The SBIF Review: Re-imagining our biological recording infrastructure

Latest progress update

21st June 2018

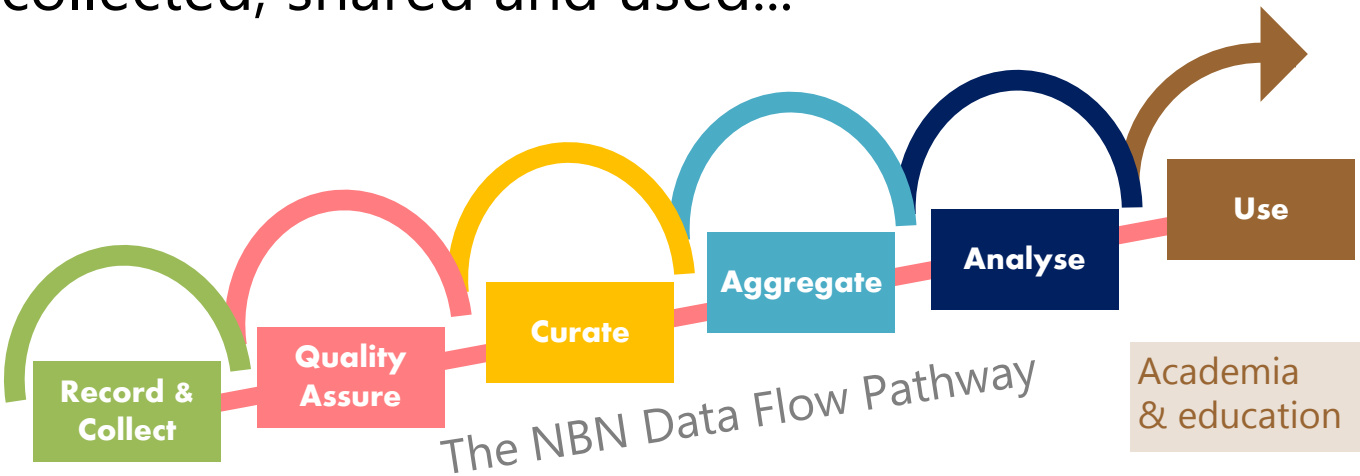
@sb_info_forum
@NBNTrust

Overview

1. Overview of the SBIF Review
2. Drivers for change
3. Benefits and value for Scotland
4. Emerging recommendations
5. How you can help
6. Discussion
   - What else would increase the value of the Review for SG?
   - What windows of opportunity might there be to connect to key initiatives?
   - What will the SG process be after submission of the Review Recommendations?
   - Ownership of the response to the Review?

The Infrastructure

The systems, processes and coordination facilitating biological records being collected, shared and used...



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National & Local Government

NGOs

Academia & education

Commercial & corporate

The Public

Scottish Natural Heritage

The Scottish Government
Riaghaltas na h-Alba

Fife Council

Inner Forth Landscape Initiative

Butterfly Conservation

Botanical Society of the British Isles

state of nature

Scottish Wildlife Trust

buglife

The University of Edinburgh

Learning to Inspire

Caledonian Conservation Ltd

CIEEM Chartered Institute of Ecology and Environmental Management

You and Me

Origin of the Review

The Scottish Parliament

(For official use only) PUBLIC PETITION NO.	PE1229

Should you wish to submit a public petition for consideration by the Public Petitions Committee please refer to the guidance leaflet How to submit a public petition and the Guidance Notes at the back of this form.

1. NAME OF PRINCIPAL PETITIONER

Craig Macadam, on behalf of Biological Recording in Scotland (BRISC)

2. TEXT OF PETITION

Calling on the Scottish Parliament to urge the Scottish Government to establish integrated local and national structures for collecting, analysing and sharing biological data to inform decision making processes to benefit biodiversity

3. ACTION TAKEN TO RESOLVE ISSUES OF CONCERN BEFORE SUBMITTING THE PETITION

For a number of years BRISC has lobbied SNH and local authorities to support a Scottish network of local recording groups and biological records centres to collect, share and use biological information. But in this we have had very limited success. SNH staff have been generally sympathetic, but ... recording network or provide support for local recording groups or centres.

We have made contact with a number of MSPs: Michael Russell, Sarah Boyack, Ted Brocklebank, Roseanna Cunningham, Robin Harper, Patrick Harvie, Christ...

4. ADDITIONAL INFORMATION

All nature conservation, ... is based on the knowledge of ... where it is and how scarce it is. This knowledge relies entirely on data, collected over ... professionals and volunteers. It is critical that all these efforts are properly co-ordinated.

The purpose of this petition is to urge Scottish Ministers to help put in place a network of formal biological data-sharing partnerships all over Scotland. These partnerships would identify, collate, mobilise, and possibly gather the biological data required to inform land-management decision-making, by public as well as by private bodies, thus enabling them to exercise their duty to further the conservation of biodiversity as stipulated in the Nature Conservation (Scotland) Act 2004. In addition, these data sharing partnerships would make biodiversity information readily available to everyone

Calling on the Scottish Parliament to urge the Scottish Government to establish integrated local and national structures for collecting, analysing and sharing biological data to inform decision making processes to benefit biodiversity

09/01/2009

Ministear airson na h-Àrainneachd
Minister for Environment and Climate Change
Roisin Chonaigean BPA
Roseanna Cunningham MSP

The Scottish Government
Riaghaltas na h-Alba

F/T: 0845 774 1741
E: [redacted]

Dr Ian Bainbridge
Head of Science
Scottish Natural Heritage
Silvan House, 3rd Floor East
231 Corstorphine Road
Edinburgh
EH12 7AT

Ur faidhle/Your ref:
Ar faidhle/Our ref: B4458277
14 December 2010

Dear Dr. Bainbridge,

Thank you, and the members ... for providing a comprehensive report on the ... recording.

Attached to this letter is the Scottish ... recommendations within that report. ... appropriate that they are given detailed ... be an agenda item at the upcoming ...

I look forward to hearing the outcome ... recommendations where appropriate.

Yours

R. Cunningham

ROSEANNA CUNNINGHAM

Taigh Naomh Anndrais, Rathad Regent, Dùn Èideann EH1 3DG
St Andrew's House, Regent Road, Edinburgh EH1 3DG
www.scotland.gov.uk

Scottish Government, SNH and others should establish a Scottish Environmental Information Forum (SEIF)…

…SEIF should review the role, funding and coverage of LRCs and other local options for biological data management across Scotland as part of the process to ensure that the necessary structures are in place to collect and disseminate biological information across Scotland

14/12/2010

Approach

Literature Review	✓	1975 to 2016
Interviews with key stakeholders	✓	47 'influencers' from 42 organisations
Public Questionnaire	✓	290 in total, 156 anon + 134 from 95 organisations
X-Sector Workshops	✓	66 people from 39 organisations @1+
Business case and recommendations	In progress	SBIF Advisory Grp on 28th June

Literature review

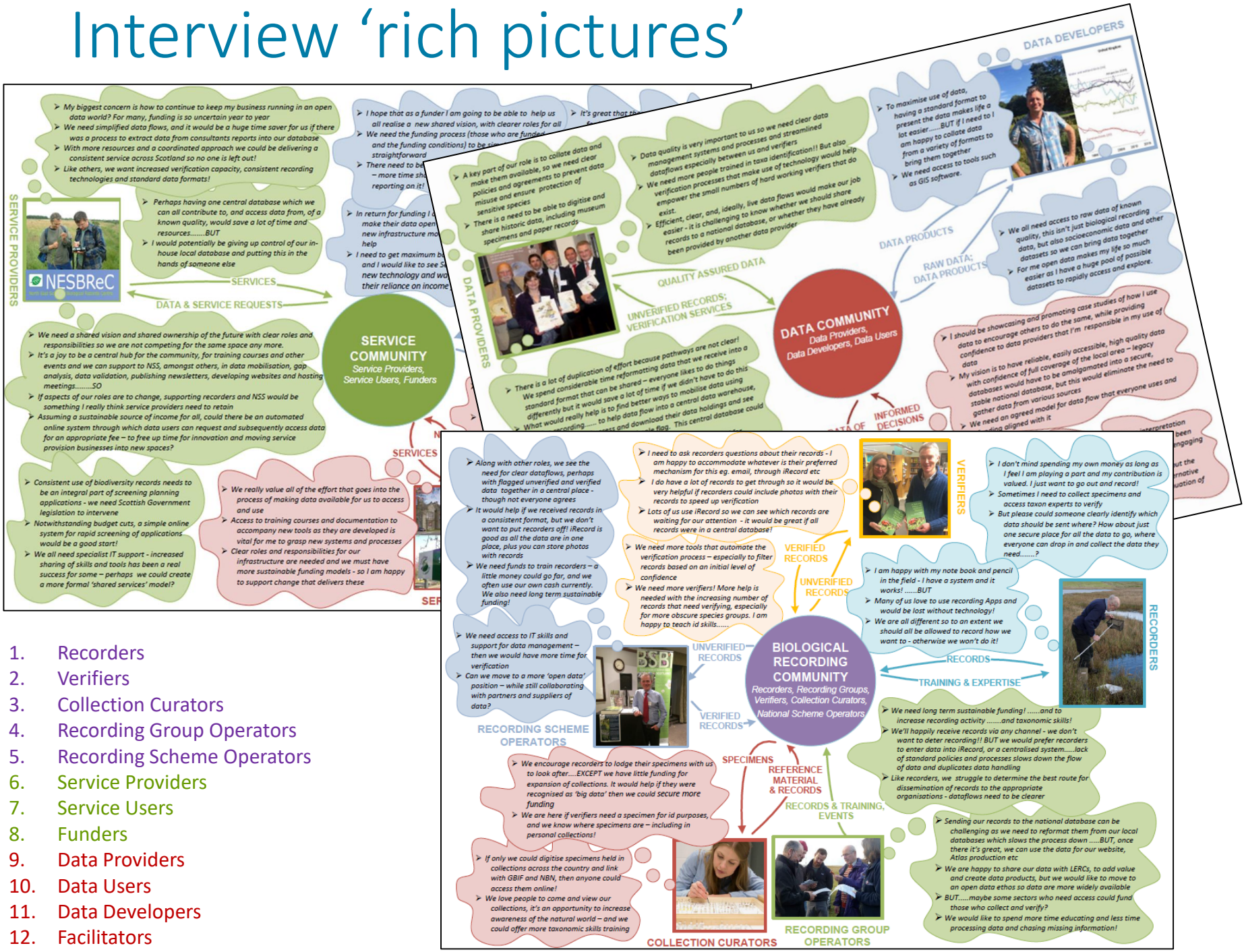
1975: The present **financial situation** and attitudes to biology in Scotland is not encouraging. We must plan for a brighter future… This is **a time of change** - the very time to press a case and win it. The needs of the planners and the conservationists should be carefully analysed; the currently diverse and uncoordinated network of data banks should be unified and improved to cope with the increasing amount of biological information. *[Source: Conference on biological recording in Scotland, A. Ritchie]*

1988: A considerable amount of the **information is not easily available**, and so is not used by those who require it. lf the nation is to profit from its reservoir of recording talent and have the ability to make planning and conservation decisions from a firm base, there must be a commitment to invest in the setting-up of an efficient network… A coordinated national recording network could operate at less or the same total costs at present spent on recording by a **multiplicity of bodies**. The proposed network could be self-financing if it could channel the information currently commissioned from a wide variety of people... A continuing supervisory body should be established to **oversee local records centres**. *[Source: Biological Survey Need & Network, R.J. Berry]*

1995: If a re-organisation for improved coordination and accuracy of biological recording is to be implemented the options necessary to support **a business case must be expressed clearly,** the necessity for change being spelt out rationally; defined in specific policies, after the potential roles of participants have been clarified and agreed by the recording community, <in a way> which can be readily understood by the public. Clear and far-sighted, authoritative **leadership will be essential**. *[Source: Biological Recording in the United Kingdom, J. Burnett, C.J.T. Copp, P.T. Harding]*

2016: LOCAL AUTHORITIES SHOULD PURSUE THE ESTABLISHMENT OF SHARED SERVICES. **Radical solutions need to be realised.** Shared services would be particularly helpful in specialist areas where it is unrealistic to expect all local authorities to maintain a high level of expertise in-house. *[Source: An Independent Review of the Scottish Planning System]*

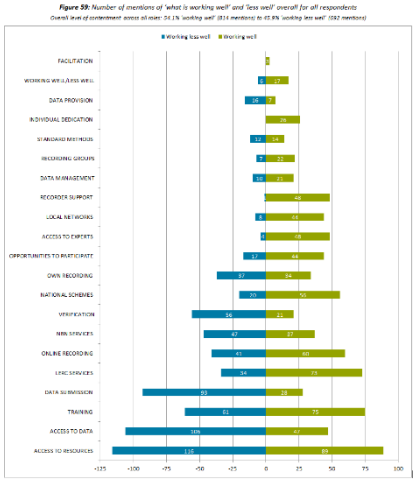
Interview ‘rich pictures’

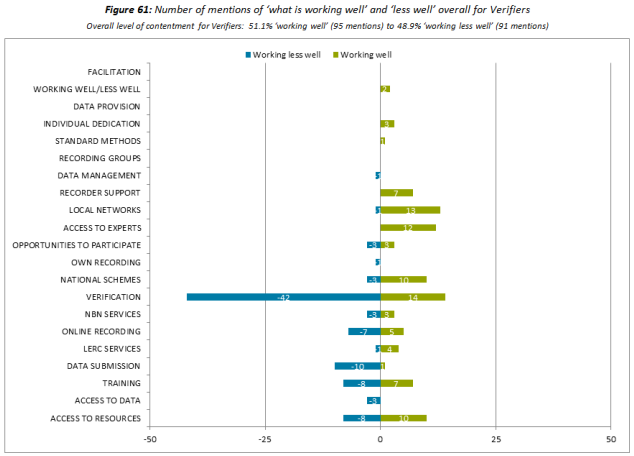


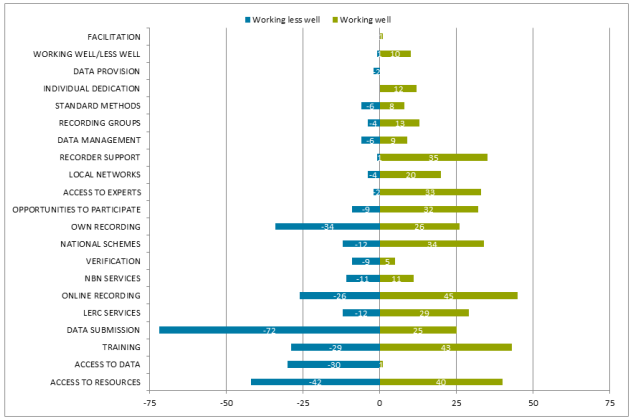
1. Recorders
2. Verifiers
3. Collection Curators
4. Recording Group Operators
5. Recording Scheme Operators
6. Service Providers
7. Service Users
8. Funders
9. Data Providers
10. Data Users
11. Data Developers
12. Facilitators

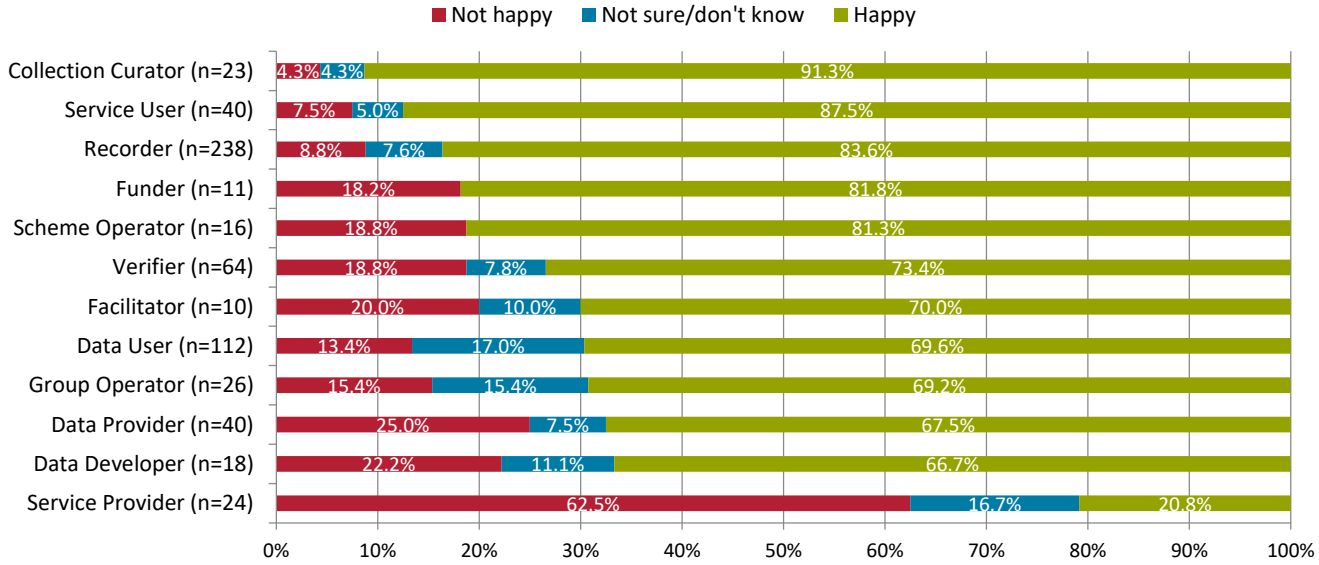
Questionnaire findings

Some things are working well (e.g. online recording and training) and some are working less well (e.g. data submission, verification and access to resources)







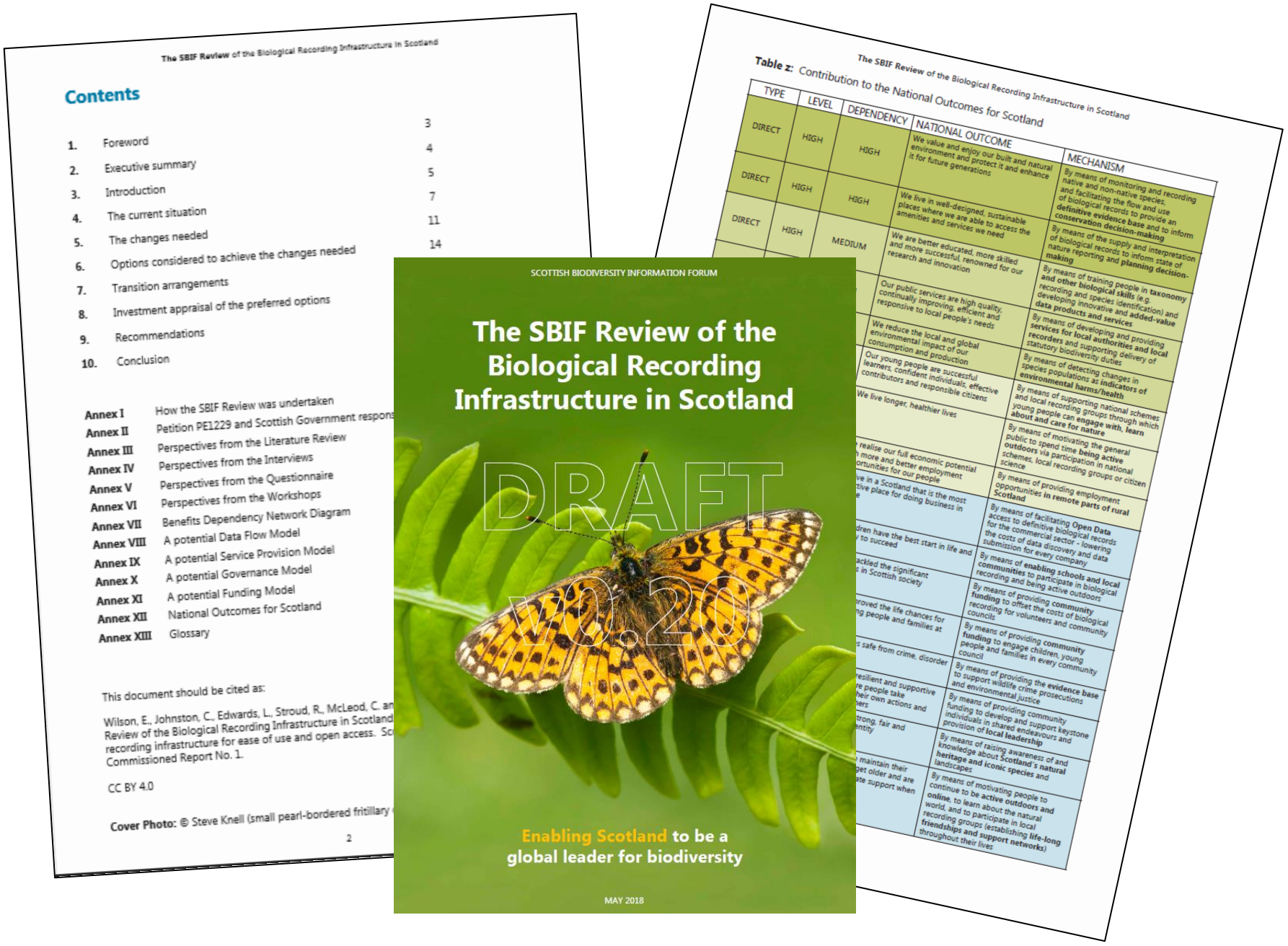


Service Providers are least happy about Open Data because of the need to cover costs...





Business case and recommendations



The SBIF Review of the Biological Recording Infrastructure in Scotland

Contents

This document should be cited as:

Wilson, E., Johnston, C., Edwards, L., Stroud, R., McLeod, C. an
Review of the Biological Recording Infrastructure in Scotland
recording infrastructure for ease of use and open access. Sc
Commissioned Report No. 1.

Cover Photo: © Steve Knell (small pearl-bordered fritillary

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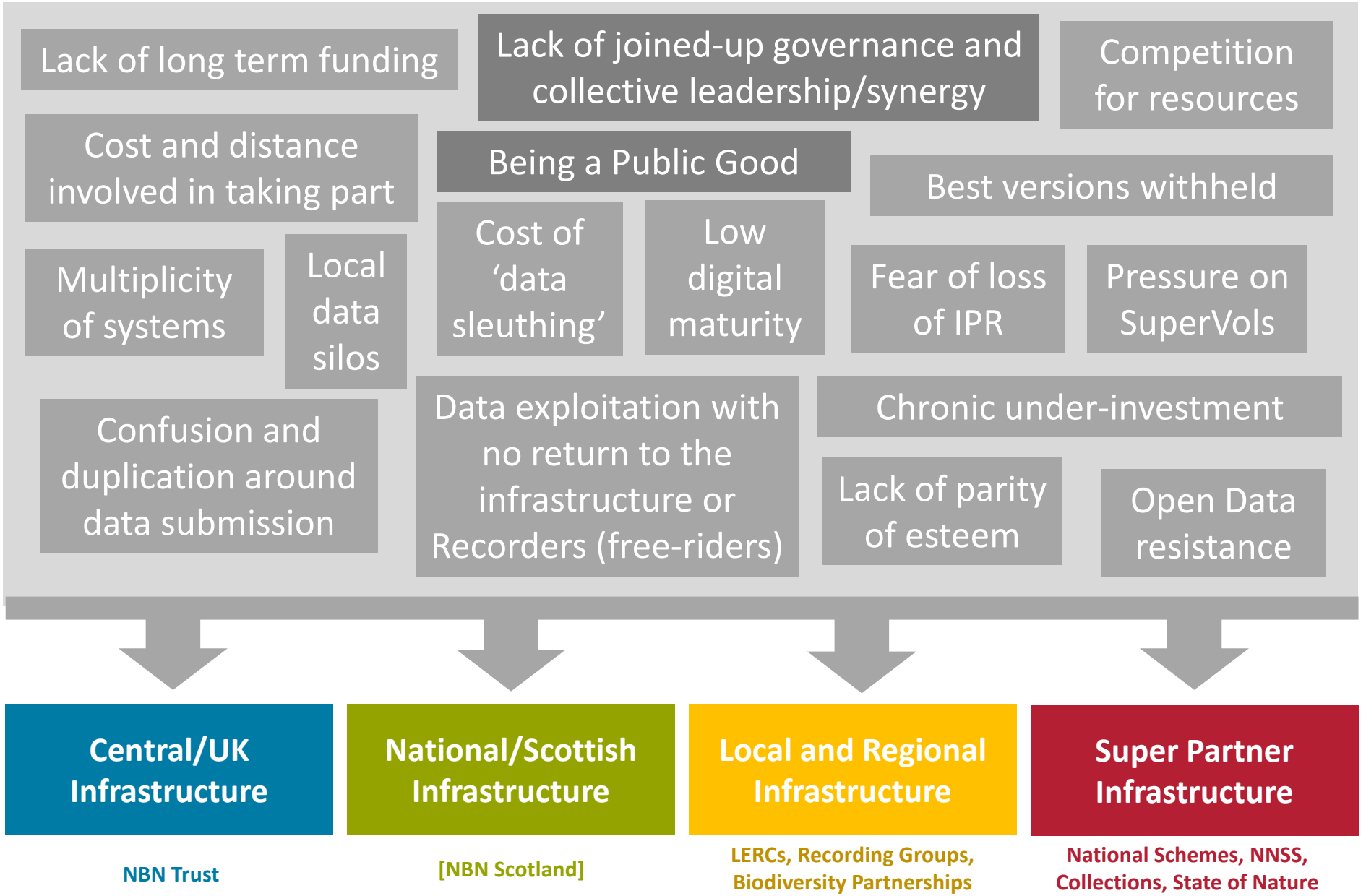
The SBIF Review of the Biological Recording Infrastructure in Scotland

Table 2: Contribution to the National Outcomes for Scotland

TYPE	LEVEL	DEPENDENCY	NATIONAL OUTCOME	MECHANISM
DIRECT	HIGH	HIGH	We value and enjoy our built and natural environment and protect it and enhance it for future generations	By means of monitoring and recording native and non-native species, and facilitating the flow and use of biological records to provide an **definitive evidence base** and to inform **conservation decision-making**
DIRECT	HIGH	HIGH	We live in well-designed, sustainable places where we are able to access the amenities and services we need	By means of the supply and interpretation of biological records to inform state of nature reporting and **planning decision-making**
DIRECT	HIGH	MEDIUM	We are better educated, more skilled and more successful, renowned for our research and innovation	By means of training people in **taxonomy and other biological skills** (e.g recording and species identification) and developing innovative and **added-value data products and services**
			Our public services are high quality, continually improving, efficient and responsive to local people's needs	By means of developing and providing **services for local authorities and local recorders** and supporting delivery of statutory biodiversity duties
			We reduce the local and global environmental impact of our consumption and production	By means of detecting changes in species populations as **indicators of environmental harms/health**
			Our young people are successful learners, confident individuals, effective contributors and responsible citizens	By means of supporting national schemes and local recording groups through which young people can **engage with, learn about and care for nature**
			We live longer, healthier lives	By means of motivating the general public to spend time **being active outdoors** via participation in national schemes, local recording groups or citizen science
			realise our full economic potential more and better employment portunities for our people	By means of providing employment opportunities **in remote parts of rural Scotland**
			ve in a Scotland that is the most tive place for doing business in	By means of facilitating **Open Data** access to definitive biological records for the commercial sector - lowering the costs of data discovery and data submission for every company
			dren have the best start in life and to succeed	By means of **enabling schools and local communities** to participate in biological recording and being active outdoors
			ackled the significant in Scottish society	By means of providing **community funding** to offset the costs of biological recording for volunteers and community councils
			roved the life chances for ng people and families at	By means of providing **community funding** to engage children, young people and families in every community council
			s safe from crime, disorder	By means of providing the **evidence base** to support wildlife crime prosecutions and environmental justice
			esilient and supportive e people take heir own actions and ers	By means of providing community funding to develop and support keystone individuals in shared endeavours and provision of **local leadership**
			trong, fair and entity	By means of raising awareness of and knowledge about **Scotland's natural heritage and iconic species** and landscapes
			maintain their get older and are ate support when	By means of motivating people to continue to be **active outdoors and online**, to learn about the natural world, and to participate in local recording groups (establishing **life-long friendships and support networks**) throughout their lives

Key issues


Lack of long term funding
Lack of joined-up governance and collective leadership/synergy
Competition for resources
Cost and distance involved in taking part
Being a Public Good
Best versions withheld
Multiplicity of systems
Local data silos
Cost of 'data sleuthing'
Low digital maturity
Fear of loss of IPR
Pressure on SuperVols
Confusion and duplication around data submission
Data exploitation with no return to the infrastructure or Recorders (free-riders)
Chronic under-investment
Lack of parity of esteem
Open Data resistance
Central/UK Infrastructure
National/Scottish Infrastructure
Local and Regional Infrastructure
Super Partner Infrastructure
NBN Trust
[NBN Scotland]
LERCs, Recording Groups, Biodiversity Partnerships
National Schemes, NNSS, Collections, State of Nature

Drivers for change

1. Insufficient sustainable funding and resources to operate the biological recording infrastructure effectively
2. Demand for timely access to Open Data of known quality
3. Demand for complete coverage for service provision
4. Proliferation and complexity of competing data flows causes inefficiency, confusion and frustration
5. Insufficient support for, and recognition of, volunteers involved in biological recording
6. Demand to achieve the Scottish Biodiversity Strategy and UN Sustainable Development Goals/Aichi Targets

1975

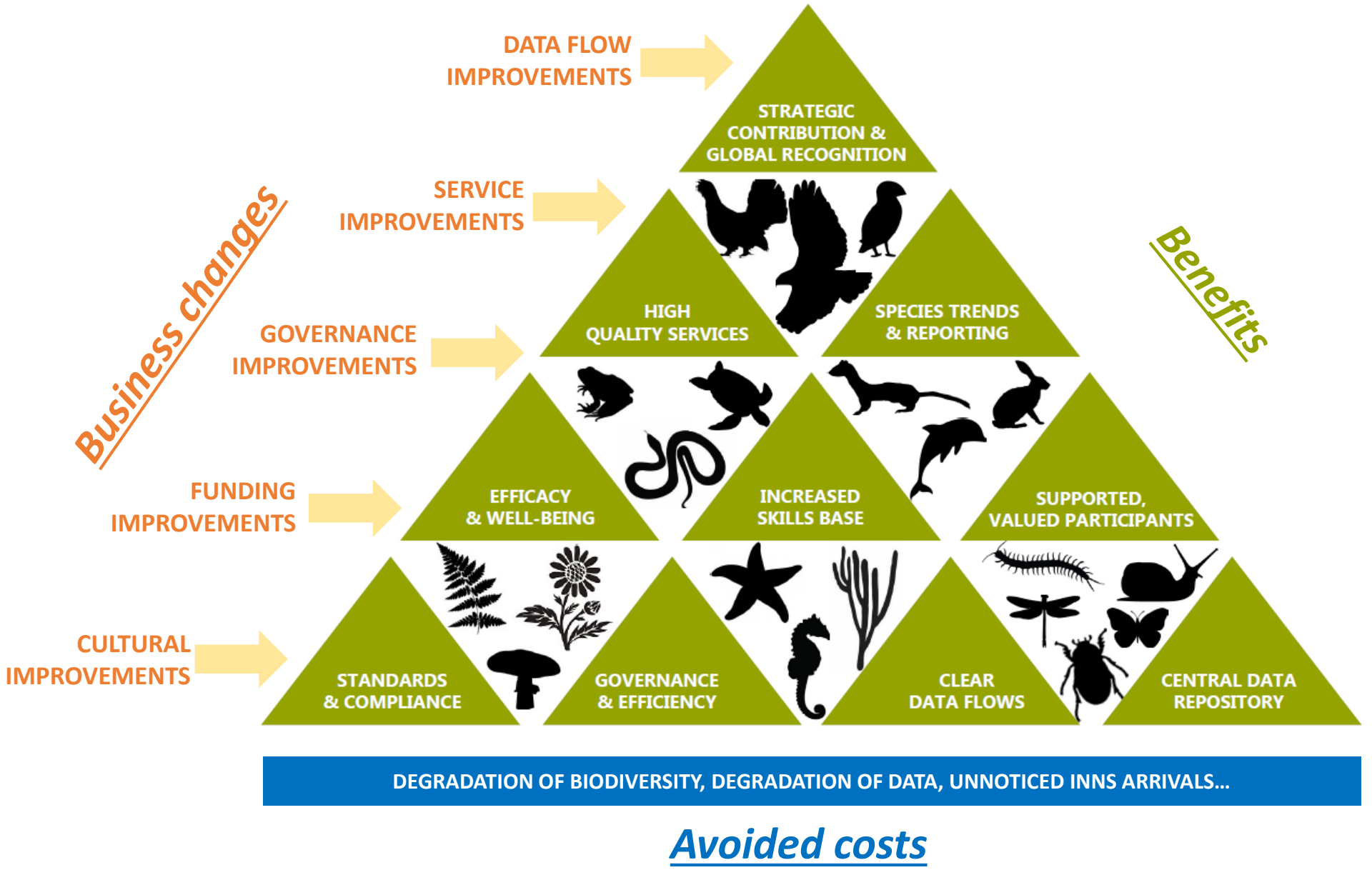
*"The present **financial situation** and attitudes to biology in Scotland is not encouraging. We must plan for a brighter future… This is **a time of change** - the very time to press a case and win it..."*

[Source: Conference on biological recording in Scotland, A. Ritchie]

Objectives

1. Establish and embed preferred models for data flow, service provision, governance and funding
2. Provide consistent high quality services equally accessible to all public bodies in support of their statutory biodiversity duty and strategic goals
3. Better facilitate and grow the network of volunteer Recorders and Verifiers who are actively supporting, and being supported by, the infrastructure
4. Facilitate the open provision of biological records from all sectors for onward dissemination via a single central data repository
5. Establish a feedback mechanism for Recorders and Data Providers to showcase the use of their records and value of their contribution
6. Be universally recognised and valued for being the definitive provider of biological records in Scotland as a common evidence base for all purposes, all sectors and all generations

Benefits and business changes



Avoided costs

Benefit dependency network

Contribution to goals

Protected environment

Sustainable economy

Health

Skills

Community

TYPE	LEVEL	DEPENDENCY	NATIONAL OUTCOME	MECHANISM
DIRECT	HIGH	HIGH	We value and enjoy our built and natural environment and protect it and enhance it for future generations	By means of monitoring and recording native and non-native species, and facilitating the flow and use of biological records to provide an **definitive evidence base** and to inform **conservation decision-making**
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DIRECT	HIGH	MEDIUM	We reduce the local and global environmental impact of our consumption and production	By means of detecting changes in species populations as **indicators of environmental harms/health**
DIRECT	HIGH*	LOW	Our young people are successful learners, confident individuals, effective contributors and responsible citizens	By means of supporting national schemes and local recording groups through which young people can **engage with, learn about and care for nature**
DIRECT	MEDIUM	LOW	We live longer, healthier lives	By means of motivating the general public to spend time **being active outdoors** via participation in national schemes, local recording groups or citizen science
DIRECT	LOW	LOW	We realise our full economic potential with more and better employment opportunities for our people	By means of providing employment opportunities **in remote parts of rural Scotland**
INDIRECT	LOW		We live in a Scotland that is the most attractive place for doing business in Europe	By means of facilitating **Open Data** access to definitive biological records for the commercial sector - lowering the costs of data discovery and data submission for every company

Examples of value

Central/UK Infrastructure	£ Billions	• Single, central, open access biodiversity evidence base for all with clarity on data flow • Lead governance organisation facilitating affiliation, cohesion and risk management
National Infrastructure	£ Billions	• National product ownership for NBN Atlas; bespoke national services/reporting; Aichi Target support • Innovation and collaboration across all sectors; links to digital collections and enriched data
Regional Infrastructure	£ Millions	• Equal access to high quality biodiversity information services for all Local Authority areas in Scotland • Encouraging Recorders to submit records and cover gaps; connecting beginners and experts alike
Super Partner Infrastructure	£ Millions	• Increased verifier capacity, support for key volunteers, succession planning, taxon expertise maintained • Costs covered for 'public service' platforms (e.g. BSBI Plant DDb), so securing key resources and access
Communities	£ Millions	• Improved access to improved digital services, greater empowerment in citizen decision-making • Greater support for deprived/remote communities – access to events, equipment, training and experts
Scottish Government	£ Billions	• World-leading infrastructure to aid decision-making (sustainable economy, protected nature) • Popular activities getting people outside discovering nature (health/skills/community)

Scotland's environment

NBN atlas

Examples of value


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©Scottish Government


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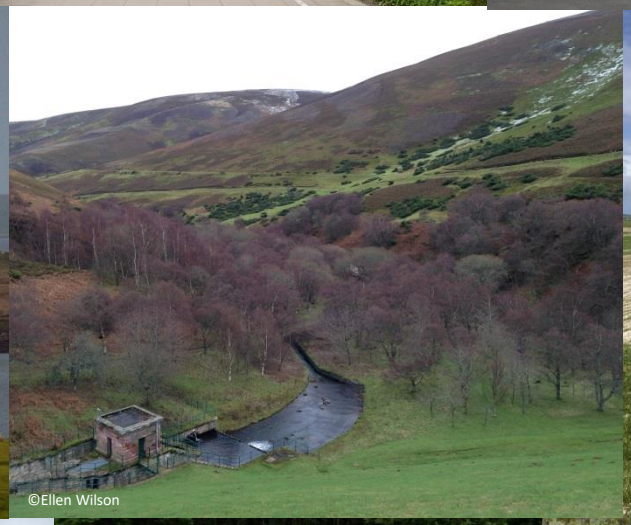
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Emerging recommendations

1. IMPROVED DATA FLOW

- *Renewed commitment to NBN and NBN Atlas and a Scottish 'Product Owner'*
- *Data supply mandated as a condition of funding/consent/affiliation, via regulation or good practice*
- *NBN 'kitemark' for affiliated routes, iRecord as the route for adhoc records, regional recorder support*
- *Recorder 6 to evolve into a central data management portal for local use*
- *Financial support for costs of Platform Partners who provide 'public service platforms'*
- *Verification capacity building via Expert Partner funding and Community funding for verifiers*
- *System simplification programme with a rationalised platform road map*
- *LERC funding replaced with funding for 'Regional Hub Partners' open to a wider range of partnerships via NBN Trust*
- *Use feedback built into automated services in future*

2. IMPROVED SERVICE PROVISION

- *Focus on service improvement and consistent provision of a core set of services coordinated via NBN Scotland*
- *Service design programme using a business analysis approach supported by NBN Scotland*

3. IMPROVED GOVERNANCE & CULTURE

- *NBN Trust given special status as Lead Governance Organisation coordinating National and Regional Hubs*
- *Hosting of partners to share back end office services with access to professional HR support*
- *Training of all partners in use of 'agile' and 'business analysis', One Team profile and parity of esteem*
- *Bringing together/repackaging of NBN Trust and BRC skills and remit to unify data management elements*

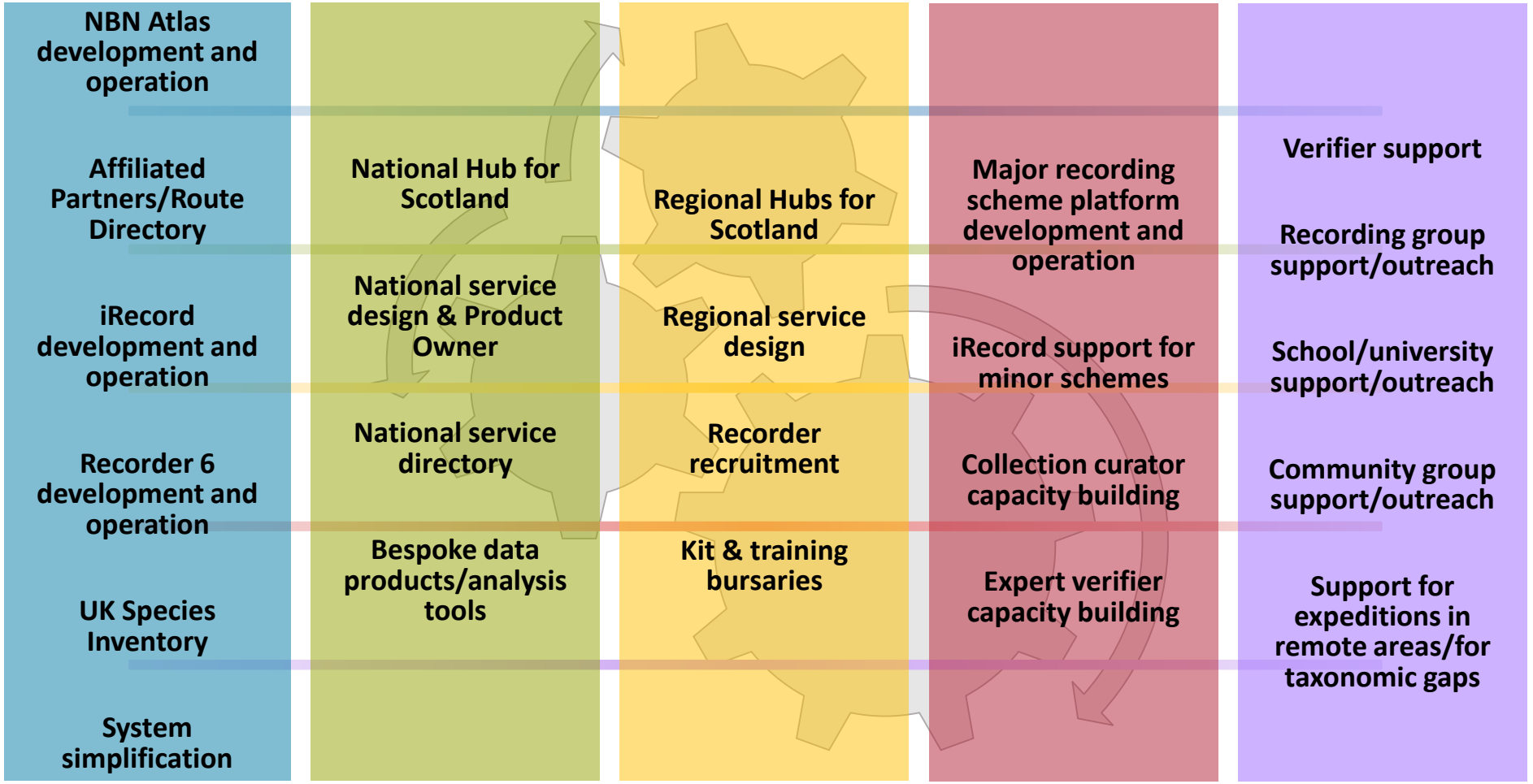
4. IMPROVED ENGAGEMENT & CONTRIBUTION

5. IMPROVED FUNDING

- *Establishment of funding of ≥£3 million per annum for Scotland (e.g. a biodiversity levy/business rates, or subscriptions)*

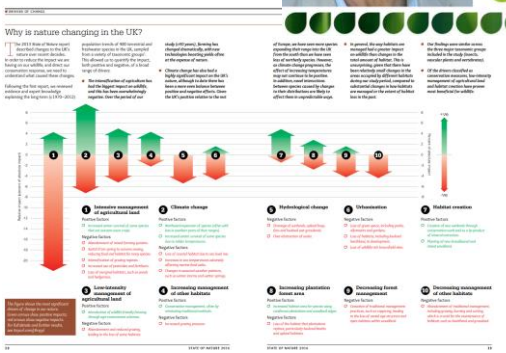
6. TRANSITION BY 2025

Potential components



Why now?

Pressures on the environment are causing a biodiversity crisis: from farming, forestry, INNS, climate change, hydrological change

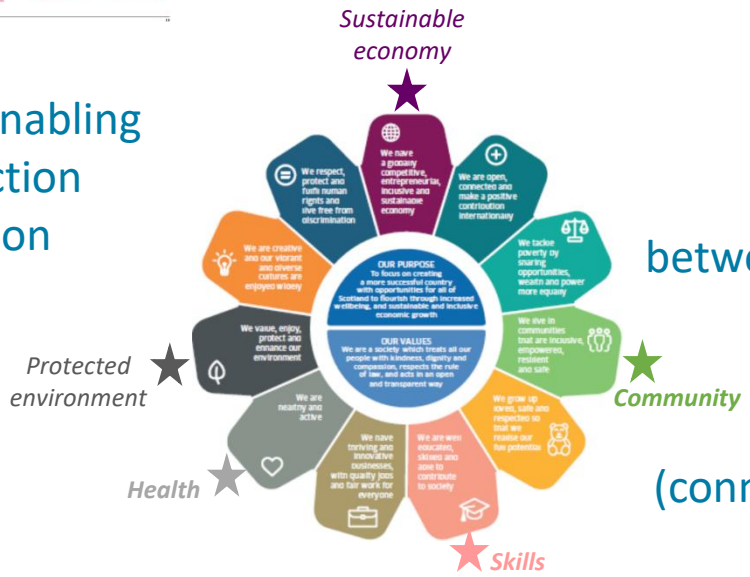


Government funding (Aichi Target 20) is reducing and Open Data is changing business models

Amateur expert resource is dwindling, complexity of data flows, gaps in data collection and service provision; but massive consensus and collective energy from SBIF community…

Technological advances are enabling a huge increase in data collection and so pressures on verification

Digital Scotland
DIGITAL PARTICIPATION



Significant dependencies between our National Outcomes and a biodiversity evidence base, taxonomic skills and community engagement (connecting people with nature)

Scalable investment choices

Value

£0.5m-£1m

Local Communities
- Verifiers
- Recorders & Recording Groups
- School, University & Community Groups

£0.75m-£1m

Regional Hubs
- Recorder support
- Local Authority support
- Local engagement

£0.25m-£0.5m

National Hub
- National Product Development
- Bespoke tools and reporting
- National list and layer curation

£1m-£2m

UK Hub
- UK Product Development
- Data Partner support
- Standards and affiliation
- UK Species Inventory
- Data warehouse and aggregation

£0.5m-£1.5m

Super Partners
- Museums and Gardens
- National Schemes
- Non-Native Species Secretariat
- State of Nature Partnership

Annual operating costs of
c. £2.5m-£6m for Scotland

With the potential for other UK countries to share central and super partner costs to halve the total cost for Scotland

Some opportunity to develop interim funding through grant applications and partnership working

Phased and agile approach, active benefits management and engaging progress reporting

Huge public engagement potential for all sectors, communities and ages; positive x-party political support

£

Annual Costs

Next steps

Subject to funding

FINISH

Review Phase

- Business case and recommendations
- Close down the Review ASAP

ASAP

START

Advocacy Phase

- Priming of Funders
- Decision by Scottish Government et al
- Holyrood reception with Species Champions?

2018/19

PLAN

Implementation Phase

- Central systems and governance
- National and regional services and support

2019/2020

Who We Are

LINK is a forum for Scotland's voluntary environment organisations with over 35 member bodies representing a wide range of environmental interests with the common goal of contributing to a more environmentally sustainable society.

Scottish Environment LINK *The voice of Scotland's environment community*

How you can help