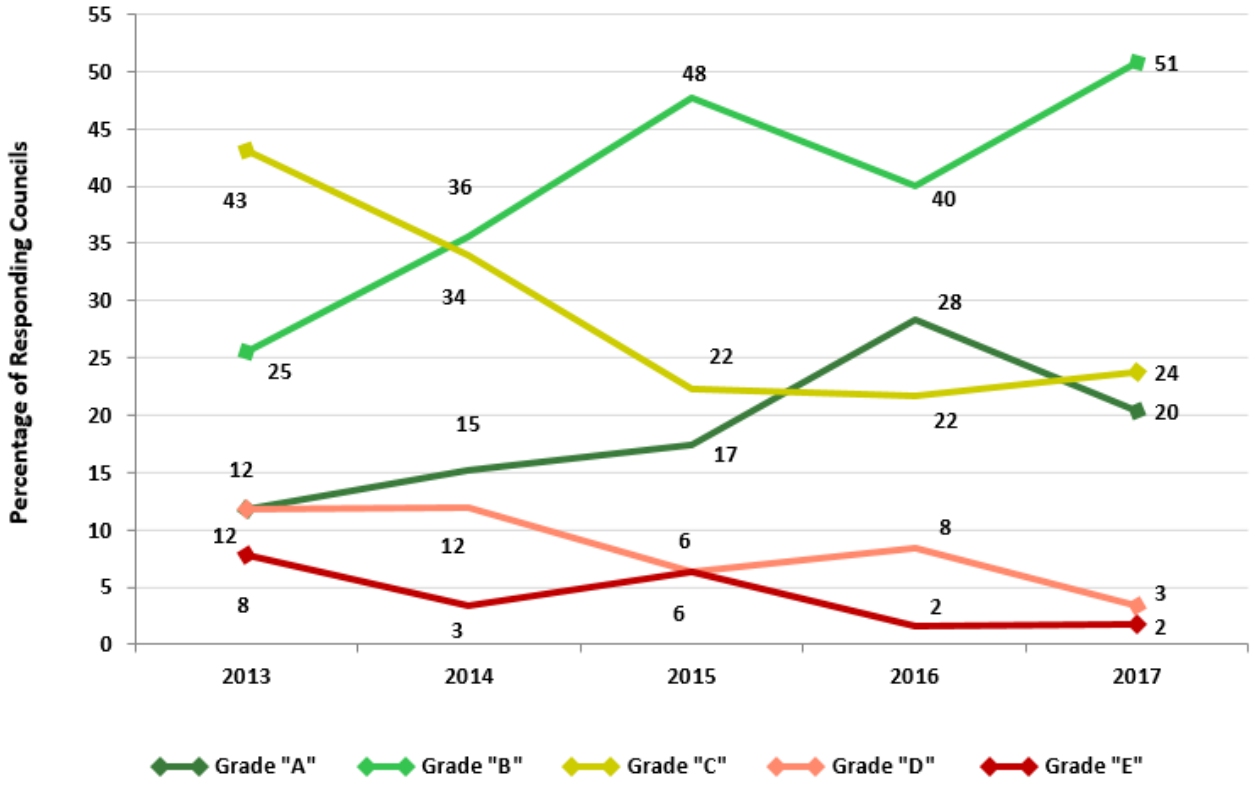
5. Core Vicmap Data Maintenance

*Composite Score: "**Support for Core Vicmap Data for use by Council and the public"***	**2013**	**2014**	**2015**	**2016**	**2017**
State average	**C**	**B**	**B**	**B**	**B**

The average Core Vicmap Data Maintenance grade for the sector improved from a "C" in 2013 to a "B" in 2014 and has remained at a "B" in 2015, 2016 and 2017. However, it is apparent from the figure below that there has been a noteworthy increase in the percentage of participating councils assessed as having a grade of "B", with this figure more than doubling from 25% in 2013 to 51% in 2017. There is a trend showing positive signs of improvement, with some councils grading improving from "C" to "B" and also dropping from "A" to "B".

Change in Councils' GIS Good Practice Grades: Core Vicmap Data Maintenance



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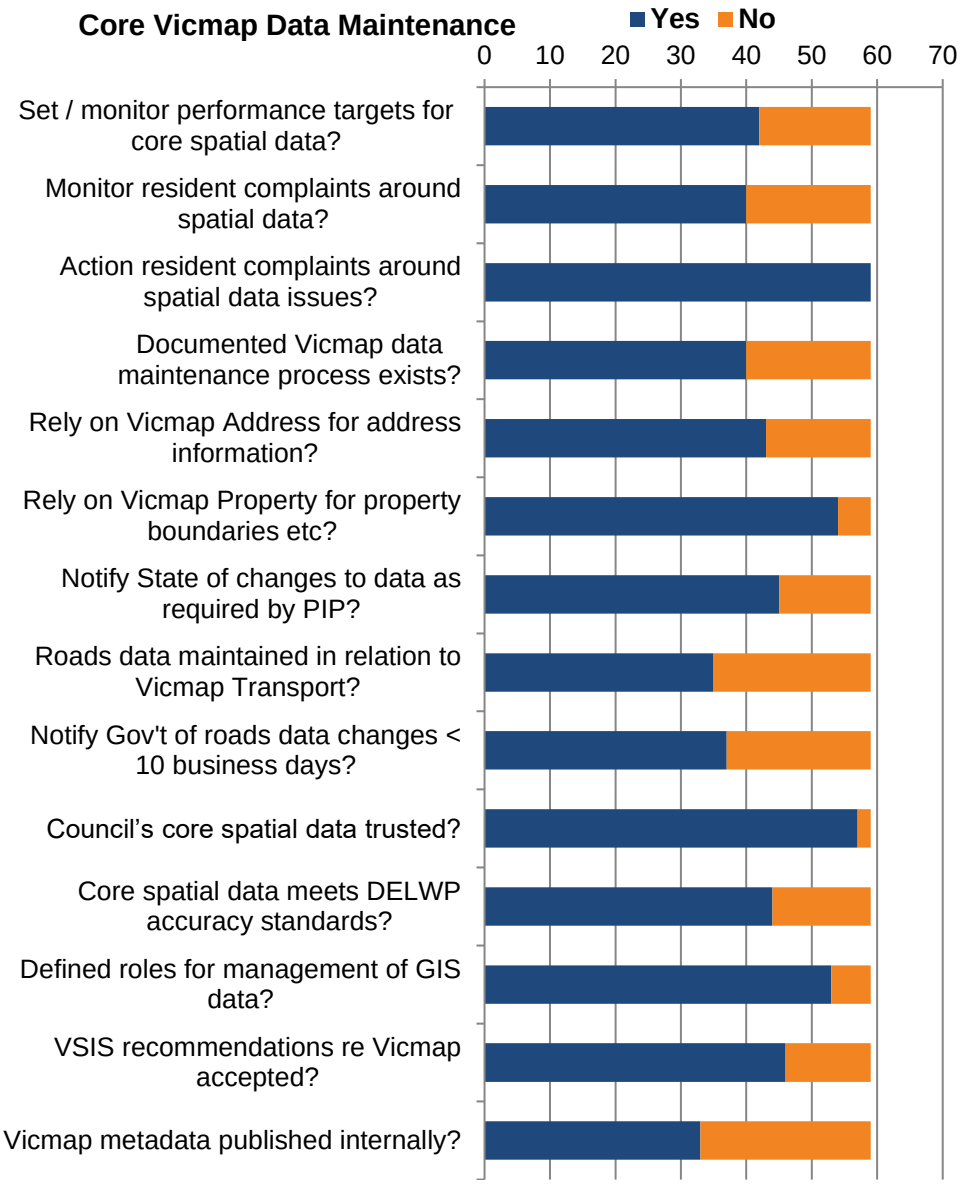
Statewide Responses (count): Core Vicmap Data Maintenance



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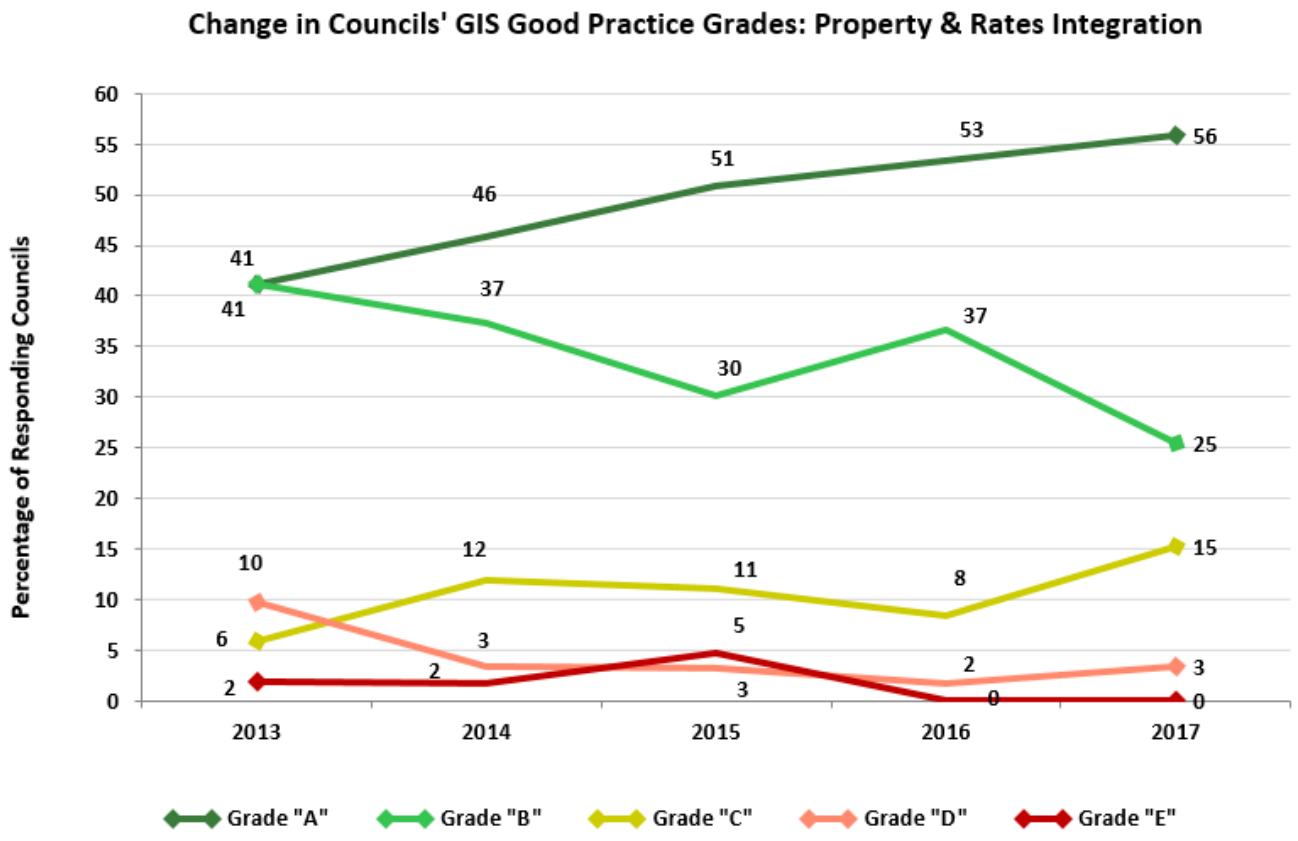
6. Property and Rates (P&R) Integration

Composite Score: ***"Effective Integration between GIS and Property & Rates Data***	**2013**	**2014**	**2015**	**2016**	**2017**
State average	**B**	**B**	**B**	**B**	**B**

The average Property & Rates Integration grade for the sector remained steady at a "B across the five GPF assessment years (2013 - 2017). It is apparent from the figure below, however, that there has been a noteworthy increase in the percentage of participating councils assessed as having a grade of "A" and "C" in the GIS proficiency focus area.



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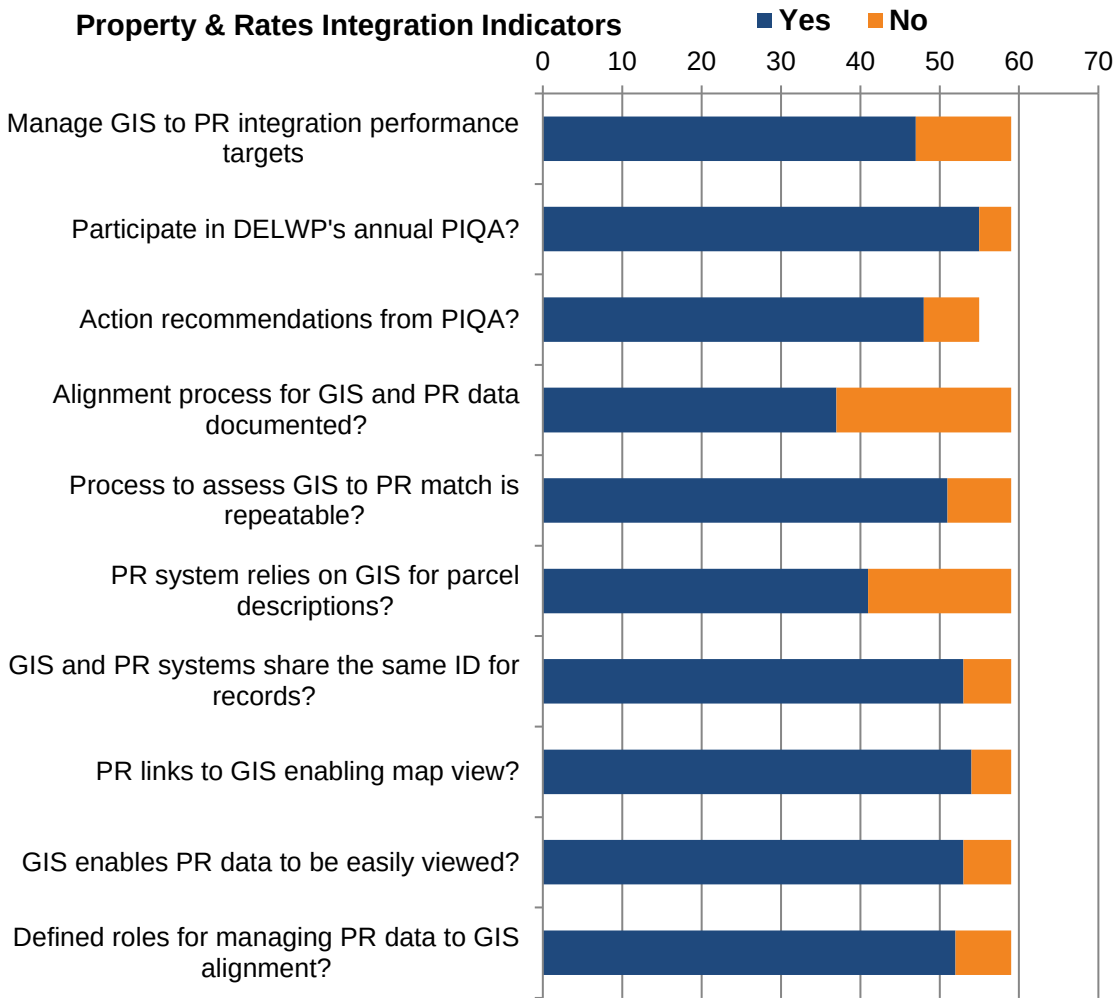
Statewide Responses (count): Property & Rates Integration



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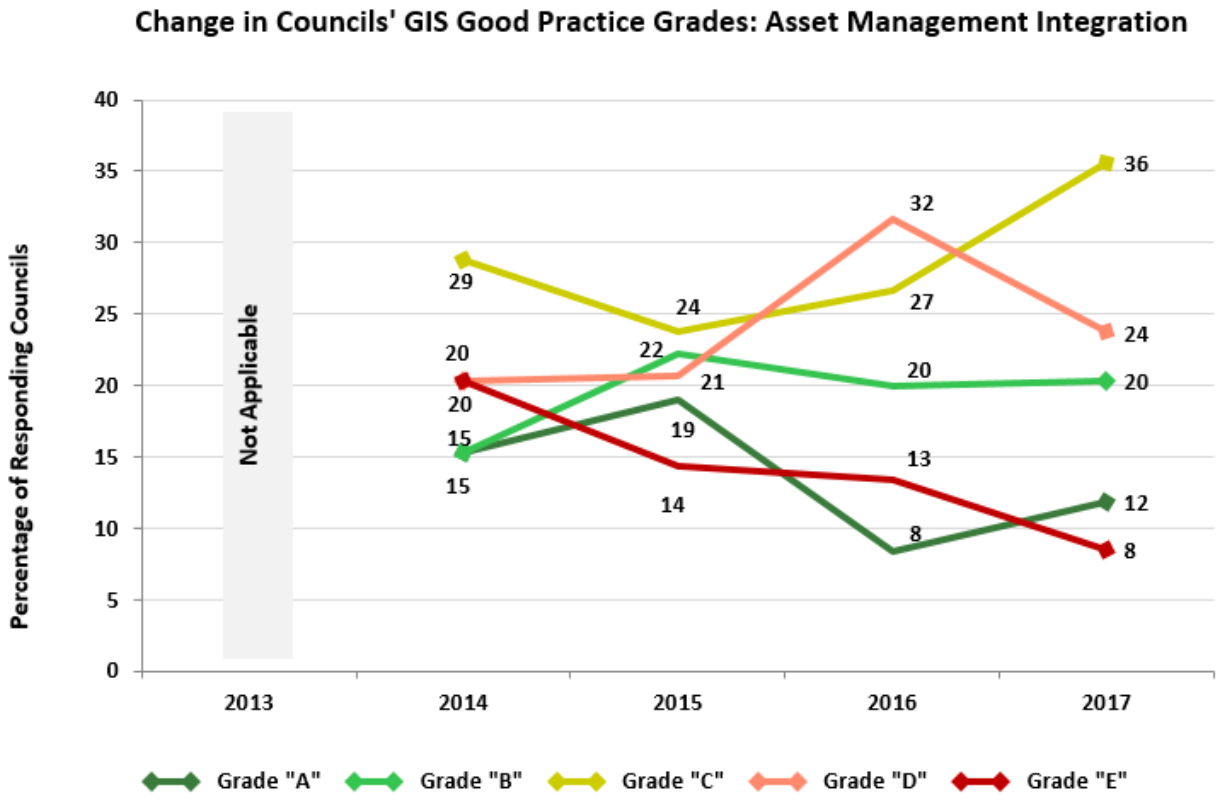
7. Asset Management to GIS Integration

Composite Score: ***"Effective Integration between GIS & Asset Data"***	2013	2014	2015	2016	2017
State average	N/A	C	C	C	C

The average Asset Management to GIS integration grade for the sector remained steady at a "C" over the past four GPF assessment years. The figure below provides a more granular view of trends and shows that the percentages for participating councils receiving grades of "A" and "C" have increased and "D" and "E" have decreased. This is quite a positive observation for the period of 2016 to 2017.



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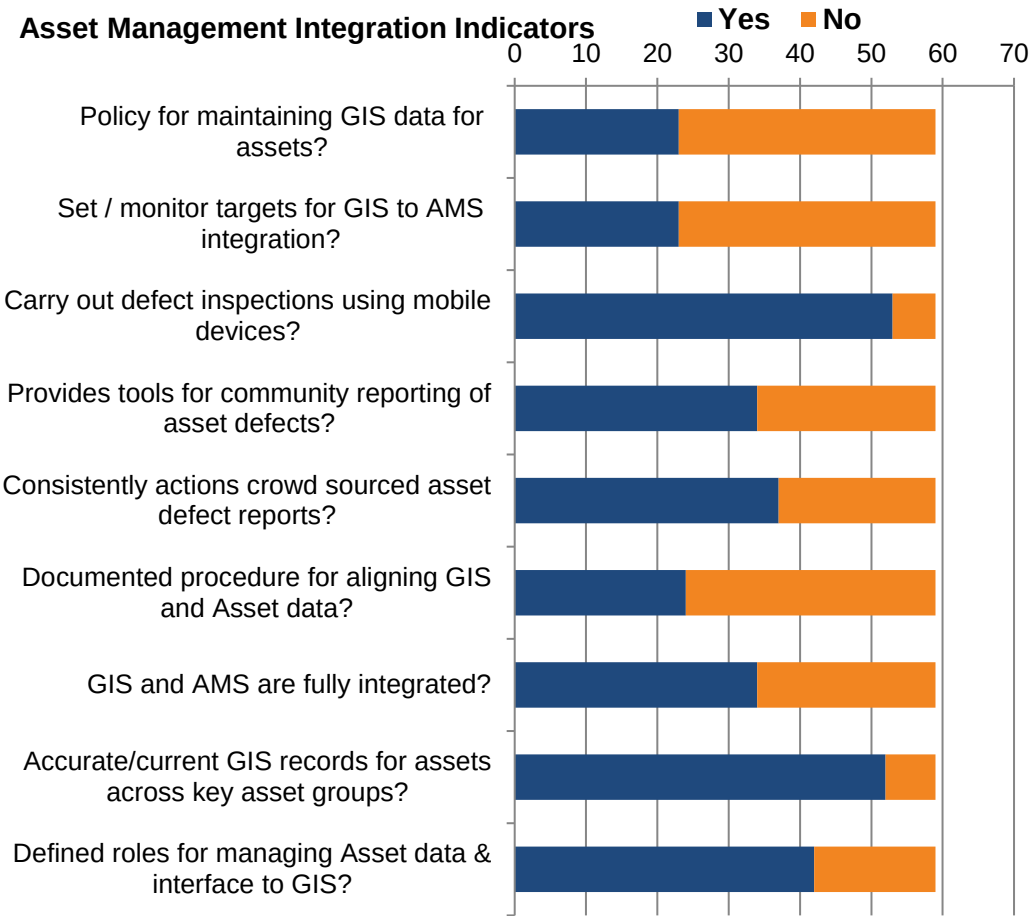
Statewide Responses (count): Asset Management Integration



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8. Community Engagement & Self Service

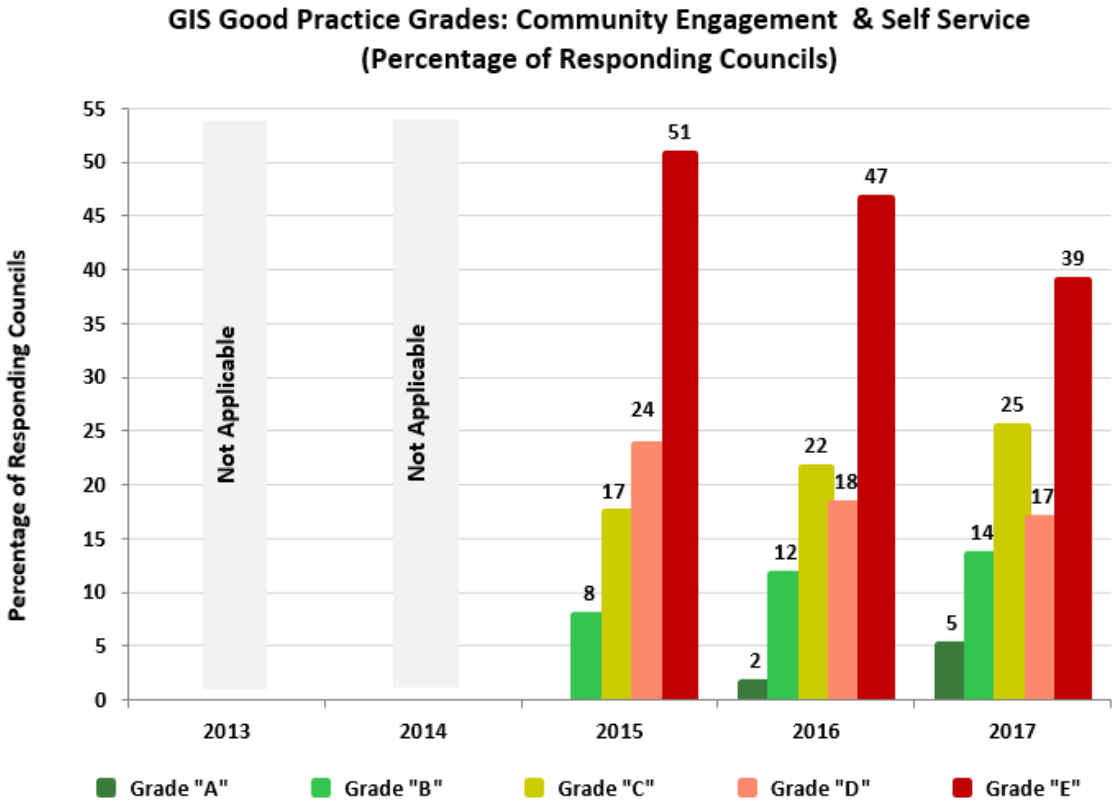
Composite Score: "Spatial technologies support relationships with the community and delivery of services when and where required"	2013	2014	2015	2016	2017
State average	N/A	N/A	D	D	D

This is the third year the GPF assessment included a series of new questions pertaining to *Community Engagement and Self Service* as a proficiency focus area.

The average composite grade for this proficiency focus area was "D" whilst the most common grade, received by more than half of participants, was "E".

Since being introduced in 2015, the trend for Community Engagement and Self Service has improved; seeing five councils achieve a grading of "A" and a large number of councils increasing their grading to a "B" or "C". As councils' awareness of this area of GIS best practice becomes more mature, it is expected that grades for this proficiency focus area will improve.

There was a significant improvement in the results for one of the questions in this year's assessment; *"Has Council published at least one spatial dataset as open data in the past 12 months?"*



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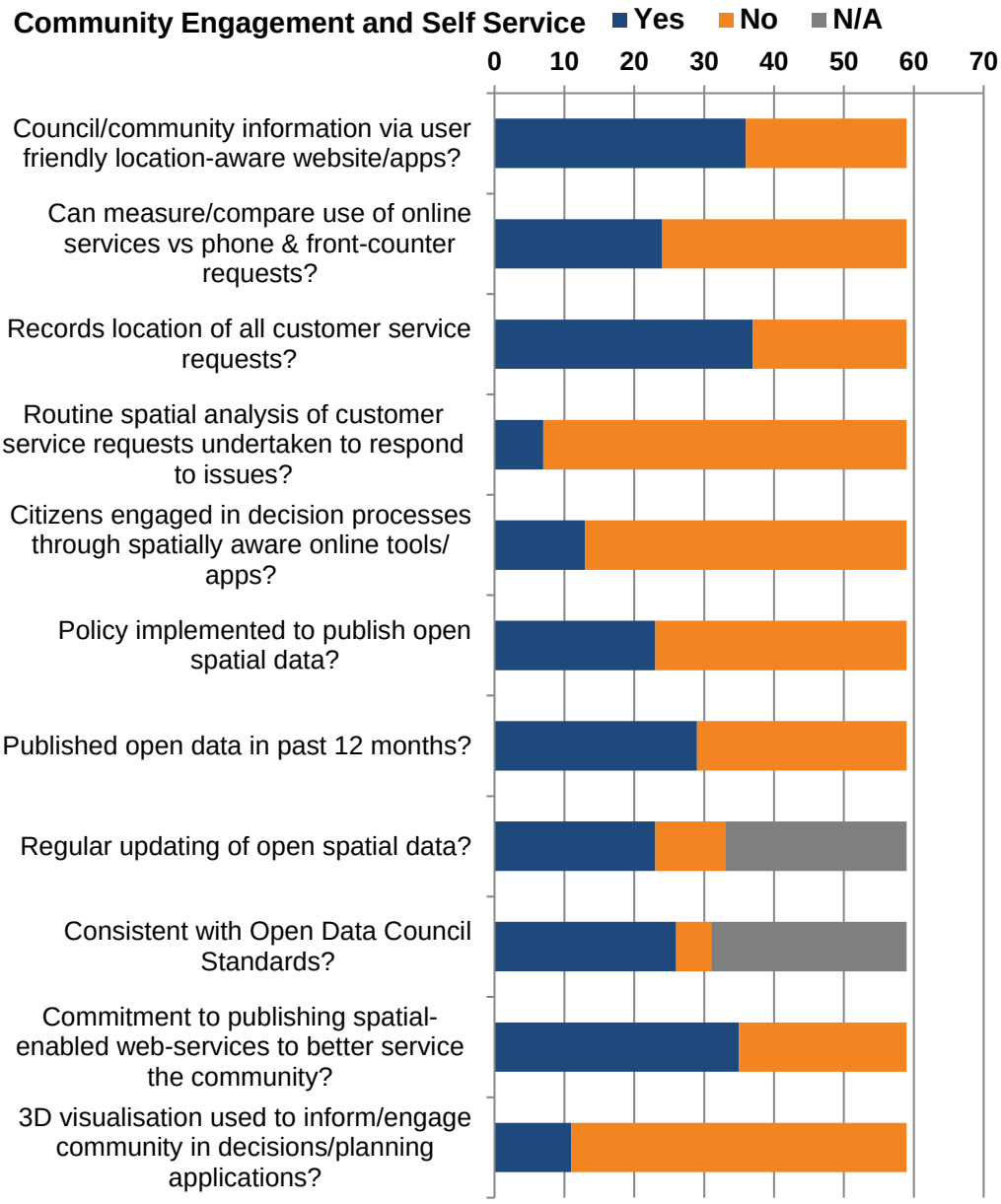
Statewide Responses (count): Community Engagement and Self Service



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Appendix A: GPF Assessment Questionnaire

1) Spatial Capability	
Long Form (as asked in online questionnaire)	**Short Form (as presented in charts)**
Does your Council have a current GIS Strategy?	Current GIS Strategy Exists?
Is there a direct relationship or link between the Council's GIS Strategy and its Corporate Plan?	GIS Strategy and Corporate Plan Linked?
Would you say the GIS Strategy clearly defines the future vision for GIS and identifies gaps between Council's current and future states?	GIS Strategy defines vision, currents state and gaps?
Is Council's GIS Strategy integrated into Council's annual planning and/or budgeting processes?	GIS Strategy integrated into planning processes?
Does Council have a risk management plan that includes GIS software, resources and data?	Risk management plan includes GIS?
Is Council formally committed to supporting Vicmap data?	Vicmap data supported?
Does Council have a current Information Management policy?	Current IM policy exists?
Does Council's Information Management policy acknowledge that relevant spatial business data should be based on or derived from Vicmap data when relevant?	IM policy defines use of Vicmap data?
Would you say Council's Information Management policy sufficiently acknowledges the importance of reliable spatial data?	IM policy notes importance of reliable spatial data?
Do the majority of Council staff have access to useful spatial tools (e.g. GIS or web mapping) underpinned by Council data?	Most staff can access spatial tools using Council data?
Would you say that Council staff generally find the available spatial tools (e.g. GIS or web mapping) easy-to-use?	Available spatial tools easy-to-use?
An effective GIS Steering Committee is one that maximises opportunities for utilising capabilities and monitoring performance. Does your Council have an effective GIS Steering Committee (or equivalent) in operation?	GIS Steering Committee (or equivalent) in operation?
An effective GIS User Group is one that engages appropriate staff to generate ideas and gather feedback. Does Council have an effective GIS User Group in operation?	GIS User Group in operation?
If it could be demonstrated that collaboration with other Councils can deliver improved spatial capabilities, would your Council be open to such collaboration?	Open to spatial collaboration with other Councils?
2) Core Vicmap Data Maintenance	
Long Form (as asked in online questionnaire)	**Short Form (as presented in charts)**
Does Council set and monitor performance targets for core spatial data? (e.g. frequency of update, match rates etc)	Set / monitor performance targets for core spatial data?
Does Council monitor resident complaints around incomplete or inaccurate data for address, property, roads or locality?	Monitor resident complaints around spatial data?
Does Council action or follow up resident complaints around incomplete or inaccurate spatial data?	Action resident complaints around spatial data issues?
Does Council have a documented procedure for maintaining core Vicmap data?	Documented Vicmap data maintenance process exists?
Does Council rely on Vicmap Address for address information?	Rely on Vicmap Address for address information?
Does Council rely on Vicmap Property for Council and ratepayer property boundaries and attributes?	Rely on Vicmap Property for property boundaries etc?
Does Council notify State Government typically within 10 business days of changes or corrections in property, parcel and address information?	Notify State of changes to data as required by PIP?
Is Council road asset data maintained in relation to Vicmap Transport roads?	Roads data maintained in relation to Vicmap Transport?
Does Council notify State Government typically within 10 business days of changes or corrections in roads and transport information?	Notify Gov't of roads data changes < 10 business days?
Would you say that most users of Council's core spatial data trust it as authoritative?	Council's core spatial data trusted?
Does Council's core spatial data meet documented DELWP standards for spatial and attribute accuracy?	Core spatial data meets DELWP accuracy standards?
Would you say that your Council has clearly defined roles and responsibilities for managing its GIS data?	Defined roles for management of GIS data?

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Has Council accepted or (adhered to) the Victorian Spatial Council / DELWP Custodianship Program guidelines for relevant Vicmap data through a PIP or MOU agreement?	VSIS recommendations re Vicmap accepted?
Does your Council share/ publish metadata about Vicmap data for internal users?	Vicmap metadata published internally?
3) Property and Rates Integration	
Long Form (as asked in online questionnaire)	**Short Form (as presented in charts)**
Does Council set and monitor performance targets for integration between GIS and Property & Rates systems? (e.g. match rates)	Manage GIS to PR integration performance targets
Does Council participate in DELWP's annual Property Information Quality Audit?	Participate in DELWP's annual PIQA?
Does Council action the recommendations of the Property Information Quality Audit?	Action recommendations from PIQA?
Does Council have a current documented procedure for aligning data between GIS and Property & Rates systems?	Alignment process for GIS and PR data documented?
Does Council have repeatable processes to measure the reliability of matching between GIS/spatial and Property & Rates business data?	Process to assess GIS to PR match is repeatable?
Does Council's Property & Rates system rely on GIS property data for parcel descriptions?	PR system relies on GIS for parcel descriptions?
Do the GIS and Property & Rates systems share the same identifier for property records?	GIS and PR systems share the same ID for records?
Would you say that users can easily link from the Property & Rates system to GIS (or to a map within the Property & Rates system) to find and view properties and parcels?	PR links to GIS enabling map view?
Does Council's GIS or web map enable users to easily view the Property & Rates data via a link?	GIS enables PR data to be easily viewed?
Would you say that Council has clearly defined roles and responsibilities for managing Property & Rates data and its interface to GIS?	Defined roles for managing PR data to GIS alignment?
4) Asset Management to GIS Integration	
Long Form (as asked in online questionnaire)	**Short Form (as presented in charts)**
Does Council have a policy for maintaining GIS data for assets?	Policy for maintaining GIS data for assets?
Does Council set and monitor performance targets for integration between GIS and Asset Management Systems?	Set / monitor targets for GIS to AMS integration?
Does Council carry out defect inspections using location-enabled mobile devices (smartphones, tablets, trimbles etc)?	Carry out defect inspections using mobile devices?
Does Council provide a web or mobile app or support third party apps such as 'Snap Send Solve' for members of the community to report the location of an asset defect?	Provides tools for community reporting of asset defects?
Does council consistently action 'crowd sourced' asset defect reports e.g. from third party apps such as 'Snap Send Solve' or from a Council provided tool or app?	Consistently actions crowd sourced asset defect reports?
Does Council have a current documented procedure for aligning data between GIS and Asset Management systems?	Documented procedure for aligning GIS and Asset data?
Is Council's GIS web portal fully integrated (two-way integration) with its Asset Management System?	GIS and AMS are fully integrated?
Are there accurate and up to date GIS/spatial records for assets across the major relevant asset groups? NOTE: relevant groups include Roads (e.g. kerb, channel, footpath) Drainage, Marine (e.g. jetties, boat ramps), Properties (eg. council managed buildings, parks, gardens and reserves)	Accurate/current GIS records for assets across key asset groups?
Does Council have clearly defined roles and responsibilities for managing Assets data and its interface to GIS?	Defined roles for managing Asset data & interface to GIS?
5) Community Engagement and Self Service	
Long Form (as asked in online questionnaire)	**Short Form (as presented in charts)**
Are people able to access dynamic information about Council services and their local community through user friendly location-aware website or apps?	Council/community information via user friendly location-aware website/apps?
Is Council able to measure and compare the similar uses of online services (website or apps) to telephone and front-counter requests?	Can measure/compare use of online services vs phone & front-counter requests?
Does Customer Service record the location of all customer service requests?	Records location of all customer service requests?

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Does Council undertake routine spatial analysis of customer service requests to proactively respond to issue hotspots?	Routine spatial analysis of customer service requests undertaken to respond to issues?
Are citizens dynamically engaged with Council and its decision-making processes through geospatially aware online tools (or apps)?	Citizens engaged in decision processes through spatially aware online tools/ apps?
Has Council implemented a policy to publish Open data to demonstrate transparency and encourage innovation in the delivery of services by other providers?	Policy implemented to publish open spatial data?
Has Council published at least one spatial dataset as open data in the past 12 months?	Published open data in past 12 months?
Is Council regularly updating spatial data that is published as open data?	Regular updating of open spatial data?
Is Council published open spatial data consistent with Open Data Council Standards? see standards.opencouncildata.org/	Consistent with Open Data Council Standards?
Is Council committed to publishing spatially enabled web-services to better service the community and activate their city or townships for visitors, for example parking availability, dial-before-your-dig, and notification of events?	Commitment to publishing spatial-enabled web-services to better service the community?
Does Council use 3D visualisation to inform and engage the community in significant decisions such as Precinct Structure Plans, Capital Works Plans or major planning development applications?	3D visualisation used to inform/engage community in decisions/planning applications?

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