The SBIF Review

Re-imagining our Data Infrastructure for sustainability and success

Ellen Wilson, Chair

Scottish Biodiversity Information Forum

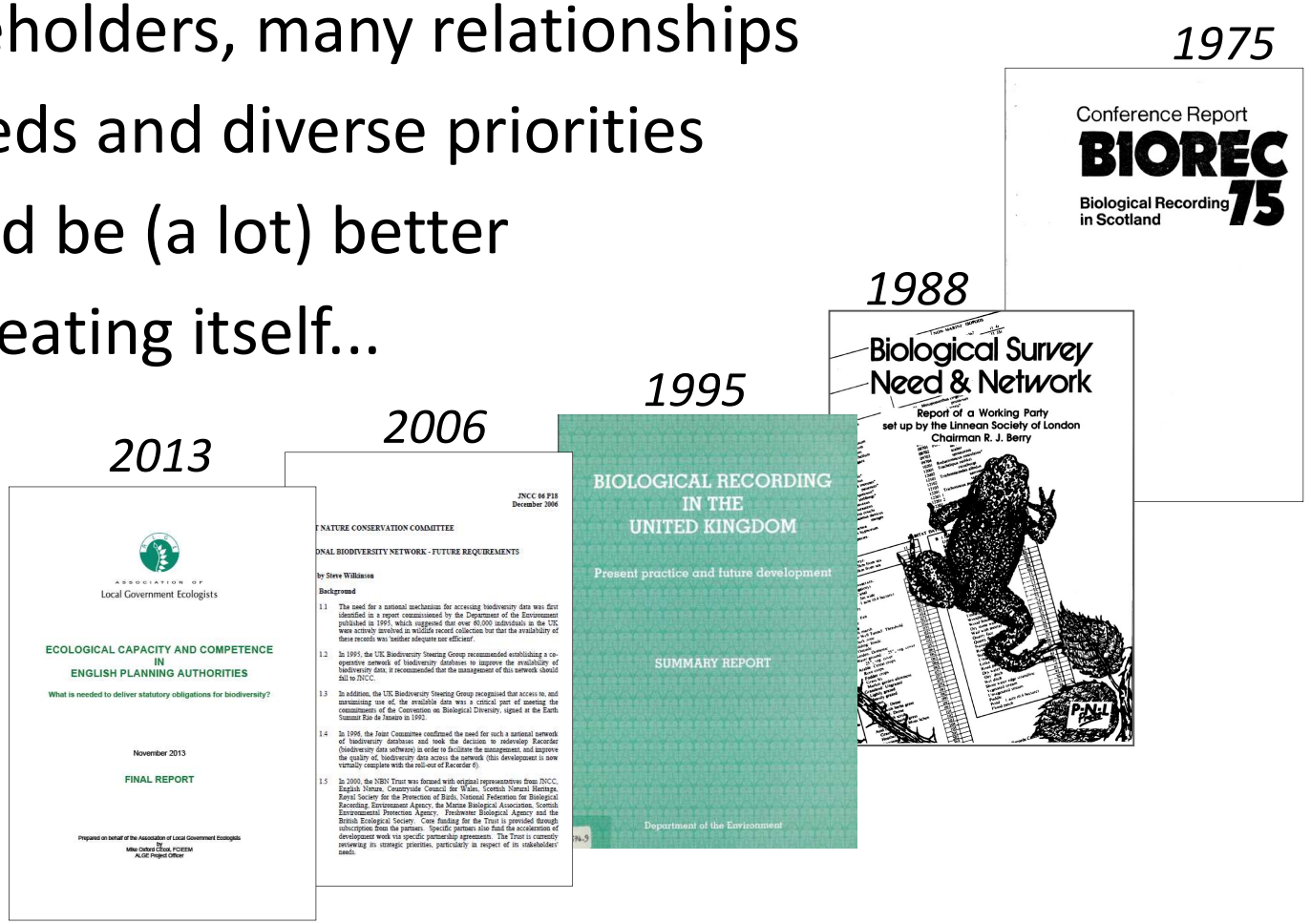
NBN Conference 2017

SENSITIVE INFORMATION INSIDE

work in progress, handle with care

Why have a Review?

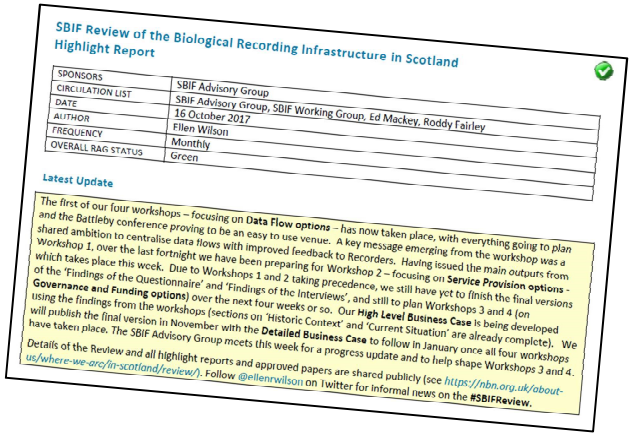
- Public petition for an effective infrastructure
- Many stakeholders, many relationships
- Diverse needs and diverse priorities
- Things could be (a lot) better
- History repeating itself...



High-level Plan

- STAGE 1: Set up the Working Group and complete planning for the Review
- STAGE 2: Gather perspectives, requirements and other information from key stakeholders
- STAGE 3: Hold workshops to find and evaluate options at central, national and local levels
- STAGE 4: Issue recommendations and plan their implementation
- STAGE 5: Support implementation of recommendations and monitor progress

See SBIF Review pages on the NBN website for more details and highlight reports



SBIF Review of the Biological Recording Infrastructure in Scotland
Highlight Report

SPONSORS	SBIF Advisory Group
CIRCULATION LIST	SBIF Advisory Group, SBIF Working Group, Ed Mackey, Roddy Fairley
DATE	16 October 2017
AUTHOR	Ellen Wilson
FREQUENCY	Monthly
OVERALL RAG STATUS	Green

Latest Update

The first of our four workshops – focusing on **Data Flow options** – has now taken place, with everything going to plan and the Battleby conference proving to be an easy to use venue. A key message emerging from the workshop was a shared ambition to centralise data flows with improved feedback to Recorders. Having issued the main outputs from Workshop 1, over the last fortnight we have been preparing for Workshop 2 – focusing on **Service Provision options** - which takes place this week. Due to Workshops 1 and 2 taking precedence, we still have yet to finish the final versions of the 'Findings of the Questionnaire' and 'Findings of the Interviews', and still to plan Workshops 3 and 4 (on **Governance and Funding options**) over the next four weeks or so. Our **High Level Business Case** is being developed using the findings from the workshops (sections on 'Historic Context' and 'Current Situation' are already complete). We will publish the final version in November with the **Detailed Business Case** to follow in January once all four workshops have taken place. The SBIF Advisory Group meets this week for a progress update and to help shape Workshops 3 and 4.

Details of the Review and all highlight reports and approved papers are shared publicly (see https://nbn.org.uk/about-us/where-we-are/in-scotland/review/). Follow @ellenrwilson on Twitter for informal news on the **#SBIFReview**.

1968_Nature on the Grid_CAMPBELL
1973_BRC_A national data bank_Leaflet
1975, 1977 Guide to Biological Recording in Scotland
1975_Angus Wildlife Review
1975_Biological Recording in Scotland_Conference Report
1977_BRC Intructions for Recorders_HEATH AND SCOTT
1977_The development of the Biological Data Bank, West Yorkshire Region_LAVIN
1978 _Handbook for Local Biological Record Centres_FLOOD & PERRING
1984_LRCs & environmental recording - where do we go from here_COPP
1990_Biological recording changes_ITEsymposium_PAUL HARDING
1993_Biological recording in the Highlands - the first5yrs 1987-1991_EVANS
1996_Biodiversity Information on the Internet Cornucopia or Confusion_CARLING
1999_A Source Book for Biological Recording in Scotland_BRISC
1999_Lanarkshire Biological Information Survey_MELLOR
2000_Generating data solutions through Local Record Centres. NBN
2001_Biological Re
2001_framework-bi
2006_Biodiversity D
2006_NBN Future R
2006-16_Strategic B
2007_Biodiversity-D
2009_Analysis of Bi
2010_ Obtaining th
2010_DataHub_LLT
2010_Highland Bio
2010_Recommenda
2011_Towards Joing the Dots_NFBR
2011-2015_Strategic_Plan_NFBR
2012_A change in funding directions. Implications for Bio Recording_ROGER MORRIS
2012_Evidence for the need for SBIF
2012_Promoting Biological Recording_BRITISH WILDLIFE
2013_Biodiveristy data should be published, cited, and peer reviewed_COSTELLO
2015_SBIF Survey of CIEEM members_SBIF

Programme of Forum

1. What is a biological record?
2. Validation of records
3. Networking
4. Data storage - Records Centres keep records - How?
5. Computing
6. Users and uses
7. The problems being faced

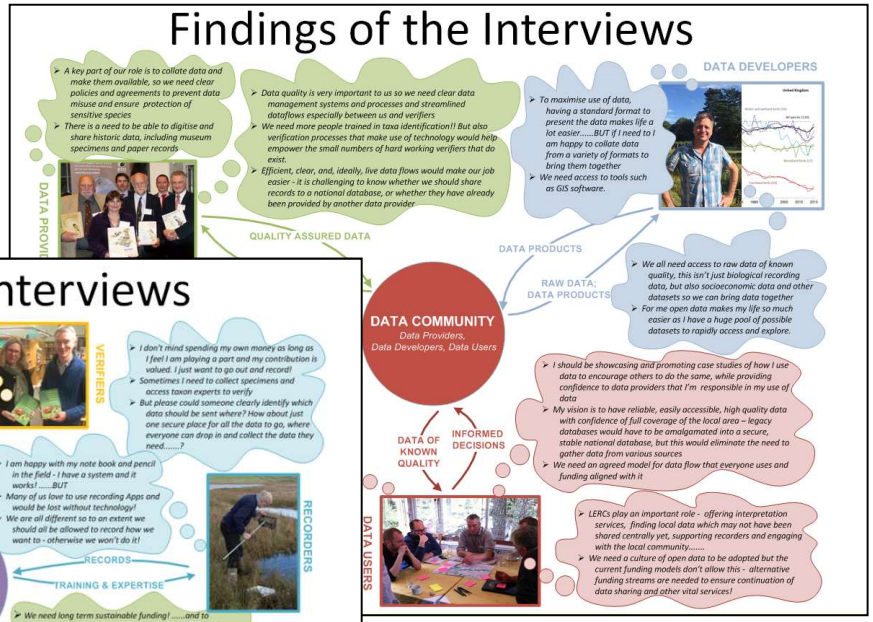
"It would be tragic if the wealth of amateur talent for, and interest in, natural history in this country remains largely untapped because of the lack of a system for ensuring the flow of data from those who have it to those who require it."

BRC - 1978

"The challenge is to convince all those concerned that by working together we can make maximum use of limited resources"

Copp & Harding - 1985

Key messages from the Interviews



Service Community want -

- *consistent system for screening planning applications*
- *sustainable funding*
- *technical and IT support for national schemes, recorders and users*
- *central database with access to attribute rich data of known quality*
- *income generated from adding value to data*
- *improved networking and knowledge transfer*
- *more support for recording community*

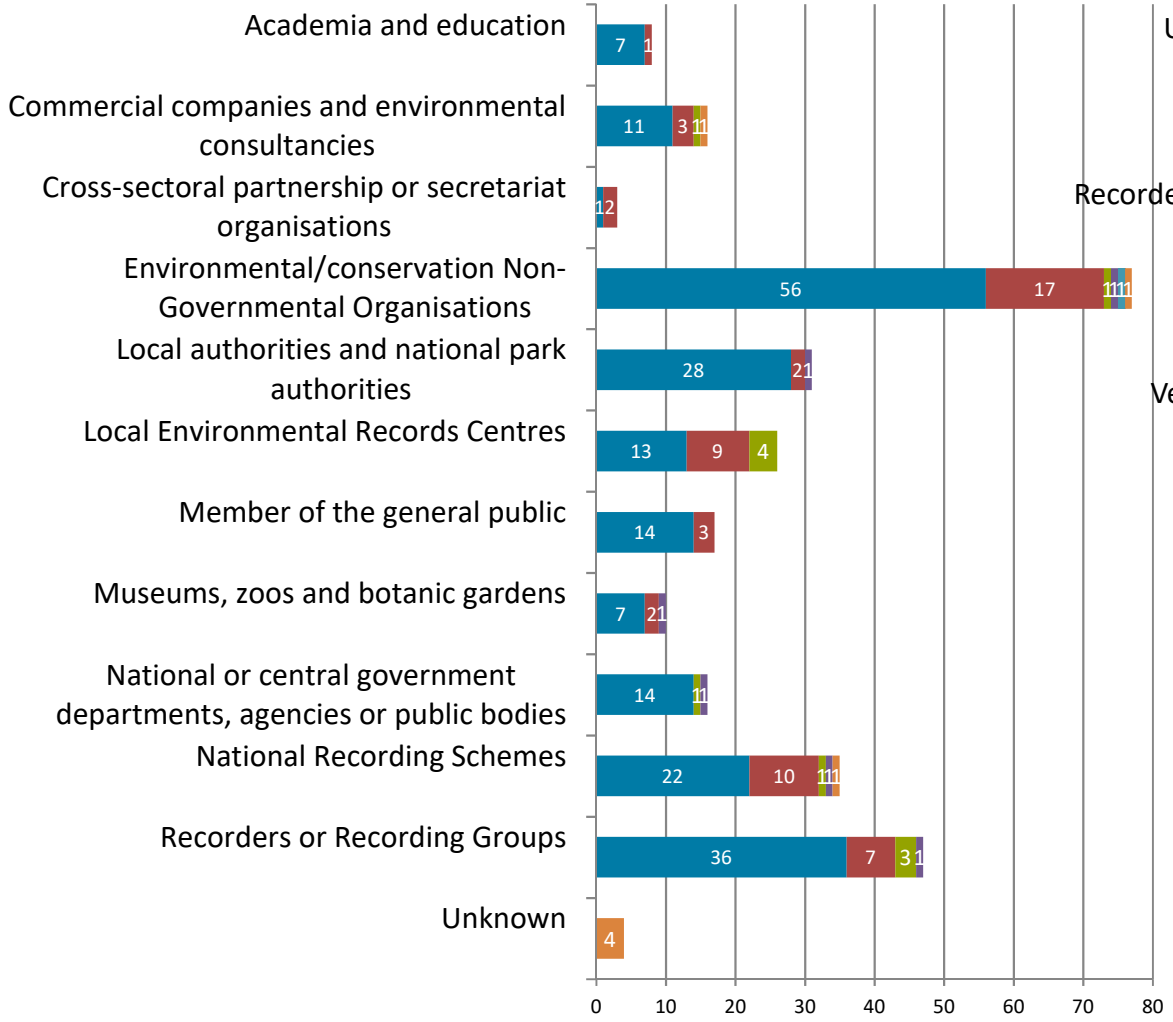
Biological Recording Community want -

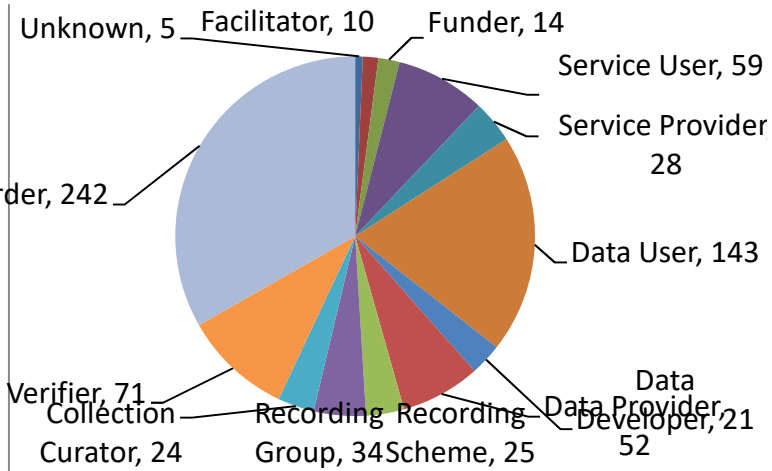
- *simple, transparent data flows into a stable central database*
- *consistent verification process with standard data formats and automation where possible*
- *sustainable funding*
- *mobilisation of historic data*

Data Community want -

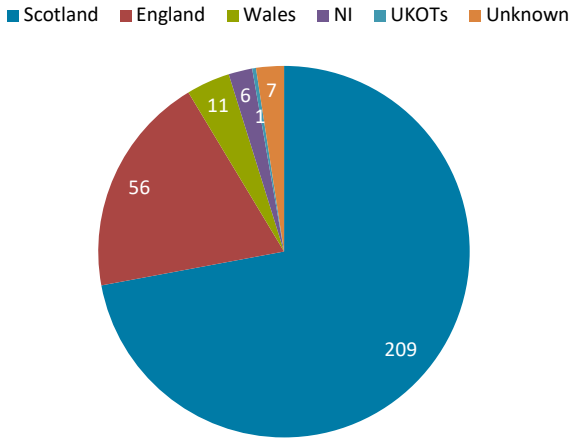
- *clear and simple data flows*
- *tools to manage data holdings*
- *data of known quality available in a well-funded central database*
- *centrally agreed standards on openness*
- *easily accessible, reliable, high quality data*
- *confidence of full geographic coverage across all areas*

Findings of the Questionnaire



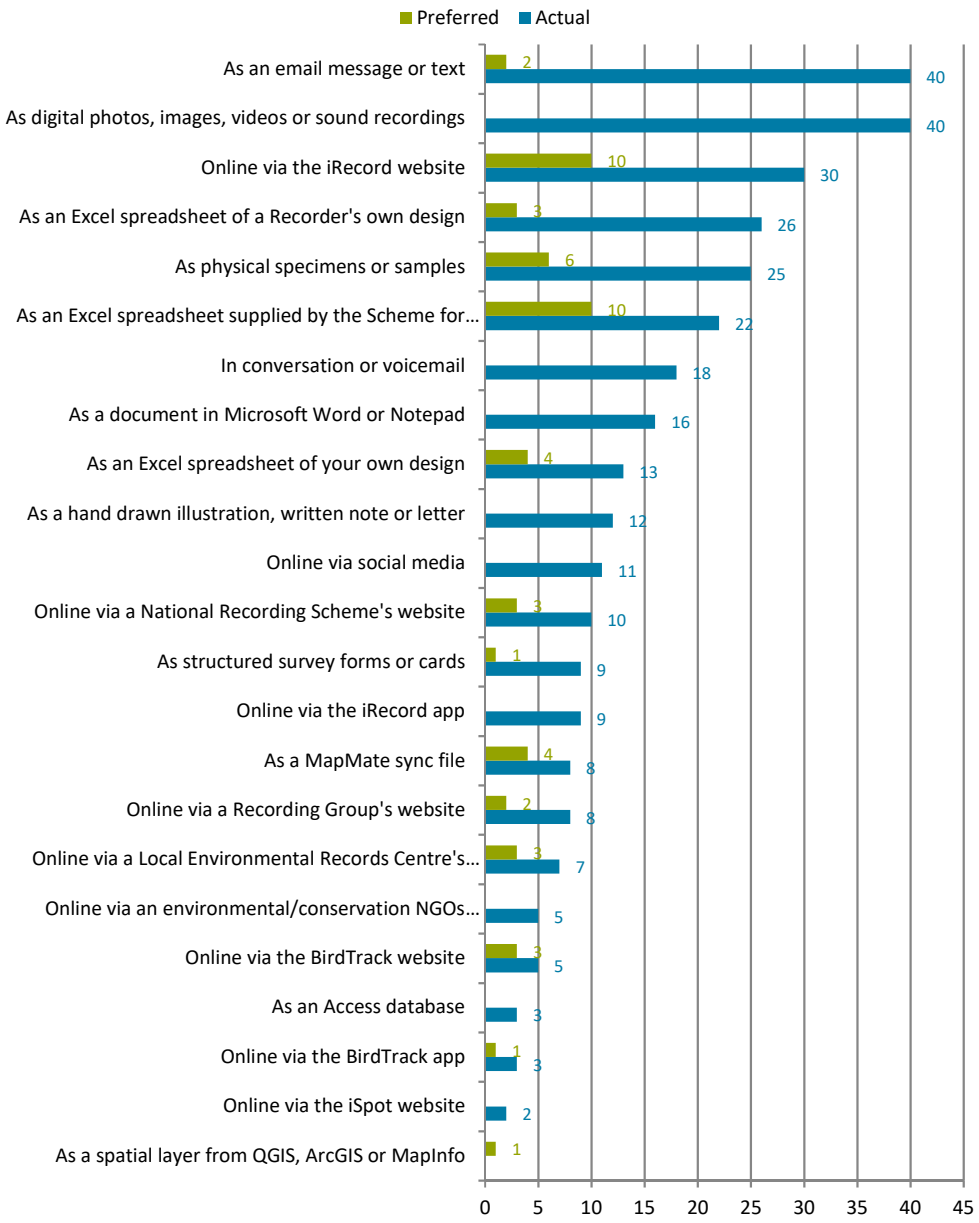


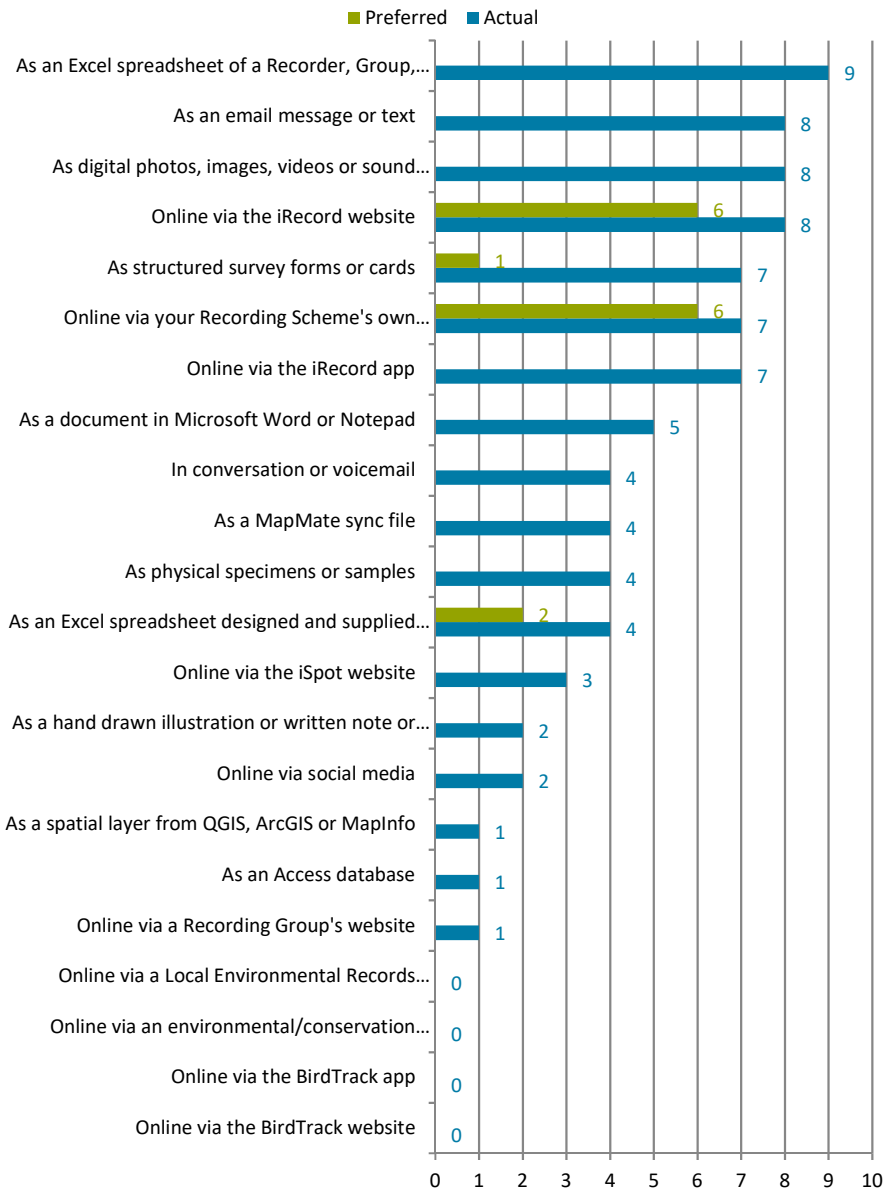
72% of responses from Scotland, 19% from England

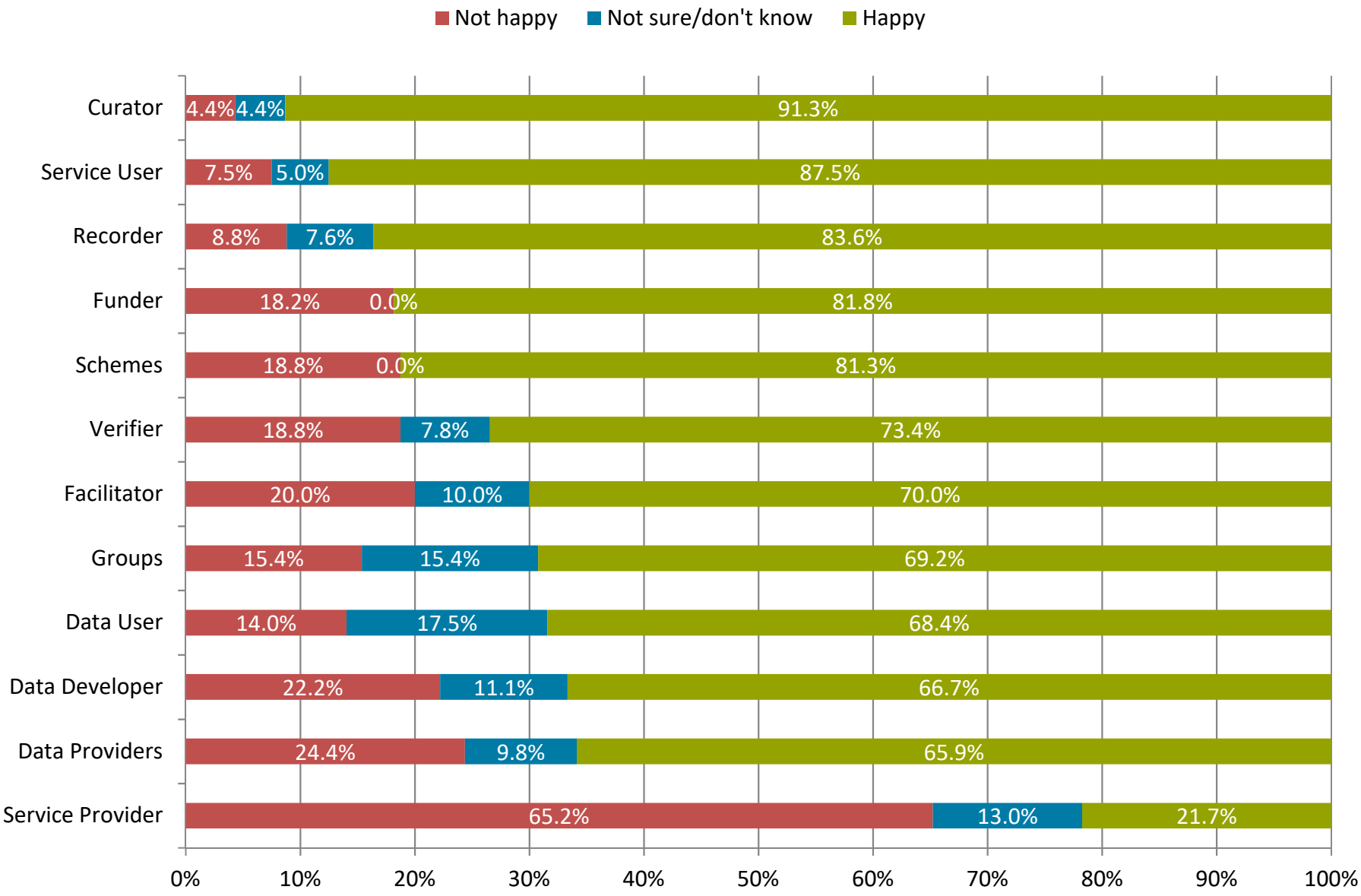


All sectors fulfil ≥75% (≥ 9 out of 12) of all roles (except x-sectoral partnerships/secretariats)

Verifiers handle a wide range of formats, Schemes prefer online formats







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

What's working well

WORKING WELL	Recorders	Verifiers	Collection Curators	Group Operators	Scheme Operators	Data Providers	Data Developers	Data Users	Service Providers	Service Users	Funders	Facilitators	ALL	n
ACCESS TO RESOURCES	9.5%	10.8%	6.7%	9.4%		6.8%	29.4%	13.6%	16.7%	17.2%	37.5%	16.7%	11.1%	89
TRAINING	10.2%	7.5%	26.7%	6.3%	8.3%	9.1%	17.6%	3.4%	6.7%	13.8%	12.5%	8.3%	9.3%	75
LERC SERVICES	6.9%	4.3%				11.4%	11.8%	12.5%	33.3%	34.5%	12.5%	8.3%	9.1%	73
ONLINE RECORDING	10.6%	5.4%	6.7%	6.3%	8.3%	6.8%		2.3%				8.3%	7.5%	60
NATIONAL SCHEMES	8.0%	10.8%	6.7%	12.5%	16.7%	2.3%	5.9%	3.4%					7.0%	56
ACCESS TO EXPERTS	7.8%	12.9%				2.3%		1.1%	3.3%				6.0%	48
RECORDER SUPPORT	8.3%	7.5%		6.3%		2.3%		1.1%	3.3%			8.3%	6.0%	48
ACCESS TO DATA	0.2%			3.1%		4.5%	11.8%	39.8%	6.7%	13.8%			5.9%	47
LOCAL NETWORKS	4.7%	14.0%	6.7%	3.1%		4.5%	11.8%	1.1%	6.7%			16.7%	5.5%	44
OPPORTUNITIES TO PARTICIPATE	7.6%	3.2%		15.6%	16.7%					3.4%		8.3%	5.5%	44
NBN SERVICES	2.6%	3.2%				6.8%	5.9%	12.5%	20.0%	6.9%			4.6%	37
OWN RECORDING	6.1%		20.0%	6.3%	8.3%			1.1%			12.5%		4.2%	34
DATA SUBMISSION	5.9%	1.1%	6.7%			2.3%							3.5%	28
INDIVIDUAL DEDICATION	2.8%	3.2%	6.7%	12.5%	8.3%	2.3%		1.1%		3.4%	12.5%	8.3%	3.2%	26
RECORDING GROUPS	3.1%			18.8%	8.3%						12.5%	8.3%	2.7%	22
DATA MANAGEMENT	2.1%				16.7%	13.6%	5.9%	1.1%	3.3%	3.4%			2.6%	21
VERIFICATION	1.2%	15.1%				2.3%		1.1%					2.6%	21
STANDARD METHODS	1.9%	1.1%	13.3%			2.3%		2.3%					1.7%	14
DATA PROVISION						15.9%							0.9%	7
FACILITATION	0.2%					2.3%						8.3%	0.4%	3
NOT WORKING WELL	*0.2%*				*8.3%*	*2.3%*		*2.3%*		*3.4%*			*0.7%*	*6*
ALL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	803
	423	93	15	32	12	44	17	88	30	29	8	12	803	

Training, LERC services, national schemes and online recording working well.

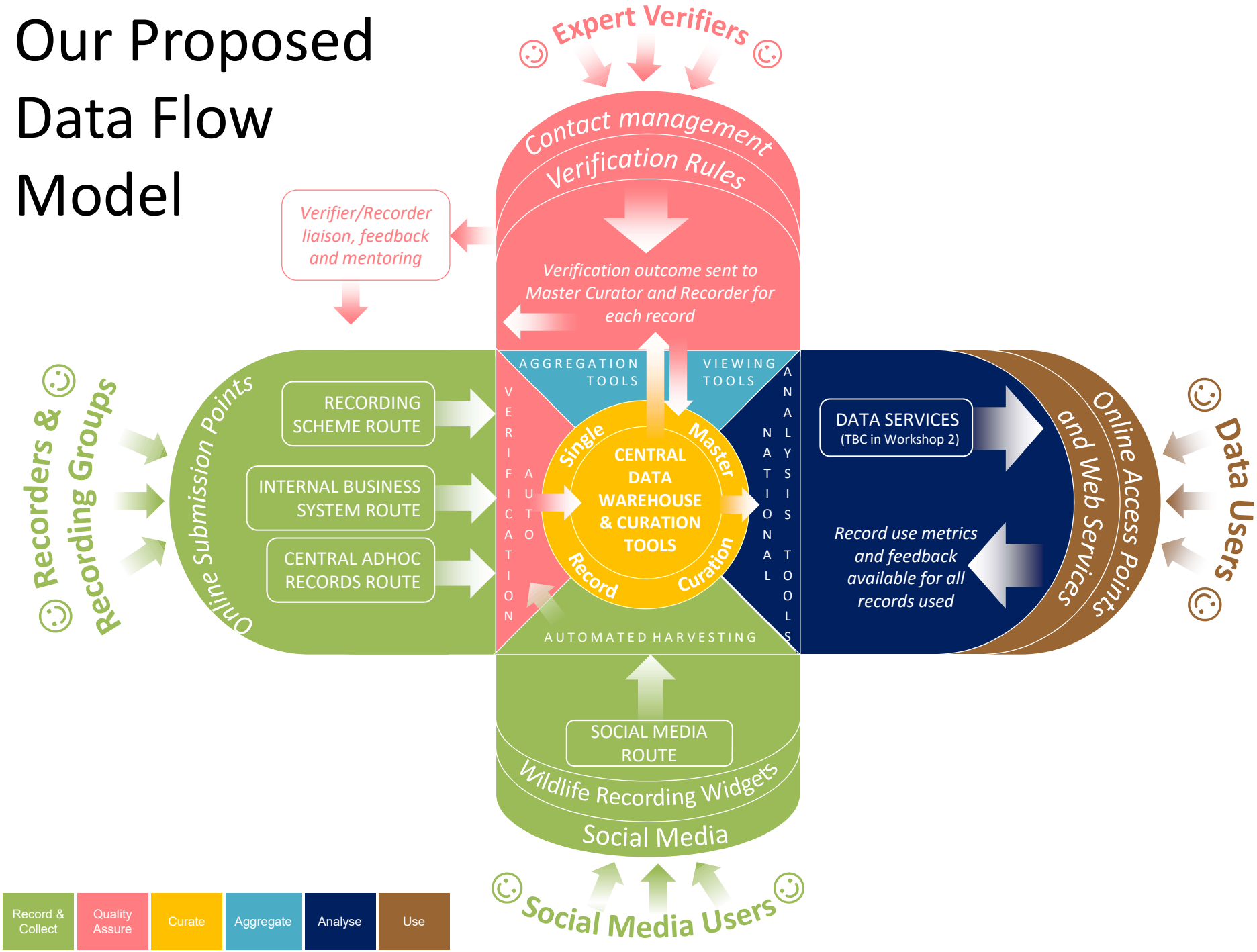
What's working less well

WORKING LESS WELL	Recorders	Verifiers	Collection Curators	Group Operators	Scheme Operators	Data Providers	Data Developers	Data Users	Service Providers	Service Users	Funders	Facilitators	ALL	n
ACCESS TO RESOURCES	13.1%	8.6%	45.5%	22.7%	33.3%	26.7%	20.0%	4.0%	43.3%	18.5%	85.7%	40.0%	16.5%	116
ACCESS TO DATA	9.3%	3.2%			6.7%	8.9%	40.0%	53.5%	6.7%	22.2%		20.0%	15.1%	106
DATA SUBMISSION	22.4%	10.8%	4.5%	4.5%	6.7%	4.4%		3.0%	3.3%	3.7%		10.0%	13.2%	93
TRAINING	9.0%	8.6%	13.6%	18.2%	6.7%	6.7%	10.0%	4.0%	13.3%	14.8%			8.7%	61
VERIFICATION	2.8%	45.2%	9.1%	4.5%		2.2%		1.0%					8.0%	56
NBN SERVICES	3.4%	3.2%		9.1%		13.3%		16.8%	13.3%	11.1%		10.0%	6.7%	47
OWN RECORDING	10.6%	1.1%	4.5%	4.5%									5.3%	37
LERC SERVICES	3.7%	1.1%	4.5%	4.5%		2.2%		7.9%	6.7%	25.9%		10.0%	4.8%	34
ONLINE RECORDING	8.1%	7.5%		4.5%	6.7%	4.4%		3.0%	3.3%				5.8%	41
NATIONAL SCHEMES	3.7%	3.2%			26.7%		10.0%						2.8%	20
OPPORTUNITIES TO PARTICIPATE	2.8%	3.2%	4.5%	9.1%	6.7%						14.3%		2.4%	17
DATA PROVISION	0.6%					24.4%		3.0%					2.3%	16
STANDARD METHODS	1.9%		4.5%					2.0%	6.7%	3.7%			1.7%	12
DATA MANAGEMENT	1.9%	1.1%					10.0%	1.0%	3.3%				1.4%	10
LOCAL NETWORKS	1.2%	1.1%			6.7%	2.2%						10.0%	1.1%	8
RECORDING GROUPS	1.2%			13.6%									1.0%	7
ACCESS TO EXPERTS	0.6%		9.1%										0.6%	4
RECORDER SUPPORT	0.3%												0.1%	1
FACILITATION														0
INDIVIDUAL DEDICATION														0
WORKING WELL	*3.1%*	*2.2%*		*4.5%*		*4.4%*	*10.0%*	*1.0%*					*2.4%*	*17*
ALL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	703
	321	93	22	22	15	45	10	101	30	27	7	10	703	

Access to resources, access to data, data submission and verification working less well,

Workshop 1 on Data Flows

Our Proposed Data Flow Model



Workshop 2 on Services

Our Proposed Service Model

Regional Services

Enhanced data search/bespoke reports including sensitive records
Expert planning screening including interpretation/advice
Local Recorder engagement and mentoring
Local Recorder liaison and contact management
Loan of/access to field or lab equipment etc
Entry level engagement and small events for the general public
Entry level taxonomic training and mentoring

National Services

Automated planning screening
Data driven local and national species lists
Gap analysis for species and habitat monitoring
Composite habitat map data curation (HabMoS)
Bespoke analysis/reporting tools for national government
Archiving of individual/personal specimens and collections
Management of voucher collections/loan of reference material
Ecological training to support delivery of biodiversity duty
Apprenticeship schemes
Locally important site designation and registration
Specialist taxonomic training
Fast-tracking/backlog management for verification/digitisation

Central Services

Financial management and procurement
Legal, HR, IT and admin support
Accreditation, standards and innovation
UK Species Inventory management and development
Technical platform and central data warehouse
Technical support and training for developers/data managers
Data management of a central data warehouse
Scheme record submission portals and curation and analysis tools
Adhoc record submission and curation portal
Commercial and academic record submission and curation portal
Invasive species submission and curation portal
Automated validation and verification
Viewing, presentation and visualisation tools
Reporting tools for sites, postcodes, species and habitats
Habitat survey submission and curation portal
Social media harvesting
Aggregation of, and access to, non-commercial/non-academic data
Aggregation of, and access to, commercial/academic data
County/Vice-County Recorder liaison and contact management
Scheme Recorder engagement and mentoring
Scheme Recorder liaison and contact management
Major event management

Cross Cutting Services

Office space and facilities management
Access to premium OS data (raster and vector)
Expert mapping and GIS including visualisation/presentation
Innovation

Workshop 3 on Governance

‘Aunt Sally’ Model:

BOARD OF TRUSTEES

MANAGEMENT BOARD & COUNTRY COMMITTEES

Governance
Leadership
Strategy
Risk management

CENTRAL SERVICES

Finance
Legal
IT
HR
Admin
PR + comms
Event management
Facilities management
Membership support

PARTNERSHIP SERVICES

Partner affiliation
UKSI + verification rules
Scheme hosting+support
Ad hoc record curation
Academic data curation
Commerc’l data curation
Fast track digitising
UK user group
UK product owner

TECHNICAL SERVICES

Platform development
App + web development
APIs and web services
Automation
Technical assurance
Data warehouse admin
Portal management
BA + UX design
Content management

NATIONAL SERVICES

Partner liaison
Composite layer creation (Habitats + LNCS)
Taxonomic training
Apprenticeship scheme
Collection curation
Fast track verification
National user groups
National product owner

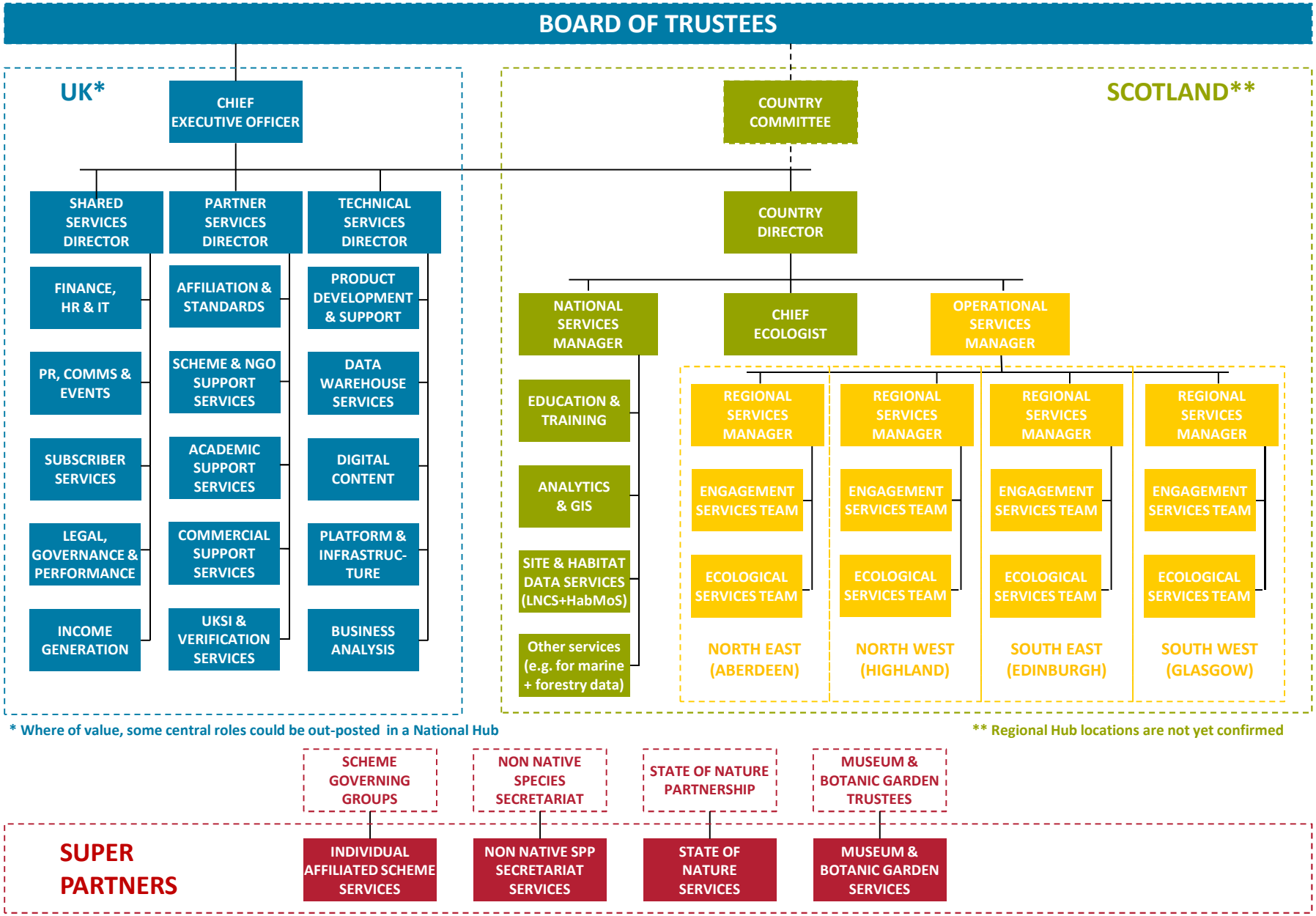
SUPER SERVICES

Non Native Species alerts + expertise
State of Nature trends + expertise
National Recording Scheme services + expertise
Museum curation services + expertise

REGIONAL SERVICES

Public engagement + entry level training
Recorder engagement + support
Recording Group hosting + support
Enhanced data services and planning screening

Our Proposed Governance Model

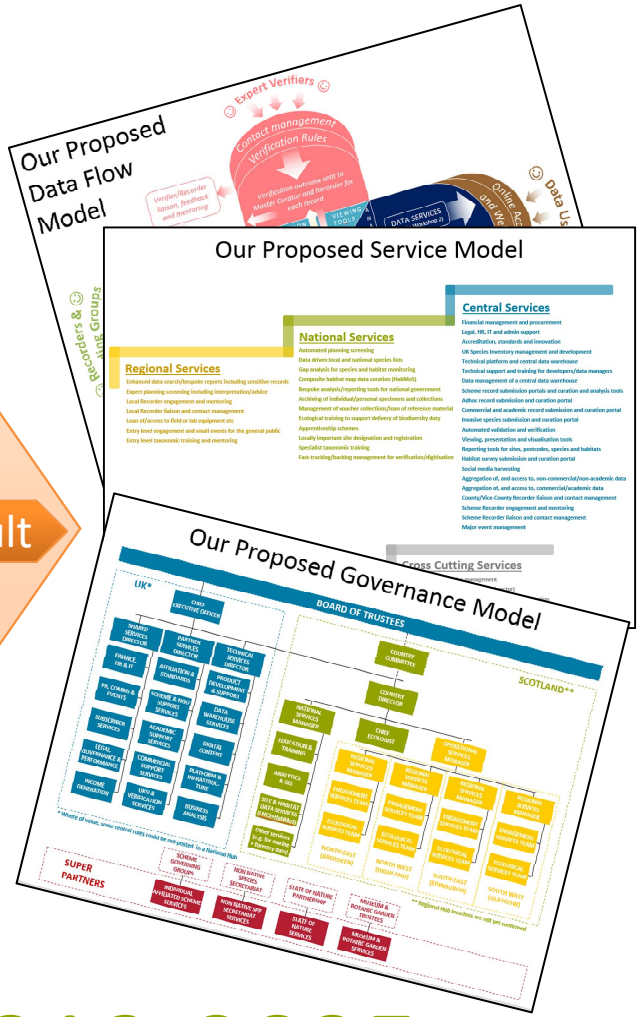


Next Steps…

2017

- Run Workshop on Funding
- Form Detailed Business Case
- Accept Recommendations
- Plan Implementation + Consult
- Secure Funding
- Develop Teams + Tech
- Support + Manage Change

2018+



2019-2025

If you are interested in finding out more, or joining in, please get in touch with Ellen or Christine

All countries and regions welcome!

Thank you to everyone involved

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