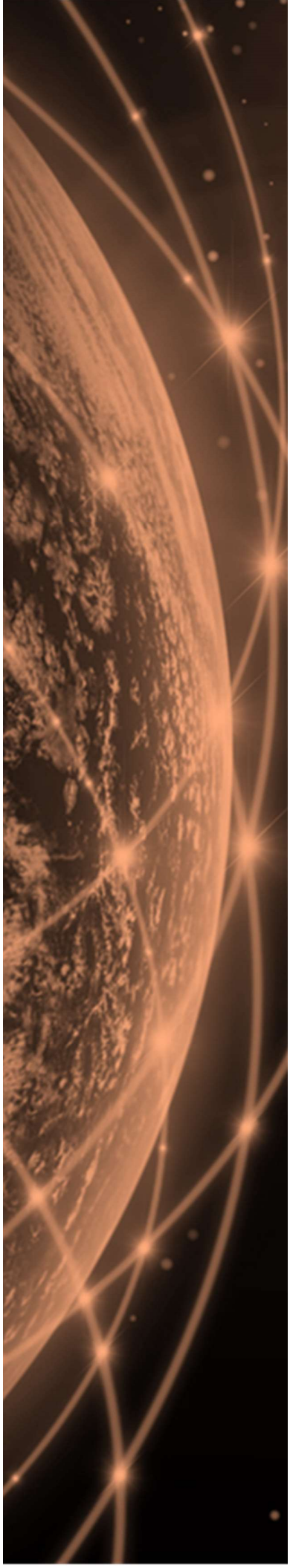

Strategic Pathway 7

Partnerships

*This **strategic pathway** establishes cross-sector and interdisciplinary cooperation, coordination and collaboration with all levels of government, the geospatial industry[1], private sector, academia, and the international community, as an important premise to developing and sustaining an enduring nationally integrated geospatial information framework.*

*The **objective** is to create and sustain the value of geospatial information through a culture based on inclusion, trusted partnerships and strategic alliances that recognize common needs, aspirations and goals, towards achieving national priorities and outcomes.*

Summary

The 2030 Agenda for Sustainable Development is anchored by the premise that "all countries and all stakeholders, acting in collaborative partnership, will implement this plan". As an integrated plan of action, the 2030 Agenda identifies **Partnerships**, along with People, Planet, Prosperity and Peace, as one of its five defining pillars; and with a specific target to encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

Partnership allows for coordination of policies and strategies and their implementation. Such joint efforts can leverage the maximum potential from resources, avoid redundant or overlapping investments, exploit synergies, and introduce a culture of sharing. For these reasons, partnerships should always be actively explored.

Partnerships bring together different strengths and perspectivies that stimuate creativity and innovation, often through unique capabilities, and drive achievements towards common goals. Partnerships at all levels – international, regional, national and local – bring different but complementary skills, experiences, knowledge and resources to an initiative or programme to establish, strengthen or organize geospatial information management arrangements. Partnerships bring diversity that can increase organizational knowledge, capacities and capabilities, enhance geospatial processes and services, and improve the effectiveness of information management and data sharing.

[1] In some countries and regions, Africa in particular, the term 'geospatial industry' is an in inclusive term that captures the entire geospatial sector as a 'geospatial discipline'

Common to all partnership arrangements are four key elements:

- **Cross-sector and Interdisciplinary Cooperation** - are partnerships that draw people together from multiple disciplines to examine and redefine problems from various perspectives in search of solutions based on a new understanding of complex situations.
- **Private Sector and Academia Collaboration** - are typically research and development partnerships formed to trigger research, innovation and activities to bring knowledge, process, social and economic benefits.
- **International Collaboration** - is where countries develop partnerships leveraging their respective integrated geospatial information management to accomplish transboundary, regional or global objectives and outcomes.
- **Community Participation** - refers to partnerships with civil societies and communities where stakeholders together address issues, challenges and opportunities towards tangible outcomes for the benefit of the local community and its inhabitants.

These elements are underpinned by principles that promote successful partnership arrangements that can be adopted by each country. The principles are put into practice through several strategic actions that deliver and strengthen participation and commitment to achieving the Integrated Geospatial Information Framework (IGIF). Tools, such as matrices, examples and checklists, are provided in the appendices to assist countries to work through concepts and processes to successfully complete each action. The overall structure for partnerships is illustrated in and anchored by Figure 1.1.

When implemented the actions (and their interrelated actions[2]) will enable the achievement of the four elements, which in turn will deliver significant and sustainable national outcomes and benefits for a country. These outcomes include attaining:

- Increased development capacity through sharing, learning and knowledge transfer and collaboration;
- Enhanced organizational knowledge, expertise and proficiencies and expanded capability through complimentary resources;
- Agility and flexibility in digital transformation and reform; and
- Empowered creativity and innovation through collaboration and joint efforts on mutual endeavors.

[2] Examples of the interrelated actions across Strategic Pathways are described in the introductory chapter; Solving the Puzzle: Understanding the Implementation Guide.

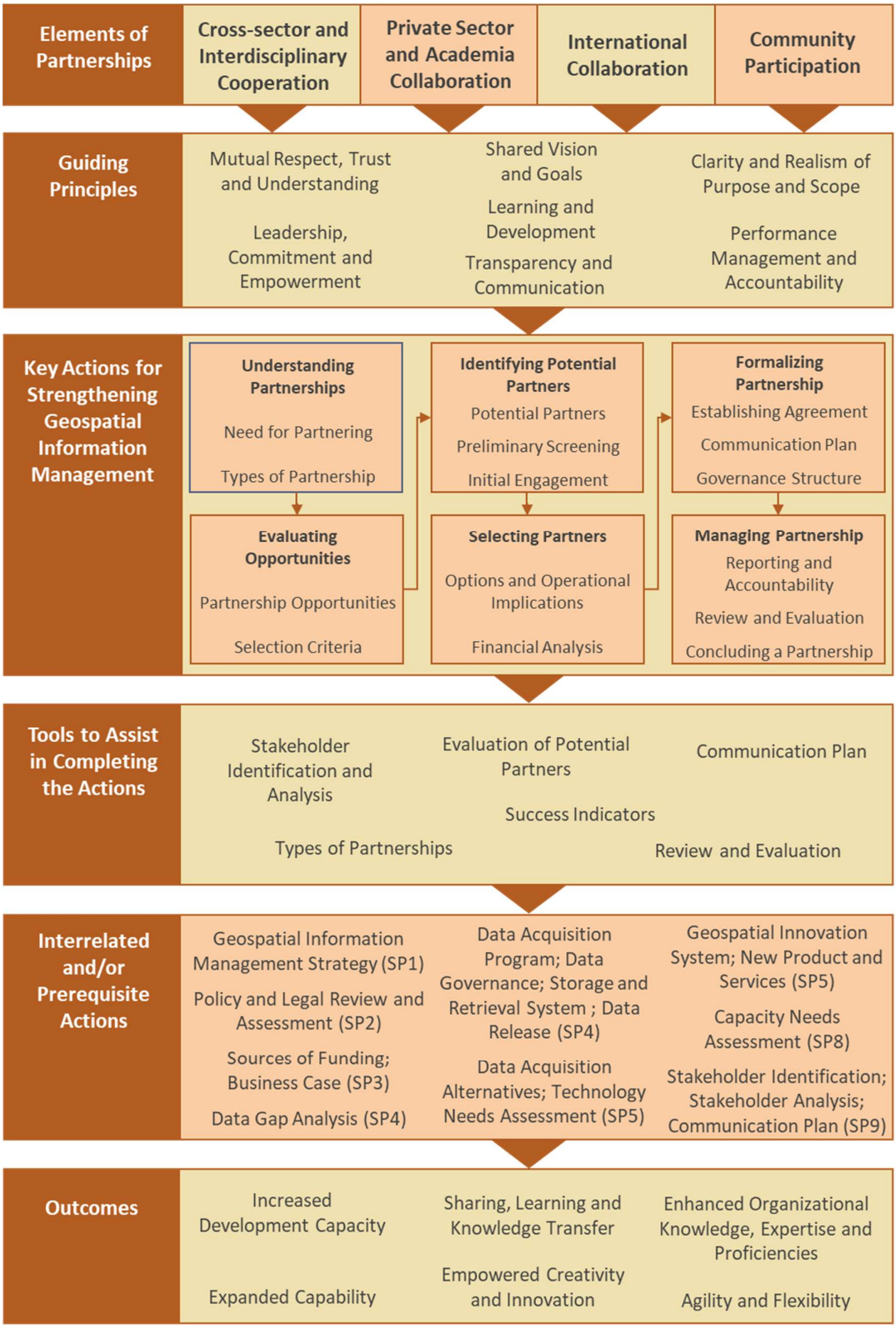

Figure 7.1: *The overall structure for Partnerships - showing the four key elements, guiding principles, actions and interrelated actions, and the tools provided in the Appendices to support and achieve the outcomes.*

7.1 Introduction

Strategic partnerships are collaborative relationships between organizations that have a shared purpose and goals.

Strategic partnerships are collaborative relationships between organizations that have a shared purpose and goals. Partners often join forces to bring different but complementary skills, knowledge, data and resources to an initiative or development program for strengthening geospatial information management that otherwise may not be available, particularly around capacity development and data sharing.

Partnerships and collaboration build the knowledge, experience, and human, technological and financial capacities to strengthen nationally or sub-nationally integrated geospatial information management arrangements. Partnerships can enhance efficiency of development efforts through the identification and exploitation of the comparative advantages of those involved in the partnership (Brinkerhoff, 2002).

Multi-stakeholder partnerships and collaboration leverage a range of resources. These may include knowledge, technology, information, expertise and financial capabilities. They have the potential for creative and innovative approaches, leveraging the diversity of partners and their respective contributions, hence the ability to embrace change, tackle complexities and deliver transformative outcomes. Partnerships and collaboration are fundamental to implementing and achieving national strategic and development priorities, the 2030 Agenda for Sustainable Development, and the IGIF.

Strategic partnerships provide an opportunity to address capacity needs and gaps through the transfer of relevant knowledge, expertise, technologies, development of policy, collection and integration of data, research and development and innovation. The IGIF places strong emphasis on the development of cross-sector and interdisciplinary collaboration, academic, private sector cooperation, joint endeavors and partnerships, community participation, and regional and international cooperation.

Collaborative action is required to build the knowledge, experience and human and financial resources to strengthen the implementation of integrated geospatial information management, in order to achieve national strategic and development priorities and the 2030 Agenda for Sustainable Development in all countries, and at all levels.

Multi-stakeholder partnerships have the potential to leverage a range of resources to support the strengthening of integrated geospatial information management, is inclusive, create innovative approaches from the diversity of the partner contributions and thus, the ability to tackle complexity and implement change.

Partnerships operate at any level - from local, to regional to global. They can exist between two institutions or a number of institutions within government.

Partnerships can also be between government and/or its institutions with community and civil society, private sector, academia, regional or international organizations.

Partnerships thrive with good governance and an enabling policy and legal framework. Institutional arrangements, policy and legal frameworks, and financial rules and provisions need to be periodically reviewed and referred to as the geospatial information ecosystem advances – both in terms of technologies and applications.

Partnership arrangements clarify roles and responsibilities among organizations involved in geospatial information management. This includes the rules, operations, oversight and regulatory conditions between organizations. Arrangements typically include mechanisms for collaboration across government sectors, and with non-public sector stakeholders, such as donors, private sector and non-government organizations; and can be extended to collaborative arrangements with community groups and individuals that are engaged in participatory data collection and mapping programs.

It may be necessary for some countries to develop new partnership arrangements to transform and integrate geospatial information management practices across the broader government sector and to include related stakeholders. However, there is no single universal partnership arrangement that fits all countries. Nevertheless, successful approaches do have a number of common elements that have evolved from past experiences and lessons learned.

The benefits of partnerships are becoming increasing clear for integrated geospatial information management. Partners bring differing but complementary knowledge and resources, expertise and experiences to strengthen and bring about effective and sustainable geospatial information management, coordination and leadership. This strategic pathway discusses the importance of partnership and identifies several actions that countries can adopt and implement to strengthen and bring about effective and sustainable geospatial information management with partnerships and deepening collaboration.

While not always the first action to be implemented, an important step is to have an understanding of the need for and opportunities from partnering. However, it is useful that actions leading to effective multi-stakeholder partnerships and collaboration include understanding partnerships, evaluating opportunities, identifying potential partners, evaluating and selecting partners, formalizing the partnership, and managing partnership. This will provide a coherent approach to modernize and sustain geospatial information management practices.

7.2 Context and Rationale

Partnerships bring diversity that can increase organizational knowledge, create capacity and develop capabilities.

The 2030 Agenda emphasizes that global partnerships are key to realizing our Agenda and affirms a strong commitment to its full implementation, recognizing that it will take a revitalized and enhanced global partnership bringing together governments, civil society, the private sector, the United Nations system and other actors and mobilizing all available resources[3].

The benefits of partnerships are becoming increasingly clear for integrated geospatial information management, bringing the diversity that can increase organizational knowledge, create capacity and develop capabilities to establish, strengthen or organize geospatial information management arrangements. Partners bring different but complementary skills, experiences, knowledge and resources to an initiative or programme, stimulate innovation and provide wide-ranging perspectives and abilities to better respond to changing, emerging or more complex needs. Partnerships across stakeholders have a potential effect of 'pooling resources' where responsibilities are shared, open new opportunities for greater use and understanding of different data types and variable sources.

While these benefits are widely recognised, partnerships can be difficult to establish and challenging to maintain, and consequently, often avoided in favour of the traditional siloed approach to geospatial information management. This is particularly the case when there are perceived differences in philosophies or work styles, and a fear of hidden agendas that may lead to an unequal and/or unacceptable balance of power and control. This is an opportunity for effective leadership to ensure that positive benefits are emphasized, and concerns are openly addressed. It is important to move beyond the silos, sharing grows a community; restrictive practices constrict use and value.

Potential partners can be found at all levels - international, regional, national and local, and include but not limited to government agencies and entities, international development and aid agencies, donors and philanthropic foundations, non-governmental organizations and civil societies, industry and private sector, academic and research institutions, professional bodies and regulatory authorities, and financial institutions.

Partnerships can be time bound, project based or multi-year and multi-areas to accomplish shared and desired outcomes. Partnership needs will typically fall into one or more of the following categories but not restricted to: data partnerships, capacity and capability development partnerships, technology and system integration partnerships, research and innovation partnerships, joint development partnerships, services sharing partnerships, education and

[3] Transforming our World: the 2030 Agenda for Sustainable Development (A/RES/70/1)

knowledge enhancement partnerships, institutional and governance partnerships.

Taking a partnership-first mindset requires an organization to re-examine and potentially disrupt its traditional practices and old ways of operating. The effects of partnering will ripple throughout every aspect of an organization and how it operates. Partnering across sectors is difficult, but crucial for geospatial information management. It requires bringing together organizations with differing missions, approaches, business culture, interests, vocabularies and values to find an equitable approach that delivers value for all.

Adopting a multi-stakeholder partnership approach means that governments can leverage a range of resources (knowledge, technology, information, expertise and financial) to tackle complex situations that deliver transformation and policy reforms, crucial to integrated geospatial information management. No single institution can deliver the data, systems and infrastructure, and the digital transformation required to support the digital and knowledge economy such as the information needed for smart cities, to prepare for and respond to the impacts of disasters, for example. Climate change action alone spans several disciplines and agencies that must work together to achieve positive social, economic and environmental outcomes.

7.3 Approach

The approach to creating and sustaining the value of geospatial information is through a culture based on trusted partnerships and strategic alliances.

In this strategic pathway, the approach for promoting effective public, public-private, and civil society partnerships starts with both clearly understanding and appreciating the unique strengths and advantages that each organization brings to the partnership. Partnering pushes geospatial information, products and services into new markets, exposes geospatial information to new communities and applications, enables organizations to leapfrog the traditional barriers of staying relevant and scale-up by using the core competencies of each partner.

The public and the private sector will continue to play a significant role in providing the technologies and information required to maximize the opportunities available. They provide the valuable, and in many cases unique, elements of geospatial information, technologies and services required to maximize its use; and an understanding of the end-user base for geospatial information. Collaboration between all different actors in this wider geospatial community will be crucial.

The approach to creating and sustaining the value of geospatial information is through a culture based on trusted partnerships and strategic alliances that recognize common needs and aspirations, and national priorities. The approach includes four key elements that are a guide for nations to establish effective partnerships to foster integrated geospatial information management. These elements include **cross-sector and interdisciplinary cooperation, private sector**

and academia collaboration, **international collaboration,** and **community participation**. These elements are explained in more detail in section 7.4 below.

The approach includes strategic pathway actions that are recommended as a means to achieve the four key elements. The actions are underpinned by guiding principles, provide the step-by-step guidance to implement and achieve the desired outcomes. While most of these actions may be unique to this strategic pathway, there are several interrelated and/or prerequisite actions detailed in other strategic pathways that may need to be completed. Tools to assist in completing the actions are available in the appendices to the strategic pathway. The approach for Strategic Pathway 7: Partnerships is illustrated in Figure 7.2 and explained in the following sections.

7.4 Elements

7.4.1 Cross-sector and Interdisciplinary Cooperation

The implementation of the Integrated Geospatial Information Framework requires many people from different disciplines working together.

The implementation of the IGIF requires many people from different disciplines working together, each drawing on their specialty and expertise. Cooperation can take on many forms, from simple networking where information is shared for mutual benefit, to more structured coordination and collaboration where organisations may have to alter their data management processes and protocols and agree to share data, resources and systems for a common purpose.

In many cases, cooperation will require enhancing the capacity of partner organizations for mutual benefit. Investment may take the form independent co-funding by each organization, or contributions to a common pool. An example is where two or more entities decide to co-manage a geospatial data theme. This type of cooperation requires a significant level of trust between partners, as well as an ability for agencies to share roles and responsibilities in all aspects of planning, governance, implementation, and evaluation and reviewing to create a better or more seamless geospatial information management system.

An organization may establish a cross-sector interdisciplinary team of professionals to work on a complex project where multiple skills sets, or areas of expertise are required in order to succeed. For example, a flood risk management system will require fundamental geospatial data and expertise, as well as complex hydrological models and hydrologists, to work together toward a common goal to manage flood hazards and respond to disaster events. This includes collaborating with governments, parliamentarians or legislators and policy makers in aspects of regulatory frameworks, education and delivery systems to name a few. In addressing issues related to mandates and authoritative data, this collaboration between governments, parliamentarians or legislators and policy makers are crucial.

Figure 7.2: *The approach to partnerships*

7.4.2 Private Sector and Academia Collaboration

Partnerships with the private sector and academia facilitate win-win collaborative outcomes for governments and stakeholders.

Strategic partnerships and joint ventures with the private sector, the broader geospatial industry and companies, and educational and research institutions facilitate and support win-win collaborative outcomes for government and stakeholders through local, national and international collaborative activities or ventures, and sector-specific strategic initiatives, such as infrastructure development. These also ultimately provide positive benefits to the community.

Evidence is unfolding that incremental benefits accrue by developing a geospatial information management ecosystem that includes academic engagement, peer-level private sector engagement (Longmore, 2018). Benefits include greater access to knowledge, mitigating risk and reducing potential mistakes through greater understanding, being able to draw from wider pool of technical expertise, cost sharing, increased innovation potential, and the ability to more readily overcome challenges.

In cooperating with educational and research institutions, there is the ability to benefit from the scientific, technical, research and learning capacity available, and the ability to discover and access knowledge resources and capital. Similar, public-private and civil society partnerships can address user interest, needs and demands, and considerably enhance technological and market-driven innovation.

Public-private partnerships can be seen as an activity or project, or a form of delivery mechanism. It can also be a stated intent in a government policy statement, and generally involve the sharing of risk, a way of financing and joint development. This can apply to infrastructure development, such as that of geodetic infrastructure, including a continuously operating reference stations (CORS) network.

7.4.3 International Collaboration

International collaboration assists nations in the pursuit of common goals or interests.

International and regional collaboration refers to the interaction between organizations representing various nations in the pursuit of common goals or interests. International collaboration is crucially important to delivering on the sustainable development goals. Geography has no real boundaries and transboundary issues exist; cross border cooperation amongst regional partners can foster coordinated decisions and actions that enable results and change.

International and regional collaboration is enabled and supported by advances in communication technology, better transportation infrastructures and options but the primary driver being to gain access to complementary knowledge and experience, technology and financial resources. Partnerships and cooperation can expedite delivery of outcomes and “multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, support the achievement of the Sustainable Development Goals in all countries,

in particular developing countries"[4]. International and regional collaboration can build consensus and support transboundary solutions for the benefits inhabitants.

International and regional collaboration can include partnerships with international aid agencies, philanthropic foundations and official development agencies. Typically, this cooperation involves technical support, knowledge exchange, funding as well as affording access to regional and global networks and at times also to levels of government and politics.

Regional and international partnerships and cooperation are needed in many instances to afford national geospatial information entities the opportunities, capacities and capabilities to leapfrog into the digitalized geospatial information realm as well as to operate from its traditional silo.

7.4.4 Community Participation

Community participation is the involvement of individuals and community groups in geospatial information projects to solve their own problems.

Community participation in this strategic pathway refers to the involvement of individuals and community groups in geospatial information initiatives or projects to solve their own problems. It also recognizes that community engagement is important to ensure inclusiveness and ownership; and that in many developing countries, the community can influence decision makers and politicians. Community partnerships can take on a variety of forms including for institutionally selected services delivered to particular community groups or segments of the population.

Community participation is especially important in emergency services programs where people contribute local knowledge about their location and surroundings to improve emergency preparedness, mitigation, response and recovery. Government transparency is important to people and they want to be able to participate in major policy-setting and decision-making that are important to them. Being able to contribute geographic and demographic information through knowledge-sharing systems means that they have a greater say in how they live their life and in ways that matter.

Community participation has increased significantly through the rapid expansion of the sharing economy. Now acquiring, providing and sharing access to geospatial information through community based on-line platforms is giving rise to a new economic model – collaborative consumption. Businesses are developing goods and services that rely on regularly contributed and updated geographic information. Ride-sharing and renting out an unused item such as a bicycles, cars, rooms or houses are examples of how the community are actively

[4] Target 17.17 under Goal 17 - strengthen the means of implementation and revitalize the global partnership for sustainable development.

participating in this collaborative consumption model by providing and using value-added geospatial information.

7.5 Guiding Principles

By applying the guiding principles, it is possible to create and sustain the value of geospatial information through trusted partnerships and strategic alliances.

There are specific guiding principles and elements for creating and sustaining the value of partnerships for geospatial information that can be adopted by each country. Replicating a set of successful partnership models from one nation to another likely will not work in its entirety as there are different priorities and levels of development maturity and cultural aspects that need to be taken into account. That said, using good ideas and successful implementations across nations is encouraged where the approach is suitable. The guiding principles for partnerships are:

- **Mutual respect, trust and understanding**: Having mutual respect, trust and understanding of one another's capacities, capabilities and competencies as well as the motivations, needs and constraints, and committing the time and patience to build trust add value to each other's work and bring synergies.
- **Shared vision and goals:** A partnership guided by a shared vision and goals builds trust and recognizes the value and contribution of all partners. All partners in the relationship should have at least one goal on which they are jointly focused for the purpose of the work being undertaken together.
- **Clarity and realism of purpose and scope**: Clarity and realism about objectives, boundaries, roles and structures, but with the acknowledgement that it is not always possible to know how things will develop and where each partner determines benefit(s) for participating in the partnership which can be short or long-term and could also include altruistic goals.
- **Leadership, commitment and empowerment:** Leadership and commitment is necessary to sustain a collaboration or partnership through ownership of purpose, empowerment in processes and collective responsibility for outcomes.
- **Learning and development**: An atmosphere of learning and the desire to invest in partners' skills and knowledge to further create opportunities to shape and enhance each other's work and mutual learning and to foster innovation and value-adding.
- **Transparency and communication:** Shared and transparent decision-making processes and effective communication at all levels within the partnership and inside each partner organization with robust monitoring

and feedback loops so that all partners are kept abreast of progress and outcomes.

- **Performance management and accountability**: Having an appropriate partnership structure, management practices and resources in place to achieve the intended purpose of the partnership, to measure and monitor, with accountability for the objectives and targets for which each partner is responsible.

7.6 Actions

The strategic pathway actions are recommended as a means to achieve the four key elements.

The strategic pathway actions are recommended as a means to achieve the four key elements of partnerships. Country-specific actions may be influenced by factors such as country priorities, existing capabilities, resources, culture and other practicalities. These will influence approaches for implementing each strategic pathway and their related actions. Whatever the implementation approach chosen by countries, each action should take into account the guiding principles in Section 7.5 above as these describe drivers for effective and efficient geospatial information management.

For ease of use, particularly to assist countries in the early stages of developing and strengthening their national geospatial information management arrangements, the actions are presented in a sequential step-by-step structure as illustrated by way of a road map and presented in Figure 7.3. However, it is acknowledged that countries, depending on existing national arrangements and circumstances, may wish to start their actions at different steps along the pathway and in a different sequence.

Hence, a less structured depiction of the actions is additionally presented in Figure 7.4. Some actions may have interrelated and/or prerequisite actions that need to be achieved prior to, or in conjunction with, the strategic pathway actions. These interrelated actions are also illustrated in Figures 7.3 and 7.4, are referenced in the text, and detailed under other strategic pathways.

The actions for partnerships are divided into six categories, which are:

1. Understanding Partnerships
2. Evaluating Opportunities
3. Identifying Potential Partners
4. Selecting Partners
5. Formalizing Partnership
6. Managing Partnership

The following actions are typically used to address gaps in capacities and capabilities to sustain effective public, public-private and civil society partnerships. They serve as a guide to building the necessary capacity and

capability to strengthen nationally integrated geospatial information management, capacities and infrastructures.

Figure 7.3: *Partnerships includes several actions and tools designed to assist countries 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. The actions are divided into six categories and reflect the order with which these actions are typically completed.*

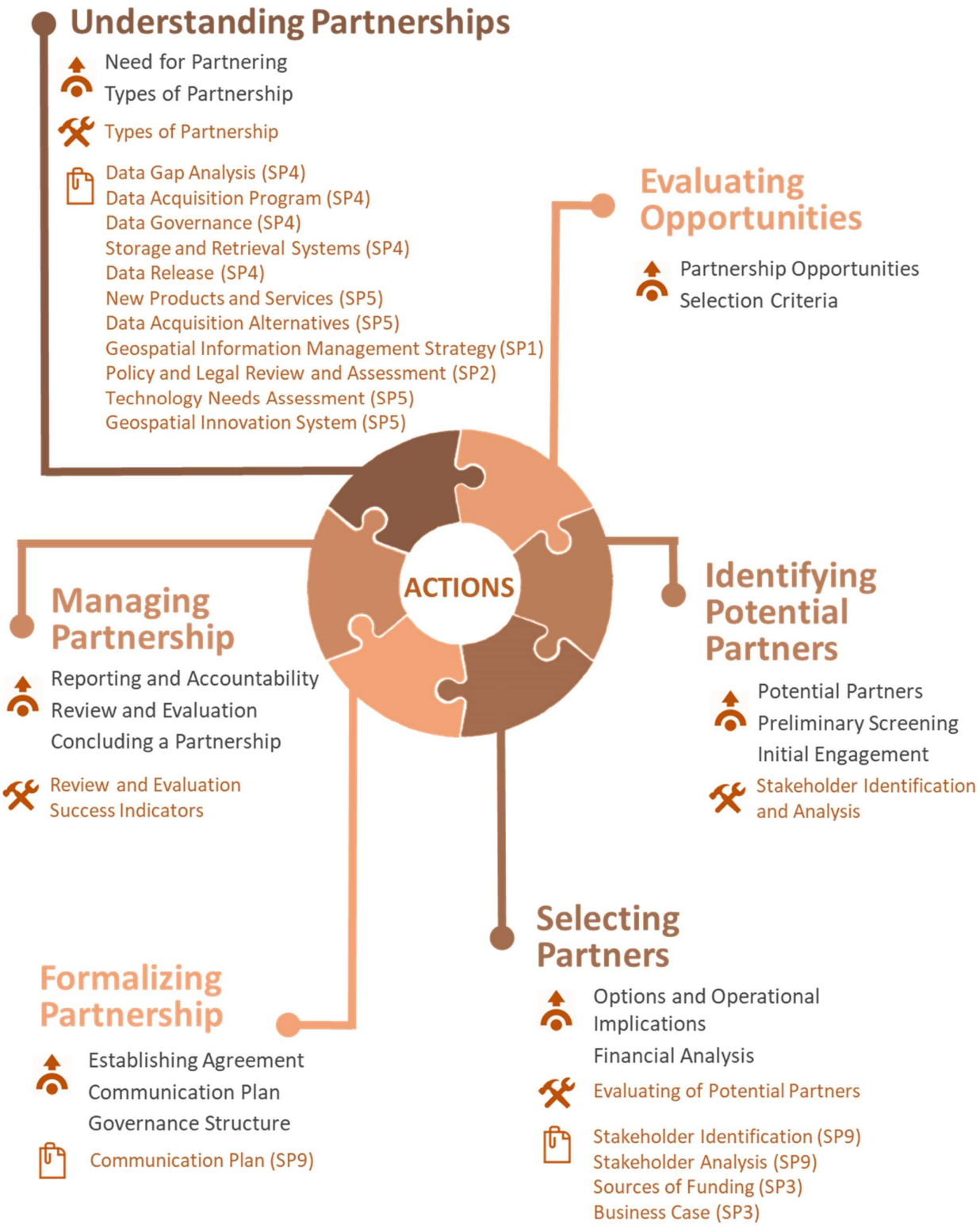

Figure 7.4: *Partnerships includes several actions and tools designed to create and sustain the value of geospatial information through a culture based on trusted partnerships and strategic alliances that recognize common needs and aspirations and national priorities. The interrelated actions provide key linkages to other strategic pathway actions*

7.6.1 Need for Partnering

Partnerships are about addressing a need or gap in capability.

Partnerships are about addressing a need, an opportunity, a gap or a possibility for pooling resources to increase capacities and capabilities. Therefore, identifying partnership needs is a critical first step. As shown in Figure 7.5, needs will typically fall into the following categories for partnering opportunities:

- **Data partnerships** - for enhancing the collection, updating, integration, storage, and maintenance of existing or new datasets;
- **Capacity development** - to develop competencies and skills and enable knowledge transfer;
- **Technology and system integration** - to pool technological resources, develop geospatial data analytics capabilities, improve access to data and acquire high-end software otherwise not available;
- **Advisory and governance** - to develop the policy, standards and norms necessary for strengthening geospatial information management capabilities and
- **Research and innovation** - collaborative research projects with end-users (industry, enterprises, and public sector and non-government organizations) that address end users, environmental, economic and societal issues and promoting the 'best, highest and widest use' of geospatial information.

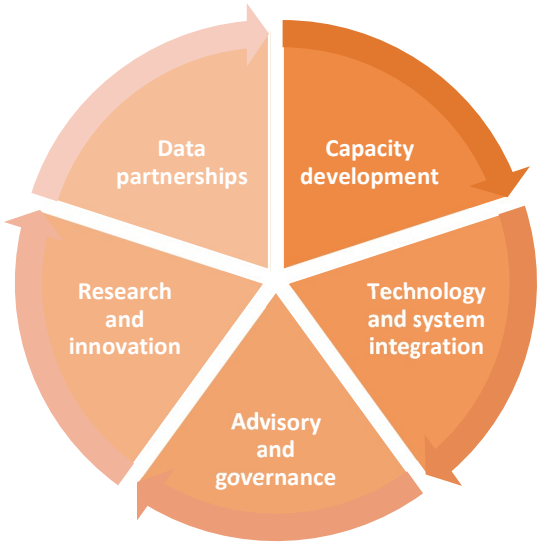

Figure 7.5: *Areas of need with partnership potential*

See Interrelated Actions: Data Gap Analysis (SP4); Data Acquisition Program (SP4); Data Governance (SP4); Storage and Retrieval Systems (SP4); Data Release (SP4); New Products and Services (SP5); and Data Acquisition Alternatives (SP5).

A needs assessments and gap analysis will provide the starting point in understanding what areas ought to be strengthened to benefit from effective public, public-private and civil society partnerships. Several means for identifying needs are discussed in this document and some examples are itemized for quick reference in Table 7.1.

Category for Partnership Opportunity	Identifying Needs	Types of Needs
Data (Content)	New products and services (SP5: Action 5.6.x) Data acquisition alternatives (SP5: Action 5.6.x)	Data collection, updating, integration and maintenance
Capacity development	Capacity needs assessment (SP8: Action 8.6.x) Inventory of knowledge, skills and resources (SP8: Action 8.6.x)	Skills and knowledge transfer
Technology and system integration	Technology needs assessment (SP5: Action 5.6.x)	Shared technological resources; geospatial data analytics; access to high-end software
Advisory and governance	Policy and legal review and assessment (SP2: Action 2.6.2)	Advice and examples of laws, policies, norms guidelines, and standards
Research and innovation	Geospatial innovation system (SP5: Action 5.6.x) New products and services (SP5: Action 5.6.x)	Applications that address end user, environmental, economic and societal issues

Table 7.1: *Reference for identifying partnering opportunities*

In defining the need for a partnership, it is important to consider what the partnership can accomplish as a whole, and what concrete benefits will arise. Answering the following questions, preferably in a group setting, will provide the necessary perspective:

- What are our short-term interests?

- What does our organization need to accomplish or gain in the next 12 months to stay engaged in the partnership?
- What is each organization contributing to the effort?
- What are our long-term interests?
- What does our organization need to accomplish or gain in the next 18-36 months to stay engaged in the partnership?

See Interrelated Actions: Geospatial Information Management Strategy (SP1); Policy and Legal Review and Assessment (SP2); Technology Needs Assessment (SP5); and Geospatial Innovation System (SP5).

Possible answers might include additional organizational staff or volunteers; enhanced products or services; growing organizational capabilities, greater community credibility or support; and improved access to businesses, technology, data, and financial resources.

7.6.2 Types of Partnerships

There are several partnership types to address gaps in capacity and capability.

Once the geospatial information management needs are known, it is then possible to start considering the type of partnerships that could potentially address gaps in capability or achieve new strategic targets. Examples of partnership types that can be used to address needs and gaps in capacities and capabilities are summarized below. Table 2 shows the relationship between strategic opportunities and partnership type:

- **Cross-sector partnerships** with other government organizations, the business sector and/or academic sectors, such as forming part of a user association.
- **Public-private partnerships** are typically commercial joint ventures undertaken jointly by two or more parties which would otherwise retain their distinct identities, such as for delivering geospatial products or services.
- **Community partnerships** with community groups, citizen volunteer efforts, or non-profit service organizations, such as to monitor the need for data updates and develop community (mobile) applications (e.g. history or heritage projects).
- **Strategic alliances** involving shared or transferred decision-making power, such as joint data acquisition programs, and shared administrative consolidation where geospatial information management is concerned.
- **Collaborations** that have no permanent organizational commitments or combined services but emphasize the willingness to work together, such as geospatial information sharing and coordination.

- **Integration of services** that involve changes to organizational structure and control mechanisms, such as joint projects where two or more organizations create a new structure to advance a new initiative or function; or mergers where previously separate organizations combine program/administrative/governance functions.
- **Donor partnerships** where the government is a recipient, such as delivering training or end-user geospatial services.
- **Funding alliances** where organizations come together to share a large grant/donation or create a recipient/donor relationship. Cost-sharing occurs when each organization provides different resources, such as facilities, staff or equipment.
- **Grant-matching** where one organization provides a grant and the recipient provides a match in services, funding, maintenance, supplies, or volunteers.

Partnership Type	Data	Capacity Development	Technology and System Integration	Advisory and Governance	Research and Innovation
Cross-sector partnerships	Data collection and maintenance	Leadership development, internships, training	Digital collaboration tools	Inter-agency working groups or task forces; national-level working groups	Cross discipline projects with academia, development of a research agenda
Public-private partnerships (Joint ventures)	Whole-of-government commercial imagery service	Professional workplace training programs	System development/ operations and maintenance contracts	Training manual, procedures	Government funded investment opportunities; Small start-up incubators
Community partnerships	Volunteered geographic information (VGI) and field validations	Outreach programs; on-line training	Crowd sourcing; mobile services development	Feedback on policy initiatives; establishing user groups	Hack-a-thons and code sprints
Collaborations	Data acquisition program partnership	Technical expertise and advice	Sharing of information and resources	Policy development	Innovation hubs
Strategic alliances	Data supply chain participant	Coaching and mentoring	Whole-of-government	Standards organisations	Case study implementations

			software licensing		
Integration of services	Digital data maintenance collaborations	E-learning	System integration/ supply chain logistics	Open data policy	Existing success stories
Donor partnerships	Global datasets (e.g. GlobeLand30, freely available Earth observation data)	International fellowship or exchange programs; volunteer staff	Online technological tools and map portals funded by foundations (e.g. Africa GeoPortal)	Promotion and advocacy; facilitating access	Harvesting experiences and implementing proven solutions
Funding alliances	National priority; re-use of available data	Partnerships and networking	Shared services	Institutional and regulatory reforms	Research and development grants
Grant-matching		Scholarships	Technology grants		Innovation grants

Table 7.2: *Partnership/Opportunities Matrix*

An expanded list of examples of Types of Partnerships is provided in Appendix 7.1.

7.6.3 Partnership Opportunities

There are many models for evaluating partnership opportunities and formalizing a partnership, but there is no single correct approach.

As opportunities arise, organizations need practical guidance on whether to form strategic partnerships, whether it is public, public-private, or civil society, and if so, where to begin the partnership development process. For this reason, a process to evaluate partnership opportunities should be decided at the outset. A review of literature reveals that there are many models for evaluating partnership opportunities and formalizing a partnership. There is no single correct approach. Any approach will depend on the type of partnership being evaluated, cultural sensitivities, national policy and legal frameworks in place.

Typically, a geospatial-related partnership/collaborative venture will include eight major steps: (1) establishing the selection criteria for the specific partnership being considered; (2) identify potential partners; (3) conducting preliminary research and fact finding; (4) considering a 'Request for Information' or 'Request for Proposal'; (5) evaluating options and identifying operational implications; (6) preparing a resource impact assessment and financial analysis;

(7) conducting negotiations and formalizing the partnership; and (8) implementing governance and a communication plan (Figure 7.6).

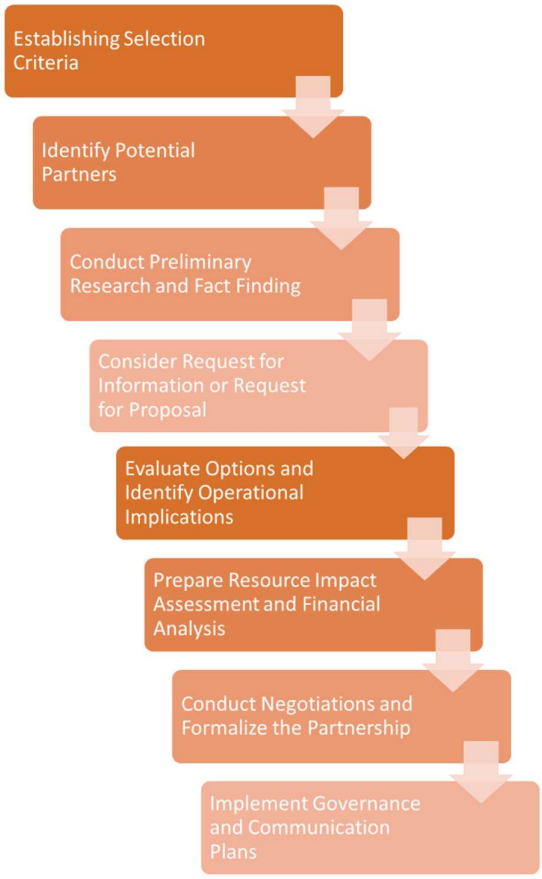

Figure 7.6: *An example of a process for evaluating geospatial-related partnerships/collaborative ventures.*

7.6.4 Selection Criteria

Prior to identifying potential partners, it is important to establish the selection criteria for evaluating the specific opportunity. This is sometimes referred to as the criteria for evaluating a partnership and may include the:

Prior to identifying potential partners, it is often best to establish the selection criteria for evaluating the specific opportunity.

- Opportunity to enhance expertise in an area;
- Capability to fill gaps in knowledge and skills;
- Potential impact on the recruitment and retention of staff;
- Degree of cultural fit between the partners;
- Effect on access to financial resources; and
- Ability to enhance competitive differentiation, improving user base and financial performance.

7.6.5 Potential Partners

Consider your stakeholders as potential partners.

Identifying partners may be challenging. Potential partners can be found at all levels - international, regional, national and local. They can include, but not be limited to, government agencies and entities, international development and aid agencies, donors and philanthropic foundations, non-governmental organizations and civil society, industry and the private sector, academic and research institutions, professional bodies and regulatory authorities, and financial institutions. Parliaments, legislators, local authorities, local councilors, community groups and customary leaders can also be potential partners.

As a starting point, it would be advisable to carry out a stakeholder identification and analysis exercise as recommended in Strategic Pathway 9: Communications and Engagement (Actions 9.6.4 and 9.6.5) for potential partners.

A template for identifying and classifying stakeholders, and a stakeholder analysis is provided in the appendices of Strategic Pathway 9: Communications and Engagement.

7.6.6 Preliminary Screening

Conduct preliminary screening to determine if potential partners exist, or if the search net needs widening.

Once the potential partners have been identified, the next stage is to conduct preliminary research and fact-finding before bringing them to the table. The level of scrutiny at this stage can include a review of available publications. These can include newsletters, press releases, advertisements, websites, annual reports, speeches, strategic plans, recent performance reviews, and shareholder expectations, and corporate social responsibility reports, along with boards and CEO leadership posted on websites.

Preliminary screening allows better understanding and improves confidence of the potential partners identified. It can begin a process of building trust. It also serves to confirm if potential partners exist, filters out those that do not offer the required fit, and determines if the search for potential partners needs to be extended or conducted more broadly. Importantly, this preliminary screening is required to build a shared understanding, and ultimately trust for any new partnership.

7.6.7 Initial Engagement

A request for proposal can be used to initiate the partnership process.

There may be different stages for considering or seeking a partnership. Depending on national circumstances, and in particular with regards to the private sector, there may be mechanisms that allows government to seek information without making a commitment, including committing funds or

entering into a binding agreement. Examples include Request for Information and Request for Proposal to learn about different organizations' capabilities, resources or offerings as they relate to governmental needs.

Another option to acquire similar information is to schedule an 'industry day'. This is where an organization openly advertises an invitation for interested stakeholders, which may be commercial enterprises, academia or civil society, to visit the organization, hear about potential plans and interests, an outline of upcoming requirements of the organization to acquire products and/or services, and to answer any questions from the perspective vendors or potential partners. If the exchanges between the organization and potential stakeholders are encouraging, more information can be learned by the organization on capacities and capabilities of different interested parties all at the same time.

The next step in an initial engagement effort is to carefully plan what the organization wants to partner in or procure, and the conditions on how they want the relationship to proceed. With the private sector, or where there are payments involved, there can be a form of an Expression of Interest, Proposed Procurement Order, Request for Proposal, or a Tender, either for provision of services or products, or both. In almost all situations, there will be an outline of requirements, specifications, terms of reference, and duration and deliverables (non-exhaustive). And in many instances, a competitive bidding process will be a more appropriate approach, particularly when entering into a public-private partnership, as transparency and accountability is paramount. This transparency can be assured by issuing a Request for Tender or a Tender Document.

If the results of the initial reaching out or engagement with the private sector do not meet the organization's requirements, it is highly recommended to suspend the procurement process before any commitment is put in place. Further dialogue may help to clarify interests and lead to a successful procurement at a later date. Procurements in general should reflect what the organization wants and needs, without regard for any limitations the private sector entity faces. Often the strongest partnerships will involve bringing multiple entities to the table.

7.6.8 Options and Operational Implications

The next step is to evaluate the options against the previously established criteria and prioritize potential partners for consideration. In addition to evaluating against the predetermined criteria, the following should be assessed (Dubow, 2006):

Potential partners are evaluated against the selection criteria.

- To what extent does the potential partnership contribute to the strategic imperatives for strengthening geospatial information management?
- What does the potential partner bring to the table? This may include management and geospatial expertise, resources (facility, information technology and personnel), access to capital, and relevant supporting relationships (contracts, partnerships and affiliations/alliances).
- What are the potential weaknesses (e.g. reputation, uncertain revenue streams, etc.)?
- What is the probability of successfully implementing a partnership with this entity? The working relationship is more likely to succeed if the entities share a common vision, values, and culture, as well as compatible performance metrics.
- What are the opportunity costs of not pursuing a partnership?

There is also the need to assess the operational implications of the intending partnership. This assessment can operate under two assumptions: that the entire organization is dependent on the continuing operations of various operating units within the organization; and certain operating units would require more resources and attention if and when disruption occurs, in this instance, from an intended partnership.

With each option, with reference to the aims and objective of the intended partnership, and from the information available from earlier actions (principally from Action 7.6.6 - Preliminary Screening, and Action 7.6.7 - Initial Engagement), consider and assess, among others: operational and financial implications; timing and duration implications; staffing implications; and any regulatory and policy or compliance implications.

It is always useful to document the assessment and prepare a report as an outcome for this action.

A template for Evaluation of Potential Partners is provided in Appendix 7.2.

See Interrelated Actions: Stakeholder Identification (SP9) and Stakeholder Analysis (SP9).

7.6.9 Financial Analysis

Conduct a financial analysis to define the resource requirements.

Having considered the options and the operational implications of a potential partnership, the next step is to conduct a financial analysis to understand and define the resource requirements. In the intended partnership, respective partners have responsibilities and obligations including resources, and financial resources in particular. This has to be understood and analyzed.

The analysis seeks to define the resource requirements (personnel, equipment, facilities, technology, logistical, etc.) necessary for the partnership to deliver its aims and objectives. Some of these requirements are one-time, others may be recurring commitments. In certain instances, a projected fund-flow analysis will be required to better understand any budgetary and financial commitments.

More guidance on the needed financial analysis is provided in Strategic Pathway 3: Financial.

See Interrelated Actions: Sources of Funding (SP3) and Business Case (SP3).

7.6.10 Establishing Agreement

Formalize the partnership through an appropriate arrangement.

When establishing a partnership/collaborative venture between two or more parties, it is important to have a clear, defined and agreed understanding of the aims and objectives (or mission and purpose) for the partnership/collaborative venture, as well as the roles, responsibilities and obligations of all partners. It has to be mutually beneficial and agreeable.

Any agreement needs to be defined at an early stage when setting up the partnership. It is helpful to recognize that there is often a need for flexibility to accommodate change as the partnership or venture evolves.

Formalizing a partnership is dependent on trust and consensus, negotiations and compromises. In certain instances, an objective third party (legal advisor or legal counsel, etc.) can assist in facilitating the process and to find common ground that satisfies the objectives of all parties (Dubow, 2006).

Formalising a partnership arrangement entails five key tasks:

- Enacting a Statement of Intent, Memorandum of Understanding or Legal Partnership Agreement;
- Documenting the partnership norms and making them accessible. Norms usually include principal points of contact for each party, communication structures, knowledge management, project protocols, resource management, decision-making, conflict resolution, and meeting frequency;
- Establishing the partnership governance, such as through an independent board, a steering committee, an oversight committee, or through an informal partner management process;
- Establishing the monitoring, evaluation and review processes; and

- Defining the process for transitioning and concluding the partnership.

7.6.11 Communication Plan

Establishing clear communication protocols early in the partnership is important.

Once the partnership is formalized, it is appropriate to advise internal and external stakeholders through a communication plan to raise the profile and build support for the new entity or initiative. Strategic Pathway 9: Communication and Engagement provides the required guidance to prepare a communication plan (Action 9.6.10). A communication plan is used to maintain open lines of communication with partners.

Establishing clear communication protocols early in the partnership is important. Case studies have shown that regular and clear communication is essential, particularly when (and if) problems arise (Longmore, 2018). Having regularly scheduled dialogue among partners supports the sharing of information and smooth operations, avoiding difficulties as the partnership progresses.

An example of a stakeholder communication plan that provides the objectives and methods for connecting with partners can be found in the appendices of Strategic Pathway 9: Communication and Engagement.

7.6.12 Governance Structure

Norms and governance structures are essential to cultivate strong and fruitful working relationships.

Norms and governance structures are essential to cultivating strong and fruitful working relationships within a trusted environment. They provide practical suggestions that help individuals and groups, involved in a partnership, to hold productive discussions about difficult topics, manage conflict and reach decisions.

Collaboration works most effectively when the partners have shared values and principles, and when it meets each organization's mission and goals. Collaborations also work best when each partner understands the other's mission, goals and priorities, including their respective operating environments. For example, private sector organizations will need to understand government's policy environment and, vice versa, government will need to understand the private sector's business environment.

Partnership norms are used to establish the goals, structure and responsibilities of the partnering relationship. This includes identifying and documenting the shared values of the group – shared vision, shared objectives, shared governance, shared risk, shared resources, shared processes, shared information and shared reward.

7.6.13 Reporting and Accountability

Having streamlined reporting and accountability is crucial to the smooth running of collaborations and partnerships. A collaborative work plan can be used to identify specific agreed tasks, realistic timeframes, measurable outcomes, accountability and shared responsibilities.

Having streamlined reporting and accountability is crucial to the smooth running of collaborations and partnerships.

This work plan is typically operationalized by dedicating a focal person (preferably at senior level) to the partnership/collaborative venture primarily to coordinate governance arrangements, manage communication between partners, provide supervision and oversight, implement and complete monitoring, and ensuring reporting and accountability requirements. As most partnerships and collaborative ventures often span a number of years, it is important to document the process, the history and the culture of the collaboration.

Technology can be used to bring partners closer together, integrate processes and contribute to maintaining strong relationships in the longer term. Use of technology depends on availability of a dependable supporting infrastructure. The examples below can be used as evidence of the need for dependable infrastructure as a requirement. Technology platforms that support online collaboration vary in terms of the depth of collaboration and include:

- **Sharing Networks/Platforms:** As a minimum, the sharing of networks and platforms is an effective partnership enabler. They can be used to distribute information, to share new resources such as a dataset, provide a deadline alert, and update a partner on the status of a project. Common methods for distributing geospatial information include online data portals, centralised map viewers, and cloud storage for data clearinghouses.
- **Digital Collaboration Platforms:** Digital collaboration platforms go beyond information sharing. They are virtual workspaces that allow multiple participants to edit shared documents and datasets together. These real-time interaction systems replicate the experience of working in the same room. For example, systems for real-time interaction, such as enterprise GIS, allow collaborative editing of datasets/documents over the internet.
- **Online Project Management Systems:** Web-based project management tools allow a lead organization to make project plans, roles, responsibilities, and schedules transparent to all partners (NRC, 2002).

- **Communication Platforms:** Communication platforms such as web-based video-conferencing sites bring remote teams together to plan, brainstorm and problem solve.
- **Software as a Service (SaaS):** Systems for accessing common geospatial tools, such data management and data analytics, allow teams to use the same methods and thus achieve the same results no matter where their location may be.

7.6.14 Review and Evaluation

It is important to continually review and evaluate both the partnership itself, as well as the work being delivered.

It is important to continually review and evaluate both the partnership itself, as well as the work being delivered – be it a capacity development exercise, implementation of a system, new business venture and/or the acquisition of data.

For this reason, it is important to establish, and have agreement on, the review and evaluation process – its goals and objectives and how lessons learned will be applied. Reviews and evaluations are facilitated by having a systematic and open process for receiving feedback and tracking performance.

One of the hardest parts of the review and evaluation process is to choose what to measure. Some example of measures include (Figure 7.8a):

- Measuring the **inputs**, such as data collected, meetings and reports, and agreed-upon actions that the partnership delivers towards achievement of the goals.
- Measuring the **outputs**, which are the results of the inputs and activities e.g. increase in the number of datasets made available.
- Measuring the **outcomes** in terms of the overall benefits and change in behavior, e.g. the use of more effective and efficient geospatial information management practices.
- Measuring the **impacts** that the partnership is having in terms of the long-term effects on social, environmental and economic conditions.

Regular reviews should form part of the overarching monitoring and evaluation process. The review considers the partnership itself and employs a mix of measures – financial, stakeholders, processes and sustainability (Figure 7.8b):

- **Financial:** Review of project budget and spending rate relative to budget balance.
- **Stakeholders:** Level of satisfaction, brand recognition, and growth in end users.
- **Processes:** increased product quality and improved decision-making capabilities.

- **Sustainability:** Growth in skills/knowledge, increasing awareness and use of geospatial information.

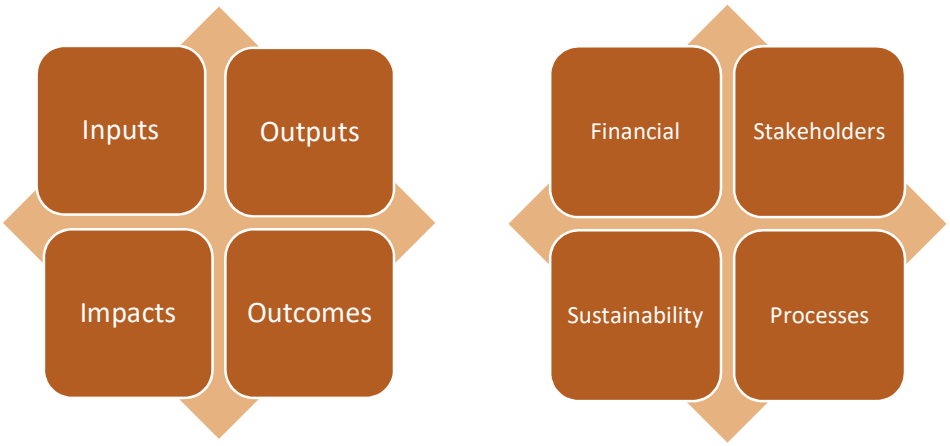

Figure 7.6: *(a) Measures for monitoring and evaluation; and (b) Elements of the partnership to be reviewed regularly.*

An example of a Review and Evaluation process for the partnership is provided in Appendix 7.3.

An example for developing Success Indicators is provided in Appendix 7.4.

7.6.15 Concluding a Partnership

The process for transitioning and concluding a partnership is usually conducted at the stage when the partnership is formalized. The process is also typically specified in the original legal agreement.

A formal project closure is important. Too often partnerships end with a hard stop or gradually dwindle without substantial communication.

A formal project closure is important. Too often partnerships end with a hard stop or gradually dwindle without substantial communication (NRC, 2002). This means that there is no opportunity to assess and potentially renew goals and commitments, and it may leave important tasks incomplete.

It is also important to set a completion date for the current agreement. While some relationships may continue in the future without ever stopping, it is recommended to have a stop date with a new start of the partnership agreement. This new version allows for adjustments that may be desirable based on past experience.

Once the decision is made by all parties to formally close the partnership, the following activities should be undertaken:

- Verify all agreed activities of the partnership/collaborative venture have been completed;
- Allocate project assets – usually to one of the partners;

- Review and approve final financial accounts and reports, and transfer remaining funds/balance as appropriate;
- Archive final records and project documents;
- Conduct partnership and stakeholder surveys;
- Prepare a closure report including lessons learned;
- Recognise and celebrate achievements of the project; and
- Release appropriate communications advising of the partnership closure and its achievements

7.7 Deliverables

The list of deliverables below is an example of actions that can be monitored to improve the success factors in realizing an Integrated Geospatial Information Framework. Examples include:

- Need for partnering – how can partnering potentially improve capacity and capability gaps;
- Types of partnership – an evaluation of partnership opportunities;
- Formulating appropriate selection criteria for evaluating potential partners;
- Findings from preliminary research and fact-finding into potential partners;
- Assessment of the options available and operation implications related to each option;
- Outcome of a financial analysis;
- Partnership arrangement and agreement, including its governance structure and communication plan;
- Review and evaluation processes including success indicators; and
- Concluding a partnership when appropriate.

7.8 Outcomes

Partnerships expand the capabilities and capacities of governments to achieve more, while benefiting from a variety of knowledge and experiences that strengthen the organization and its geospatial information management, its capacities and infrastructures.

Sharing, learning, knowledge transfer, increased capacity, and other intangible benefits are realized through partnerships. Sometimes, learning what not to do

based on a partnership experience is as valuable, if not more than, as learning about proven practices. Communicating the purpose and value of the organization often times results in a broad network of champions for the work undertaken and completed by the organization.

Therefore, strengthening of geospatial information management is made possible through:

- Effective cooperation across disciplines and sectors, private sector and academia, communities and stakeholders, levels of governments, regional and international cooperation;
- Enhancing the 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.

Multi-stakeholder partnerships and collaboration leverage a range of resources, be it knowledge, human resource or financial capacity, and have the potential for creative and innovative activities and approaches to embrace and embark on change, tackle complexities and develop feasible options to deliver the transformation desired. Multi-stakeholder partnerships and collaboration benefit from the collective strength, resolve and resources from the diversity of partners and their respective contributions. Partnerships and collaboration are needed to achieve national development and strategic priorities and the 2030 Agenda for Sustainable Development at all levels.

Effective partnerships and collaboration can create a level of agility and flexibility amongst partners; speed up any process development, innovation and transformation; enhance value and sharpen purpose and focus. Ultimately, effective partnerships and collaboration enhance the knowledge and develop the capacities to strengthen nationally integrated geospatial information management.

7.9 Resources

As part of the work programme of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM), there are a number of initiatives and activities including by the Subcommittee, Expert and Working Groups of the Committee of Experts. These initiatives and activities are consultative and multi-stakeholder when arriving at outputs and outcomes. This

inclusive and participatory nature of work has allowed the preparation of a number of resource documents and publications that are useful and helpful when addressing the opportunities and the complexities in partnerships that impact geospatial information management.

This includes specifically the work and contributions of the Expert Group on Land Administration and Management, the Working Group on Trends in National Institutional Arrangements in Geospatial Information Management and the Working Group on Legal and Policy Frameworks for Geospatial Information Management. The Expert and Working Groups have provided a series of deliverables that will support organizations in their partnering arrangements towards nationally integrated geospatial information management.

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