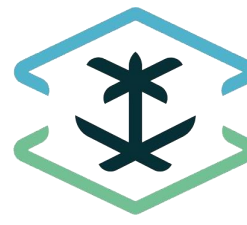


**الجيومكانية**  
الهيئة العامة للمساحة  
والمعلومات الجيومكانية  
General Authority for Survey  
And Geospatial Information



# General Authority for Survey and Geospatial Information Kingdom of Saudi Arabia

January 2024





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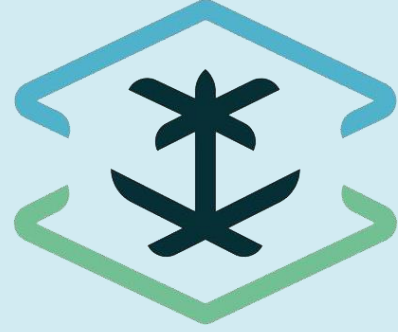
Introductory about GEOSA

2

Aligning the National Geospatial Strategy with IGIF

# الجيومكانية

الهيئة العامة للمساحة  
والمعلومات الجيومكانية  
General Authority for Survey  
And Geospatial Information



## General Authority for Geospatial and Geospatial Information





The Authority aims to regulate, develop, supervise, and monitor the Sector in the Kingdom, in a manner that achieves quality, enhances performance, and maintains security, in coordination with relevant agencies, and to do everything necessary to achieve its objectives.

## Key roles



National Geospatial Standards



National Geospatial Strategy



Sector Investments



KSA Presentation



National Geospatial Systems



Geospatial Licences and Permits



National Competencies



KSA Atlases



National Geospatial Infrastructure



beneficiaries benefits



International Collaboration



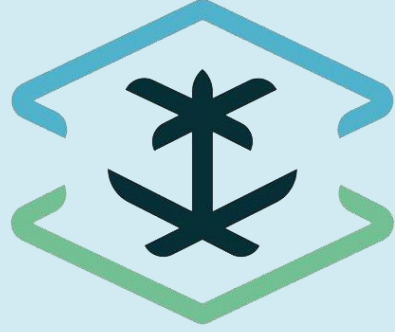
KSA Borders



Geospatial Consultations

# الجيومكانية

الهيئة العامة للمساحة  
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General Authority for Survey  
And Geospatial Information



## Aligning the National Geospatial Strategy with IGIF





## Benchmark comparison of pilot countries

Assessing the national geospatial strategies of the pilot States and benefit from the latter's experience in establishment, development and management of geospatial data



## Current Status assessment

Conduct of questionnaire workshops, meetings with stakeholders with participation of experts in geospatial sector

*To collect and analyse information about the current status of the Geospatial Sector in the Kingdom*



## Integrated Geospatial Information Framework (IGIF)

to act in accordance with **the Integrated Geospatial Information Framework "GIF"**

*Approved by the United Nations to enable States to collect and manage the geospatial data*

Methodology and background



sector integrity



National Strategy

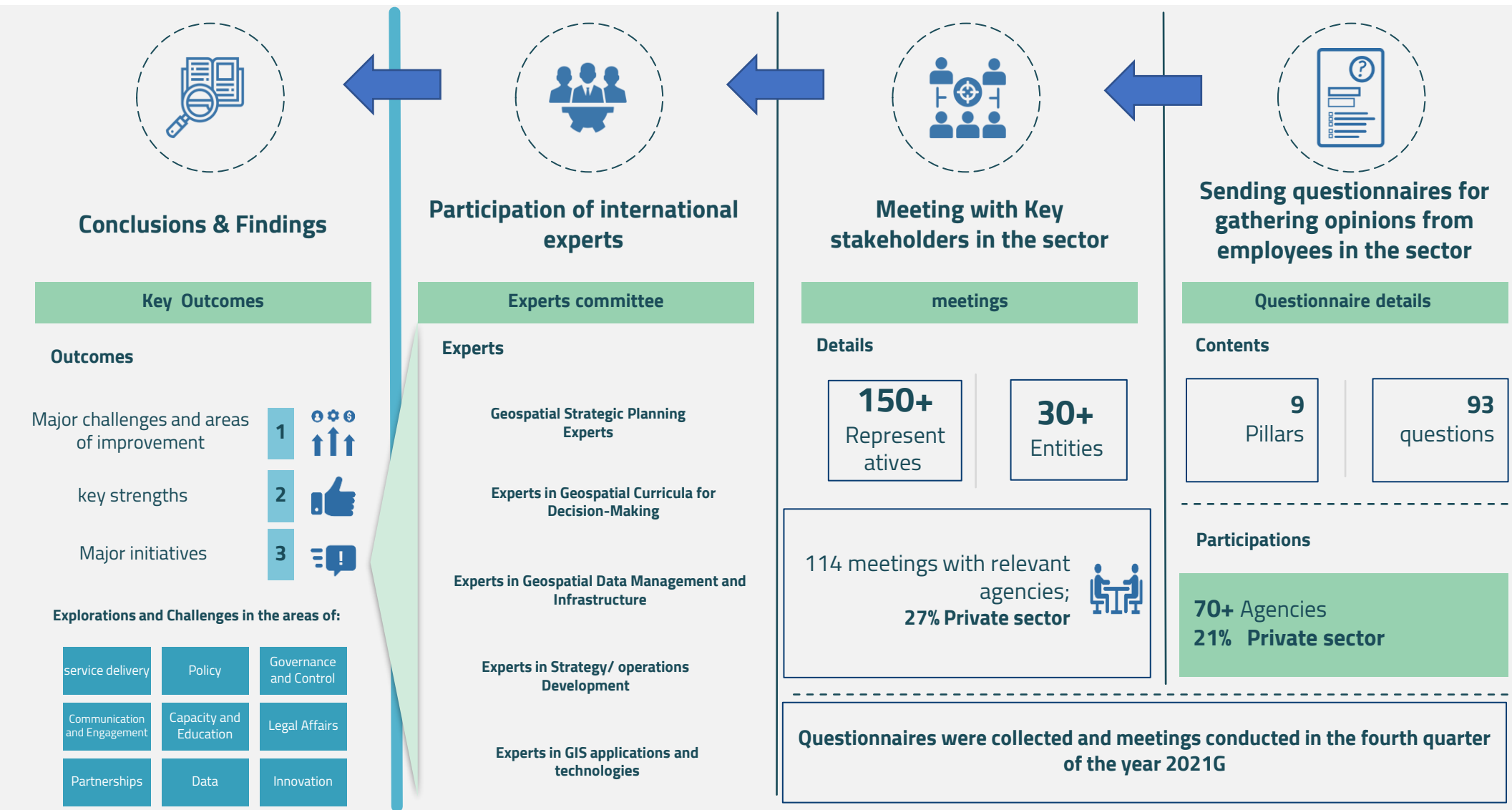


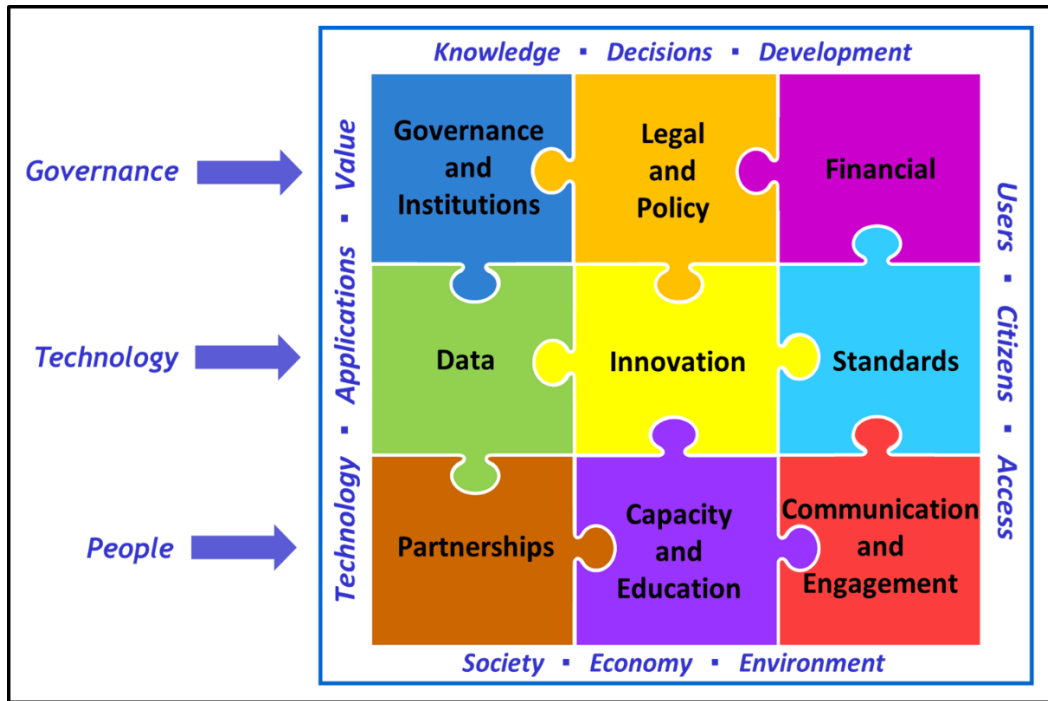
Strategy Steering Committee





- Methodology and background
- IGIF
- Current Status assessment
- Benchmark comparison of pilot countries
- sector integrity
- National Strategy
- Strategy Steering Committee





Elements of Policy and Legal	Legislation	Policies, Norms and Guides	Data Protection, Licensing and Sharing	Governance and Accountability
<b>Guiding Principles</b>	Available and Compatible Accessible and Equitable	Stewardship and Trust Strategic and Responsible Optimize Value and Resources Secure and Safeguarded		Future Proof and Responsive Policy Coherence and Legal Interoperability
<b>Key Actions for Strengthening Geospatial Information Management</b>	<b>Providing Leadership</b> Review Group ↓ <b>Assessing Needs</b> Review and Assessment Gaps and Opportunities Analysis	<b>Addressing Opportunities</b> Design and Develop Data Sharing and Dissemination Licensing Geospatial Information ↓ <b>Future-Proofing</b> Future-Proofing	<b>Addressing Coherence</b> Intellectual Property Rights Privacy and Data Protection Liability Concerns Sensitive Information ↓ <b>Delivering Compliance</b> Impact Assessment Compliance Strategy	
<b>Tools to Assist in Completing the Actions</b>	Common Legal Terms Review and Assessment Considerations Review and Assessment Questions	Use Case Example Gaps and Opportunities Analysis Gap Analysis Matrix Policy and Legal Instruments		Assessing Fitness for Purpose for a Policy Managing Intellectual Property Rights Addressing Sensitive Information
<b>Interrelated and/or Prerequisite Actions</b>	Governing Board (SP1)  Geospatial Coordination Unit (SP1)	Geospatial Information Management Strategy (SP1)  Specialist Working Groups (SP1)		Identify Key Stakeholders (SP9)  Stakeholder Analysis (SP9)
<b>Outcomes</b>	Sound and Enabling Policy and Legal Environment Maximizes Utility of Geospatial Information with Safeguards	Mandates and Responsibilities Clarified Strengthened Governance and Accountability		Effective, Secure Management and Applications Responsive to Changes and Progress





## Legal and Policy

Please answer the following questions regarding the Legal and Policy of your organisation:

- 1** Do you have clear laws and policies for geospatial services and products?  
*To gain understanding on geospatial laws that govern the organisation/ sector*

Yes  No

*If yes, state laws and policies*
- 2** Do you have privacy, security and intellectual property rights?  
*To gain understanding on matters related to geospatial rights and IP in the sector*

Yes  No

*If yes, state rights*
- 3** Are you complying with internationally recognized laws and guidelines? If yes, state law(s)  
*To gauge the level of maturity of these laws and rights*

*(e.g. IGIF Framework, UN Policies, Local Policies)*
- 4** Do you think the KSA use of geospatial information achieves the most strategic use of resources and avoids duplication of effort? If no, suggest alternative uses  
*To capture interest around geospatial data usage*

Yes  No
- 5** Do you think the geospatial data sharing policies and processes are secure and safe? If no, please elaborate or provide suggestions  
*To gauge the level of trust the sector has in data sharing*

Yes  No
- 6** Are you complying with internationally recognized standards defined by ISO/TC 211?  
*To measure level of compliance with ISO/TC 211 standards in the sector*

Yes  No
- 7** Are you complying with relevant local standards for geospatial / data to ensure technical and semantic operability? If no, state why  
*To measure level of compliance and completeness of current local standards*

Yes  No
- 8** How do you ensure compliance with the defined data and technology standards?  
*To gain an understanding on the methods used in the industry to ensure compliance with defined data technology standards*

*(e.g. auditing, training, etc)*

## Phase 2: Emphasis was placed on the following inputs to ensure the integration of the geospatial sector in the Kingdom with Saudi Vision 2030 and approved national strategies objectives



Methodology & Background



Sector integration



National Strategy



Strategy Steering Committee



### GEOSA organization No.90 and the related regulations

Reviewing the evaluation results of the new GEOSA statute , bylaws and the national tasks and responsibilities assigned to it.



رؤية  
2030  
المملكة العربية السعودية  
KINGDOM OF SAUDI ARABIA

The integration of the geospatial sector with Saudi Vision 2030 objectives and identification of the national geospatial strategy hubs that support Vision Realization Programs (VRPs) of the Saudi Vision 2030



### National Strategies in the Kingdom

interdependence between Geospatial objectives and National strategies for key sectors and the Kingdom's strategy.



Methodology & Background



Sector integration



National Strategy



Strategy Steering Committee



## Holding workshops inside GEOSA for its employees

Reviewing the first version of the national geospatial strategy by GEOSA's employees through internal workshops



## Workshops with the public, private, academia, third sectors and international companies

Presenting the newly developed geospatial strategy to representatives from several ministries and official bodies, private companies operating in the sector, and specialized academics.

- Discussing the strategy with a number of relevant international companies



## Including highlights from national workshops

All opinions and recommendations submitted by participants were collected for integration with initiatives and performance indicators of the national geospatial strategy.



## National Geospatial Strategy

Finalization of the national geospatial strategy



- Methodology & Background
- Sector integration
- National Strategy**
- Internal workshop
- National Workshops
- Showcase of the workshop discussions
- Final National Strategy
- Strategy Steering Committee

## Participant

Involving national agencies from the public, private sectors and academia to review and discuss the national geospatial strategy through workshops to present the national strategic goals and initiatives.

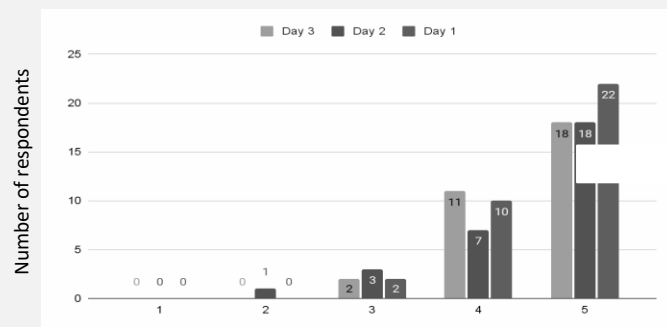
## Outcomes

Emphasizing the proposed vision, mission, hubs and strategic objectives of the National Geospatial Strategy, as well as initiatives and KPIs that will contribute in achieving an integrated geospatial national strategy.

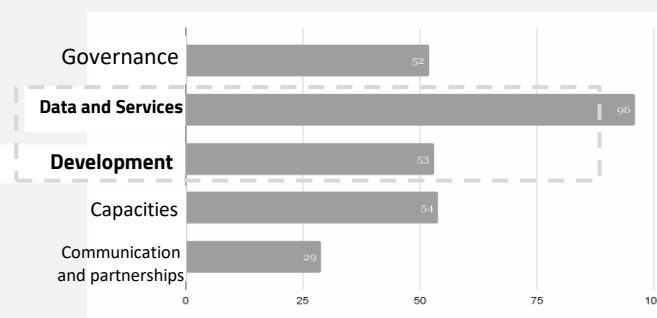
## Questionnaire

The workshop was followed by a questionnaire to know the participants' opinions and to evaluate the workshop in order to enhance and develop some aspects in the upcoming workshops.

### Workshop findings evaluation by participants





### Distribution of ideas according to the national geospatial strategy hubs






















### Details

**86**  
Number of entities participating in the workshop 

**128**  
Number of participants in the workshop 

**500+**  
Interactive proposals and opinions about the strategy framework 



<b>Governance</b> 	<b>Legal Affairs</b> 	<b>Data</b> 	<b>Capacity &amp; Education</b> 
<p><b>Duplication of strategic planning and implementation</b></p>	<p><b>Non-alignment of policies and standards</b></p>	<p><b>Weak regulation and limited data sharing</b></p>	<p><b>The need to develop national capacity building in the sector</b></p>
<p><b>Duplication in terms of permits and licenses</b> for some geospatial services between the Authority and other agencies</p> 	<p>More than <b>50%</b> of stakeholders consider that <b>current standards and policies are not suitable</b> for the intended purpose</p> 	<p><b>Multiple sources of geospatial data production and digital maps</b> resulting in weak technical integration, incompatibility and interfere with the Kingdom's maps as a whole</p> 	<p>Out of <b>13,700</b> jobs in the private sector, only <b>8% are held by Saudis</b></p> 
<p><b>Lack of national governance of geospatial controls</b> and regulations among Stakeholders of common interest</p> 	<p>Data-sharing policies are unclear and lead to an <b>unattractive environment</b> for investments in the geospatial market</p> 	<p>Lack of easily accessible and free <b>open data sources</b></p> 	<p><b>The market need is incompatible with the graduates' specialization</b> as there are <b>41,246</b> job seekers, while there are <b>2,300</b> jobs available in the sector</p> 
<p><b>45%</b> of participants have their <b>own geospatial strategy</b> or plan to develop it</p> 	<p>Challenges in data sharing and integration due to <b>lack of commitment to standards</b> adopted by agencies</p> 	<p>No <b>automated central link to real-time data collection</b> with data owners</p> 	<p>Limited specialist practitioners and professional skills development. (There are only 90 geospatial practitioners in the Kingdom)</p> 
<p>Need for a <b>detailed data governance framework</b> (3 hubs for population distribution data are not available in Saudi Arabia compared to UN standards)</p> 	<p>Lack of <b>international standards</b> "digital geospatial metadata" issued by International Organization for Standardization for Geospatial location Identification</p> 		<p>Ambiguity between jobs levels and description of names and qualifications making this type of jobs <b>less attractive to the workforce</b></p> 

- Methodology and background 
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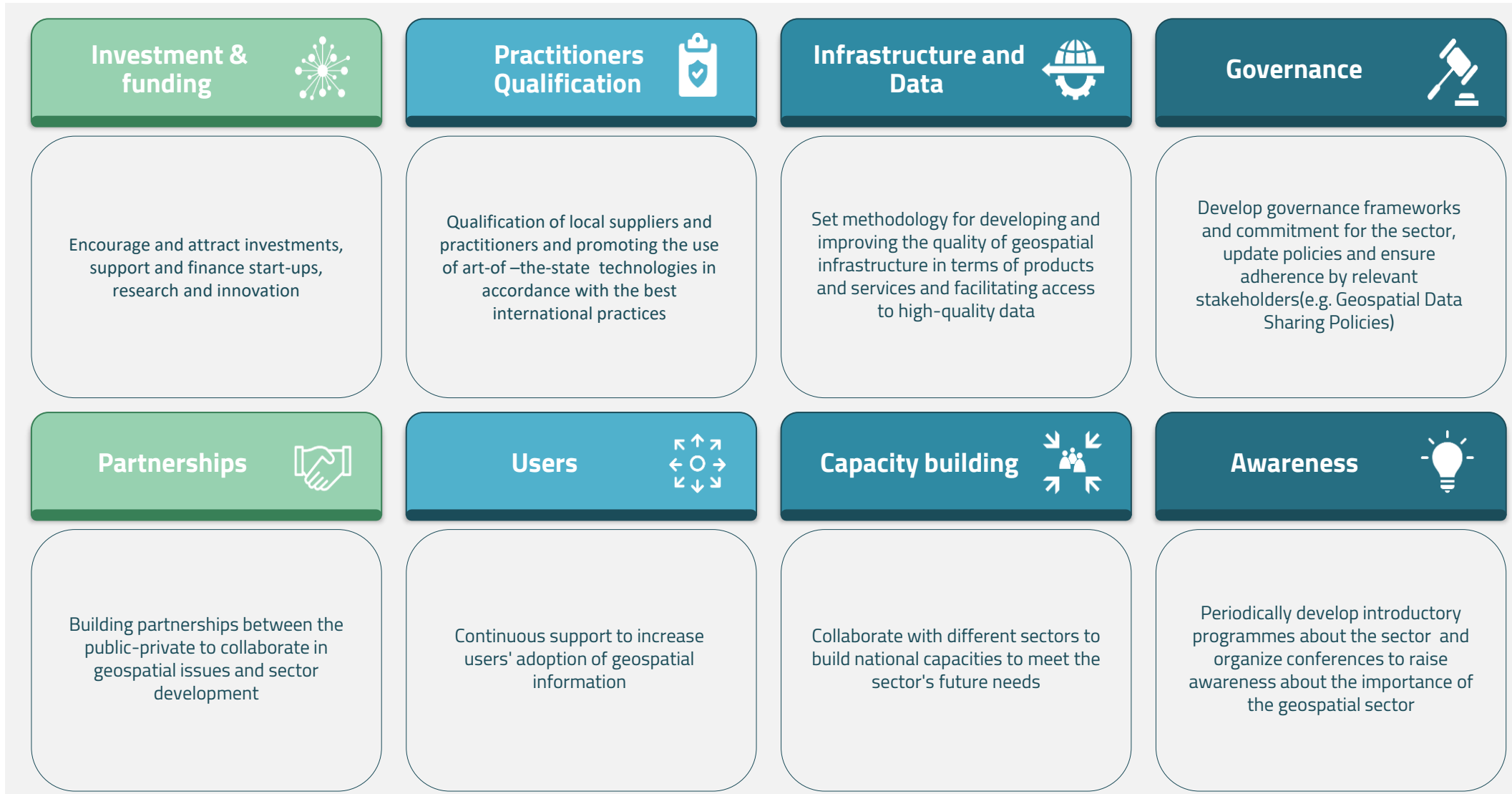


	Partnerships and Collaboration		Delivery of Services		Innovation		
	<b>Limited mechanisms and frameworks for collaboration and partnerships</b>	<b>Shortage of local service providers</b>	<b>The need to activate and motivate innovation elements</b>		<b>Limited public-private partnerships</b> , lack of policies and frameworks to manage such models of partnerships in the geospatial information sector	<b>Lack of qualified local suppliers</b> to providing hydrographic survey services and other services	<b>Lack of Geospatial innovation programs targeting start-ups</b> and SMEs
	<b>Limited international cooperation</b> in the geospatial sector. <b>Only 8% of agencies participate in international cooperation</b>	<b>Limitation of using latest geospatial technologies</b> such as drones, remote sensing technologies and LIADAR systems	<b>Limited of R&amp;D specialized experts</b> , <b>Only 15%</b> of enterprises have dedicated R&D and innovation departments.		<b>Limited local and international workshops for Geospatial sector</b> where only 37% of stakeholders meet at least once a year	<b>Absence of business models for data investment</b> like Platform or Data Services	<b>Lack of dealing with modern technologies</b> , such as artificial intelligence, which impedes progress in delivery Geospatial services to beneficiaries

- Methodology and background
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Sources: Geospatial market Assessment Report

# 8 priorities identified for formulating the Kingdom's national geospatial strategy



- Methodology and background** 
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- Current Status assessment**
- Benchmark comparison of pilot countries**
- sector integrity** 
- National Strategy** 
- Strategy Steering Committee** 

Sources: Geospatial market Assessment Report



A dynamic and sustainable sector that establishes effective geospatial infrastructure and contributes to the Kingdom's leadership in economic, social, and environmental sectors

Provide an organized and effective national geospatial infrastructure and data, supported by an innovative and attractive environment for investment and enhanced with qualified human capabilities, that activates the participation of stakeholders and strategic partners and supports them in decision-making

### Strategic Themes



### Strategic Objectives

Raise awareness of Geospatial value and clarify its contribution and role in the development of the economy and society	5.1	Build national geospatial capabilities and provide them with the necessary skills and techniques to meet the needs of the geospatial sector	4.1	Attract investments and grow the contribution of the private sector in the geospatial field, support business opportunities	3.1	Ensure the quality, accessibility and use of geospatial data in the sector	2.1
Strengthen partnerships locally with the private and public sector, and internationally with leading institutions to advance and improve the Kingdom's global position in the geospatial field	5.2	Qualify and enable Geospatial Entities in the sector to build competitiveness at the local, regional and global levels	4.2	Promote Geo-Innovation and entrepreneurship and leverage of latest technologies to expand markets and create new opportunities	3.2	Improve the quality of geospatial products and services and enhance beneficiary satisfaction	2.2

### 1. Governance

Strategic Objectives: Organize and govern the geospatial sector

1.1

Methodology and background



sector integrity



National Strategy



Internal workshop

National Workshops

Highlights of workshop discussions

Final National Strategy

Strategy Steering Committee







Methodology & Background

Sector integration

**National Strategy**

Internal workshop

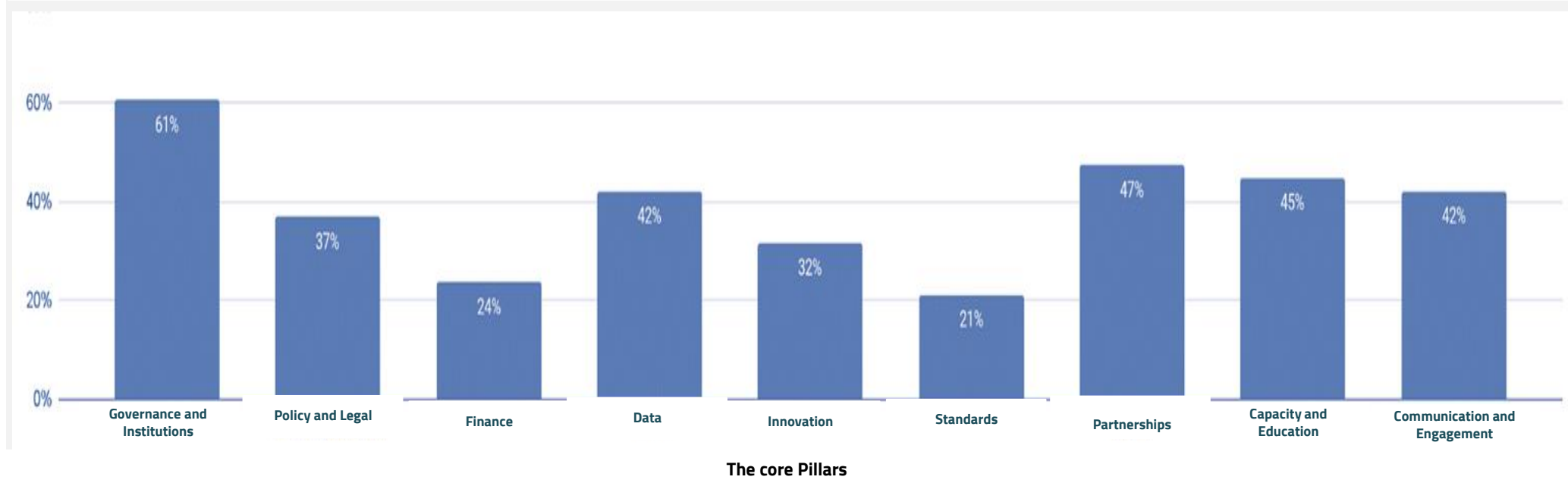
National Workshops

Highlights of workshop discussions

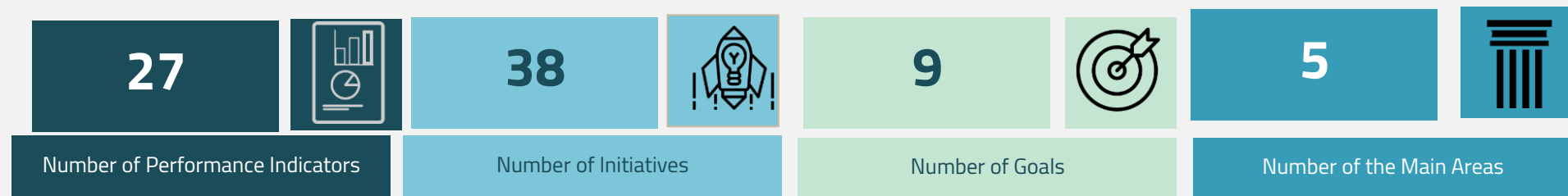
Final National Strategy

Strategy Steering Committee

**Coverage Percentage of Strategic Listed Initiatives for the Core Pillars in the Sector**



**National Geospatial Strategy in Numbers**



\*Calculating strategic initiatives and their targeted core pillars in the sector



1	The initial Concept of the Surveying and Geospatial information law has been prepared based on international best practice
2	Launching the National Geospatial Center
3	The National geospatial policies (which concern geospatial data governance and the policy for classifying, licensing, pricing, sharing and protecting geospatial data)
4	A national geospatial data governance framework has been prepared
5	The National Geospatial Security Initiative is being prepared
6	National geospatial strategy
7	Approval of the Saudi Arabia National Spatial Reference System (SANSRS)
8	The Terms & Conditions set by GEOSA for issuing licenses allowing the practice of Survey and Geospatial Information has been approved
9	Licenses for the approved geospatial activities have been set by coordination with the General Authority for Statistics, 18 economic activities in the surveying and geospatial information sector were approved
10	Control and compliance rules & procedures have been set for the surveying and geospatial information sector.
11	A specialized department has been created in the GEOSA's organizational structure concerned with protecting the interests of beneficiaries



1	The National Geospatial Data Model.
2	The National Geospatial Metadata Directory
3	The National Geospatial Data Dictionary
4	Production and updating of the National Topographic coverage Maps
5	Starting a project of developing KSA Geo Names Databases
6	Production of Aeronautical Chart
7	Updating the technical infrastructure for the Continuously Operating Reference Station (CORS).
8	The Hydrographic Survey
9	Updating the technical structure of National Tidal Gauge Stations



## Standards

### Prepared National Geospatial Standards

Standards cover managing and evaluating the quality of geospatial data, specifications for national geospatial data, and the national registry of geospatial standards, Approval of the Saudi Arabia National Spatial Reference System (SANSRS)

## Finance

**1** A feasibility study is carry out by GEOSA to establish the National Geospatial Company

**2** Estimating of Economic Value of Geospatial Information and Technology to the Economy of Saudi Arabia - with the World Bank



1

The geospatial knowledge and innovation sector roadmap has been approved

2

GEOSA Launched the knowledge sector strategy project

3

GEOSA Establishing a center for geospatial innovation



1

GEOSA has commenced feasibility study for establishing the National Geospatial Academy.

2

GEOSA is carry out training programs to develop human capabilities in GEOSA and the sector.



1

GEOSA held more than 23 workshops in the field of the geospatial sector in the Kingdom in regard to raise the awareness about the importance of geospatial information for all sectors, as well as to raise awareness about GEOSA activities for regulating and developing the surveying and geospatial information sector in the Kingdom.

2

GEOSA Participates in international organizations e.g UNGGIM, OGC, IHO ,ISPRS, UNGEEN ...

**Together towards a  
sustainable geospatial  
sector to lead the Kingdom  
economically, socially and  
environmentally**

**Thank You**

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