



THE ASSOCIATION
FOR **GEOGRAPHIC**
INFORMATION



AGI Foresight Report 2020 Summary

There has never been a more urgent need for a paradigm shift in how we inhabit our planet. Whether we look at it through the lens of climate change, population growth, migration, socio-political unrest, or use of natural resources – it's clear that our current trajectory is unsustainable and unpalatable.

There is no escaping that technology dominates our lives, with a large part of the world's economy and society now relying on phones, IT and the internet. At the heart of today's world is the data that this technology generates.

Yet, in these days of big data, open data, Internet of Things, sensors, augmented reality and almost instantaneous sharing of information on social media, there's a mismatch between the rate of change of technology and the ability for our world's leaders and policy makers to keep up and understand the implications of this change. The ongoing challenge is that the time taken to deliver such policy and standards is extraordinarily long and technology is moving several times faster. In the past, these kinds of technological shifts have allowed humanity to advance its resilience, adaptability and influence. Can we make the same happen in the future?

The AGI Foresight Report 2020 shows that an increase in data volumes and availability of real time data feeds, as well as the increasing levels of accuracy and data resolution from high volume data sources such as LiDAR and Point Cloud applications are all factors impacting not only the realm of the geospatial industry, but the wider industry as well.

Spatial information has a critical part to play here. **Providing a sense of place is extremely powerful: as humans, we gain comfort from knowing our place and position in the world. This becomes even more important as our world moves online and becomes more intangible.** But do we believe we as GI specialists can fill this role?

I believe our industry has reached an existential moment. Our past belief in our central role and importance has been eroded by the realisation that geo-technology and its use is now so ubiquitous as to be almost invisible. Many of the key skillsets we had previously taken for granted as exclusively ours are now shared by other professionals, users and even hobbyists such as gamers, geo-cachers and travellers/ramblers.

What this gives the geospatial industry is the opportunity to morph into a new role in an information rich world. We must take charge of technology and not be its slave, raising our heads to view the wider geospatial picture. **There is far more to location intelligence than maps.** It's all about the data, what you do with it and what outcomes you can provide that counts. Data is no longer an asset but a 'modus operandi'.



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The papers in the Report are clear – the geospatial industry has the skills to shape and tame this information. Managing this level of complexity requires a clear approach to data management, one that we as GI specialists have.

As with films and computer games like SIM City and Minecraft, the combination of massive amounts of computing power with leading edge visualisation techniques improves the ability of human analysts to interpret and derive insight from large quantities of data. Through visualisations and images we are helping people to process large amounts of data and tell a story.

This highlights a point made by many contributors to the Report that in future 4D rather than 3D information will be considered the norm. The art and science of communicating information is central to the world of geographers, so visualisation analytics will likely form a source of competitive advantage for astute practitioners of GI over the next five years.

The Report also shows that there is a much greater need to focus on the customer experience and improve the usability of our tools. This will help ensure that the promise offered by increased data processing capabilities and analytical insights can be used effectively by a wider audience. This view is one of the more important insights contained in the Foresight Report, as it emphasises that we – as GI specialists – are no longer representative of the typical user of many of the technologies we are developing.

The geospatial industry has to understand how to switch from being a data provider, to being a data service. Our market proposition needs to focus on value creation, quality and trust.



It is clear in the Report that we are coming under increased pressure to protect people’s data, in a world where increasingly it is ever easier to identify individuals through data granularity.

It is also clear that we need to overcome the technology translation gap – where technologists (including geospatial practitioners) are unable to succinctly explain the usefulness or value of their data, tools or services. **We have to adopt language which easily conveys our value to potential collaborators, clients and end users.** At the moment this seems to be holding us back, with an on-going perception of an “inner sanctum of GIS”. The sooner we can ditch this image the better.

One example of how we can do this is the potential to converge with BIM. Just as there is a conception that GIS is just about mapping, so there is a misconception that BIM is just about 3D modelling. **If you think of BIM as Better Information Management – entailing the whole life cycle of the whole built environment integrated with the people and the services it delivers – you can understand that this complements and converges fundamentally with geospatial.**

Ultimately the Report tells us we are on our way to a “Digital Earth” that embraces gaming technologies and semantic ontologies, on a scale which we can only just start to comprehend. Our Digital Earth will require us to tackle issues of data quality, security, and clarity of use, interpretation and enhanced decision making; to consider not only technology, process and data, but more importantly the human dimension – at a behavioural and psychological level.

To do this requires a fundamental and deep understanding of our relationship with digital data, and how we can draw out intelligence from that data, to inform better dialogue, and make better decisions.

This has to be one of the biggest latent and untapped opportunities for the geospatial industry. Not maps, not 3D – but recognising the latent possibilities of data and the value-add services that we can and should deliver from it. What a phenomenal opportunity for not only our industry, but other industries as well.

Location intelligence can, and indeed should, become absolutely critical – the foundation on which our business decisions are made. But for this to happen, we need to open up our industry and make it more accessible, better understood and less exclusive.

The AGI’s mission is to serve the needs of society, environment and the economy by bringing geography and information together. This Foresight Report endeavours to address how the GI industry can make a difference during an era of massive change and incredible need.



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