Lessons Learned from Implementation of World Bank IGIF Methodology in Eastern Europe

Andrew Coote
ConsultingWhere

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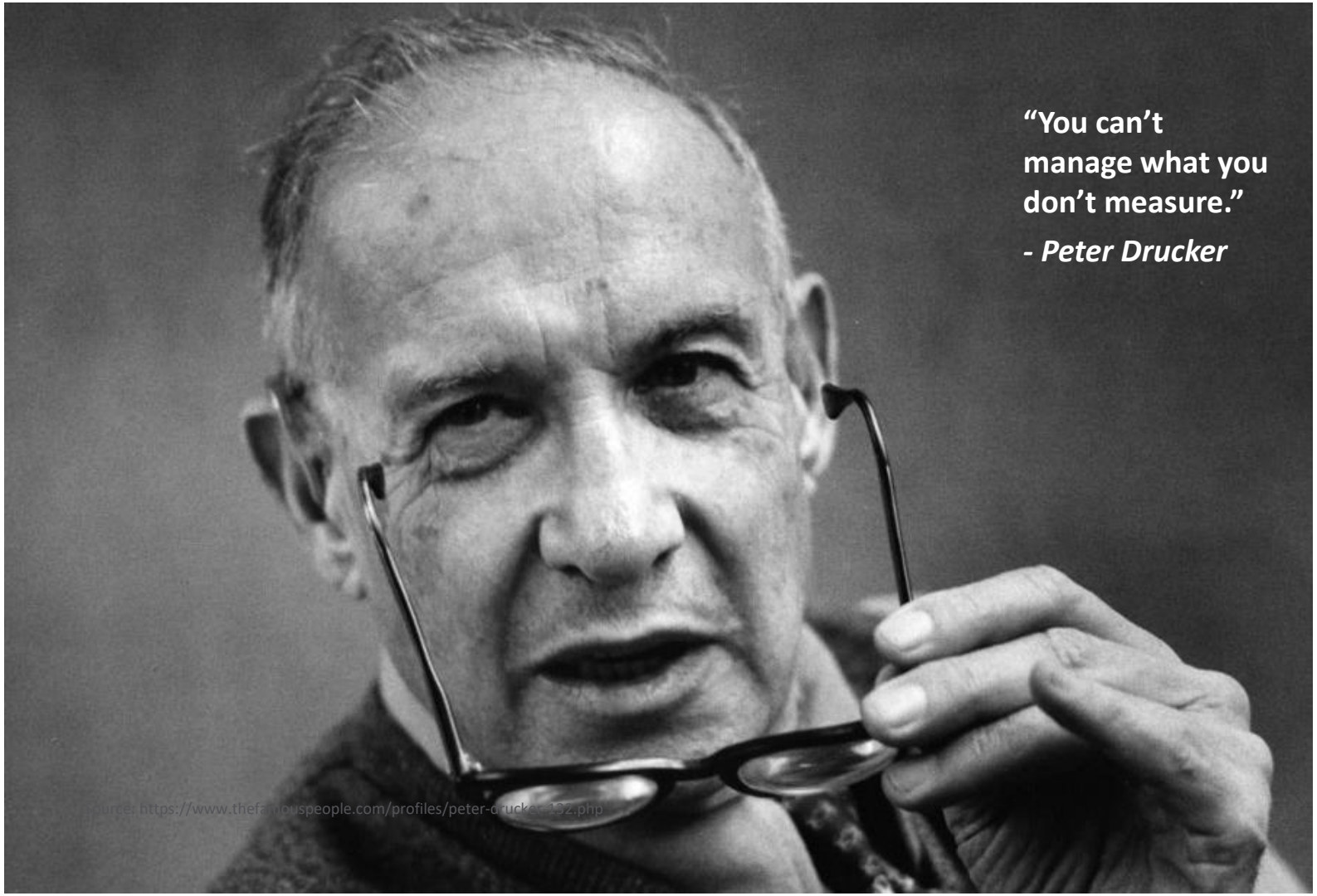
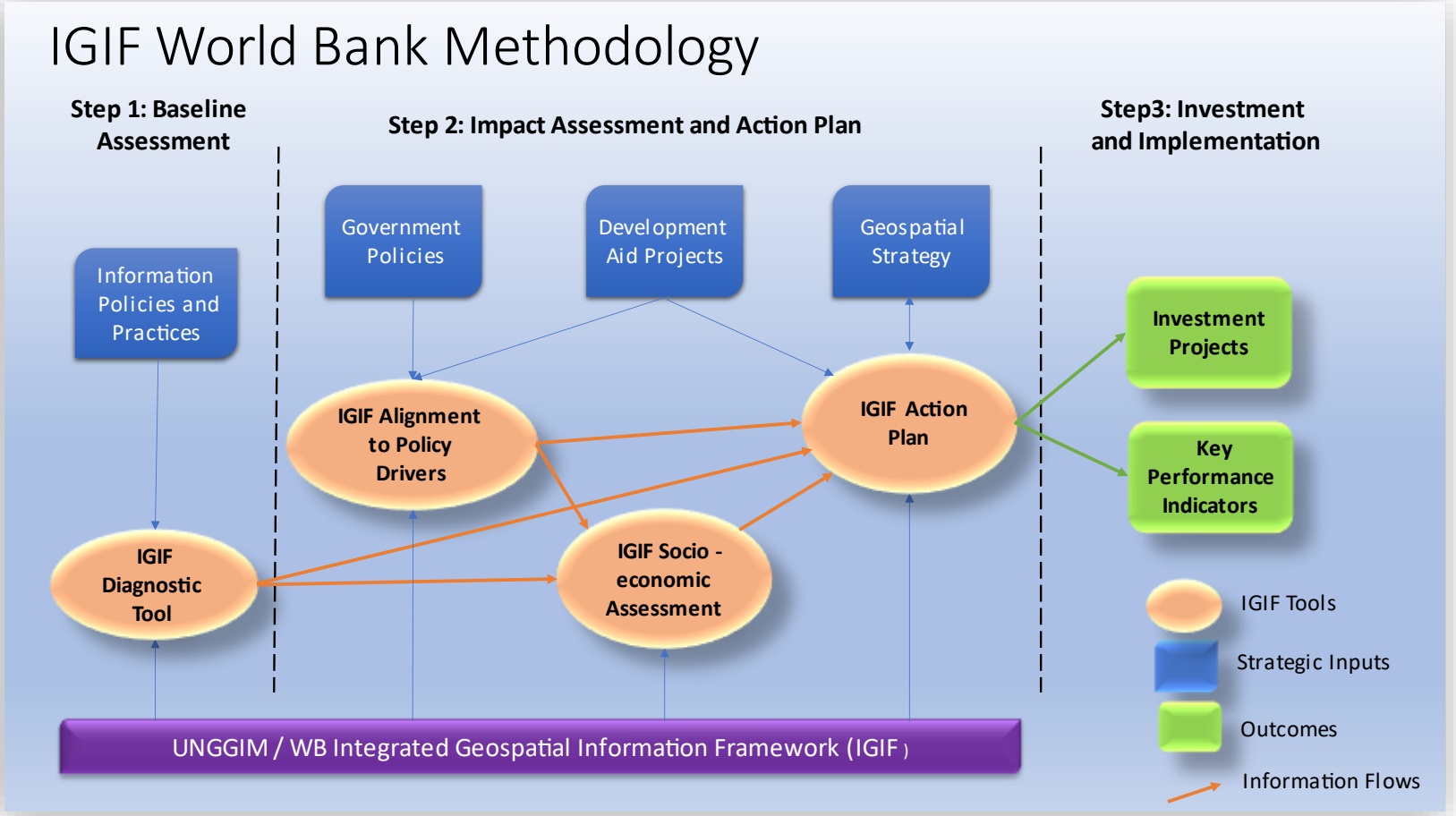
NSDI, Policy and Decision Making



World Bank IGIF Implementation Methodology

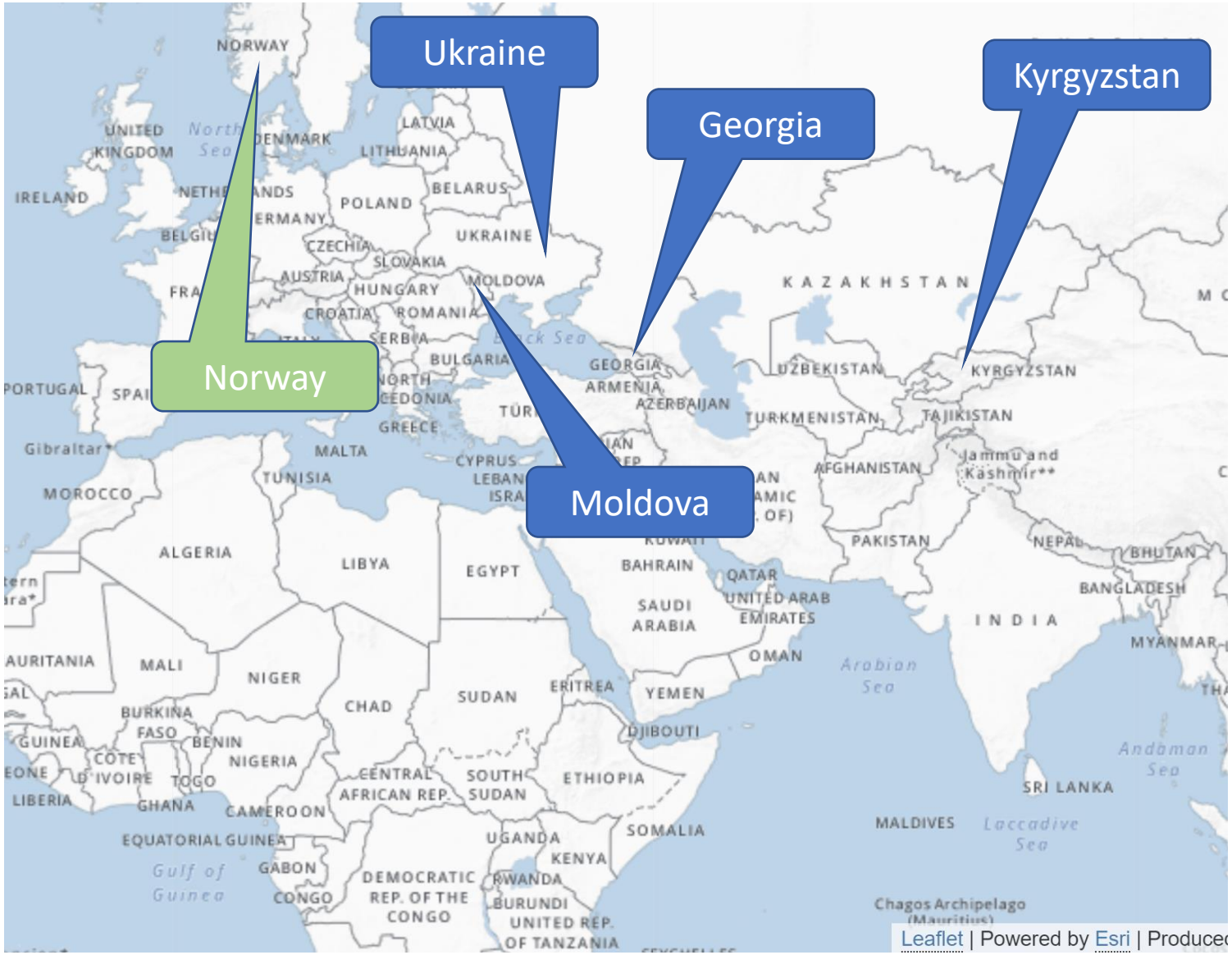
The World Bank Group has established an IGIF Implementation Methodology and corresponding analytical toolkit to support the use of the IGIF:

- **Incrementally strengthen geospatial information management -** customized to specific countries and priorities
- **Link to financing:** based on analytics, using standard WBG infrastructure model



The diagram shows the analytical tools (in orange), key inputs (in blue), the IGIF in purple, outcomes (in green). Arrows show the different types of information flows.

Context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Moldova

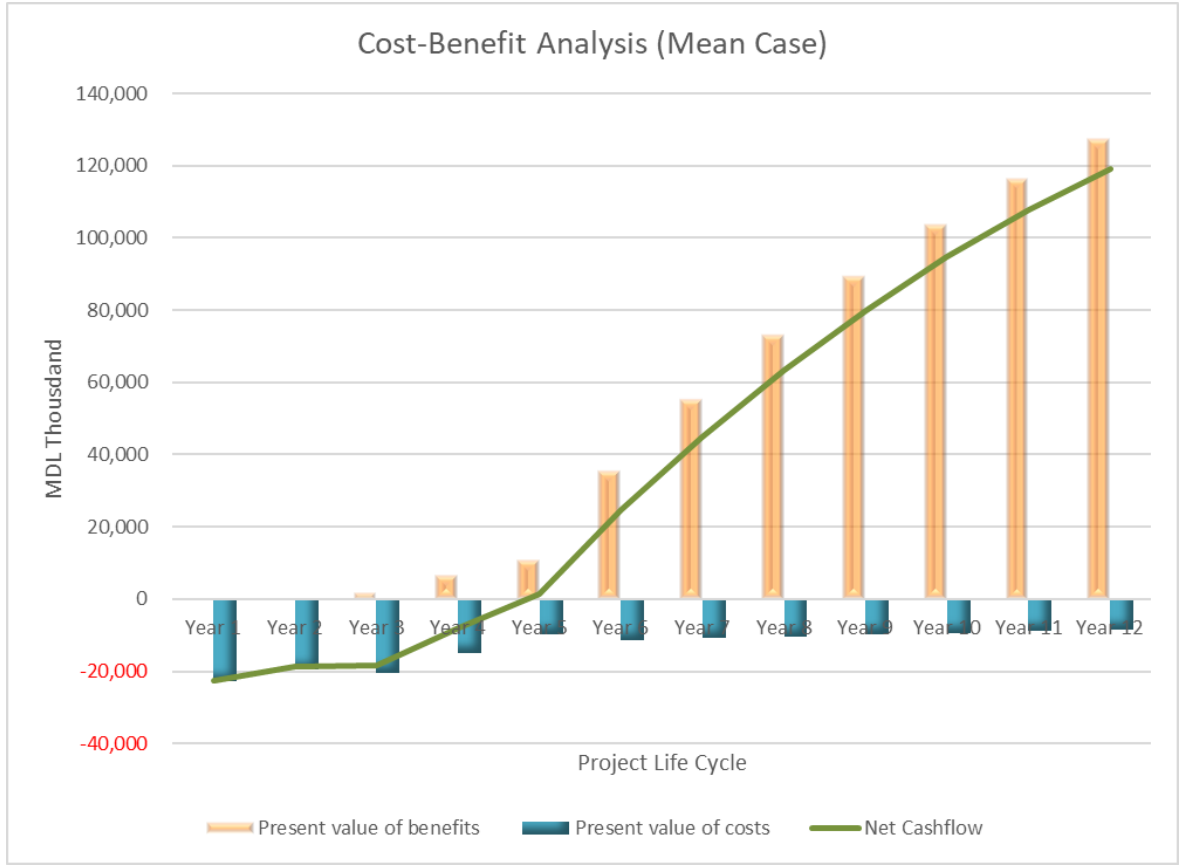
Moldova Results: Quantified Benefits

- Improved Data Sharing of National Address database
- Faster Emergency Response
- More accurate and less costly Geodetic Surveying
- Value of digital mapping to citizens
- Local Government efficiency
- Increased agricultural productivity
- Land Market growth
- New Geospatial products and services
- Open geospatial data

This represents only about 20% of the use cases identified.

SDI Cost-Benefit Results

	MDL	USD
Sum of discounted benefits	624,630	35,255
Sum of discounted costs	156,578	8,838
Benefit to Cost Ratio	4:1	
Cumulative Net Present Value	468,052	26,418



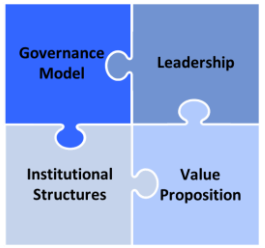
Latest Progress

- IGIF Action Plan
  - Completed in November 2021
  - Includes activities of EU Twinning Project
- Implementation already in progress
  - European Union Twinning Project continues for rest of 2022
  - Kartverket has commissioned Map Revision Methodology study
  - World Bank tender announced for capacity enhancement consultants
- Action Plan and SEIA are “living” documents
  - will need continuous revision

Kyrgyzstan

tesy of Simon Wills, UN ECE Presentation May 22

Proposed Actions: Strategic Path Highlights



Strengths: NSDI working group, draft action plan & Digital Kyrgyzstan
Weaknesses: No geospatial champion, no value proposition, no formal NSDI strategy or plan

Strengths: Donor funding
Weaknesses: lack of use cases & benefits studies, insufficient government funding, lack of coherent policy on data access & charging

Develop a small number of **geospatial use cases** that are aligned with government policies to raise awareness and to obtain a budget for a socio-economic impact assessment

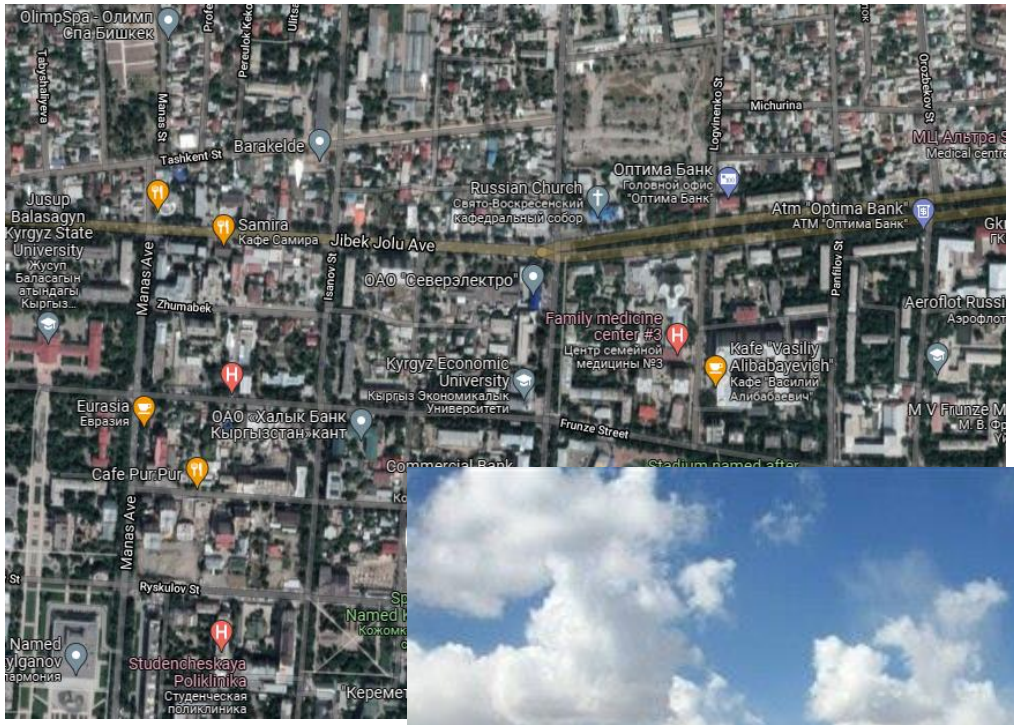
Develop an outline value proposition, supported by a **socio-economic impact assessment and business model** leading to the formation of an approved NSDI strategy

Key Use Cases

- Difficult to complete full Socio-economic Impact Assessment
  - Limited understanding
  - Lack of data

- Assessed the value of digital base mapping for two key use cases

- Focus on tangible economic benefits to the country and the sustainability.



Land Registration & Cadastre

Disaster and risk management – earthquake hazards

Benefits of Adopting the FFPLA Approach

	Traditional Approach US$ 53 per parcel / building	FFP Approach US$ 13.5 per parcel / building	Financial Saving
287,525 first registration properties	US$ 15 million	US$ 3.8 million	**US$ 11.2 million**
989,000 properties for quality improvement	US$ 52 million	US$ 13 million	**US$ 39 million**

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Maximising the value of location information

Business Models for SDI

Mobilising Sustainable Finance

What is a business model?

A definition

A business model describes how an organization creates and delivers value.

What it used for

In simple terms, this can be thought of as how an organization balances income and expenditure.

Why is it needed

A government initiative such as building a National Spatial Data Infrastructure (NSDI) needs a sustainable business model in the same manner as a commercial organization.

Types of business model

A business model is a framework for how an organization will create value. Business models answer fundamental questions about the problem to be solved, how the business will solve it, and the growth opportunity. Here are some well known organizations and their business models:

Freemium model

A basic product is provided for free but you charged for additional services or features (Duolingo).

Licensing model

Technology or innovations are monetized by selling a license (Esri).

Open Source model

Your product is free and is largely created by crowd sourcing either data (Open Street Map) or software (Quantum GIS).

Subscription model

Customers pay a recurring fee to access your product or service (Netflix).

Advertising model

Searching is free (the user does not pay) rather companies pay to get themselves to the top of the listings (Google).

Funding options

There are several means by which your spatial data infrastructure organization can be funded. Note that these funding options are not mutually exclusive:

1. Government funding (GOV)

The default mechanism is to draw funding from the Government department responsible.

2. Cost Sharing (CS)

The costs of creating and managing geospatial data are shared proportionally across stakeholders.

3. Value Added Services (VAS)

Funding is provided by NSDI data suppliers using their data to generate revenue to fund an increasing proportion of their costs.

4. Donors (DON)

Funding can also be sought from donors such as the UN, International Finance Institutions (IFIs), Bilateral Aid Agencies and Foundations.

Funding options (cont…)

Continuing the list of funding options, you can also consider:

5. Partnerships

Collaboration among different organizations involving the pooling of resources (financial and non-financial) to efficiently implement a project.

6. Full cost recovery

All costs received through charging for products and services.

7. Privatization

The geospatial organization could be moved into the private sector generating its own revenue from its services.

While there are several funding approaches ultimately you are likely to settle on a **Hybrid Business** model which adopts a mix of the options described.

Investment Plan Funding: Hybrid Business Model

Action Ref	Title	Total Investment (US$)	Funding Source	Explanation
4.1	Quality Improvement of fundamental datasets	xxx	SDI Coordinating Body	Activity to be financed using on-going budget through coordinating agency for NSDI
4.2	Formalize Geospatial Data Supply Chains	xxx	Donor	Capacity development activity funded by donor with skills transfer focus
4.4	Data Acquisition Program (remaining datasets)	xxx	Cost Sharing	Demand-led and financed by cost sharing between interested stakeholders
4.5.3	Integrated Address Management – Data Matching	xxx	Value Added Services	Key opportunity for value added services proposition using expertise in address management.

Key Takeaways

- The IGIF Action Plan only gets you to the Starting Line.
- A mixed of local and International expertise is the optimum approach
- The World Bank methodology for developing an IGIF Action Plan delivery, worked well in each country
- Action Plan Implementation needs **sustainable finance** to make it happen
- Understanding business models is crucial to realistic financial plans
- The Return on Investment provides the economic evidence necessary for presentation to local and international decision makers on strategy and funding

Thank You

Contact Information:

Andrew Coote

Mobile: +44 7860884119

Email: andrew.coote@consultingwhere.com

Skype: andrew.coote Chipperfield, UK

Twitter: @acoote

Website: www.consultingwhere.com

Extra Resources