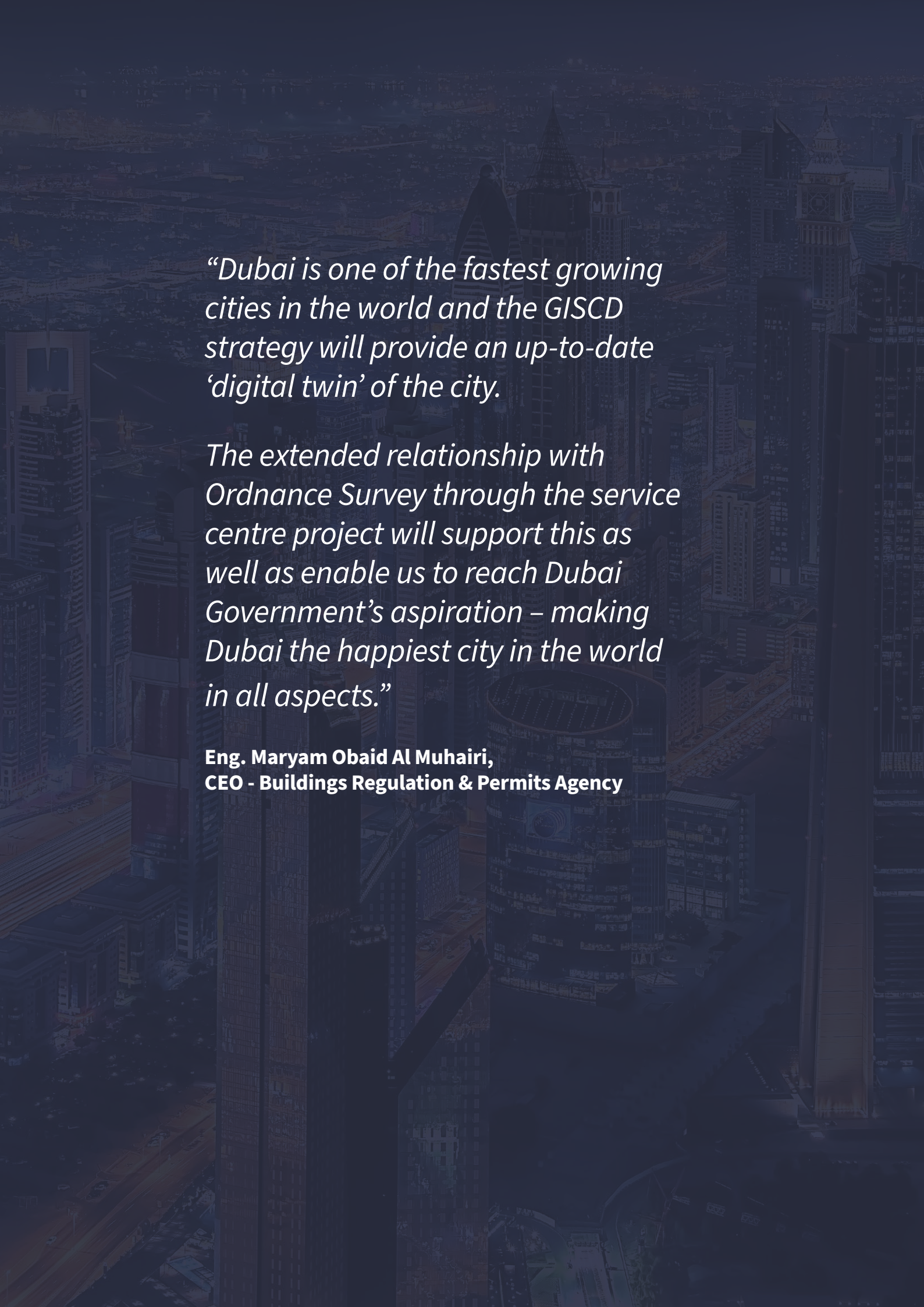


The Road to the Happiest City on Earth

Harnessing location
data to accelerate
innovation in Dubai



An aerial, high-angle view of the Dubai skyline at night. The image is dark, with the city lights providing a subtle glow. Several prominent skyscrapers are visible, including the Burj Khalifa in the center-right. The text is overlaid on the left side of the image.

“Dubai is one of the fastest growing cities in the world and the GISCD strategy will provide an up-to-date ‘digital twin’ of the city.

The extended relationship with Ordnance Survey through the service centre project will support this as well as enable us to reach Dubai Government’s aspiration – making Dubai the happiest city in the world in all aspects.”

**Eng. Maryam Obaid Al Muhairi,
CEO - Buildings Regulation & Permits Agency**

An aerial night view of Dubai, showing the illuminated skyscrapers of the Burj Khalifa and other high-rise buildings, with the city's lights reflecting on the surrounding areas.

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01

Introduction

Dubai Municipality has a clear ambition to make Dubai the happiest city in the world in all aspects.

As one of the fastest growing cities in the world, it is constantly evolving to accommodate new areas for retail, business, and services every day. This rapid and purposeful development is contributing to the city's ongoing reputation as a desirable place to live and work.

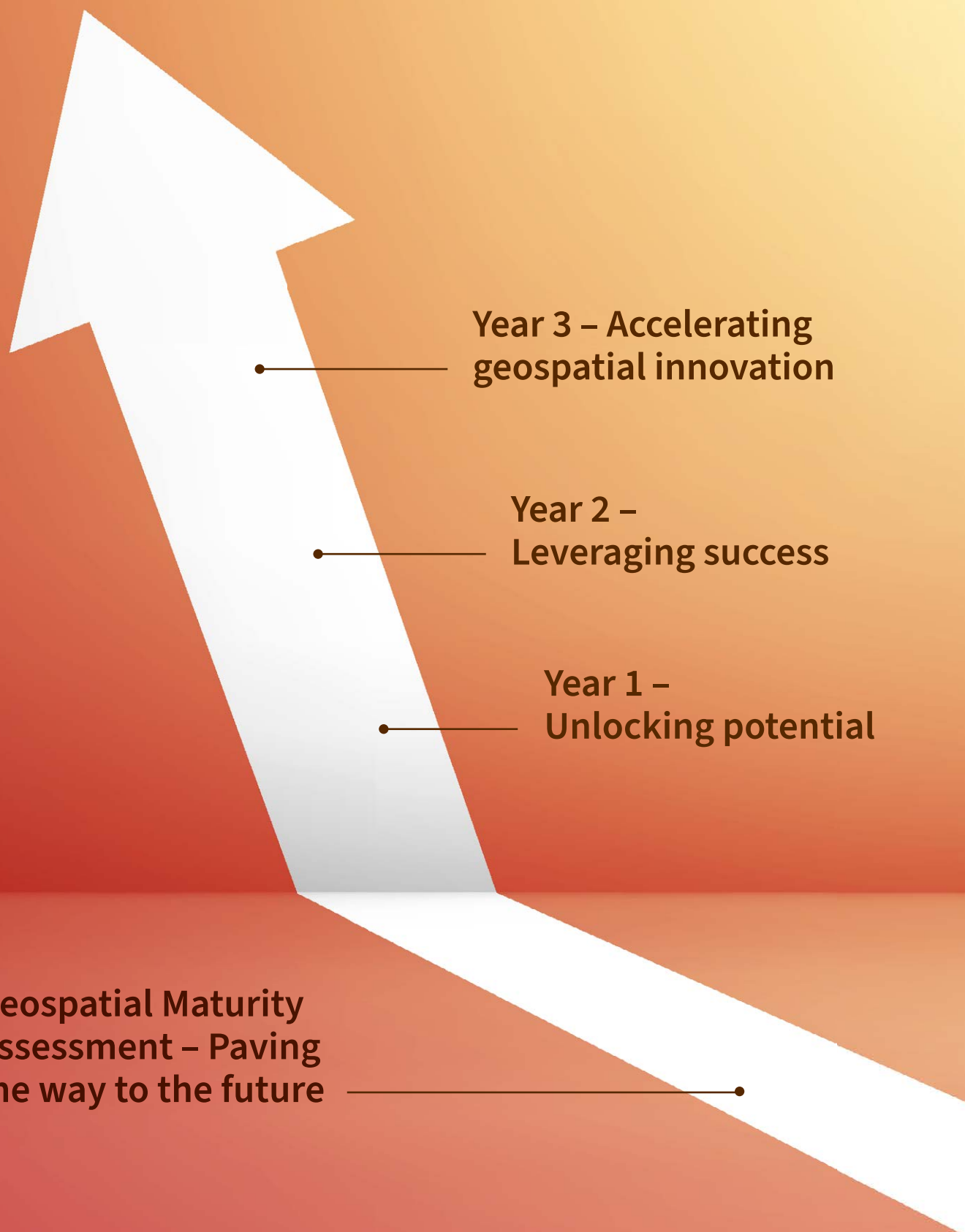
Ensuring the city grows in ways that are efficient and serve its citizens, relies on having consistent, world-class location data that can be seamlessly captured and put to use. Dubai's GIS Centre Department (GISCD) is supporting Dubai Municipality in this goal through the provision of geospatial data. Location data intelligence helps decision-making and evidence-based policies that will support citizens with the infrastructure and services they need, exactly where they need them.

The unparalleled growth in Dubai also presents an immense opportunity to use new technologies in unique ways. The Municipality will soon draw on the most advanced tools, such as Artificial Intelligence and digital twins, to support the city's planning and elevate the experience of its residents. Combining GISCD's geospatial capabilities, the potential Dubai brings as a rapidly growing city, and Ordnance Survey's 200+ years

of experience, presents a unique opportunity to build the geospatial infrastructure that will underpin, and accelerate, the adoption of pioneering technologies.

The partnership between GISCD and Ordnance Survey so far has outlined a focused route to maximise the use of geospatial data in Dubai. With this roadmap defined, these organisations are now progressing the journey from establishing Dubai's geospatial maturity, all the way to the beginning stages of designing and trialling new technologies. This project is supporting the acceleration of innovation for the best outcomes for Dubai's citizens.

GISCD: The trusted and authoritative centre for mapping and geospatial data in Dubai



**Geospatial Maturity
Assessment – Paving
the way to the future**

**Year 3 – Accelerating
geospatial innovation**

**Year 2 –
Leveraging success**

**Year 1 –
Unlocking potential**

02

Accelerating geospatial innovation



“GISCD is already recognised as one of the leading governmental geospatial agencies in the Middle East, it is now in the enviable position of being able to take its ambitions for Dubai further, helping to cement the city’s vision to become a world leader in the Global Digital Economy”

Paul French, Chief Innovation Officer, Ordnance Survey



Dubai is a city primed to be at the cutting-edge of geospatial innovation. The city is now laying the strong foundations that will form the tenets of this immense potential, ensuring comprehensive geospatial data coverage, and world-leading data currency and quality.

GISCD, with the support of Ordnance Survey, is evolving the tools and skills to apply some of the most state-of-the-art mapping techniques in the world. This will expand on GISCD's own capabilities in harnessing geospatial science for innovation and will span data management capabilities, and AI-based automation such as Remote Sensing and Automatic Feature Extraction (AFE).

Over the first two years of the partnership, GISCD and Ordnance Survey have collaborated on a proof of concept for an AFE system. This technique for state-of-the-art mapping will enable the creation of models and digital twins for intelligent urban planning in Dubai.

Over the course of the partnership, GISCD and Ordnance Survey have collaborated on the proof of concept for an Artificial Intelligence driven AFE system that can locate and identify urban evolution in a continuously changing landscape.

Building these robust systems relies on location data that is consistently high-quality, up-to-date and authoritative for use by stakeholders. By outlining the best tools to use and supporting the evolution of world-leading technical skills, GISCD and Ordnance Survey have provided a strong position for pioneering the use of geospatial data in new technologies and applications.

The advancements achieved over the course of this collaboration will be of immense value to the citizens of Dubai and to Dubai's continued position as a city that the world looks to for technological vision, leadership, and excellence in citizen-centric services.

Dubai is on its journey to be at the global forefront of research and development of applications ranging from Artificial Intelligence and Machine Learning, Digital Twin, Intelligent Urban Planning, Augmented Reality, Internet of Things (IoT), Advanced Robotics, and both Airborne and Terrestrial Autonomous Vehicles. The breadth and depth of these opportunities and developments herald the transformation of entire systems of economy, production, and management for Dubai.

GISCD is positioned as both the foundation and an accelerator for Dubai's global pre-eminence as a future technology hub, helping to ensure Dubai's future prosperity.

It also firmly positions GISCD as a research, development and innovation-driven organisation in the evaluation and application of geospatial science and technology.

Ensuring all public services are spatially-enabled will also open the doors to a truly smart city for Dubai's citizens to thrive in, one where Dubai Municipality has access to unrivalled insights to better serve its residents.

03

Supporting Dubai's sustainable urban planning

Property development led by Dubai's public or private sectors can be greatly enriched with the application of geospatial technologies for planning and service provision. The city's world-leading infrastructure and construction initiatives are ensuring that everyone has easy access to sanitation, electricity and water services, that emergency services can reach a scene as quickly as possible, and that people have happy, healthy commutes.

Location data intelligence is also a vital tool in ensuring the long-term sustainability of infrastructure – robust systems of data collection and application provide near real-time monitoring of the city. These are key to ensuring access to resources like water, in the face of environmental issues such as drought, and fully-informed planning for projects that may start and be completed in periods with different climates. Part of citizen happiness is the ability to see your city as home for decades to come.

The partnership between GISCD and Ordnance Survey has so far worked to establish high location data standards for collection and management of geospatial information in Dubai. This includes policies on data quality and planning.

It has also worked to make this data more accessible. Through more efficient sharing of location insights with the professionals that need it, Dubai can ensure its more effective use for public services.

The importance of bringing both domestic and international stakeholders on this journey has been highlighted throughout this project. GISCD, supported by Ordnance Survey experts, enhanced routes to share and deploy data in new and innovative ways, whilst bringing agencies and entities into an integrated network.

The partnership is helping Dubai to push the limits of location data intelligence in a sustainable and effective way, by establishing geospatial technologies knowledge sharing channels. These will help to ensure knowledge can be successfully exchanged and Dubai can build its own capacity as an international leader, now and into the future.

The programmes cover themes such as the requirements for sharing and implementing decisions made on location data in Dubai, and advising on ways to maximise the efficiency of data collection, so that the city's investments go further.



04

Establishing Dubai as a global leader in geospatial innovation



Dubai is pioneering the Middle East's technological transformation. GISCD will be representing the United Arab Emirates (UAE) and Middle East to demonstrate this on the world stage. By highlighting the city's breadth of location data and accelerated speed at which effective geospatial data approaches have been established, it will ensure the region receives the global recognition it continues to deserve.

It is also demonstrating the incredible impact it can have on urban planning and infrastructure in a city growing so rapidly. Few places in the world have the same momentum when it comes to building and expanding a city, and Dubai exemplifies the possibilities for geospatial data to act as a guiding force – here, GISCD offers a unique perspective to the global community.

In its work with Ordnance Survey, a founding member of the global geospatial community, GISCD is presenting Dubai as a city conducting some of the most exciting projects in this area; taking part in the Open Geospatial Consortium workshop series.

The appetite for geospatial data by the city of Dubai and its expansive urban planning requirements also represents an immense opportunity to build a geospatial community and professional body that attracts innovative young professionals from across the region.

Laying the foundations for an accreditation scheme, based on the centuries-old professional bodies Ordnance Survey helped to establish, Dubai will raise its own standards even further.

Driving excellence and professionalism, these initiatives will cement GISCD as a global leader. In the sharing of local success stories, Dubai's world-leading position in geospatial technology, infrastructure, and people will be established.



05

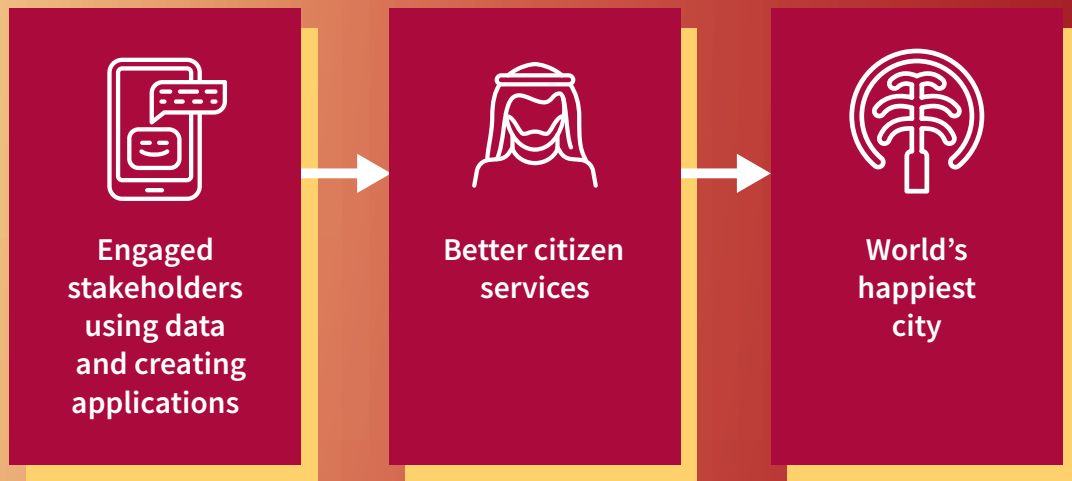
The future of location in the happiest city on Earth

We're on the cusp of a real step change in how cities meet the needs of their residents – central to this is data. Location data represents a significant opportunity to ensure services are delivered to people in both timely and accessible ways, and therefore is crucial to Dubai's future as the happiest city on Earth.

Progress continues to be made through the collaboration between GISCD and Ordnance Survey. Now with the project's strategy, governance and finessed skillsets and relationships in place, Dubai can really accelerate innovation and highlight its potential on the world stage. Together, GISCD and Ordnance Survey can make the future happen first in Dubai.

There are exciting milestones ahead in the roadmap of this partnership – the next steps for collaboration include:

- Increasing satisfaction of stakeholders through serving reliable, trusted and authoritative data, and improving access to GISCD's datasets to its stakeholders.
- Building the capability within GISCD in geospatial science and innovation: putting into action the proven innovation achievements, and improving the currency, accuracy and quality of data shared with GISCD's customers.
- Bringing together geospatial professionals throughout Dubai, and continuing to strengthen stakeholder relationships with a series of events showcasing GISCD's innovation – showing stakeholders the reason for GISCD's pioneering position within the UAE.
- Increasing global recognition of GISCD through a series of thought leadership initiatives, and sharing local successes with the global geospatial governance community.







Together we
can make the
future happen
first in Dubai.

إمارة دبي
Dubai Municipality



*“Dubai will never
settle for anything
less than first place”*

His Highness Sheikh Mohammed Bin Rashid Al Maktoum



Ordnance Survey provides consultancy services to governments helping to break down silos and improve policy decisions across urbanisation, environment and sustainability, commercialisation, resilience and statistics collection.

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