Western Cape Spatial Information Forum

Achieving with GIS – an Interactive Table Discussion

7 March 2017

Geographical Information Struggles

During the Western Cape Spatial Information Forum (WCSIF) meeting held on 7 March 2017 attendees were engaged to discuss how they were experiencing the institutionalisation of GIS at their respective organisations. Each attendee was given a questionnaire to complete from their own perspective. This was followed by a summarised discussion of the salient points. This report is a summation of scores and comments made by members. No names or organisations are mentioned in this report, as these are a collection of opinions of workers and GIS practitioners.

The intention of the questionnaire and the following open discussion was to gauge the organisations GIS fitness as represented on the WCSIF. To understand the well-being of each GIS system, the hardware, software and the personnel involved. This is not a new strategy for the WCSIF but may be considered as an on-going thermometer of what is needed to encourage healthy GIS systems in the Western Cape.

A GIS "Blue Print" Score sheet for each delegate / organisation was composed by completing the questionnaire below.

GIS " Blue Print" Questionnaire

		Question		Rating, If YES				
	Initiative Needed	**Yes**	**No**	**1**	**2**	**3**	**4**	**5**
1	Vision & Buy-in from Top Management							
2	Human Resources							
3	Quality Data							
4	Software/Hardware							
5	System Integration							
6	Partners (Internal & External)							
7	Marketing/ Awareness (linked to 1)							

What are your main GIS Objectives?

What can you do to ensure that the GIS objectives are met?

Question 1: Vision and buy-in from Management

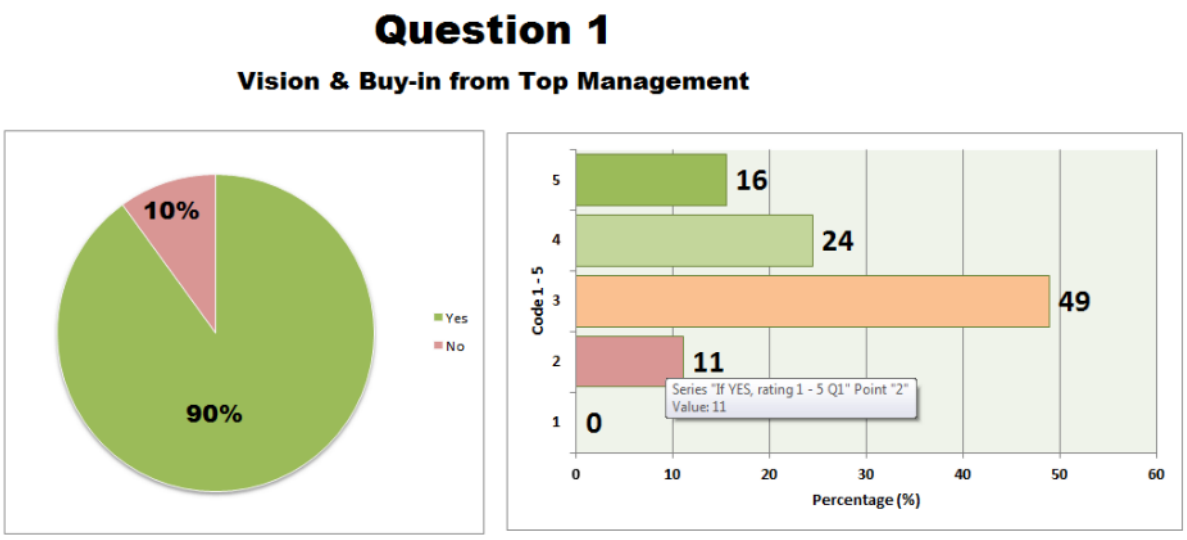
One of the ways to ensure or acquire buy-in, is to use GIS on projects that have a good visual and spatial component that will successfully prove the value of GIS in an organisation.

Show how effective GIS is and how budgeting for it is essential. Timing of projects must be aligned with the budget, i.e. ensure that there is sufficient funds for spatially representing project results.

GIS Training must be applied across the organisation and up-skilling is essential for all GIS users.

GIS must be simplified to encourage politicians and management to see the importance of using GIS and spatial representation of strategies and projects.

GIS must be returned to basics, no fancy reporting tools, basic and simple.



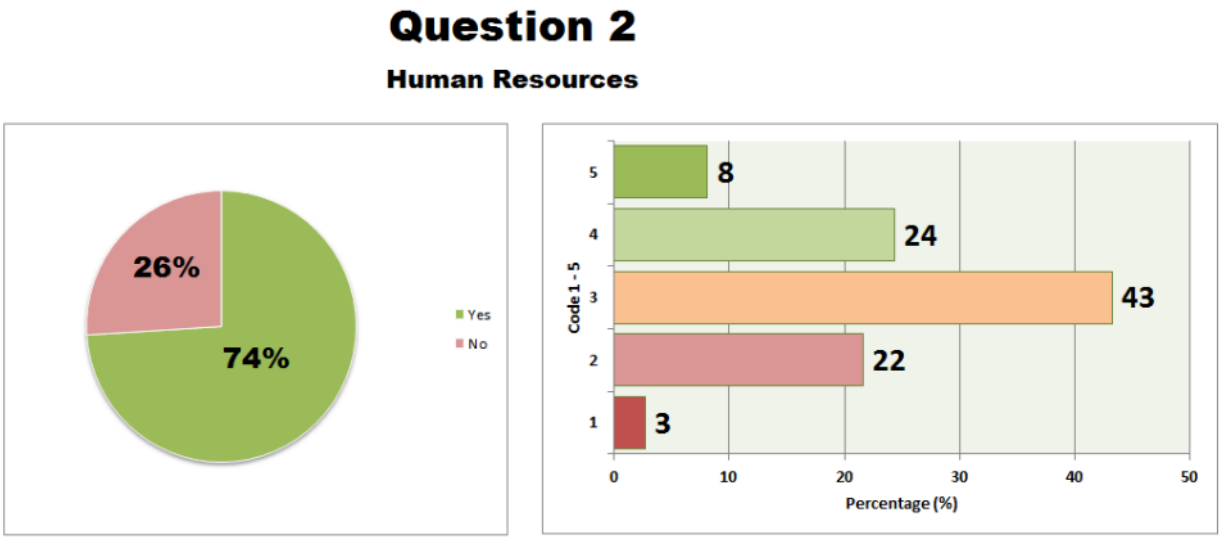
Question 2: Human Resources

A GIS specialist could be used to perform the more advanced GIS functions for an organisation, but using simple tools it may be possible to empower anybody to use GIS to produce maps and perform basic spatial analysis.

It is difficult to retain GIS skills and too often planning divisions are devastated by the loss of key staff members. A GIS program may be terminated by such a loss of personnel. Advanced skills are needed to set up spatial databases and other analytical GIS, but these specialist jobs could be outsourced and GIS offices could employ more generalised skillsets.

Some organisations rotate staff in large components to ensure staff are multi-skilled.

Consider asking other spheres of government for assistance.



Question 3: Quality Data

Cadastral data is often perceived to contain errors or to be inaccurate. Each user of any spatial data has a duty to give feedback to the custodians of the data (see Committee for Spatial Information's Custodianship Policy). The Surveyor General has a process for reporting and dealing with inaccuracies or anomalies.

It was felt that custodians that do not meet the standard of metadata should be named and shamed. All data must have metadata. At the very least each user should report any such problems to the Committee for Spatial Information on the prescribed forms (see Custodian Policy).

It is important to contact the custodian of the dataset if you have any questions. Firstly, always interrogate the supplier of the data. Secondly, don't provide or distribute data that you are not a custodian of or have permission to redistribute.

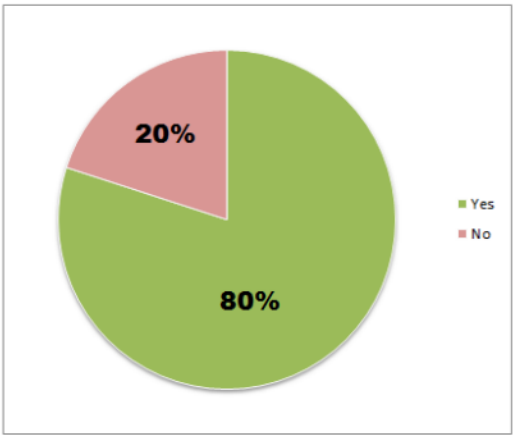
There are metadata standards – National and International. These must be used by all custodians or owners of spatial data. If you can't verify the data you shouldn't use it. Register your metadata owned by your organisation on the national Electronic Metadata Catalogue (http://www.sasdi.net/).

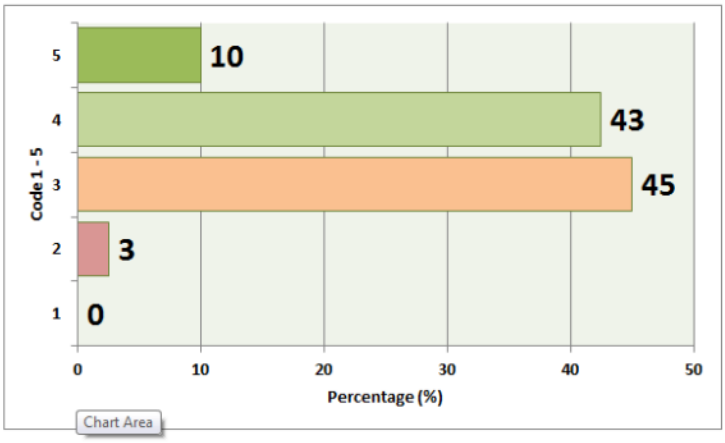
It is also important to tap into data collected by NGOs and community-based organisations to enhance spatial datasets. When collecting new spatial data, please register the project/survey on the National Projects Register maintained by the NSIF (National Spatial Information Framework).

Procuring spatial data is expensive.

Question 3

Quality Data





Question 4: Software and Hardware

Software and hardware is not always affordable at the local government level.

Keeping the staff to support the hardware and software is also a challenge. As mentioned under Human Resources, GIS units often close when a GIS resource leaves.

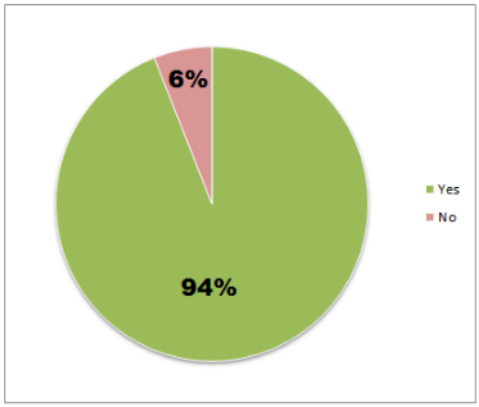
There are Free and Open Source Software solutions that may help.

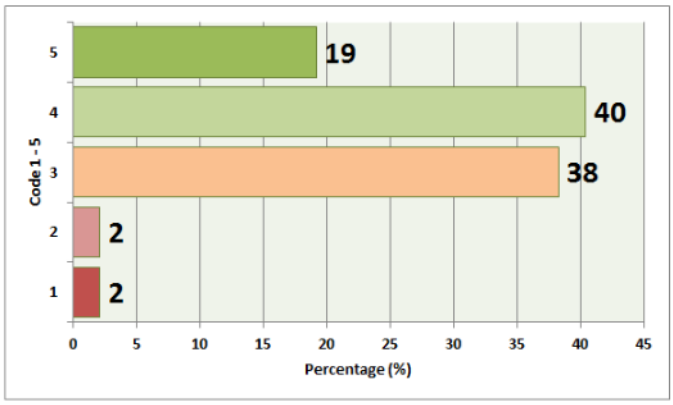
Viewers should be user-friendly, especially for non-GIS users. Keep it simple.

Focus on getting the basics right.

Question 4

Software/Hardware



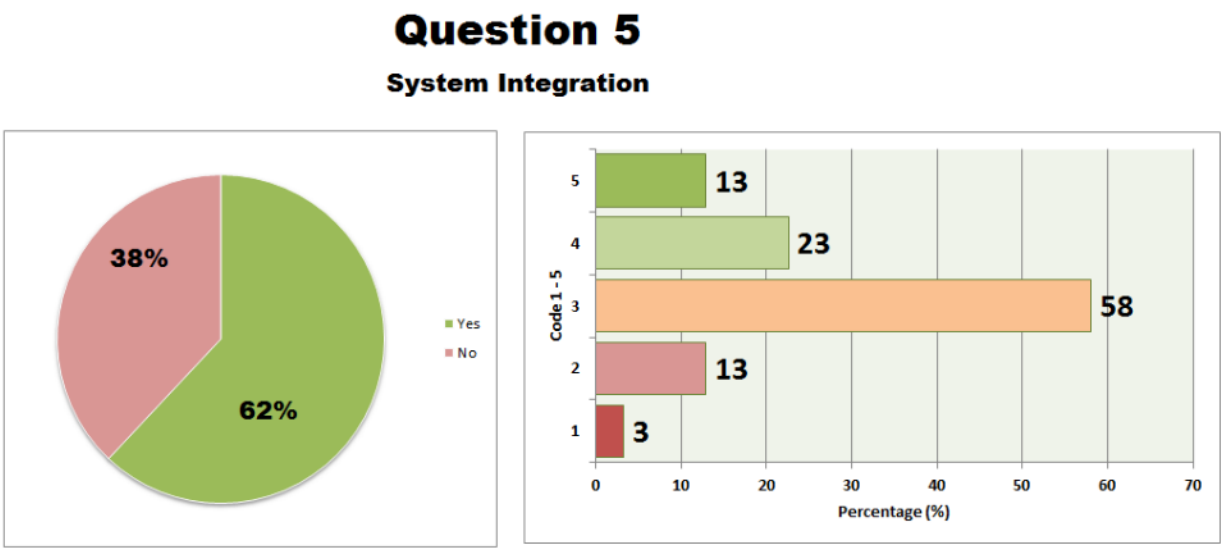


Question 5: System Integration

When starting a system or collecting new spatial data, integration with other systems, municipalities and intergovernmental planning must always be considered. Any work outsourced must include terms in the contract that specify that electronic maps must be supplied in the required format (whatever the organisational standard is, e.g. shape files or geo databases).

Projects should be completed to a standard – Always have a GIS strategy in mind – How does your strategy dovetail with the entire organisation.

We, as the GIS community, must speak about standards - Standards that are upheld by all users and custodians. The Committee for Spatial Information must communicate who the custodians of data are. Furthermore, a portal should be established that integrates and advisors all government users of GIS information.

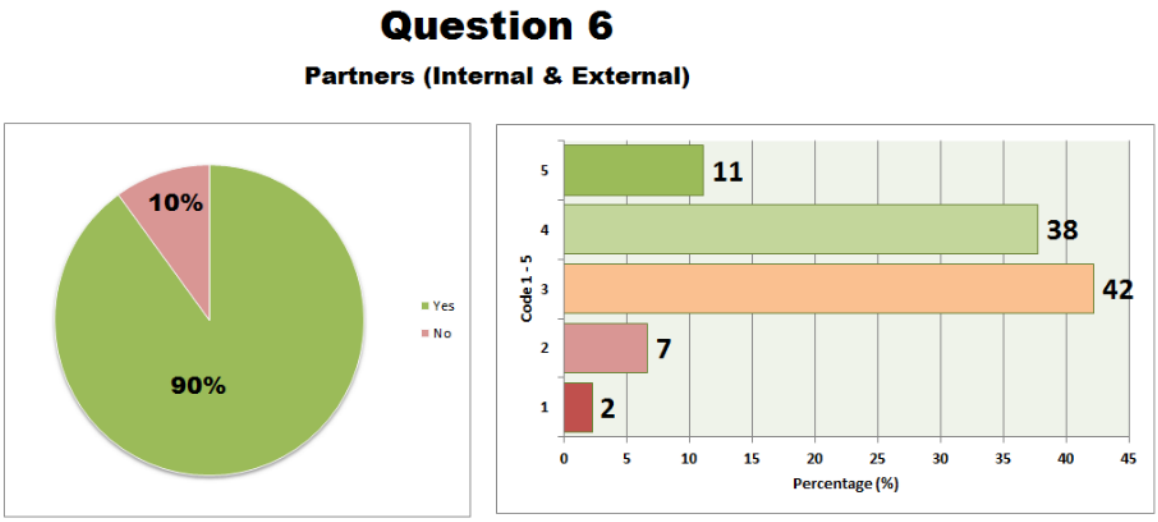


Question 6: Partnerships

The establishment of Partnerships was generally not commented on amongst the Forum respondents, but from the responses to the questions it is clear that many feel this is a very important aspect of ensuring that GIS lands in an organisation.

Organisations should leverage on their partnerships for skills, data, and know-how. There are usually not enough resources in an organisation to attend to all their needs, but through partnerships the workload can be shared, duplication avoided and ultimately more can be achieved.

Synergy in partnerships should be strived for where the whole is worth more than the sum of the parts.



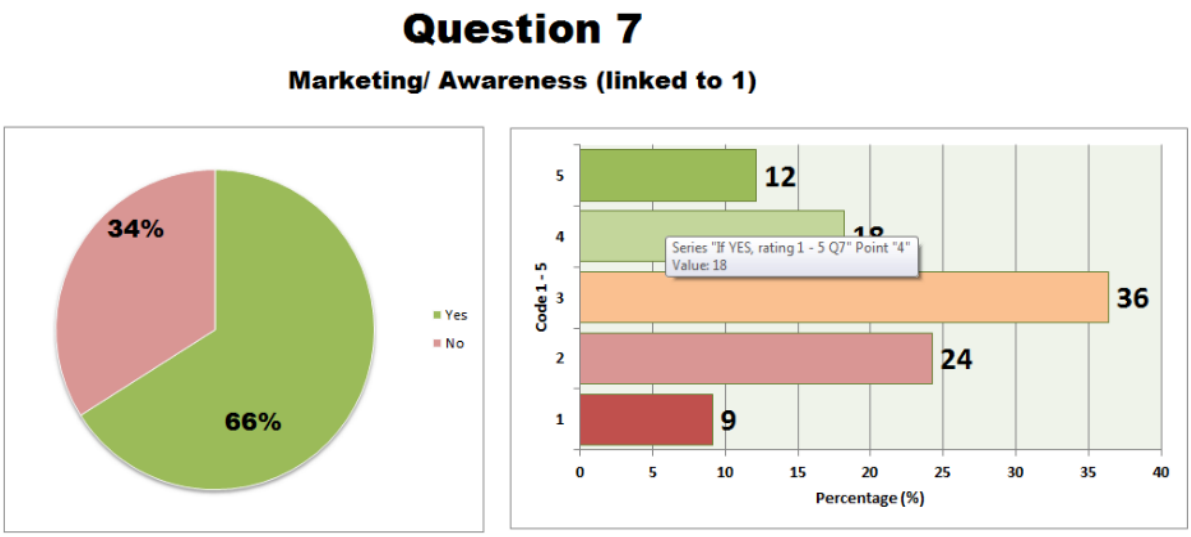
Question 7: Marketing and Awareness

GIS marketing should be consistent, ongoing and sustainable. GIS spatial data should inform the strategic context and align to political/policy direction – thereby gaining buy-in and maintaining it.

Set realistic goals. GIS must be a sought after commodity. To get and maintain traction, start with the basics and do it well.

SCOA regulations will insist on a financial asset register and when this happens GIS personnel will be inundated with requests for GIS assistance. GIS users need to be ready. The positive is that there should now be a higher need to budget for GIS.

When marketing GIS –keep the language of GIS simple and understandable.



Some Challenges

Some of the common challenges recorded during the day include the list below.

1. Lack of skilled staff and staff turnover
2. Lack of budget
3. Lack of (implemented) universal standards for metadata
4. Data that is standard and integrated for use on all platforms of government Standard geography for service delivery areas and planning at community level.
5. Building Partnerships
6. Duplication of data and data sources
7. A working web portal
8. To stay abreast of the latest technology
9. GIS awareness in Education – as a career choice

Conclusion

The engagement was valuable in the sense that it gave a brief view of how GIS is being experienced in the majority of Western Cape Organs of State (at all three spheres of government, but especially at the local level.) The ideas and comments that were shared will benefit organisations that have a low level of GIS maturity.

Following this engagement, the report will be circulated and the WCSIF committee will consider formulating suggestions on how to address the challenges and how to assist in the establishment of GIS units in Western Cape Organs of State. The report will also be circulated and presented to the Municipal Managers' forum and Municipal ICT Managers' forum.