



Local Government

Spatial Reference

Group

GIS Good Practice Framework



Assessment: 2018-2019

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 2018, the assessment was completed by 78% of all Councils. This report presents the results of the 2018 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 did not respond in 2017 and vice versa, therefore introducing changes in trends. This year's survey saw a change of 19 councils from 2017 (a loss of 8, and a gain of 11), representing a net gain of +5% in respondents, but also a not insignificant change in specific respondents.

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	2018
Spatial Capability	C	C	C	C	C	C
Core Data Maintenance	C	B	B	B	B	B
Property and Rates Integration	B	B	B	B	B	B
Asset Management to GIS Integration	N/A	C	C	C	C	C
Community Engagement & Self Service	N/A	N/A	D	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 custom 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

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

The results of the Good Practice Framework are used by GIS Officers in many different ways. Many officers have used them to highlight potential areas to focus on for improvement and investment. One really interesting example can be found in the following case study from the Rural City of Wangaratta. [Sharing the GIS Good Practice Framework Survey results with the Corporate Management Team](#)¹ prepared by Jane Kaye.

2. Methodology

The 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 2017 questionnaire, enabling comparison of assessment grades over time.

Three new questions were added to the survey this year to measure councils' GIS capacity with respect to the number and consistency of Equivalent Full Time (EFT) GIS positions.

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

Reponses were received between 20th November and 10th December, 2018.

¹ <https://drive.google.com/file/d/11MxHPHL05i8P5AcaKO5tnpInJxXQjbR/view>

3. Findings

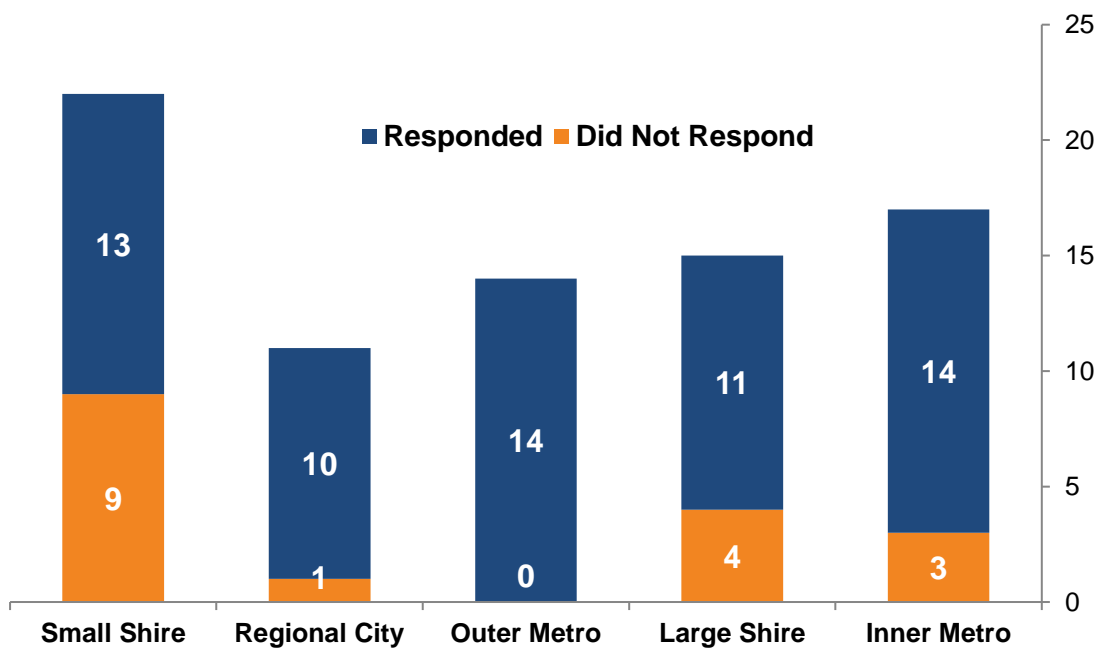
3.1 Response Overview

A total of 62 valid responses were received for 2018.
Responses from previous years: 59 for 2017, 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

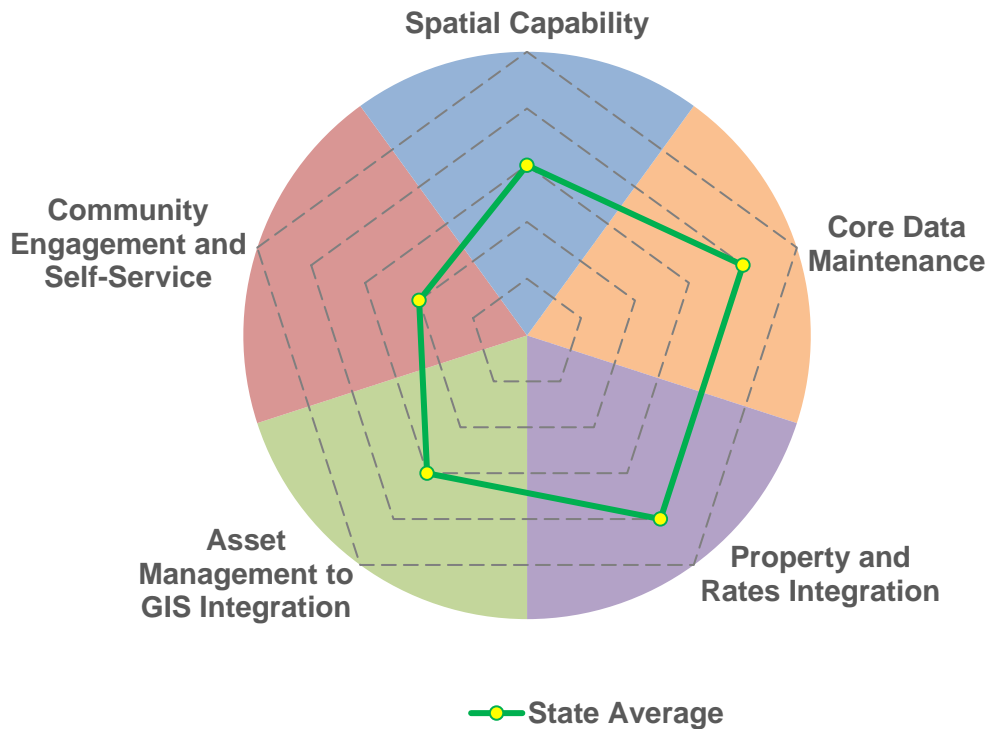
The following assessment legend is intended to assist councils in interpreting their summary grades for each of the five Proficiency Focus Areas: 1) Spatial Capability, 2) Core Vicmap Data Maintenance, 3) Property and Rates Integration, 4) Assets to GIS Integration and 5) Community Engagement and Self-Service, 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

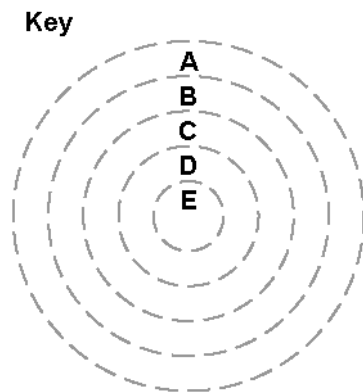
3.3 Focus Areas Overview

The following Figure 2 provides an overview of the statewide results for 2018-19.

Figure 2 –State average, by focus area



Across areas in 2018-19, the state average is strongest in the areas of Core Data Maintenance and Property and Rates Integration (B grade); Asset Management and general Spatial Capability are slightly lower (C grade); and the area with the lowest average and hence in most need of improvement across the state is Community Engagement (E grade).

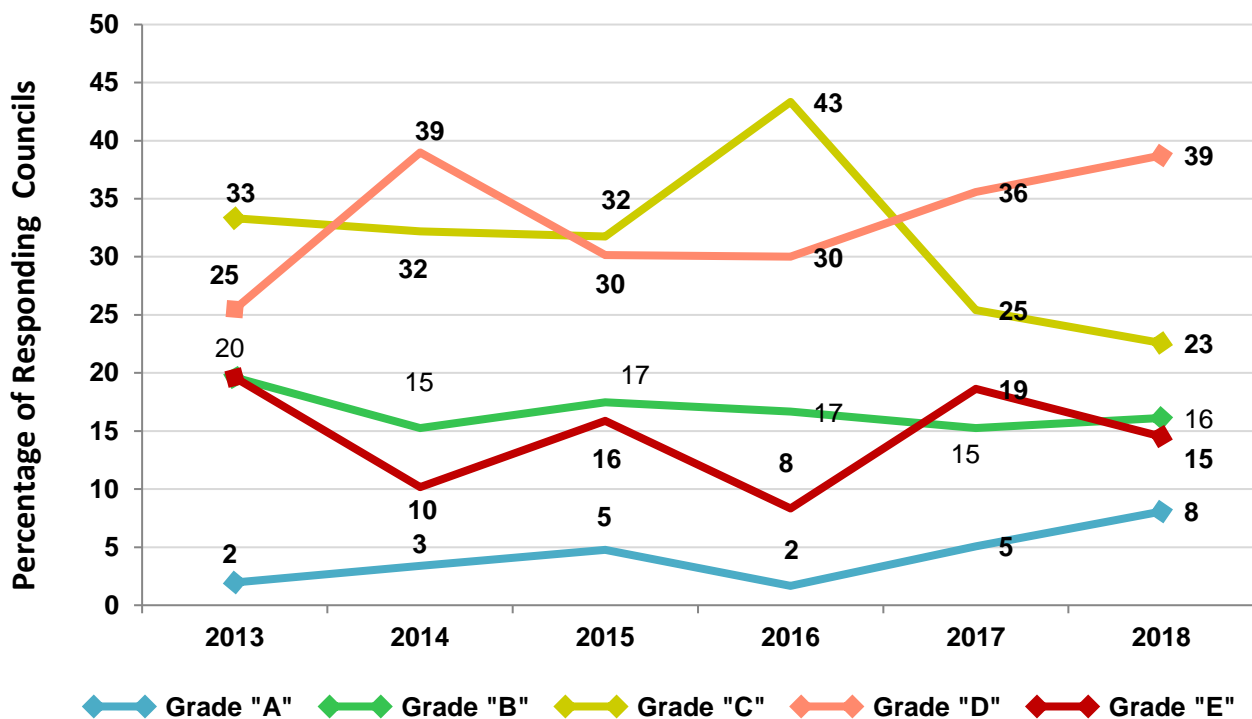


4. Spatial Capability

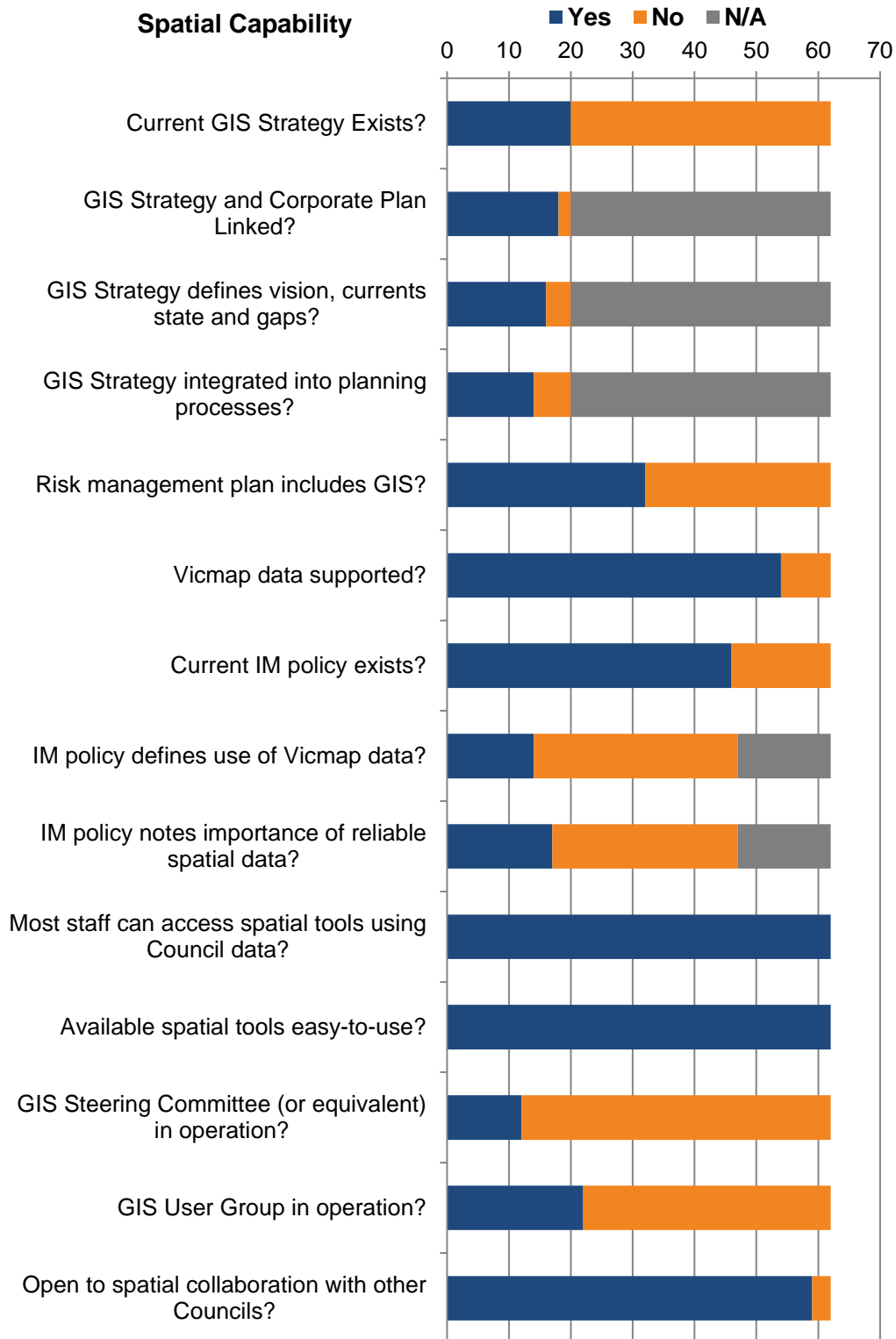
<i>Composite Score: "Recognition of Spatial Capability to Support Council Service Delivery."</i>	2013	2014	2015	2016	2017	2018
State average	C	C	C	C	C	C
Small Shire average	D	D	D	C	D	D
Large Shire average	D	D	C	C	D	C
Regional City average	C	D	C	D	D	D
Outer Metro average	B	B	C	C	B	C
Inner Metro average	C	C	C	C	C	C

The state 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. The number of "A" grade councils has seen an upswing in this year's survey, rising by three, and while the number of "C" and "E" grade councils has decreased, there is a higher proportion of "D" grade councils.

% Change in Councils' GIS Good Practice Grades: Spatial Capability



Statewide Responses (count): Spatial Capability

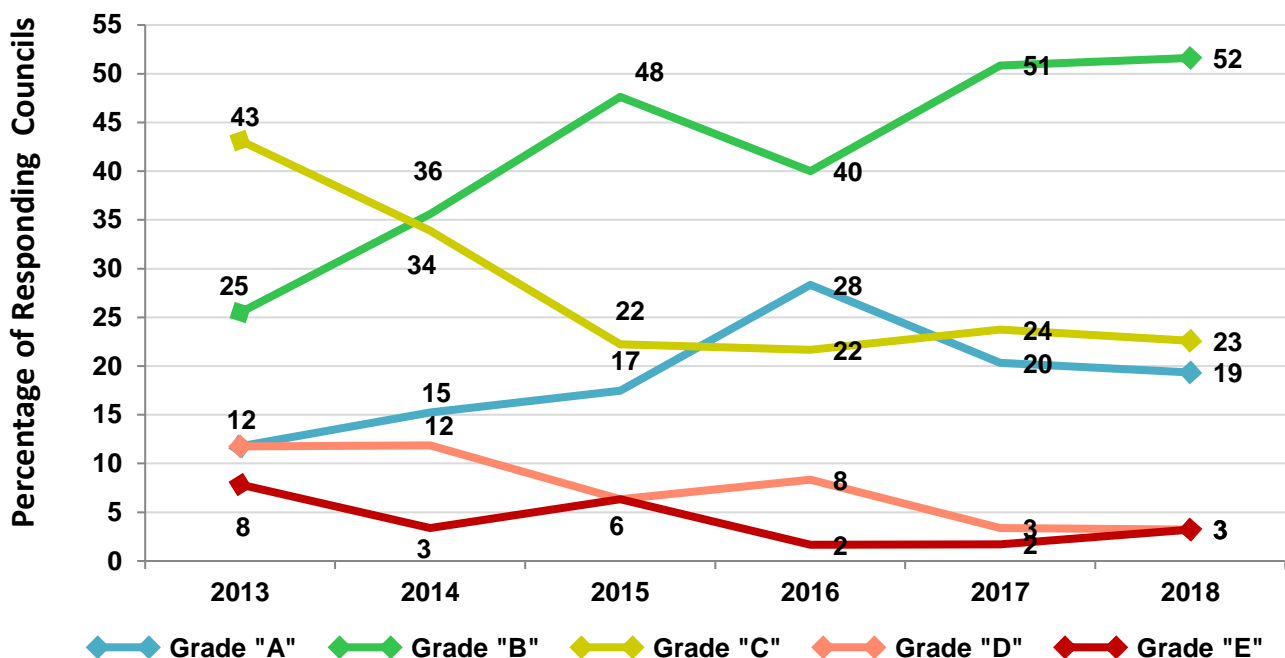


5. Core Vicmap Data Maintenance

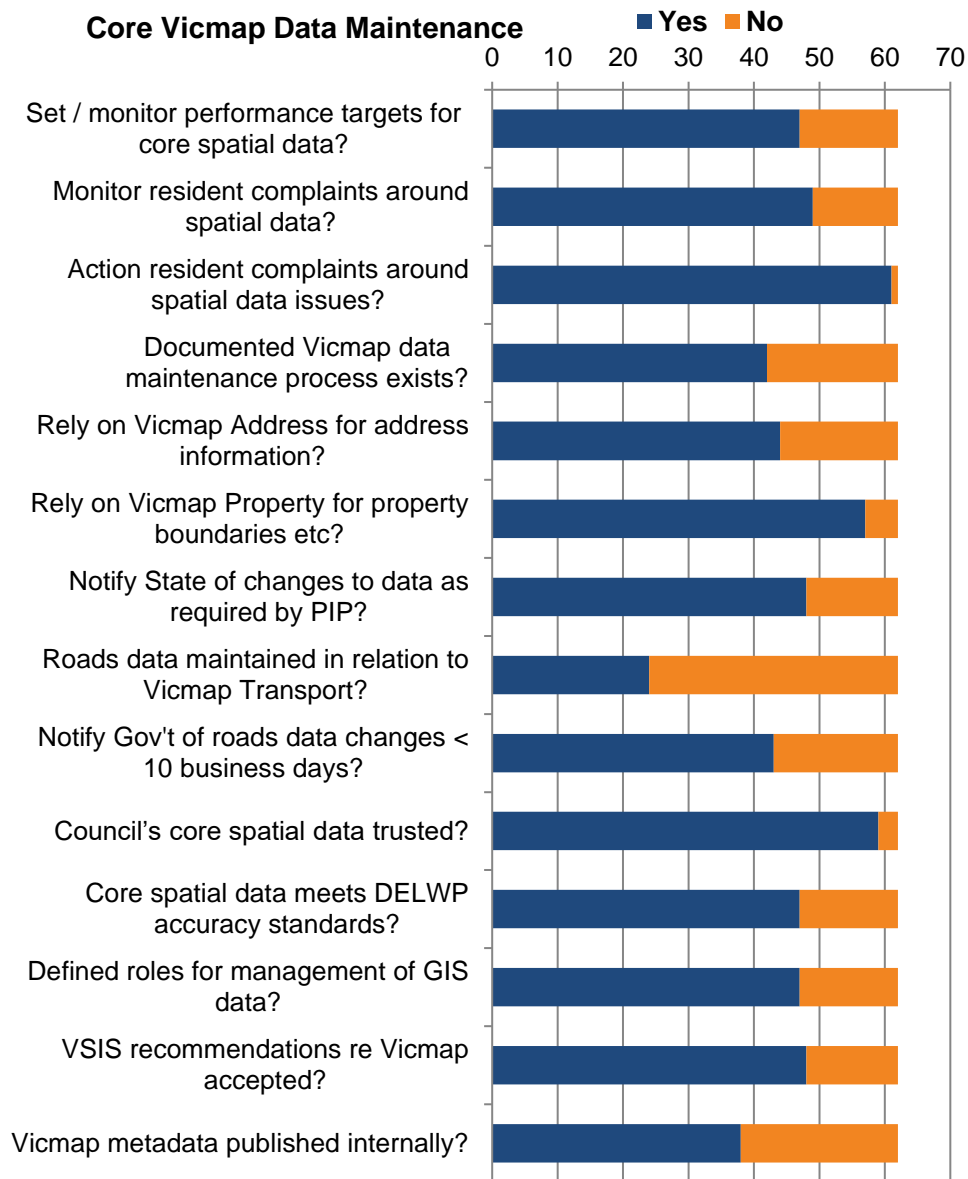
<i>Composite Score: "Support for Core Vicmap Data for use by Council and the public"</i>	2013	2014	2015	2016	2017	2018
State average	C	B	B	B	B	B
Small Shire average	C	B	B	B	B	B
Large Shire average	C	C	B	B	B	B
Regional City average	B	B	A	A	B	B
Outer Metro average	B	B	B	A	A	B
Inner Metro average	C	C	B	B	B	B

The state 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, 2017 and now 2018. This rating has remained steady for the last three years, with little tangible change in this year's results.

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



Statewide Responses (count): Core Vicmap Data Maintenance



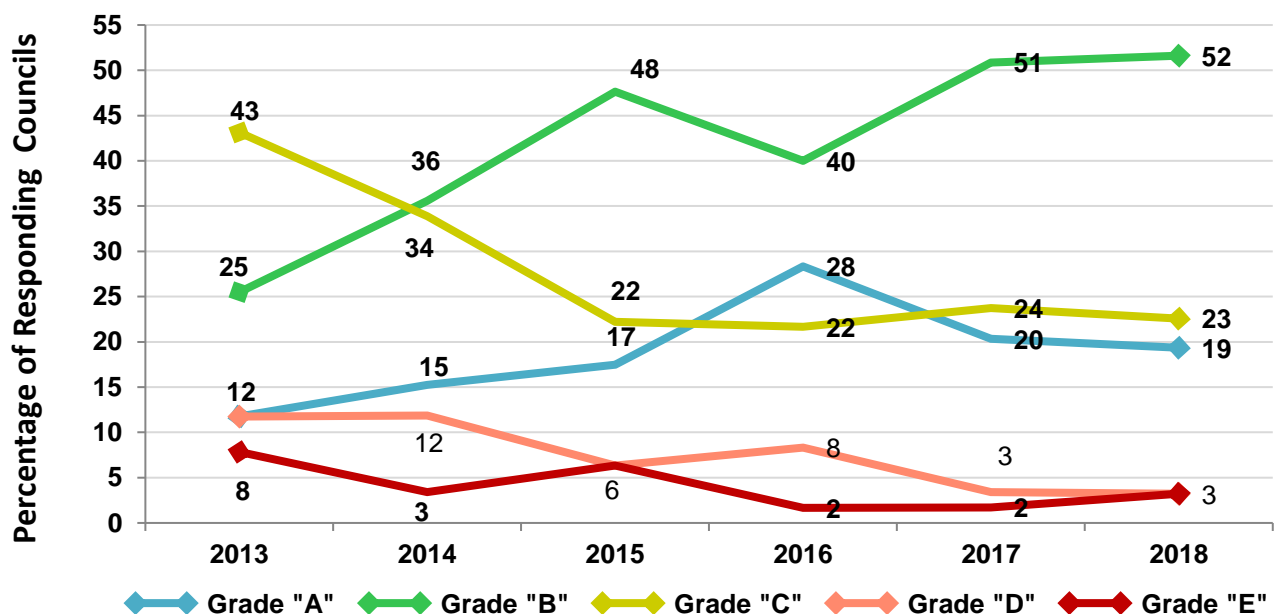
6. Property and Rates (P&R) Integration

<i>Composite Score: "Effective Integration between GIS and Property & Rates Data"</i>	2013	2014	2015	2016	2017	2018
State average	B	B	B	B	B	B
Small Shire average	B	B	B	B	B	B
Large Shire average	B	B	B	B	B	B
Regional City average	B	B	B	B	A	A
Outer Metro average	B	A	A	A	A	A
Inner Metro average	B	B	B	B	A	A

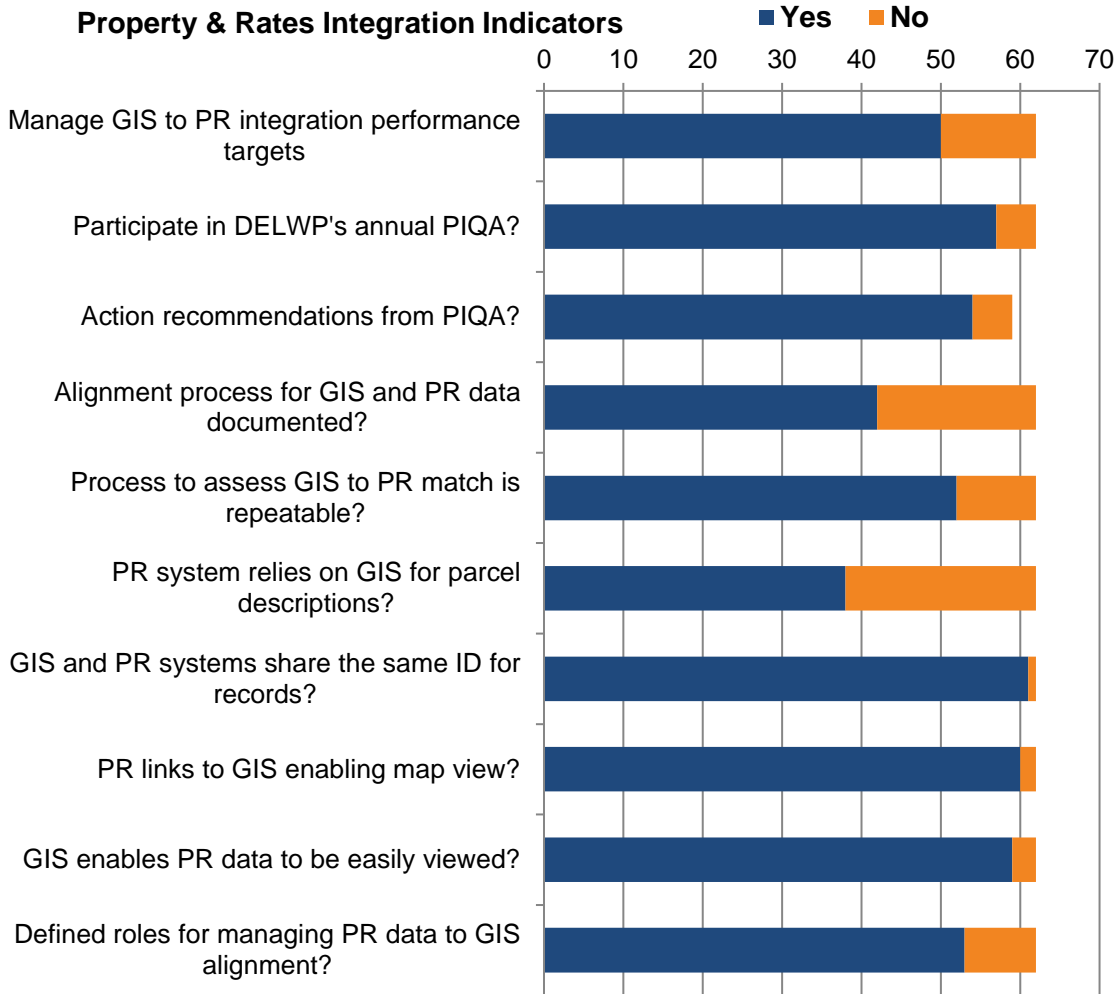
The state average Property & Rates Integration grade for the sector remained steady at a "B" across the six GPF assessment years (2013 - 2018). This year however has seen a significant inversion between "A" and "B" grades, with a downswing of nearly two-thirds in "A" grade councils, and an upswing of over double in "B" grade councils. Indeed, many "A" graded councils from 2017 dropped to "B" grade this year, accounting for the shift.

Fluctuations in council participation between 2017 and 2018 could account for this change to a certain degree (there are a total of 19 councils who responded differently between 2017 and 2018), but just the number of "A" grade councils by themselves dropped by 37 respondents. This indicates that there is some other factor influencing this shift in Property and Rates Integration.

% Change in Councils' GIS Good Practice Grades: Property and Rates Integration



Statewide Responses (count): Property & Rates Integration

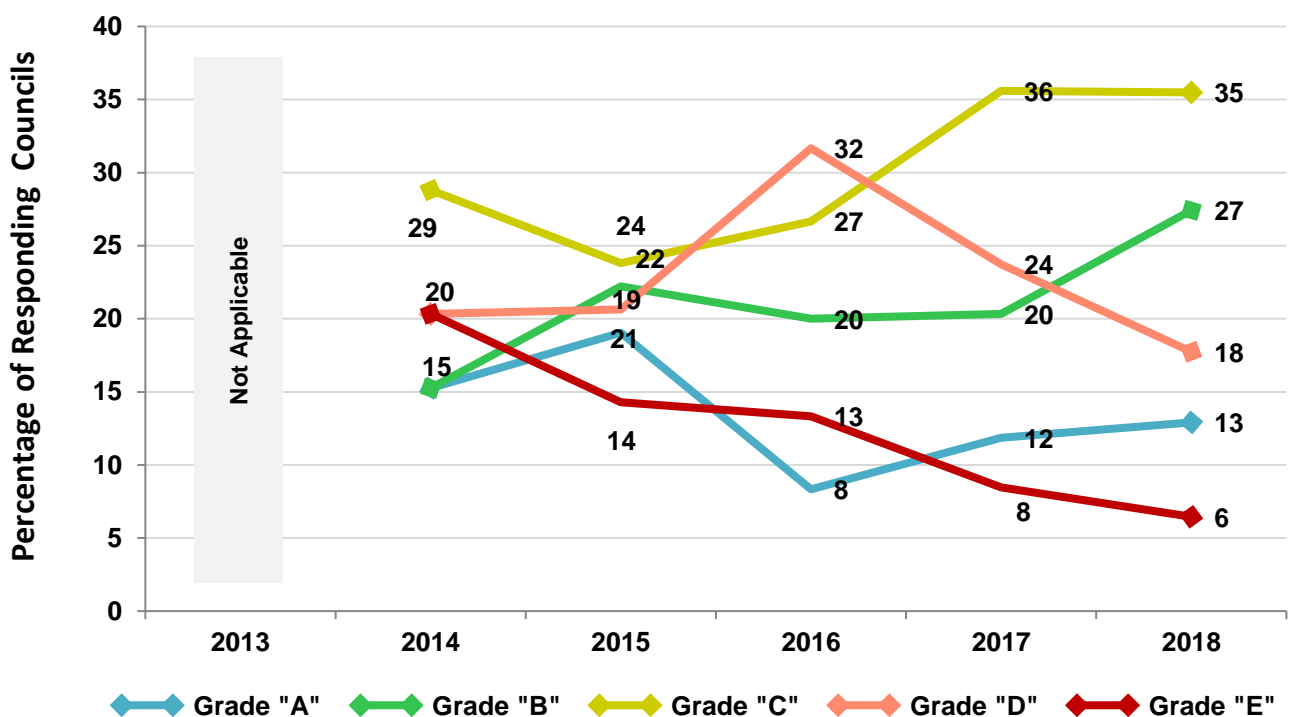


7. Asset Management to GIS Integration

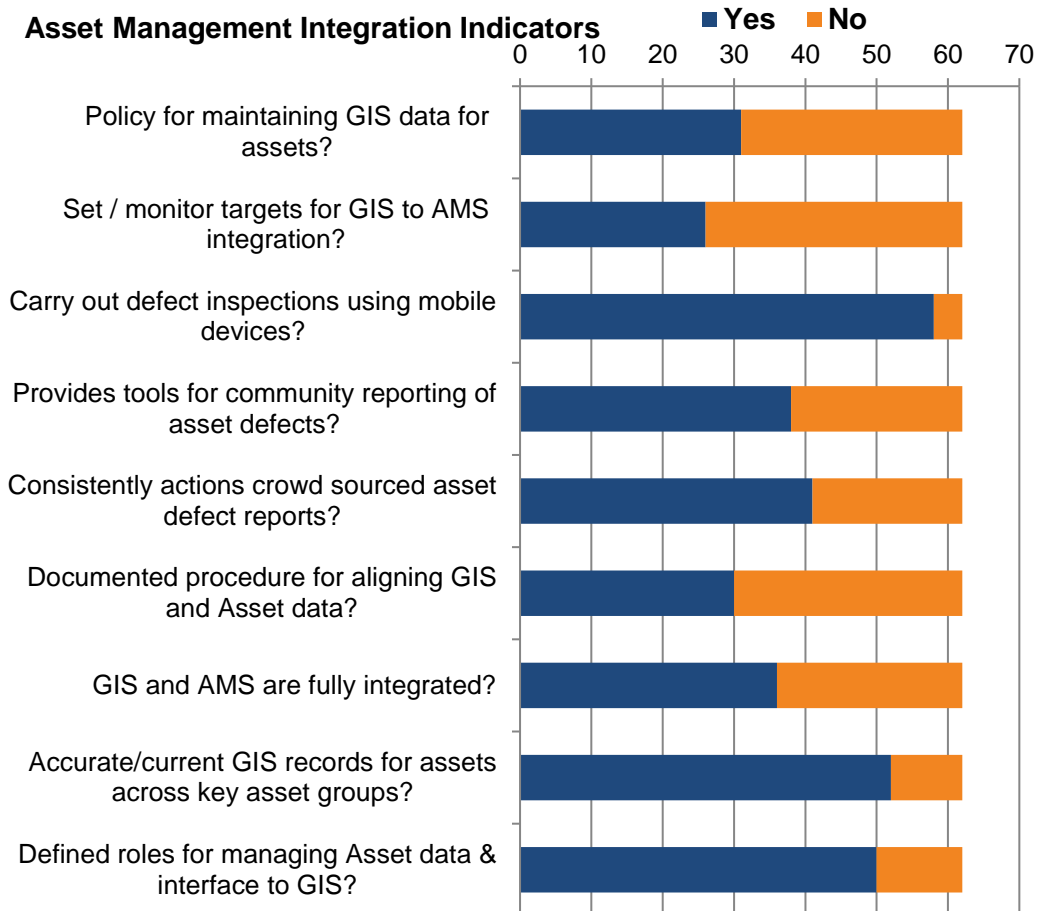
<i>Composite Score: "Effective Integration between GIS & Asset Data"</i>	2013	2014	2015	2016	2017	2018
State average	N/A	C	C	C	C	C
Small Shire average	N/A	D	D	D	D	D
Large Shire average	N/A	C	C	D	C	C
Regional City average	N/A	C	B	C	C	C
Outer Metro average	N/A	C	B	B	B	B
Inner Metro average	N/A	C	C	C	C	C

The state average Asset Management to GIS integration grade for the sector continues to remain steady at "C" over the past five GPF assessment years. The figure below provides a more granular view of trends and shows that the percentages for participating councils receiving high grades of "A" and "B" have increased, low grades of "D" and "E" have decreased, and "C" has remained steady. This continues the trend observed in 2017, and shows a continuing improvement across the state in this area around Asset Management to GIS Integration.

% Change in Councils' GIS Good Practice Grades: Asset Management Integration



Statewide Responses (count): Asset Management Integration



8. Community Engagement & Self Service

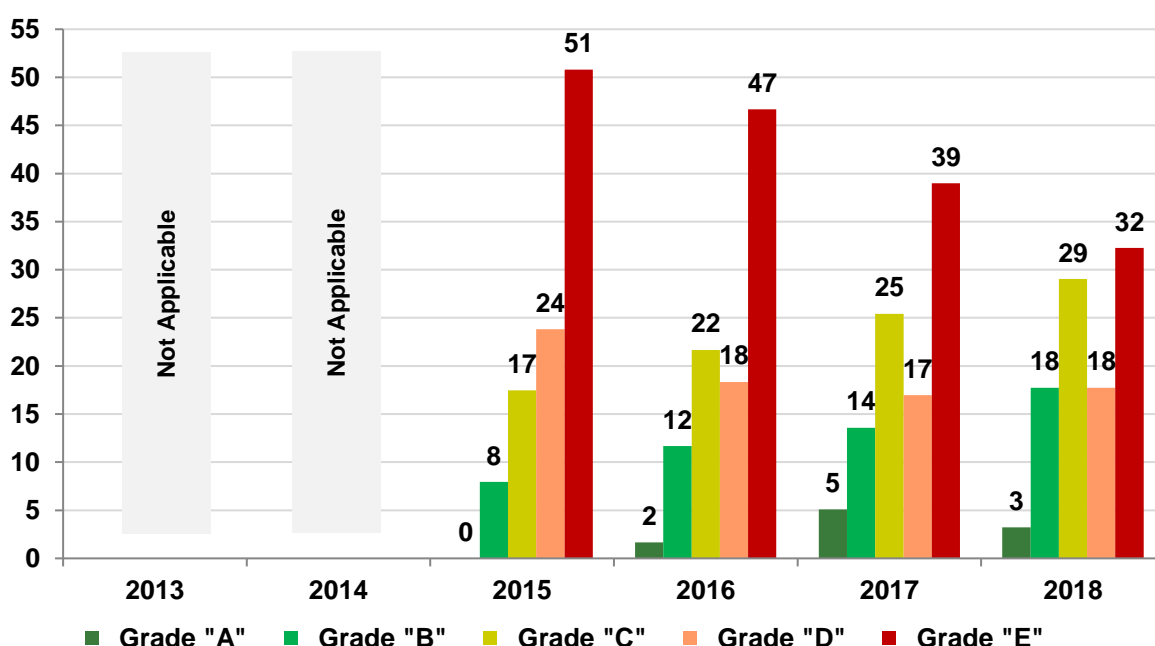
<i>Composite Score: "Spatial technologies support relationships with the community and delivery of services when and where required"</i>	2013	2014	2015	2016	2017	2018
State average	N/A	N/A	D	D	D	D
Small Shire average	N/A	N/A	E	E	D	D
Large Shire average	N/A	N/A	D	D	D	D
Regional City average	N/A	N/A	D	D	C	C
Outer Metro average	N/A	N/A	C	C	C	C
Inner Metro average	N/A	N/A	D	D	D	C

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

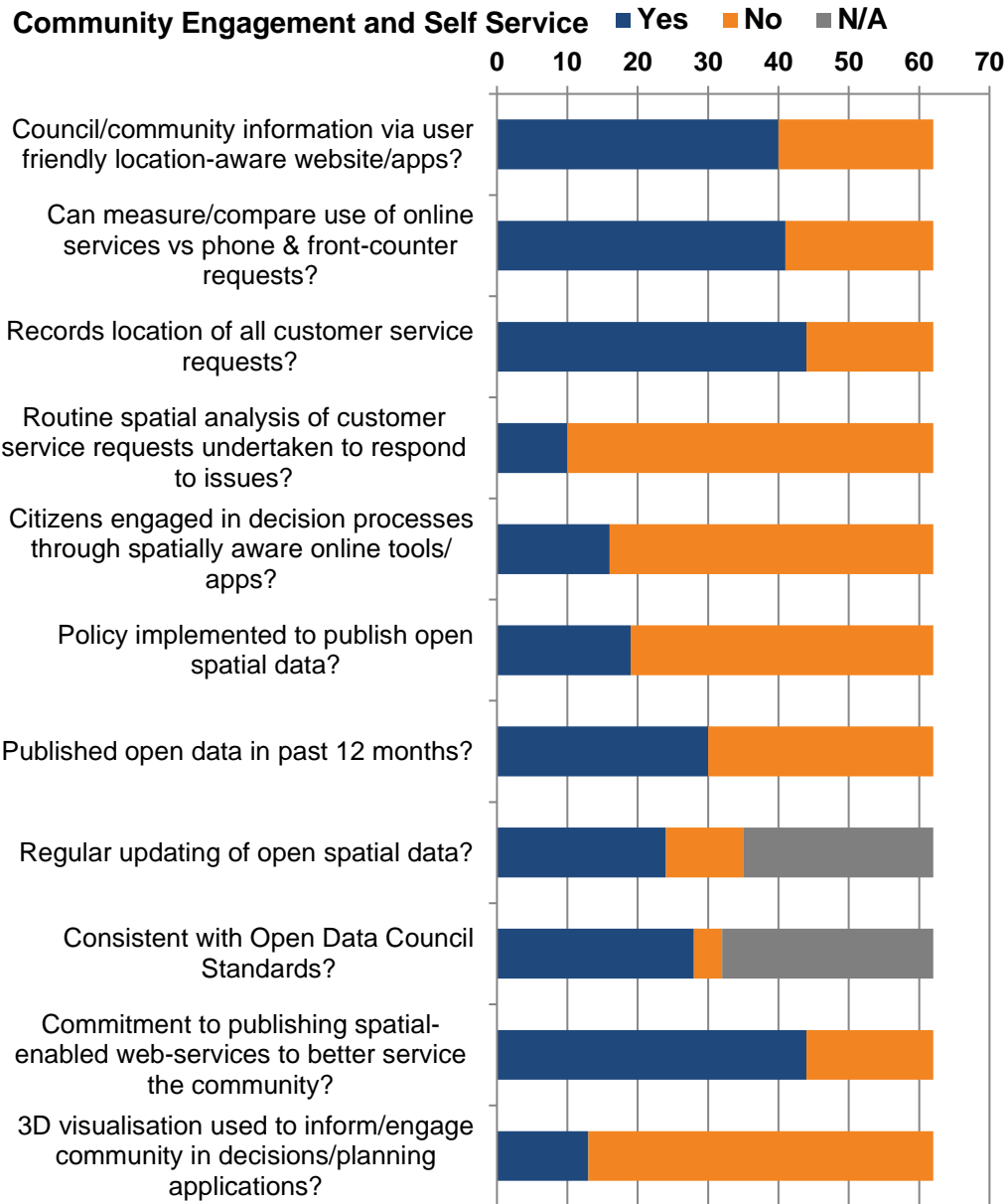
The state average composite grade for this proficiency focus area was "D" whilst the most common grade, received by more than half of participants, was once again in 2018 "E".

The improvement of low grades continued this year. Despite the high-proportion of "E" grade results, this number has decreased since 2017. Although the number of high "A" grades also decreased, there is an overall trend towards the middle of the scale in 2018.

GIS Good Practice Grades: Community Engagement & Self Service (Percentage of Responding Councils)

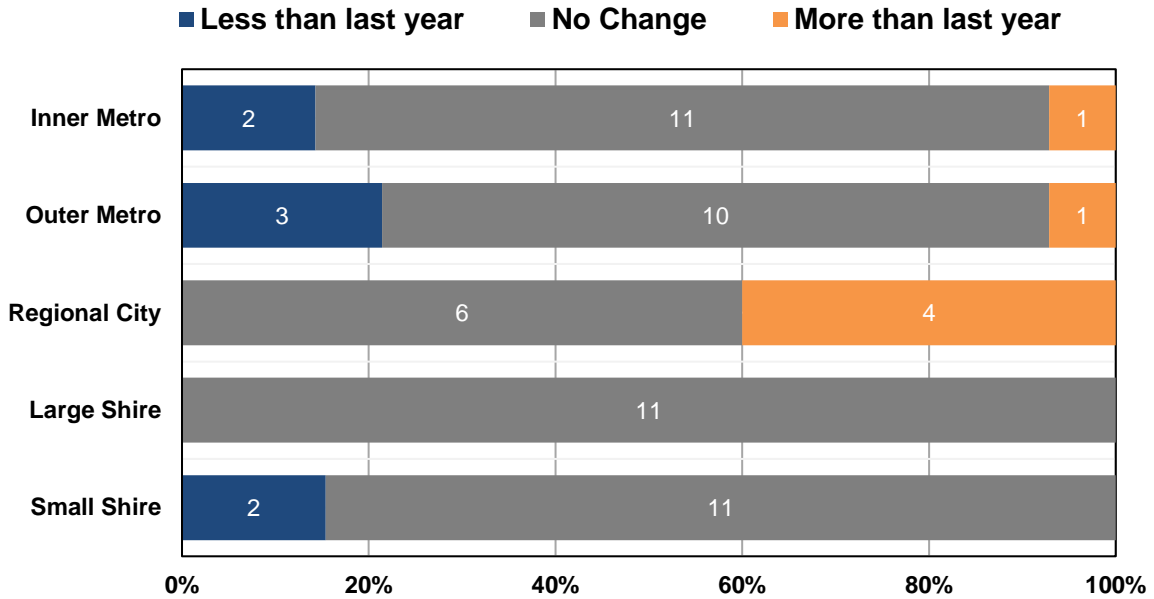


Statewide Responses (count): Community Engagement and Self Service



9. Council Profile

Change in GIS Capacity

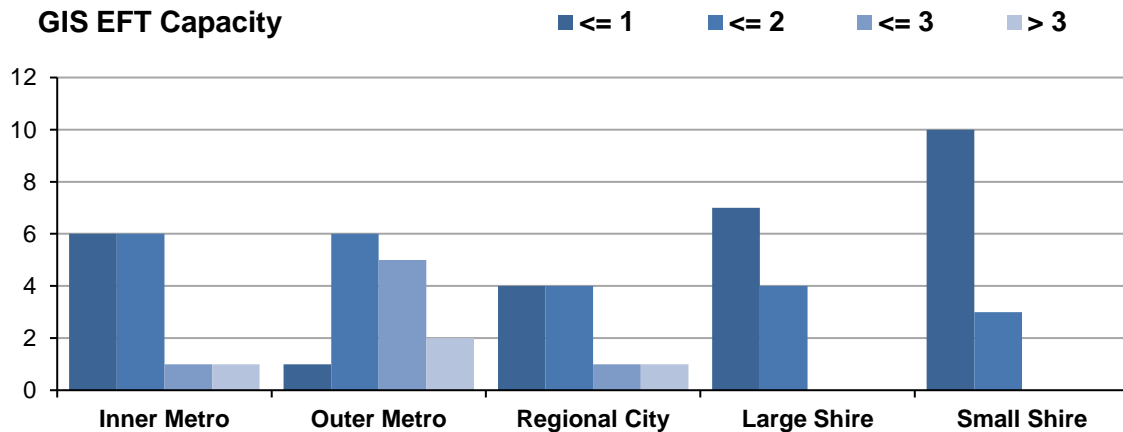


The 2018 survey introduced a new set of three questions around GIS Capacity. These questions are intended to capture the resourcing allocations and Equivalent Full Time (EFT) GIS capacity of councils.

The chart above shows the number of councils that since last year have decreased their GIS team, kept their GIS team as-is, or increased their GIS team, grouped by council type. The results show that councils have generally kept consistent GIS EFT, with the exception of regional cities, who have seen 40% of their teams grow in size. How this trend continues to develop will be mapped over the coming survey years.

The chart below shows these results in terms of actual GIS EFT, grouped by council type. Shire councils tend to have the smallest GIS teams, with none over 2 EFT positions and most with 1. A minority of regional cities have larger teams of 3 or more, but respondents from outer metro councils have the largest teams, with half of respondents having 3 or more EFT GIS positions. It should be noted that no councils surveyed have 0 EFT.

GIS EFT Capacity



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, current 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?

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?

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?
6) Council Profile	
Long Form (as asked in online questionnaire)	Short Form (as presented in charts)
How many people in Equivalent Full Time (EFT) work in the internal GIS area?	EFT in GIS area?
Has the number of people in EFT working in the internal GIS area changed in the last 12 months?	EFT changed in the last year?
Did you complete the GPF assessment survey last year?	GPF survey completed last year?