**DESIGNING AND DEVELOPING**

RECOMMENDED TASK **12**

TEMPLATE FOR A COUNTRY-LEVEL ACTION PLAN

## 1. Purpose

The purpose of this template is to serve as a guide or as an option when drafting the UN-IGIF Action Plan at the country-level. It is a suggested or a pre-set format that is recommended for consideration, has to be utilized as a reference or as a practical starting point. The template is meant for countries to consider, reference and tailor to their in-country format or preferences when drafting their UN-IGIF Action Plans. The UN-IGIF Action Plan must be prepared according to national circumstances and requirements after assessing, analysing and understanding national situations, priorities and requirements.

This template recommends specific steps towards achieving the short, medium and long-term strategic goals and priorities for implementing the UN-IGIF at the country-level and for strengthening nationally integrated geospatial information management. The template draws on the recommended methods documented in the UN-IGIF Part 2: Implementation Guide, along with justification of the approach. Combined with the UN-IGIF, this template is a resource and a reference, provides guidance and step-by-step suggestions that enable the UN-IGIF action plan to be prepared and then implemented.

# [COUNTRY] ACTION PLAN

## IMPLEMENTING THE UNITED NATIONS INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK (UN-IGIF)
## TOWARDS ENHANCING NATIONAL GEOSPATIAL INFORMATION MANAGEMENT

*"Strengthening National Geospatial Information Management Capacities towards Implementing the 2030 Agenda for Sustainable Development"*

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# EXECUTIVE SUMMARY

*In this section, provide an executive summary for the action plan. This will include the current and desired state and a list of the action to be undertaken and how they will address the gaps in existing capabilities.*

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# INTRODUCTION

## ABOUT THIS COUNTRY-LEVEL ACTION PLAN

The [Country] Action Plan provides detailed steps towards achieving the short-term and long-term strategic goals for strengthening integrated geospatial information management and draws on the recommended methods documented in the Integrated Geospatial Information Framework (IGIF) Part 2: Implementation Guide, along with justification of the approach. The Framework provides the strategic guidance that has enabled this country-level action plan to be prepared and implemented.

This Integrated Geospatial Information Framework is a United Nations endorsed Framework that was developed in collaboration between the United Nations and the World Bank, originally to provide a basis and guide for lower to middle income countries to reference when developing and strengthening their national and sub-national arrangements in geospatial information management and related infrastructures.

Direct benefits include encapsulating new and innovative approaches to national geospatial information management, implementing integrated evidence-based decision-making solutions, and maximizing and leveraging national information systems that are tailored to individual country's situations and circumstances.

The approach will assist [Country] to move towards e-economies, e-service and e-commerce to improve services to citizens, build capacity for using geospatial technology, enhance informed government decision-making processes, facilitate private sector development, take practical actions to achieve a digital transformation, and to bridge the geospatial digital divide in the implementation of national strategic priorities and the 2030 Agenda for Sustainable Development.

## STRATEGIC CONTEXT AND RATIONALE

*In this section, add the strategic context drawn from the completed Recommended Task #8: Strategic Alignment (and Benefits) Exercise*

## RELATIONSHIP TO SUSTAINABLE DEVELOPMENT GOALS

*In this section, add the SDGs that this country-level Action Plan supports in [Country]*

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## STRENGTHENING INTEGRATED GEOSPATIAL INFORMATION MANAGEMENT

The [Country] Country-level Action Plan will be delivered through nine strategic pathways. These are:

**Governance and Institutions** – aims to attain political endorsement, strengthen institutional mandates and build a cooperative data sharing environment through a shared understanding of the value of an Integrated Geospatial Information Framework, and the roles and responsibilities to achieve the vision.

**Policy and Legal** – aims to address current legal and policy issues by improving the laws and policies associated with, and having an impact on, geospatial information management, and by proactively monitoring the legal and policy environment, particularly with respect to the issues raised by emerging technologies and the evolving innovative and creative use of geospatial information.

**Financial** – aims to achieve an understanding of the implementation costs and ongoing financial commitment necessary to deliver integrated geospatial information management that can be sustained and maintained in the longer term.

**Data** – aims to enable data custodians to meet their data management, sharing and reuse obligations to government and the user community through the execution of well-defined data supply chains for organizing, planning, acquiring, integrating, curating, publishing and archiving geospatial information.

**Innovation** – aims to stimulate the use of the latest technologies, process improvements and innovations so that governments, no matter what their current situation is, may leapfrog to state-of-the-art geospatial information management systems and practices

**Standards** – aims to enable different information systems to communicate and exchange data, enable knowledge discovery and inferencing between systems using unambiguous meaning, and provide users with lawful access to and reuse of geospatial information.

**Partnerships** - aims to create and sustain the value of geospatial information through a culture based on trusted partnerships and strategic alliances that recognize common needs and aspirations, and national priorities

**Capacity and Education:** to raise awareness and develop and strengthen the skills, instincts, abilities, processes and resources that organizations and communities require to utilize geospatial information for decision-making

**Communication and Engagement:** aims to deliver effective and efficient communication and engagement processes to encourage greater input from stakeholders in order to achieve transparent decision-making processes when implementing the Integrated Geospatial Information Framework

## VISION AND MISSION

*In this section, add your country-specific vision and mission*

## GOAL AND OBJECTIVES

*In this section, add your country-specific goals and objectives.*

## STRUCTURE OF THIS DOCUMENT

The Country-level Action Plan is categorised according to the IGIF Strategic Pathways: Each Strategic Pathway identifies:

**Agencies involved** – Identifies stakeholders with interest or responsibilities for Strategic Pathway Actions.

**Contact Person** – To be contacted for more information on the Strategic Pathway Actions

**Background and Rationale** – Information for the reader so that they understand why the activities have been identified. This section includes a brief statement on the current situation and gaps in capabilities

**Proposed Approach** – This section provides a broad overview of how each activity in the strategic pathway interrelates. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Governance and Institutions Framework, Legal and Policy Framework, Financial Framework and Data Framework etc. The IGIF Part 2: Implementation Guide provides some example Frameworks that can be adopted/adapted.

**Objectives** – These are the objectives of delivering the approach (Strategic Pathway). They are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for a new governance model, as they explain the rationale for undertaking the activity.

**Actions** – This section lists the activities and their subtasks within each activity. These activities can then be incorporated into a Gantt chart (see section below). Actions are to be determined through the Country Needs Assessment and Gap Analysis. The Integrated Geospatial Information Framework Part 2: Implementation Guide is to be used as a reference to determine what activities can be implemented to address gaps in current capabilities.

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**Implementation Timeframe** – This section includes a Gantt chart (also referred to as a schedule) that includes activity timeframes, and the interdependencies between activities and tasks within and across strategic pathways. It is a visualization (bar chart) of the Action Plan Actions

**Deliverables** – These are the products/systems/reports that are expected to be delivered as a consequence of completing the activities.

**Outcomes** – This section identifies the things that change because an activity has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives. The outcomes can be written as benefits.

**Risk & Mitigation** – With any action plan there is a risk of not being able to complete activities. This section identifies the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.

**Budget Estimation** - This section identifies the budget required for each activity. Note: The investment required for each activity will be identified by the [name of Activity] under the Financial Strategic Pathway 3.

**Funding Status** – This section identifies the funding sources or the approach to being used to seek funding or in-kind support, such as potential partnerships. The funding sources and potential partnerships will be identified by the [name of Activity] under the Financial Strategic Pathway 3.

## MONITORING AND EVALUATION

*In this section, explain how the Country-level Action Plan will be monitored and evaluated.*

*For example: Monitoring and Evaluation of the Country action Plan is to be performed by [name of office responsible]. Information on progress will be collected and reported at agreed intervals or when the scheduled completion date is attained or in threat of not being met.  The [office] will post the Country-level Action Plan on its website, along with progress reports.*

*See section 12 for an example on Monitoring and Evaluation in this document.*

## REPORTING FRAMEWORK

*IN this section, explains how the reporting obligations of the various agencies that have responsibilities for activities designated under the Country-level Action Plan.*

*The reporting frameworks (to be developed) will include formal updates to the [Geospatial Council] and Working Groups.  These will be delivered by the Director [Geospatial Coordination Office].*

*Stakeholders will also be informed of progress by [method].*

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# SP1.    GOVERNANCE AND INSTITUTIONS

**Establish leadership, governance model, institutional arrangements and a clear value proposition to achieve multi-disciplinary and multi-sectoral participation and commitment.**

## 1.1    AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for Strategic Pathway Actions.* **For example:**

**Lead Ministry:** *Ministry of Land and Land Development*

**Implementation Agency:** *NSDI Working Group on behalf of government.*

**Stakeholder Community:** *Organisations responsible for generating data, such as the Survey Department, Land and Land Use Policy Development, Forestry Department, Census and Statistics Department; and government departments who are significant users of geospatial information.*

## 1.2    CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* **For example:** *Additional Secretary, Ministry for Land and Land Development*

## 1.3    BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

**For example:** *Institutional coordination and collaboration are to be strengthened in order to strengthen integrated geospatial information management.   Currently, institutional arrangements are based on official channels of information flows.  The approach is subject to a high degree of bureaucracy for data requests, preparation and signing of agreements, and data transfers.  Delays are frequent and the process is costly.*

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*Fast tracking procedures is possible in the event of emergencies. However, the process is reliant on personal relationships, which while assisting with communication and action, can collapse when changes in personnel occur.*

*There is a need to develop enduring underpinning structures. The emerging changes in the geospatial information industry require new governance arrangements that take into account the balance between public and private sectors, data sources and data users. It is also important to recognise the potential contribution from research and development bodies.*

## 1.4    PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Governance and Institutions Framework. The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

***For example:*** *The [Country] proposes the following Governance Model (Figure 1.1) that includes the creation of a Geospatial Information Coordination Unit, Geospatial Council (or Steering Committee), and Expert Working Groups that have subject matter expertise in geospatial data, technology and policy.*

*From time to time, geospatial information-related projects will require the establishment of short-term project teams that will collaborate jointly with other lead departments.*

*Figure 1.1 Proposed Governance Model*

## 1.5    OBJECTIVES

*In this section, identify the objectives for delivering the approach (Strategic Pathway). These are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for a new governance model, as they explain the rationale for undertaking the action.*

***For example:*** *The overarching aim is to attain political endorsement, strengthen institutional mandates and build a cooperative data sharing environment through a shared understanding of the value of an Integrated Geospatial Information Framework, and the roles and responsibilities to achieve the vision.*

*Specific sub-objectives for formalising the geospatial information management Governance and Institutional Framework in [Country] are to:*

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- *Provide a forum for the effective management and sharing of geospatial information across the government, private, academic and community sectors.*

- *Provide a focal point for strategic national imperatives as well as institutional requirements.*

- *Offer a governance model that is easily accessible and credible to participating institutions.*

- *Promote a model that is driven from the top, so that participating institutions are well supported and guided in their daily tasks and decisions where the mandate for geospatial information management and sharing is concerned.*

- *Mandate clear delegated levels of authority and roles and responsibilities for strengthening integrated geospatial information management*

- *Monitor and share inter-agency cost-shifting where geospatial information programs and projects complement changing cross-government practises.*

*Require regular cross-sector and cross-committee reporting and monitoring, complemented by re-evaluation of performance expectations and adjustments where necessary.*

## 1.6    ACTIONS

*In this section, list the actions and tasks that you will deliver.  These actions can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the [Country] Needs Assessment and Gap Analysis.*

*Use the Integrated Geospatial Information Framework Part 2: Implementation Guide as a reference to determine what activities can be implemented to address gaps in current capabilities. Examples are as follows.*

**Establish the [Country] Geospatial Information Coordination Unit (or Office) as the central hub for the coordination and accountability for all integrated geospatial information activities.**

Seek Administration and/or Cabinet Approval

Establish the organisational structure

Develop Terms of Reference, roles and responsibilities and code of conduct.

Determine number of staff required and create Position (job) Descriptions for permanent/part-time roles

Identify funding required for resourcing the office

Identify staff delegations and reporting structure

**Establish Leadership Committees**

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Appoint an Executive Committee/ Sub-Committee

Establish Specialist Working Groups - data, technical, policy, capacity building and financial working groups to advise the Coordination Unit and Steering Committee.

Establish an NSDI Advisory Group

Designate an NSDI Champion

Seek Cabinet Approval for committees (if required)

Identify Committee Chair, Executive Officer, Committee Members and Administrative Support

Develop Terms of Reference, and roles and responsibilities

Frequency of Meetings, and Monitoring and Reporting Structure

**Develop a Governance Model - that defines the roles and responsibilities of key institutions, and processes and procedures**

**Develop a National Geospatial Information Strategy**

**Conduct a Geospatial Socio-Economic Value Assessment**

**Develop a Monitoring and Evaluation Framework (This document – Section 12)**

## 1.7    IMPLEMENTATION TIMEFRAME

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 1.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* ***For example:***

*Approval for the creation of the [Country] Geospatial Information Coordination Unit (or Office), Geospatial Council and subcommittees.*

*Terms of Reference for the Geospatial Information Coordination Unit, Council and each Sub-committee*

*Fully functioning Committees*

*Appropriate staff with delegated powers, funding and computing resources for the Geospatial Information Coordination Unit*

*National Geospatial Information Strategy*

*Monitoring and Evaluation Framework for effective multi-stakeholder reporting of activities under the Country-level Action Plan.*

## 1.9    OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.*

***For example,*** *the outcomes from Strategic Pathway 1 are:*

- *Efficient planning and coordination of the government's geospatial information resources*

- *Strengthened institutional mandates and political buy-in*

- *A cooperative data sharing environment*

- *A shared understanding of the value of integrated geospatial information management*

## 1.10    RISK MITIGATION

*In this section identify the risk to not being able to complete the actions.  Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.* ***For example****: The ability to deliver actions associated with the Governance and Institutions Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|---|---|---|---|
| Cabinet does not endorse the proposed governance model | 1 | 5 | Seek clarification on issues and develop a new model based on feedback. |
| Stakeholder Community are suspicious of the proposed governance model and do not accept it. | 1 | 5 | Seek further consultation and feedback to understand issues with adoption |
| Lack of commitment from stakeholder community to resource committee/council member roles | 3 | 3 | Reduce scope and minimise number of meetings to what is achievable<br><br>Increase communication |

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## 1.11    BUDGET ESTIMATION

*In this section, identify the budget required for each Action. Note:* **For example:**

*Activity 1*

*Single allocation of funds of [$] to set-up the Geospatial Information Coordination Unit*

*Single allocation of funds of [$] to develop the Geospatial Information Coordination Unit organisational structure including position descriptions and committee charters/Terms of Reference*

*Recurrent budget allocation of [$] to fund the Geospatial Information Coordination Unit positions and operations*

## 1.12    FUNDING STATUS

*In this section, identify the funding sources for each activity.  If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP2.    POLICY AND LEGAL

Establish a robust legal and policy framework to institute national geospatial legalization and policy to enable the availability, accessibility, exchange, application and management of geospatial information.

## 2.1    AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for Strategic Pathway Actions.* **For example:**

**Lead Ministry:** *Ministry of Land and Land Development, Geospatial Information Coordination Unit.*

**Committees***: Legal and Policy Subcommittee with direction from Geospatial Council, and with input from the Legal and Policy Subcommittee*

## 2.2    CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* **For example:** *Additional Secretary, Ministry for Land and Land Development*

## 2.3    BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

**For example:** *Currently there are no policies or Legal Act for the management and sharing of geospatial information in [Country].   Policies are required to promote best practice in geospatial data management, particularly in the areas of accessibility to, and usability of, geospatial information.*

*When developed in conjunction with government organisations and the private sector, policies can be used to overcome many barriers to information access, such as organisational boundaries; lack of consistent information standards; and use of incompatible or inappropriate technologies*

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## 2.4    PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Policy and Legal Framework.  The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

*The proposed Policy and Legal Framework (Figure 2.2) considers all aspects of the geospatial data management life cycle: from creation and initial storage; its dissemination and use as an information product; to the time when it becomes obsolete and is deleted. The data life-cycle management approach involves institutional in-house procedures and practices for policy compliance.*

*The Proposed Policy Framework is designed to address the concerns of government agencies through an integrated approach that:*

- *Explains the role of organisations within the broader context of geospatial information management through the introduction of a Data Custodianship Policy that designates roles and responsibilities for data custodians*

- *Addresses the concerns of data security and sensitivity by providing guidelines for data release that can be adopted by organisations in the course of their normal operations*

- *Specifies the requirements for data access and allows organisations to set their own pricing conditions*

*Figure 2.1 Proposed Policy and Legal Framework*

## 2.5    OBJECTIVES

*In this section, identify the objectives for delivering the approach (Strategic Pathway).  These are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for a policy and legal review, as they explain the rationale for undertaking the action.*

*For example: The overarching aim is to address current legal and policy issues by improving the laws and policies associated with, and has impact on, geospatial information management, and by proactively monitoring the legal and policy environment, particularly with regard to designating the official responsibility for the production of data, and with respect to the issues raised by emerging technologies and the evolving innovative and creative use of geospatial information.*

*Specific objectives for formalising the Policy and Legal Framework are to provide the foundation for:*

- *Effective spatial data management and sharing*

- *Easy, efficient and equitable access to spatial data*

- *Maximise the net benefits of spatial information to the community*

- *Data custodians manage spatial data as trustees for the Strategic use of resources for planning, recording and acquiring spatial data*

- *Eliminating duplication of effort in the collection and management of spatial data.*

*Preserving confidentiality, privacy, security and intellectual property rights*

*Promoting public/private partnerships to foster innovation and value-adding.*

*Applying spatial data standards compatible and consistent with internationally recognized standards and guidelines*

*Information security of stored and transmitted spatial data and provisions for long term maintenance.*

*Developing a legal Act for data protection and spatial data sharing*

## 2.6    ACTIONS

*In this section, list the actions and tasks that you will deliver.  These actions can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the [Country] Needs Assessment and Gap Analysis.*

*Use the Integrated Geospatial Information Framework Part 2: Implementation Guide as a reference to determine what activities can be implemented to address gaps in current capabilities. Examples are as follows.*

***Undertake a Policy and Legal Review and Needs Assessment***

***Implement Policy/s***

*Prepare the Policy Implementation Plan – Business Case*

*Draft the policy documents e.g., Custodianship, Data Acquisition, Geospatial Data Management, Information Privacy, Sensitive Information, Data Access and Pricing.*

*Identify Policy Instruments - review existing legal documents for applicability to geospatial data management.*

*Release the policy documents for consultation with Stakeholders*

*Conduct a Policy Workshop*

*Analyse stakeholder feedback and adopt as appropriate*

*Develop a Policy Compliance Strategy*

*Seek approval and launch policy documents*

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*Develop a Policy Management Plan - Policy Register, Communication Strategy, Quality Audit, Policy Analysis (Measures) and Compliance Criteria*

*Develop a Reporting Framework to monitor the benefits of policy adoption overtime*

*Review policy annually*

## 1.6    IMPLEMENTATION TIMEFRAME

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 2.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* **For example:**

*A set of policies designed to promote best practices in geospatial data management and exchange*

*A Legal and Policy Management Plan, Compliance Strategy and Reporting Framework for sound policy governance*

## 2.9    OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.* **For example:**

*A policy and legal enabling environment that maximizes the utility of geospatial information and safeguards a jurisdiction or entity's interest;*

*Effective and secure management, sharing, integration and application of geospatial information;*

*A policy and legal framework that evolves over time, responds to societal progress and technological developments, and keeps pace with fast changing economic, societal and personal landscapes; and*

*Clarity in responsibilities and mandates - strengthening governance and accountability in geospatial information management.*

## 2.10 RISK MITIGATION

*In this section identify the risk to not being able to complete the actions. Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.* **For example**: *The ability to deliver actions associated with the Legal and Policy Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|---|---|---|---|
| Government institutions do not adopt the principles underpinning the policies. | 2 | 5 | Seek further consultation and feedback to understand issues with adoption and the consequences of non-compliance |
| The adoption of policy is not making a difference to data sharing practises across government. | 1 | 5 | Seek support from government leadership and conduct further education and awareness training with respect to policy compliance and value. |

## 2.11 BUDGET ESTIMATION

*In this section, identify the budget required for each Action.*

## 2.12 FUNDING STATUS

*In this section, identify the funding sources for each activity. If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP3.    FINANCIAL

Establish a business model, financial partnerships and identify investment needs and funding sources, as well as the benefits realization milestones associated with activities for strengthening integrated geospatial information management.

## 3.1    AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for Strategic Pathway Actions.* **For example:**

**Lead Ministry:** *Ministry of Land and Land Development, Geospatial Information Coordination Unit.*

**Committees**: *Geospatial Council, and with input from the Geospatial Information Coordination Unit*

**Stakeholder Community:** *Department of Finance, Cabinet, Partners*

## 3.2    CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* **For example:** Additional Secretary, Ministry for Land and Land Development

## 3.3    BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

**For example**: *Currently, there is no funding for a whole-of-government initiative to strengthen integrated geospatial information management.  Funding for geospatial data collection and management is through individual departmental budgets.  New investment is required to develop the infrastructure to enable online data sharing etc.*

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## 3.4 PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Financial Framework. The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

*Figure 3.1 Proposed Financial Framework*

## 3.5 OBJECTIVES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.* ***For example:***

- *Sustainable management of geospatial information and the staffing levels to maintain the quality of information*

- *Funding for a technology infrastructure that enables data, sharing discovery and reuse of information, and the funds to support ongoing operation and maintenance*

## 3.6 ACTIONS

*In this section, list the actions and tasks that you will deliver. These actions can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the [Country] Needs Assessment and Gap Analysis.*

*Use the Integrated Geospatial Information Framework Part 2: Implementation Guide as a reference to determine what activities can be implemented to address gaps in current capabilities. Examples are as follows.*

*Establish Financial Program Management and Leadership*

*Undertake a Review of the Current Business Models and Investment Programs.*

*Conduct a Needs Assessment and Gap Analysis to identify investments needs and sources of funding*

*Develop a Business Model for sustaining integrated geospatial information management and sharing*

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*Conduct a Socio-Economic Value Assessment*

## 3.7 IMPLEMENTATION SCHEDULE

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 3.8 DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* **For example:**

> *A report highlighting investment needs and priorities*

> *A business model for integrated geospatial information management*

> *A Socio-Economic Value Assessment*

## 3.9 OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.* **For example:**

> *A Financial Model that sustains integrated geospatial information management annually and in the longer term*

## 3.10 RISK MITIGATION

*In this section identify the risk to not being able to complete the actions.  Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.* **For example**: *The ability to deliver actions associated with the Finance Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|---|---|---|---|
| That decision-makers do not understand the value of geospatial | 2 | 5 | Produce a Geospatial strategy that articulates the benefits of geospatial information |

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| | | | |
|---|---|---|---|
| information for achieving strategic government outcomes | | | |
| | | | |

## 3.11    BUDGET ESTIMATION

*In this section, identify the budget required for each Action.*

## 3.12    FUNDING STATUS

*In this section, identify the funding sources for each activity.  If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP4.    DATA

**Establish a geospatial data framework and custodianship guidelines for best practice collection and management of integrated geospatial information that is appropriate to cross sector and multidisciplinary collaboration.**

## 4.1    AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for Strategic Pathway Actions.* **For example:**

**Lead Ministry:** *Ministry of Land and Land Development, Geospatial Information Coordination Unit.*

**Implementation Agency:** *Survey Department with guidance from the Geospatial Council and Data Subcommittee*

**Stakeholder Community:** *Organisations responsible for generating data, such as the Survey Department, Land and Land Use Policy Development, Forestry Department, Census and Statistics Department; and Government departments who are significant users of geospatial information.*

## 4.2    CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* **For example:**

- *Director Geospatial Coordination Unit, Ministry of Land and Land Development*
- *Surveyor General, Survey Department, Ministry for Land and Land Development*

## 4.3    BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

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*For example: A key deliverable of the Country-level Action Plan is the formalisation of the Geospatial Data Framework into commonly recognised themes. Currently, it is difficult to know what information is available and where it is held. This has led to several organizations collecting the same information. The Spatial Data Framework provides a way to organise geospatial data so that it can be easily accessed by users and managed by data custodians and system administrators.*

*The National Geospatial Data Framework supports best practice data management and ensures that institutions are able to meet their obligations to government, improve the efficiency of work processes, and make data available for sharing, validation and reuse. To support these obligations, it is imperative that data management is done properly from the outset; through the stages of planning, collection, analysis, publication, archiving and later reuse.*

*There are numerous geospatial data sets collected for specific business needs across government. The number and quality of these data sets is unknown. Socio-economic data is available from the Department of Census and Statistics; however, the usability of this data is not well understood.*

*There is a need to understand what geospatial information is collected, by whom and for what purpose it is used for. Building a National Geospatial Data Framework will answer these questions and provide the government with access to integrated fundamental, application and socio-economic data themes for decision making.*

## 4.4    PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Data Framework. The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

*For example: The proposed approach to the [Country] National Geospatial Data Framework is to implement three primary tiers of information:*

- *Fundamental data themes that support multiple purposes*

- *Specific business application data layers, such as flood*

- *Socio- economic layers, such as census data*

- *etc.*

## 4.5     OBJECTIVES

*In this section, identify the objectives for delivering the approach (Strategic Pathway).  These are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for new data acquisitions, as they explain the rationale for undertaking the activity.*

***For example****: The overarching aim is to enable data custodians to meet their data management, sharing and reuse obligations to government and the user community through the execution of well-defined data supply chains for organizing, planning, acquiring, integrating, curating, publishing and archiving geospatial information.*

*Specific objectives for implementing the Data Framework are to:*

> *Understand the range of geospatial data sets currently collected by government and any gaps in data coverage and quality*

> *Define data custodians for each data set to ensure the responsible management and ongoing integrity of the data sets*

> *Deliver best practice quality management processes to manage the currency, completeness, accuracy and consistency of data for a specified purpose*

> *Enhance the integration of individual and disparate data sets data using appropriate standards for the collection, maintenance and transfer of data*

> *Ensure data are compliant with laws and regulations, and managed in within approved guidelines*

> *Ensure data are held in a secure environment and with adequate provision for long-term care including disaster recovery and backup procedures*


*Figure 4.1 Proposed National Geospatial Data Framework*


## 4.6     ACTIONS

*This section lists the activities and tasks within each activity.  These activities can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the Country Needs Assessment and Gap Analysis.*

*The Integrated Geospatial Information Framework Part 2: Implementation Guide is to be used as a reference to determine what activities can be implemented to address gaps in current capabilities.*

***For example:***

> ***Conduct a Data Inventory of all data sets currently collected by government***

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*Determine gaps in national coverage and prioritize for National Geospatial Data Acquisition Program (Activity x.x)*

*Assess data sets according to 'Fit for Purpose' Criteria – currency, completeness, accuracy and coverage*

### Document the Data Framework

*Identify Data Themes and group data sets with similar characteristics*

*Incorporate Data Theme Profiles and Data Set Profiles specified for the Spatial Data Catalogue*

*Specify data standards and models*

*Set quality standards and compliance measures*

*Specify update frequency and version control*

*Prepare a Change Management Plan - Document current 'State to Future State' for each data theme/data set*

### Data Access and Pricing (to be implemented in line with Policy}

*Develop a risk assessment tool to determine data access levels – government, public views, restricted views*

*Set the pricing structure (free and fee for value-added services)*

*Provide Open Data Certification for data sets that can be accessed free*

### National Geospatial Data Framework Consultation

*Release the National Geospatial Data Framework for Consultation*

*Conduct Information Sessions and/or Workshops to achieve buy-in from participating agencies*

*Review feedback and adjust the National Geospatial Data Framework document accordingly*

### Operationalise the Geospatial Data Framework

*Establish the Governance model for the Geospatial Data Framework including leadership roles and responsibilities - Theme Sponsors, Data Custodians, Users and Project Managers*

*Develop a Geospatial Data Framework work plan with measurable outcomes*

### Document Metadata Standards

*Define the metadata schema according to the ISO-19115 Metadata standard*

*Refine the schema to suit [Country] context i.e., security classifications*

*Implement the metadata schema using the ISO 19139 Metadata XML Schema for enhanced interoperability*

*Develop an instruction manual for metadata creation for use by data custodians*

***Create Metadata***

*Develop the Data Theme Profiles*

*Develop the Data Set Profiles*

*Identify the data custodian and assign responsibility for creating the metadata according to the metadata schema and required profiles*

*Convert existing metadata records from various government agencies to a new central metadata profile (based on ISO 19139).*

## 4.7    IMPLEMENTATION SCHEDULE

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 4.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* ***For example:***

*The Geospatial Spatial Data Framework – A Publication for reference by government, private sector and the community. Includes data theme classifications, data sets, data purpose, pricing and licensing arrangements, applicable data standards, and future status of each theme.*

*Descriptive Metadata for each Data Theme in the form of a standard profile*

*Descriptive Metadata for each Data Set in the form of a standard profile*

*National Geospatial Data Dictionary*

*Core agency-level metadata for each data set schema*

*An instruction manual for metadata creation*

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## 4.9    OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.  **For example:***

*Increased range and scope of authoritative, integrated geospatial data available for decision-making and policy-setting to address economic, social and environmental challenges;*

*Critical mass of centrally coordinated data discovery to support national development and innovation, leading to economic growth and improved quality of life for residents;*

*Cost reduction through productivity improvements achieved via well-defined data supply chains that eliminate duplication and ensure standardized data is accessible to end users for integration and reuse;*

*Ability to monitor and measure progress towards achieving broad socio-economic benefits, including the sustainable development goals, through access to quality geospatial information.*

## 4.10    RISK MITIGATION

*In this section identify the risk to not being able to complete the actions.  Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place. **For example**: The ability to deliver actions associated with the Data Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|---|---|---|---|
| Changing business activities in one or more organisations | 3 | 1 | A change in custodianship to be managed according to custodianship policy/guidelines |
| A requirement for greater levels of consultation than anticipated | 3 | 2 | Focus on getting the fundamental data themes/sets right in the first instance |
| Data producers consider the task of creating metadata too hard | 3 | 1 | Produce instruction manuals and provide training in metadata creation and management and/or evaluate production process and capture metadata as |

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| | | | part of data creation or through software functions. |
|---|---|---|---|
| Insufficient time to complete the task | 3 | 3 | Prioritise data sets so that those more frequently accessed will have sufficient metadata |

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## 4.11    BUDGET ESTIMATION

*In this section, identify the budget required for each Action.*

## 4.12    FUNDING STATUS

*In this section, identify the funding sources for each activity.  If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP5.    INNOVATION

**Evaluate current and emerging technologies and processes with a view to applying innovative methods to bridge the digital divide.**

## 5.1    AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for Strategic Pathway Actions.* **For example:**

**Lead Ministry:** *Ministry of Land and Land Development, Geospatial Information Coordination Unit.*

**Implementation Agency:** *Survey Department with guidance from the Geospatial Council and Data and Technology Subcommittees*

**Stakeholder Community:** *Organisations responsible for generating data, such as the Survey Department, Land and Land Use Policy Development, Forestry Department, Census and Statistics Department; and Government departments who are significant users of geospatial information. Department of Finance, Department of Technology and Innovation.*

## 5.2    CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* **For example,** *Director Geospatial Coordination Unit, Ministry of Land and Land Development*

## 5.3    BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

**For example:** *Currently, it is not possible to access accurate and integrated geospatial information across the whole of [Country] with reliability. Investigations within government suggest that organisations spend more time collating and managing information than analysing data and generating benefits from it.  The reverse should be true.*

*The problem stems from the inability to readily share information. Technology and business processes (required to manage existing disconnected data sets) are well entrenched and therefore difficult to change - both culturally and financially.*

*Nonetheless, there are a number of technologies-driven trends that are having a positive impact in the geospatial industry, creating previously unimaginable amounts of location-referenced information and the ability to share this information easily. These developments offer significant opportunities for [Country] to escalate integrated geospatial information management capabilities.*

*In [Country] the following technologies, methods and processes are considered to be outdated and are to be explored under the {Country] Geospatial Innovation Framework:*

- *Storage and Processing Technologies*

- *Data Sharing/Map Portal*

- *Data Acquisition Methods*

- *New Geodetic Reference Frame*

- *Community Crowdsourcing and Volunteered Geographic Information Programs*

- *Etc*

## 5.4    PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as an Innovation Framework. The IGIF Part 2: Implementation Guide provides examples of elements that can be used to develop a Framework.*

*Figure 5.1 Proposed Innovation Framework*

## 5.5    OBJECTIVES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.  **For example:***

*Modern methods for data sharing and exchange between government departments and with private sector, academia and the community*

*Modern methods for collecting geospatial information*

## 5.6    ACTIONS

*This section lists the activities and tasks within each activity.  These activities can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the Country Needs Assessment and Gap Analysis.*

*The Integrated Geospatial Information Framework Part 2: Implementation Guide is to be used as a reference to determine what activities can be implemented to address gaps in current capabilities.*

***For example:***

### Conduct an Inventory of existing IT resources and capacity

### Assess Contemporary Storage

*Document the requirements for a storage solution including storage capacity needs, scalability, cost, performance, reliability and manageability*

*Options Analysis for each agency - 'Cloud' solution, Network-attached Solution (NAS) or other*

*Build/Test/Deploy*

### Implement a National Map Portal to Share Geospatial Data

*Request for Information*

*Develop high-level requirements for the National Map Portal and seek an indication of costs and capabilities through an invitation to potential vendors for a Request for Information*

Analysis of Requirements

*Develop a detailed Requirements Design that identifies the attributes, capabilities, characteristics, and qualities required of the NMP Enabling Infrastructure. It should include customer, architectural, functional and performance requirements.*

Request for Proposal – Solution architecture and development

o    Develop Proposal Documentation

o    Seek proposals for solution architecture to meet required capabilities, implementation costs and timeframes, and ongoing maintenance costs.

o    Develop a requirements matrix. This will form part of the selection criteria.

Options Analysis

- o Compare costs (development, installation, ongoing maintenance)
- o Comparison of capabilities against the Requirements Matrix
- o Select an option (supplier) based on outcomes of cost/benefits analysis

System Design

- o Based on the solution architecture, the developer to undertake the detailed design of solutions in order to refine requirements and develop a detailed implementation plan

Build, Test and Deploy

- o Deploy the map viewer and geospatial services for visualisation and querying of agency data.
- o Connect data services from external agencies to allow refinement of technology, testing of the system and development of prototypes
- o Connect agency data through to the Map Portal
- o Deploy security services for identity and access management.
- o Specify the catalogue services including the ability to upload and export metadata (see interdependent Project 2.6)
- o Build the data upload and download capabilities.
- o Develop e-commerce facilities for chargeable products, such as subscriptions, cost per unit download
- o Incorporate metering services for availability, capacity, and incident and configuration management

Pilot the Methods

> *Develop a Pilot Project to demonstrate proof-of-concept and provide a basis for refinement of the solution for other Thematic Areas*

Ongoing Operations Management

- o Develop a Business Operations Management Plan including hours of operation, incident management and monitoring and reporting

## 5.7    IMPLEMENTATION SCHEDULE

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

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## 5.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* **For example:**

> *An operational National Map Portal that delivers online access to layers of integrated geospatial information for viewing and download*

> *A mechanism for government organizations to easily upload data for access by other government agencies, private sector, academia and the broader community.*

> *A National Geospatial Data Catalogue (i.e., XML document)*

> *A 'virtual' data warehouse environment that is a combination of centralized and decentralized data stores*

## 5.9    OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.* **For example:**

> *Government programs and systems that enable state-of-the-art geospatial information management and facilitate innovation*

> *National Map Portal for visualization and accessing geospatial information*

## 5.10   RISK MITIGATION

*In this section identify the risk to not being able to complete the actions.  Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.* **For example**: *The ability to deliver actions associated with the Innovation Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|---|---|---|---|
| Funding for development of the National Map Portal is not available | 1 | 5 | Implement essential components in first year and progressively fund new functionality overtime |

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| | | | |
|---|---|---|---|
| The human resources for National Map Portal development are not available | 1 | 5 | Go out to market for development by external company |
| Limited skills in online technologies | 1 | 2 | Provide training and skills development |
| Cost of data storage is too high and not a priority for some agencies | 3 | 1 | Implement a whole-of-government warehouse where economies of scale are likely to produce a better return on investment and assist small agencies to come on board |
| Data custodians do not make data available in an accessible storage environment | 3 | 1 | Familiarise agencies with data storage principles and benefits |

## 5.11    BUDGET ESTIMATION

*In this section, identify the budget required for each Action.* **For example:**

**Activity 23**

Single allocation of funds [$] for a cloud storage solution to enable the development of a centralised data dissemination environment to be known as the National Geospatial Data Warehouse

Recurrent Budget allocation of [$] for maintenance costs associated with the warehouse

Agency specific data dissemination environments are not costed at this time

**Activity 24**

Single Allocation of funds [$] to develop the National Map Portal High-level Requirements for the Request for Information

Single Allocation of funds [$] to develop the National Map Portal Detailed Requirements Design

Single allocation of funds [$] to build the National Map Portal ITC infrastructure.

Recurrent Budget allocation of [$] to fund the ongoing operational requirements of the National Map Portal.

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## 5.12    FUNDING STATUS

*In this section, identify the funding sources for each activity.  If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP6.    STANDARDS

**Adopt best practice standards and compliance mechanisms that enable legal, data, semantic and technical interoperability.**

## 6.1    AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for Strategic Pathway Actions.* **For example:**

**Lead Ministry:** *Ministry of Land and Land Development, Geospatial Information Coordination Unit.*

**Implementation Agency:** *Survey Department with guidance from the Geospatial Council, and Data and Technology Subcommittees*

**Stakeholder Community:** *Organisations responsible for generating data, such as the Survey Department, Land and Land Use Policy Development, Forestry Department, Census and Statistics Department; and Government departments who are significant users of geospatial information. OGC, W3C*

## 6.2    CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* **For example:**

- *Director Geospatial Coordination Unit, Ministry of Land and Land Development*

- *Surveyor General, Survey Department, Ministry for Land and Land Development*

## 6.3    BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

**For example:** *In [Country], data are managed in information silos across government with several versions of geospatial data being created.  This is primarily from a lack of awareness that data already exists, but also because data formats are not always compatible across organisations and data structures do not suit multiple government business needs. Data reuse and sharing is therefore problematic.  Cross-agency data*

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*sets are currently inconsistent in terms of currency and accuracy. Updates to data need to be manually reworked causing time delays and increased overheads.*

*There is a significant opportunity to derive benefits from the removal of functional impediments which give rise to duplication in data collection, access limitations and costly inefficiencies.*

*This can be achieved through interoperability and agreements to share data using standards that support information exchange between cooperating organisations.*

## 6.4     PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Standards Framework.  The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

*Figure 4.1 Proposed Standards Framework*

## 6.5     OBJECTIVES

*In this section, identify the objectives for delivering the approach (Strategic Pathway).  These are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for reviewing the current business model, as they explain the rationale for undertaking the activity.*

***For example:*** *The overarching aim is to enable different information systems to communicate and exchange data, enable knowledge discovery and inferencing between systems using unambiguous meaning, and provide users with lawful access to and reuse of geospatial information.*

*Specific objectives for implementing the Standards Framework are to:*

   *Have consistent use of data standards across the government sector*

## 6.6    ACTIONS

*This section lists the activities and tasks within each activity.  These activities can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the Country Needs Assessment and Gap Analysis.*

*The Integrated Geospatial Information Framework Part 2: Implementation Guide is to be used as a reference to determine what activities can be implemented to address gaps in current capabilities.*

***For example:***

> ***Conduct and Needs Assessment into data standards***
>
> > *Review how standards are applied*
> >
> > *Define what data standards are required for data sharing interoperability*
> >
> > *Conduct an inventory of all the data standards currently in use*
> >
> > *Adopt or Adapt a Standard for each requirement. i.e., data quality, data structures, data formats etc.*
> >
> > *Government to mandate*
> >
> > *etc.*

## 6.7    IMPLEMENTATION SCHEDULE

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 6.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions. **For example:***

> *A published list of nationally agreed data standards*
>
> *System interoperability and data integration through compliance with National data and IT standards*
>
> *Agreed Metadata standard*
>
> *Guidelines for the adoption of standards*

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## 6.9      OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.  **For example:***

*All government geospatial information is in a format that can be easily reused and integrated with other information*

## 6.10      RISK MITIGATION

*In this section identify the risk to not being able to complete the actions.  Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place. **For example**: The ability to deliver actions associated with the Innovation Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|---|---|---|---|
| Departments fail to adopt metadata standards | 3 | 3 | Conduct training in how to create metadata |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## 6.11      BUDGET ESTIMATION

*In this section, identify the budget required for each Action.*

## 6.12      FUNDING STATUS

*In this section, identify the funding sources for each activity.  If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP7.     PARTNERSHIPS

Establish effective cross-sector and interdisciplinary cooperation, industry and private sector partnerships, and international cooperation to sustain integrated geospatial information management.

## 7.1     AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for the Strategic Pathway Actions.* **For example:**

**Lead Ministry:** *Ministry of Land and Land Development,*

**Implementation Agency:** *Geospatial Information Coordination Unit.*

**Stakeholder Community:** *UNGGIM, Earth observation data providers e.g., GEO, Copernicus Program. Development Aid, Organisations responsible for generating data, such as the Survey Department, Land and Land Use Policy Development, Forestry Department, Census and Statistics Department; and government departments who are significant users of geospatial information.*

## 7.2     CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* **For example:**

- *Director Geospatial Coordination Unit, Ministry of Land and Land Development*

## 7.3     BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

**For example:** *In [Country], partnerships are often avoided in favour of the traditional siloed approach to geospatial information management.  Common problems include a lack of commitment and unwilling participants, differences in philosophies or work styles and inadequate understanding of roles and*

*responsibilities, fear of hidden agendas, and financial and time commitments that are perceived as outweighing potential benefits.*

*Nonetheless {Country] recognises the value in building partnerships is being and to draw on a wider pool of technical expertise, experience, skills, labour and networks when working towards geospatial information management gaols, as well as reducing costs through shared resources and avoiding duplication.*

*[County's] geospatial Information management goals cannot be achieved by any one organisation alone and therefore the Country-level Action Plan includes the investigation into partnerships to bring about positive change.*

## 7.4    PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Partnership Framework.  The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

*For example: The proposed approach to the Partnership Framework is to bring diverse contributions from various partners together.  Each collaboration is linked by a common vision to work towards achieving integrated geospatial information management goals.*

*Figure 7.1 Proposed Partnership Framework*

## 7.5    OBJECTIVES

*In this section, identify the objectives for delivering the approach (Strategic Pathway).  These are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for evaluating potential partnerships, as they explain the rationale for undertaking the activity.*

*For example: The overarching aim is to create and sustain the value of geospatial information through a culture based on trusted partnerships and strategic alliances that recognize common needs and aspirations, and national priorities.*

*Specific objectives for implementing the Partnership Framework are:*

   *Planning, recording and acquiring geospatial information through one a coordinated approach*

*Clear oversight of nationally/internationally funded projects that acquire geospatial information*

*Acquiring multi-user (shared) licenses for imagery to enable reuse by many organizations*

*Build cooperative working relations between organizations that contribute different skills, ideas, financial and technical support.*

*Leveraging greater value through economies of scale and consolidated spend*

*Establish an annual program of work where organizations can register their requirements annually*

*Identify opportunities for sharing knowledge and resources*

*Open up funding and in-kind opportunities for government*

## 7.6  ACTIONS

*This section lists the activities and tasks within each activity.  These activities can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the Country Needs Assessment and Gap Analysis.*

*The Integrated Geospatial Information Framework Part 2: Implementation Guide is to be used as a reference to determine what activities can be implemented to address gaps in current capabilities.*

***For example***:

### Establish a Data Acquisition Partnership Program

*Establish norms and a communication structure for the program*

*Initiate a Collaborative Agreement*

*Create a Collaborative Work Plan*

*Implement a Technology Platform to manage data acquisition requests, prioritisation, and schedule notifications*

*Establish a Panel of Suppliers and quality criteria for data acquisition*

*Determine the Data Acquisition Funding Model*

*Identify data acquisition types and distribution mechanisms*

*Set licensing conditions*

*Develop the Reporting Framework and timeframes (i.e., bi-monthly updates)*

## 7.7    IMPLEMENTATION SCHEDULE

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 7.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* **For example:**

*A National Geospatial Data Acquisition Program Governance Model*

*Annual National Geospatial Data Acquisition Program made available online*

## 7.9    OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.* **For example:**

*Effective cooperation across disciplines and sectors, private sector and academia, communities and stakeholders, levels of governments, regional and international cooperation;*

*Enhance efficiency of development efforts through the exploitation of complementary advantages of those involved in a partnership;*

*The diversity that partnerships bring to organizational knowledge, expertise and proficiencies;*

*Complementary skills, experiences, knowledge and resources; and*

*Strategic and synergistic endeavors, and trusted partnerships that recognize common needs, aspirations, goals, and national priorities.*

## 7.10    RISK MITIGATION

*In this section identify the risk to not being able to complete the actions.  Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.* **For example**: *The ability to deliver actions associated with the Innovation Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|------|---------------------------|--------------------------|---------------------|

| | | | |
|---|---|---|---|
| Lack of commitment to the partnership/unwilling participants | | | Ensure all parties in the relationship have at least one goal on which they are jointly focused for the purpose of the work being undertaken |
| Organisations do not wish to be bound to an annual Spatial Data Acquisition Program | 2 | 1 | Include quarterly review to cater for agency changing priorities |
| Organisations distrustful of being able to obtain the right information at the right time | 3 | 1 | Develop the annual program and seek early clarification from agencies on scheduled activities and specifications |
| Partnership is challenging to maintain | | | Set in place an evaluation process and designated champions |

## 7.11    BUDGET ESTIMATION

*In this section, identify the budget required for each Action.*

## 7.12    FUNDING STATUS

*In this section, identify the funding sources for each activity.  If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP8.  CAPACITY AND EDUCATION

**Establish enduring capacity building programs and education systems so that geospatial information management and entrepreneurship can be sustained in the longer term.**

## 8.1  AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for the Strategic Pathway Actions.*
***For example:***

***Lead Ministry:*** *Ministry of Land and Land Development,*

***Implementation Agency:*** *Geospatial Information Coordination Unit.*

***Stakeholder Community:*** *Organisations responsible for generating data, such as the Survey Department, Land and Land Use Policy Development, Forestry Department, Census and Statistics Department; and government departments who are significant users of geospatial information.*

## 8.2  CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* ***For example****:*

- *Director Geospatial Coordination Unit, Ministry of Land and Land Development*

## 8.3  BACKGROUND AND RATIONALE

*In this section, provide information for the reader so that they understand why the activities have been identified.  This section includes a brief statement on the current situation and gaps in capabilities.*

***For example:*** *Having the technology to share data is only one aspect of strengthening integrated geospatial information management.  It is just as important to have a high level of computer literacy skills within the community to ensure its use; and the professional skills in the workforce, to use it innovatively.*

*In [Country] there is a need to actively promote geospatial information and advertise the National Map Portal to the broader community.  Whilst internet and web-based products are becoming increasingly*

*popular, the majority of the community are not aware of how geospatial information can be used. Yet it is the community that can provide valuable local spatial information. Limited computerisation and low computer literacy among the user population, means that a large component of the intended user group will not realise the full benefits of being able to access integrated spatial information online.*

*Making innovation work requires a workforce with a range of sophisticated skills. Building this capacity is crucial for economic development and growth. This calls for the active promotion of the spatial sciences and increased government partnerships with universities and training providers to ensure the profession has the necessary skills.*

## 8.4 PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Capacity and Education Framework. The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

***For example***: *The proposed approach to the Capacity and Education Framework is to ensure the best use of spatial information within the professional and general community the proposed approach to education and awareness is as follows:*

- *Communication: Establish a proper understanding of geospatial information and the Country Geospatial Strategy among stakeholders and general public to increase their understanding of the use of spatial information technologies*

- *Capacity development: Enhance the skills of individuals and social groups through participatory training in the use of the National Map Portal*

- *Empowerment: Develop organizational competency, and in particular that of data custodianship, so that they can take responsibility for their role in strengthening integrated geospatial information management*

- *Public Awareness: Develop understanding within the community about integrated geospatial information management and National Map Portal through various media*

- *Participation: Progressive empowerment from informing stakeholders, to consultation, to consensus building, to devolved decision-making, risk taking and partnerships.*

*Figure 7.1 Proposed Capacity and Education Framework*

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## 8.5 OBJECTIVES

*In this section, identify the objectives for delivering the approach (Strategic Pathway).  These are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for analysing current capacity, as they explain the rationale for undertaking the action.*

***For example:*** *The overarching objective is to increase the awareness and level of understanding of geospatial information science.  This includes developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities require to utilize geospatial information for decision-making.*

*Specific objectives for implementing the Capacity and Education Framework are to:*

*Actively raise awareness of spatial information and promote the use of the National Map Portal to the community through various media.*

*Capacity planning to identify the spatial core competencies and common skills sets required and incorporate these into existing training programs to increase the uptake of spatial technologies in the government sector.*

*Support research, innovation and skills development through open access to spatial information.*

*Change social norms, values, perceptions, and conversations about the value of spatial information through a communications program*

*Remove barriers and create incentives to use spatial information more broadly and as part of daily life*

## 8.6 ACTIONS

*This section lists the activities and tasks within each activity.  These activities can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the Country Needs Assessment and Gap Analysis.*

*The Integrated Geospatial Information Framework Part 2: Implementation Guide is to be used as a reference to determine what activities can be implemented to address gaps in current capabilities.*

***For example:***

> ***Develop an Education and Awareness Strategy to promote an understanding of how integrated geospatial information supports economic, environmental and societal needs***

> ***Prepare a training package and deliver seminars and training sessions according to the Strategy and Plan***

*Develop a Communications Plan to sustain behavioural change over time by targeting different audiences with different messages and using different arguments*

*Develop a cross-government Capacity Plan to target professional development in geospatial technologies*

*Conduct Education and Awareness activities to increase community participation as volunteer geographic information providers*

*Develop an Innovation Program to incentivise the use of spatial data*

## 8.7    IMPLEMENTATION SCHEDULE

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 8.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* **For example:**

*Education and Awareness Program*

*Communications Plan*

*Capacity Plan*

*Innovation Program*

## 8.9    OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.* **For example:**

*Broad scale awareness and capabilities in spatial technologies through capacity and education programs and awareness raising.*

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*A heightened awareness and increased adoption of geospatial technologies by the government and private sector leading to the creation of innovative solutions that contribute to economic growth*

*An increase in the number of graduating professionals in geospatial information-related sciences.*

*An increase in the number of primary and secondary school children with knowledge and skills in geography and geospatial science.*

## 8.10    RISK MITIGATION

*In this section identify the risk to not being able to complete the actions.  Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.* ***For example****: The ability to deliver actions associated with the Innovation Strategic Pathway has the following associated risks:*

| **Risk** | **Likelihood** (1 low-5 high) | **Severity** (1 low-5 high) | **Mitigation Strategy** |
|---|---|---|---|
| There is no increase in the use of spatial information via the National Map Portal | 1 | 1 | Refine the Education and Awareness Strategy |
| There is no evidence to indicate an increase in public private partnerships | 3 | 3 | Review policy |
| An increase in community volunteered data is not evident | 2 | 1 | Increase the number of community-based awareness programs |

## 8.11    BUDGET ESTIMATION

*In this section, identify the budget required for each Action.*

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## 8.12 FUNDING STATUS

*In this section, identify the funding sources for each activity. If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# SP9.    COMMUNICATION AND ENGAGMENT

**Identifies and involves stakeholders (including the general community) as integral to integrated geospatial information management systems and recognizes their buy-in is critical to success.**

## 9.1    AGENCIES INVOLVED

*In this section, identify the stakeholder with interest or responsibilities for the Strategic Pathway Actions.*
***For example:***

***Lead Ministry:*** *Ministry of Land and Land Development,*

***Implementation Agency:*** *Geospatial Information Coordination Unit.*

***Stakeholder Community:*** *Organisations responsible for generating data, such as the Survey Department, Land and Land Use Policy Development, Forestry Department, Census and Statistics Department; and government departments who are significant users of geospatial information.*

## 9.2    CONTACT PERSONS

*In this section, identify the person/s to be contracted for more information on the Strategic Pathway Actions.* ***For example:*** *Director Geospatial Coordination Unit, Ministry of Land and Land Development*

## 9.3    BACKGROUND AND RATIONALE

*Information for the reader so that they understand why the activities have been identified. This section includes a brief statement on the current situation and gaps in capabilities.*

***For example:*** *Stakeholders are integral to the development of the [Country's] integrated geospatial information and therefore buy-in and commitment, particularly from Ministers and senior management, is critical to success. It is therefore important to develop a supportive governance environment that embraces stakeholders and acknowledges the importance of their role.*

*It is recognised that potential stakeholders will only become active participants if they see advantages for their organisations and if they do not feel threatened by the governance arrangements. The primary stakeholders for [Country] are:*

- *Government data suppliers and users. - their role in integrated geospatial information management is largely defined by government policies regarding data management, distribution and access, and as a consequence they need to be included in the development of the associated frameworks.*

- *Commercial entities - they play a strong role as users of the National Map Portal; however, they may also be suppliers of primary and value-added data in the longer term, and therefore need to be consulted.*

- *The end-user community – they are concerned about data access, functionality of the infrastructure tools, the amount and quality of the content - its accessibility, fees for data access and usage policies.*

- *Key decision makers - they need to be kept informed about progress towards strengthening geospatial information management, and the benefits that are being progressively realised.*

## 9.4 PROPOSED APPROACH

*In this section, provide a broad overview of how each of the actions in the strategic pathway interrelate. It is a good idea to include a diagram to assist the reader in understanding the broader framework in which the activities are contained, such as a Communication and Engagement Framework. The IGIF Part 2: Implementation Guide provides some examples of elements that can be used to develop a Framework.*

*For example: The proposed approach to the Communication and Engagement Framework achieves a participative approach to cooperation and coordination in order to build on common interests and requirements. The approach will be documented as a Stakeholder Engagement Model and Plan (to be developed).*

*A stakeholder requirements matrix will be used to determine common, essential and aspirational needs. The following principles are adopted:*

- *Apply open and effective communication strategies*

- *Use clear and agreed information and feedback processes*

- *Work collaboratively to seek mutually beneficial outcomes where feasible*

- *Be inclusive by recognising, understanding and involving stakeholders in the process*

- *Conduct engagement in a manner that fosters mutual respect and trust*

*Identifying stakeholders will require the creation of a geospatial information community profile and include groups who traditionally are underrepresented in planning efforts.*

*Figure 7.1 Proposed Communication and Engagement Framework*

## 9.5    OBJECTIVES

*In this section, identify the objectives for delivering the approach (Strategic Pathway).  These are important to include in the Country Action plan as they can be incorporated in future business cases or when seeking approvals, such as for developing a communications plan, as they explain the rationale for undertaking the activity.*

***For example****: The overarching objective is to deliver effective and efficient communication and engagement processes to encourage greater input from stakeholders in order to achieve transparent decision-making processes when implementing the [Country] Action Plan.*

*Specific objectives for implementing the Communication and Engagement Framework are to:*

*Understand stakeholder concerns, views, requirements and expectations*

*Better awareness of and ability to deal with issues of significance to stakeholders*

*Respond coherently and appropriately to stakeholder needs*

*Enhance the understanding and acceptance of {Country's] Action Plan and the need to strengthen integrated geospatial information management.*

*Early identification of potential problems leading to better risk management*

*Provide transparency, accountability and integrity in planning and implementation*

*Opportunities to develop long-term and trusted relationships*

## 9.6    ACTIONS

*This section lists the activities and tasks within each activity.  These activities can then be incorporated into a Gantt chart (see section below).*

*Actions are to be determined through the Country Needs Assessment and Gap Analysis.*

*The Integrated Geospatial Information Framework Part 2: Implementation Guide is to be used as a reference to determine what activities can be implemented to address gaps in current capabilities.*

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*For example:*

### *Develop the Stakeholder Engagement Model - PLAN, ENGAGE, RESPOND and MEASURE.*

*Develop the Stakeholder Engagement Plan including:*

*Geospatial Information Community Profile*

*Stakeholder Engagement Matrix: Identification of stakeholders and their level of influence*

*Design of the engagement process and methods including a checklist and communication plan*

*Consideration of logistics*

*A Risk Management Model*

### *Engage with Stakeholders*

*Case Study the Stakeholder Engagement Model and Processes*

*Evaluate the Engagement Process*

### *etc*

## 9.7    IMPLEMENTATION SCHEDULE

*In this section include a Gantt chart (also referred to as a schedule) so it is easy to visualise the actions and their sequencing.  This chart may include timeframes, and the interdependencies between actions and tasks within and across other strategic pathways.*

## 9.8    DELIVERABLES

*In this section, include the products/systems/reports that are expected to be delivered as a consequence of completing the actions.* *For example:*

*A high-quality Stakeholder Engagement Model and Plan (Document)*

*Geospatial Information Community Profile*

*A Stakeholder requirements matrix – describing common, essential and aspirational needs*

*Stakeholder Engagement Monitoring and Evaluation Plan and checklist*

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## 9.9 OUTCOMES

*In this section, identify the things that change because an action has been completed i.e., the real or tangible differences that are being made towards strengthening integrated geospatial information management, and as a consequence to achieving on the SDGs and thus to people's lives.* **For example:**

*Heightened awareness and actively engaged in the process of strengthening geospatial information management.*

*Greater synergies and increased use of geospatial information within government, the private sector, academia and the broader community leading to innovations and major accomplishments.*

*Strong sense of trust in government information and confidence in its use.*

*Opportunities to enhance development and increase the benefits of geospatial information to communities and country.*

*Geospatial agencies and their staff ready to meet national demands for digital data and services through increased awareness, and an ability to contribute and influence government policy.*

## 9.10 RISK MITIGATION

*In this section identify the risk to not being able to complete the actions. Identify the risks, their likelihood and severity, and the risk mitigation strategy that needs to be put in place.* **For example***: The ability to deliver actions associated with the Innovation Strategic Pathway has the following associated risks:*

| Risk | Likelihood (1 low-5 high) | Severity (1 low-5 high) | Mitigation Strategy |
|---|---|---|---|
| Available spatial data sets do not meet user requirements | 1 | 5 | Seek further consultation and feedback to understand issues with adoption. |
| Funding not available to meet all user requirements | 4 | 2 | Produce 5-year Plan showing future developments and disseminate to stakeholders. In this way stakeholders will know that their needs are being considered even though they are not a priority. |

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## 9.11    BUDGET ESTIMATION

*In this section, identify the budget required for each Action.*

## 9.12    FUNDING STATUS

*In this section, identify the funding sources for each activity.  If unknown describe the strategies being put in place to achieve funding or in-kind support.*

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# UDGET ESTIMATES

*s for project activities identified in the Action Plan.*

MATES

*elow, summarise the budget items allocated to actions under each strategic pathway.*

| e | Project Description | Recurrent Funding | Consultant Fees | Data and Technology | Total C Requ |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

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# 11. IMPLEMENTATION SCHEDULE

*In this section, included a Gantt chart that shows Action timeframes, and the interdependencies between the major activities within and across strategic pathways.  This is to be a visualisation of the whole Action Plan.*

# 12. ACTIVITY SHEETS

*This section includes an example Activity Sheet that can be incorporated into business cases or used to communicate information on individual activities to stakeholders. An example is provided.*

| Activity 1: Establish Geospatial Information Coordination Unit | |
|---|---|
| **Lead Implementing Agency** | *Example: Department of Lands* |
| **Objective** | *What is the problem or opportunity that the activity will address?*<br><br>*(NOTE: This is derived from the SWOT Analysis)*<br><br>**For example**: Lack of Leadership and coordination across agencies |
| **Background and rationale** | *Describe the social, economic, political and or environmental problem to be addressed by the Activity.*<br><br>*(NOTE: This is derived from the PEST Analysis and strategic Alignment Study)*<br><br>**For example**:<br><br>A number of departments and research institutions collect and use spatial information. However, there is currently no clear accountability for the management and exchange of this information. This has led to a lack of ICT interoperability and limited data standards where spatial data is concerned. Cross-agency coordination of spatial information is inadequate and as a consequence planning and decision-making is made difficult because spatial data is not easily shared and reused.<br><br>Current institutional coordination and collaboration needs to be strengthened. Institutional arrangements are based on hierarchical channels of information flows. This has created information silos and the approach it subject to a high degree of bureaucracy for data requests, preparation and signing of agreements, and data transfers.<br><br>The implementation of new data access technologies is not enough to resolve data sharing issues. There is a need to develop a more enduring underpinning governance structure for spatial data access and use. The Geospatial Coordination Unit will deliver whole-of-government governance arrangements and the ability to balance public and private sector needs, and the mandate to encourage compliance with data sharing policies and standards. The Unit's overarching governance approach also recognizes the potential contribution that research institutions and the community can make as producers and users of data. |
| **Description** | *Explain what the Project will deliver.* |

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*Refer to the IGIF Part 2: Implementation Guide for more information.*

*For example*: *This Activity will establish the [Country] Geospatial Information Coordination Unit (or Office) as the central hub for the coordination and accountability for all integrated geospatial information activities.*

*This unit is to be managed by [Department] and will be comprised of six staff:*

> *Director Geospatial Information Coordination Unit*

> *1 Project Coordinator – Map Portal, Data Warehouse,*

> *1 Project Coordinator – Spatial Data Framework and Catalogue*

> *1 Project Manager – Country-level Action Plan Implementation and Monitoring and Evaluation, Stakeholder Engagement, Education and Awareness Program etc.*

> *1 Policy Officer - MOU Spatial Data Management, Policy development, Legal Act, Annual Policy Review*

> *Administrative Assistant etc.*

*The Geospatial Information Coordination Unit will:*

> *Provide a forum for the effective management and sharing of spatial information across the government sector.*

> *Work collaboratively with spatial data suppliers, service providers and users to achieve the goals and support the strategic priorities of government.*

> *Ensure that integrated geospatial information management is approached in a multi-disciplinary and multi-sectoral way.*

> *Promote the use and innovation potential of geospatial information*

*The Geospatial Information Coordination Unit is not a spatial data producing agency, nor is it responsible for ongoing daily ICT operations.*

| *Actions and Milestones* | *Start Date* | *End Data* |
|---|---|---|
| *Note: Refer to Recommended Task #13 – Strategic Pathway Actions and Sub Tasks, which identifies the activities and subtasks* | | |
| *Seek Cabinet Approval* | | |
| *Establish the organizational structure* | | |
| *Develop Terms of Reference, roles and responsibilities and code of conduct.* | | |
| *Create Position (job) Descriptions for permanent/part-time roles* | | |

| | | |
|---|---|---|
| *Identify funding required for resourcing the office* | | |
| *Identify staff delegations and reporting structure* | | |
| **Success Indicators** | **2020** | **2025** |
| *Refer to the next section to select the most appropriate success indicators* | | |
| | | |
| | | |

| **Additional Information** | |
|---|---|
| Estimated Budget | *Refer to Recommended Task #15 – Budget Estimations for guidance on how to estimate the budget* |
| Alignment to government programs | *Link to government plans e.g., National Development Plan* <br><br> *Refer to Recommended Task #8 – Strategic Alignment (and Benefits) for guidance on aligning with national strategies and plans.* |
| Alignment to sustainable development goals | |
| **Contact Information** | |
| Name of responsible person from implementing agency | *This will be the Project Leader* |
| Title, Department | |
| Major Stakeholders to be consulted - CSOs, private sector, multilaterals, working groups | *Refer to Recommended Task #2 – Stakeholder Identification and Analysis to prepare a list of stakeholders* |

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THE 'SELF-PACED, LEARN AND DISCOVER' APPROACH TO IMPLEMENT AT COUNTRY-LEVEL

UN-GGIM
UNITED NATIONS
COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

# ONITORING AND EVALUATION

the completed table from Recommended Task #15 - Success Indicators.

c lights method (or similar) to indicate progress towards achieving your objectives.  Delete the circles that do not apply.  Quarterly

Reporting:

*n =*          *Objective has been achieved*

*er =*         *Objective is on track to be delivered*

*          Objective is delayed and requires review and action*

| thway | Objective | Outcomes | Success Indicators | Means of Verification | Traffic Lights | Progress Comn |
|---|---|---|---|---|---|---|
| d<br><br>rship,<br>del,<br><br>and a<br>osition<br>i-<br>multi-<br>ation<br>nt. | The objective is to attain political endorsement, strengthen institutional mandates and build a cooperative data sharing environment through a shared understanding of the value of an Integrated Geospatial Information Framework, and the roles and responsibilities to achieve the vision. | *Achievement of [Country's] strategic geospatial information management goals through effective leadership and coordination* | *Political endorsement for the Geospatial Information Strategy has been attained*<br>*Roles and responsibilities to achieve the vision have been assigned at a high level* | *Evidence of government mandate issued*<br>*Relevant Ministerial or departmental appointments identified* | 🔴<br><br>🟠<br><br>🟢 | |

*"Strengthening National Geospatial Information Management Capacities towards Implementing the 2030 Agenda for Sustainable Development"*

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| **t legal** **work** **nal** **zation** **able the** **change,** **mation.** | The objective is to address current legal and policy issues by improving the laws and policies associated with, and have an impact on, geospatial information management, and by proactively monitoring the legal and policy environment, particularly with respect to emerging technologies and the evolving innovative and creative use of geospatial information. | *All government agencies that collect and use geospatial information comply with laws and policies relating to geospatial information management* | *A Legal and Policy Framework for Geospatial Information established* *Laws and policies have been reviewed in the context of emerging technologies* | *Evidence that government agencies are complying with laws and policies relating to geospatial information management* | 🔴 🟠 🟢 | |
| **ness** **d** **ent** **ng** **as the** **tion** **ciated** **or** **patial** | The objective is to achieve an understanding of the implementation costs and ongoing financial commitment necessary to deliver integrated geospatial information management that can be sustained and maintained in the longer term. | *A Financial Model that sustains integrated geospatial information management in the longer term* | *Costing for the implementation and long-term sustainability of the Integrated Geospatial Information framework has been undertaken and is understood* | *Government budget* | 🔴 🟠 🟢 | |

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| | The objective is to enable data custodians to meet their data management, sharing and reuse obligations to government and the user community through the execution of well-defined data supply chains for organizing, planning, acquiring, integrating, curating, publishing and archiving geospatial information. | *High quality geospatial information is available to end users through well-defined supply chains* | *Organization is actively participating in quality information management and data sharing* | *Number participating organizations*<br>*The range and number of datasets available*<br>*Geospatial Metadata* | 🔴<br>🟠<br>🟢 | |
| | The objective is to stimulate the use of the latest technologies, process improvements and innovations so that governments, no matter what their current situation is, may leapfrog to state-of-the-art geospatial information management systems and practices. | *Government programs and systems that enable state-of-the-art geospatial information management and facilitate innovation* | *Access to geospatial information has enabled the development of new services and Apps* | *Evidence of new services and Apps* | 🔴<br>🟠<br>🟢 | |

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| ctice | The objective is to enable different information systems to communicate and exchange data, enable knowledge discovery and inferencing between systems using unambiguous meaning, and provide users with lawful access to and reuse of geospatial information. | *All government geospatial information is in a format that can be easily reused and integrated with other information* *There is public confidence in the security of private information* | *An increase in the number of end users accessing and reusing government geospatial data* | *The number of end user data downloads recorded* | 🔴 🟠 🟢 | |
| ve | The objective is to create and sustain the value of geospatial information through a culture based on trusted partnerships and strategic alliances that recognize common needs and aspirations, and national priorities. | *Data acquisition is characterized by cross-sector cooperation and collaboration* | *Government departments are participating in the National Geospatial Data Acquisition Program* | *The number of participating departments* | 🔴 🟠 🟢 | |
| ducation | The objective is to raise awareness and develop and strengthen the skills, instincts, abilities, processes and resources that organizations and communities require to utilize geospatial information for decision-making. | *A heightened awareness and adoption of geospatial technologies by organizations and the community* | *Geospatial information is regularly used by organizations and the community* | *The number of end user data views (website hits) recorded* | 🔴 🟠 🟢 | |

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| **n and**<br><br>nvolves<br>ncluding<br>mmunity)<br>tegrated<br>mation<br>ystems,<br>their<br>to | The objective is to deliver effective and efficient communication and engagement processes to encourage greater input from stakeholders in order to achieve transparent decision-making processes when implementing the Integrated Geospatial Information Framework. | *Stakeholders are actively engaged in the process of strengthening integrated geospatial information management* | *Stakeholders have a sense of being valued contributors to the outcomes of decisions regarding integrated geospatial information management.* | *The results of a stakeholder survey* | 🔴<br>🟠<br>🟢 | |

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