



Outputs from the SBIF Review Workshop on Funding

4-5 December 2017

Key messages from Workshop 4

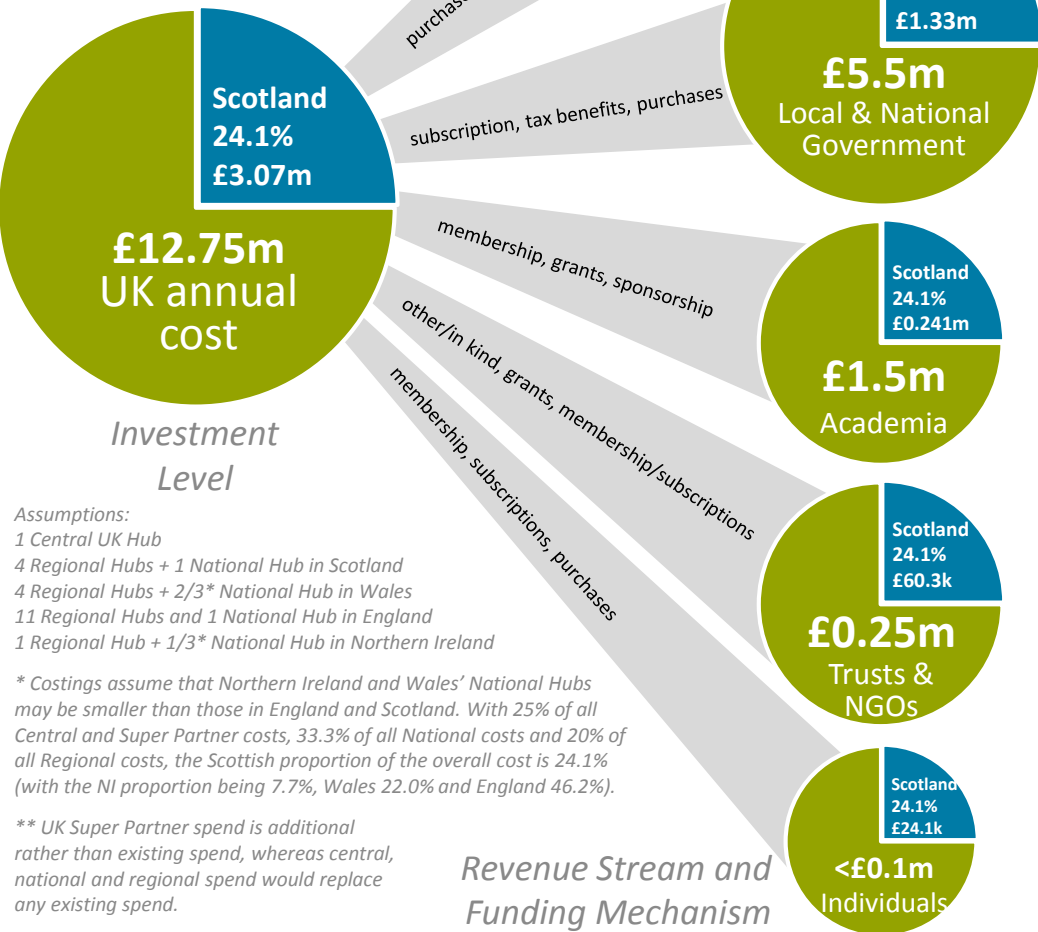
1. To attract significant funding we must **work together** at every level (reaching out to the whole UK) to remove competition for funds and share costs and back office services across sectors while joining up data to maximise benefits and return on investment.
2. We should **make a bold request** for funding. The status quo is not an option, we must ask for the full amount of investment that is needed to ensure that a properly functioning governance structure can be supported, so that the level of investment sought is significant enough to make it sufficiently beneficial and motivational for the change involved to be worthwhile.
3. We recommend the adoption of a **subscription model** charging those who make academic or commercial use of the data and for those who have a requirement to demonstrate fulfilment of biodiversity duty (e.g. local authorities and farm businesses).
4. We recommend that the biological recording infrastructure is defined as a **beneficiary of environmental taxation** (e.g. landfill tax).
5. Proposals to **increase regional and super partner resource** are very welcome and timely.
6. We will ensure that funding options **incorporate a greater level of resource for overheads** such as public liability insurance, advocacy and income generation, and for QA/verification, while clarifying what is existing spend/income and what is new.

OVERVIEW OF MOTIVATIONS AND MECHANISMS FOR EACH POTENTIAL REVENUE STREAM:

- **National and Local Government overview:** *very strong motivation to invest, envisaging numerous benefits in return; aiming for a single framework agreement for specified core services to cover Scottish Gov, Local Authorities etc with membership of 3-5 years, plus purchase mechanism for value-added services and tax/levy where appropriate to benefit biological infrastructure.*
- **Commercial/corporates overview:** *motivated to invest by business and reputational benefits associated with green credentials and potential cost savings; advocate subscription model plus corporate membership packages.*
- **Academia overview:** *see benefit to investing to improve their environmental credentials and evidence base, to provide teaching resources and for increasing university impact/value for public policy and society generally; envisage institutional membership paid via licence/subscription, supplemented by grant funding and sponsorship where relevant.*
- **Individuals/Recording Groups overview:** *motivated to be involved by altruism and opportunity for social interaction mainly; assume membership/subscription model with benefits such as preferential notification of events, equipment loan, newsletters etc in return for payment.*
- **NGOs:** *investment in return for improved services to supporters or to improve efficiency of use of existing funds; contributions largely in kind (volunteers, IPR etc), plus participation in joint funding bids and some sponsorship.*

Our Proposed Funding Model

Figures are based on the original 'Full Monty' workshop model and will be subject to change as further planning is undertaken and as the needs of the infrastructure evolve and mature. Although the proportion of investment sought per revenue stream is suggested here, this is an arbitrary value with commercial and public funding thought likely to provide the most revenue and NGOs and individuals the least (excluding in kind contributions). As an alternative option, tax benefits (from landfill and/or climate change taxes) potentially could cover the whole cost.



PARTNER SERVICES & EXPERTISE
 National Schemes
 Museum/Garden Collections
 State of Nature
 Invasive Non-Native Species

TECHNICAL & SUPPORT SERVICES
 Financial, legal, PR, IT, GDPR
 PR, Comms and Events
 Accreditation and standards
 UKSI services
 Portal and product development
 IT platform and data warehouse
 Social media harvesting
 Fundraising
 Data aggregation
 Subscriber liaison

NATIONAL SERVICES
 National product ownership
 Automated planning screening
 Species list curation
 Gap analysis
 Composite layer creation
 Bespoke reporting
 Voucher specimen management
 Fast track digitisation/verification
 Data product development
 Specialist/advanced taxon training

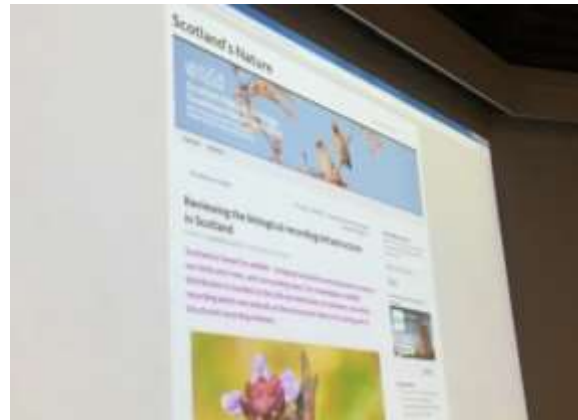
REGIONAL SERVICES
 Enhanced data reports
 Expert planning screening
 Expert interpretation
 Equipment loan
 Entry level training
 Public engagement
 Local recorder engagement and support

Area of spend

Workshop participants



Left to right: Emma Williams, Glenn Roberts, Catherine Lloyd, Colin McLeod, John Kerr, Steven Gardner, David Roy, Rob Briers, Tom Prescott, Doreen Bell, Graeme Wilson, Christine Johnston, Ed Mackey, Ellen Wilson, Elspeth Haston, Richard Sutcliffe, David Lampard, Andy Musgrove, Stephen Moran, Richard Smith, Liz Edwards, Claire Lacey, Jane Houldsworth, Jo Judge). [Battleby Conference Centre, 4-5 December 2017]



Workshop Objectives

- To inform attendees about the SBIF Review and progress towards a sustainable biological recording infrastructure
- To harness the expertise of participants in determining how the infrastructure could be sustainably funded
- To develop a vision for sustainable funding by:
 - *Identifying potential funding models based on agreed design principles*
 - *Identifying potential return on investment for each revenue stream*
 - *Agreeing the level of funding to be sought*
 - *Recommending our preferred model for funding to take forward to the Detailed Business Case*

Workshop sessions

1. Icebreaker question
2. SBIF Review so far...
3. Confirming funding scope and design principles
4. Considering investment options
5. Identifying revenue streams and funding mechanisms
6. Seeking return on investment
7. Challenging our thinking
8. Confirming our preferred investment level
9. Assessment of the business changes needed
10. Workshop feedback/last words

Icebreaker

SESSION 1

1a) Icebreaker question: Given the workshop objectives, what's the biggest benefit for you in identifying a new model for funding our biological recording infrastructure?

Schemes, Groups and NGOs:

Spend less time chasing
small pots of money

Avoid re-inventing wheel

Reduce the need to charge
for access to info

Regional integration

Use of data – secured.
Value added

Efficiency – in seeking
funds; best use of
expertise

Certainty for the future

1b) Icebreaker question: Given the workshop objectives, what's the biggest benefit for you in identifying a new model for funding our biological recording infrastructure?

Commercial/Academia:

Greater efficiency for better outcomes for environment

Better outcomes

£ Ring fence Risk!

[i.e. good to ring fence funds however there is then a risk that ring-fenced funds are more easily cut in one go!]

Longevity of funding

Consistency of funding
=> consistency of service

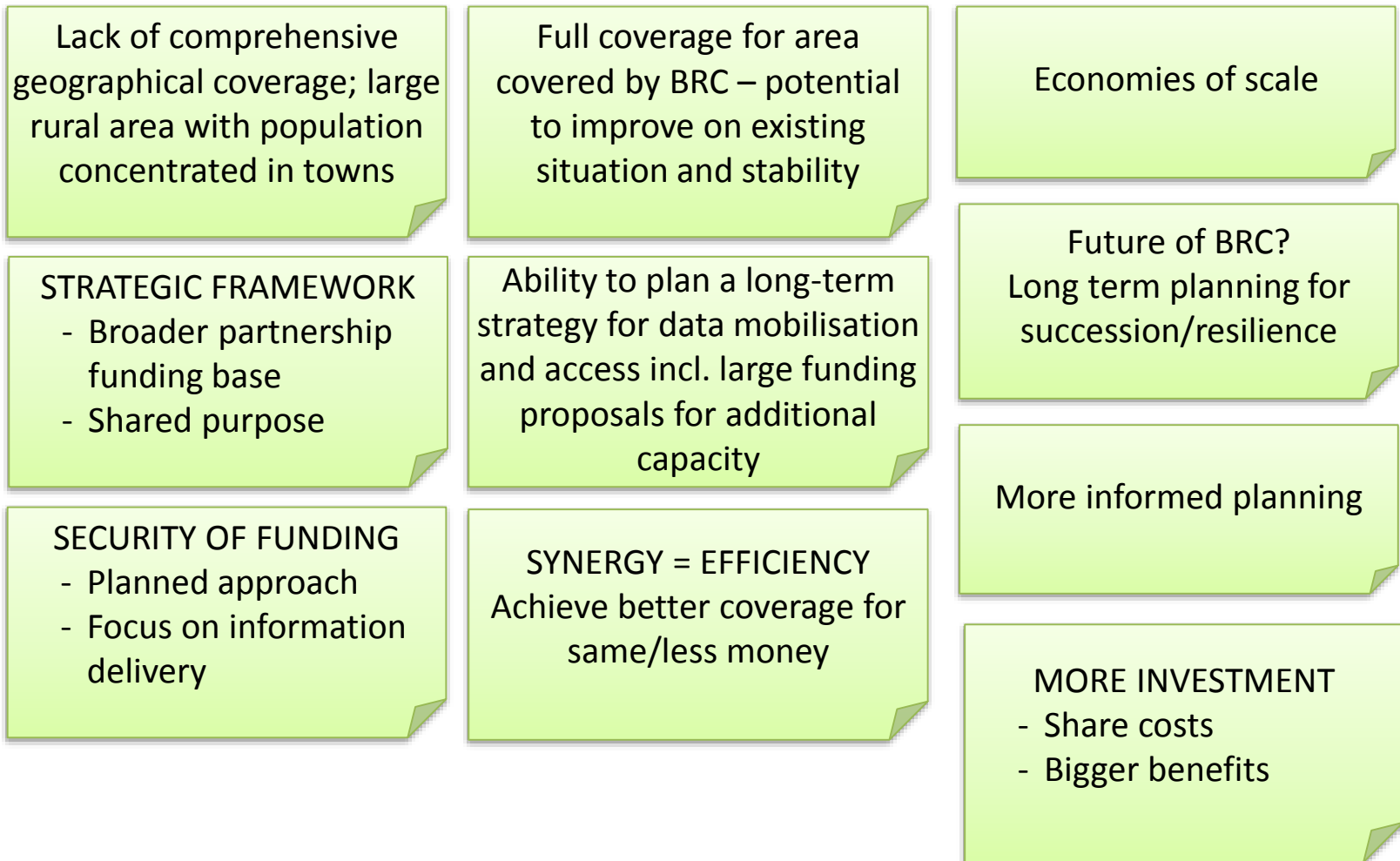
Sustainable development
of evidence base

Reliable evidence base

Single source for all data

1c) Icebreaker question: Given the workshop objectives, what's the biggest benefit for you in identifying a new model for funding our biological recording infrastructure?

National Government and Museums:



1d) Icebreaker question: Given the workshop objectives, what's the biggest benefit for you in identifying a new model for funding our biological recording infrastructure?

Local Government/LERCs/NBN:

Less stress!

Stability
Sustainability
Security

Being able to focus on
providing services rather
than looking for funding

Have more time to be
innovative

High quality data available
for use by everyone

SCHEMES / GROUPS / NGOs

- Spent less time chasing small bits of activity
- Avoided re-inventing wheel
- Reduced time need to change for activity life
- Regional integration
- Use of data -
- Shared
Value added
- Efficiency -
in saving funds
But - & capacity
- Certainty for the future

COMMERCIAL / ACADEMIA

- Greater efficiency for better outcomes for environment
- Better Outcomes
- Ring Fence Risk!
- Longevity of funding
- Consistency of funding => consistency of service
- Sustainable development of evidence base
- Reliable Evidence Base
- Single Source for all Data

LOCAL GOVT / LERCS /

NBN

- less stress!
- Stability Sustainability Security
- Being able to focus on providing services rather than looking for funding
- Have time to be more innovative
- High quality data available for use by everyone

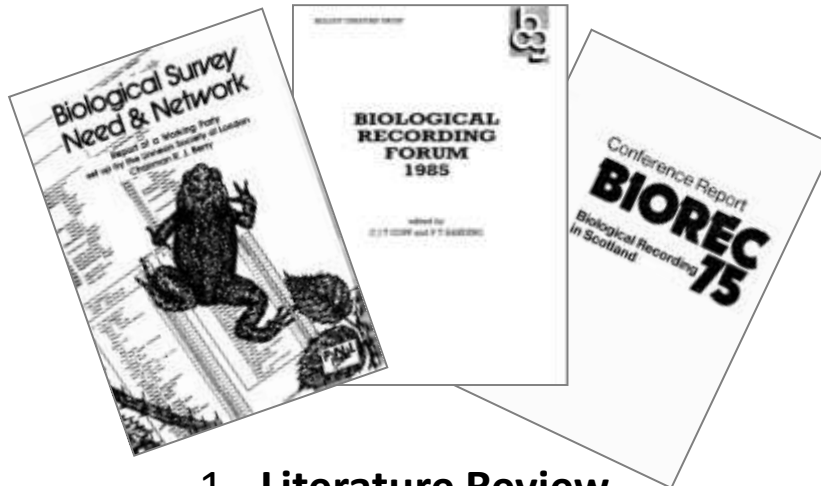
NAT GOVERNMENT / MUSEUMS

- Scale of engagement opportunities across sites, national level, with government, national level in future
- Strategic, coordinated, broader partnership funding base, shared purpose
- Security of funding, planned approach, focus on information sharing
- Ability to plan a long-term strategy, data mobilisation & access, no large funding proposals for additional capacity
- More, in year-round, shared costs, bigger benefits
- More internal planning

SBIF Review so far...

SESSION 2

Summary of findings so far



1 - Literature Review



3 - Questionnaire

2 - Interviews

SBIF Review of the Biological Recording Infrastructure in Scotland

Welcome to the SBIF Review Questionnaire

Dear Questionnaire Participant

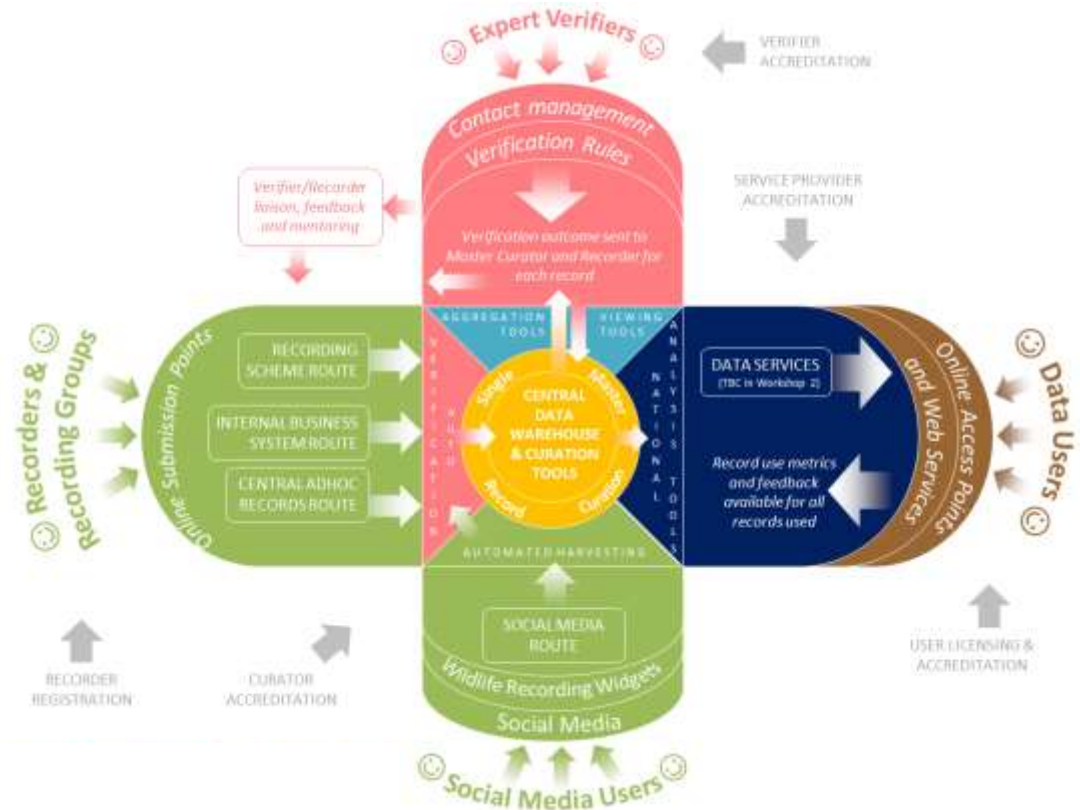
Many people are involved in the collection or use of biological records - together we are a vital network with a shared desire to understand, enjoy and protect the biodiversity around us. We are needed more than ever as pressures on the environment are growing and biological records are essential for monitoring species and habitat change, informing planning and conservation decision making and bringing people closer to the natural world. Yet the complexity of our biological recording communities and infrastructure for collecting and sharing biological records, along with the difficulties of securing long term funding, may mean that we are less effective collectively than we could be.

4 – Workshops 1, 2 and 3



Key messages from Workshop 1

- Overall data flow should be centralised for maximum efficiency and to facilitate availability of records for everyone
- A single centralised route for the submission of *ad hoc* records should be established to accept records from anywhere in the UK
- Both off and online capture of records should be accommodated, social media included, but formal submission is to be online
- Auto-verification and early aggregation are crucial for handling the bulk of records while allowing records that need expert verification to be flagged. Both verified and unverified records to be aggregated but with a 'quality stamp' so they are of known quality
- That analysis tools are required at a national level for Scotland to meet Scottish needs while being part of a shared UK toolset
- That improved feedback to recorders and ongoing access to their own records is key for effective engagement and recognition of recorders



Key messages from Workshop 2

Regional

National

Central

X-Cutting

Central Services

National Services

Regional Services

- Enhance data searches and bespoke reports
- Expert planning screening and interpretation
- Local Recorder engagement, liaison and mentoring
- Loan of/access to equipment
- Entry level engagement and taxonomic training

- Automated planning screening
- Data driven local + national species lists
- Gap analysis for species + habitat monitoring
- Composite layer creation (habitats + local sites)
- Bespoke reporting tools for national use
- Archiving, mgmt + loan of voucher specimens
- Specialist taxonomic training + apprenticeships
- Fast tracking of verification + digitising

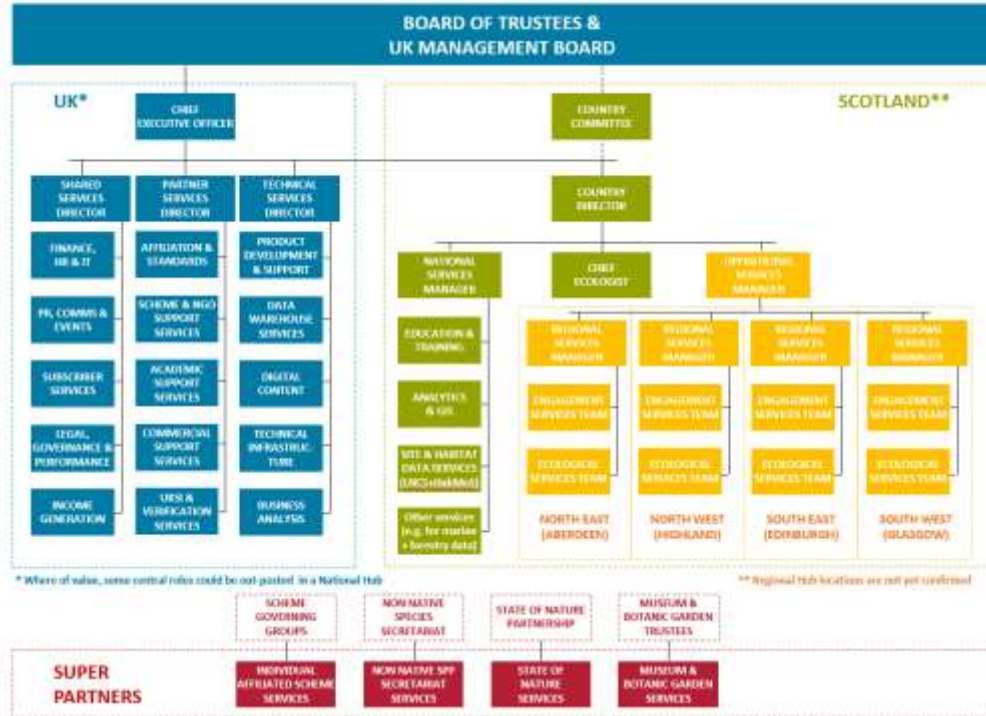
- Financial management + procurement
- Legal, HR, IT, admin support + event management
- Accreditation, standards + innovation
- UK Species Inventory management + development
- Technical platform + central data warehouse
- Data submission + curation portals
- Automated validation + verification
- Viewing, presentation + visualisation tools
- Social media harvesting
- Data aggregation (commercial/academic included)
- Scheme Recorder /Verifier engagement + liaison

- Regional rather than local
- Online access
- Automated planning screening nationally, enhanced regional interpretation
- Support needed for local/internal business dataset curation on a centralised platform (e.g. Recorder 6 functionality)
- Difficulty of business decisions on service provision while being considerate to all and wanting to ease any transition to a new normal

Cross Cutting Services

- Office + facilities management
- Access to premium OS data (raster +vector)
- Expert mapping + GIS including data visualisation
- Innovation

Key messages from Workshop 3





1. We collectively believe in, and want to realise asap, our vision of an improved infrastructure by 2025; a key measure of success is whether other stakeholders in other UK countries join us.
2. We believe that a new organisation is needed to supersede current governance arrangements at all levels (central, national, regional) so that governance can be improved, clear, respected and effective.
3. We are agnostic as to where a Central Hub for the UK could be located (but we are happy to offer Edinburgh or any other suitable Scottish location!) except that we prefer it is not in London.

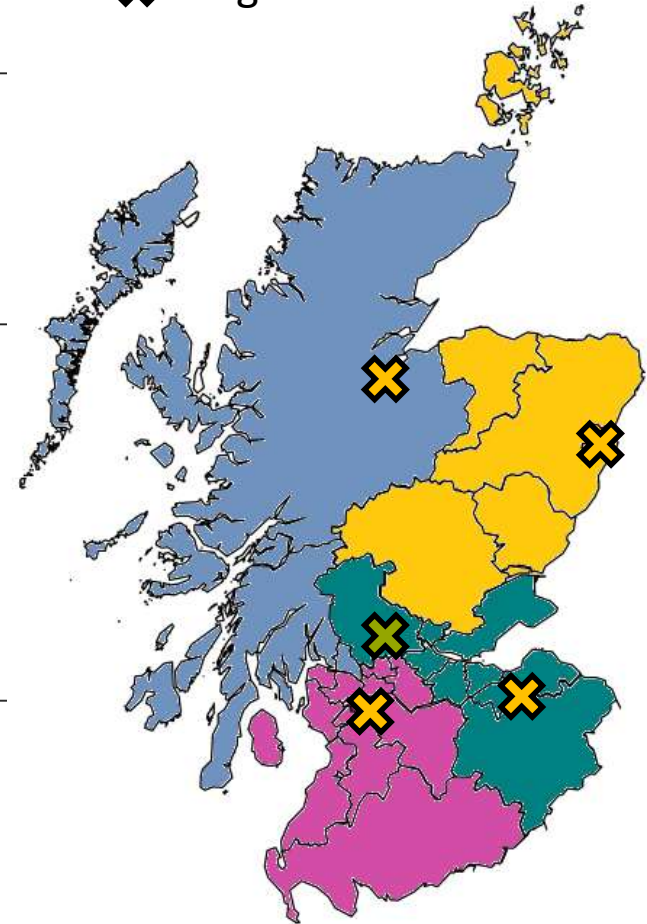
4. We want to have a Scottish Biodiversity Innovation Centre in Stirling acting as our National Hub that is open to all to lever business benefit across public, private, academic and voluntary sectors.
5. We want to have four Regional Hubs in Scotland, in Aberdeen, Highland, Glasgow and Edinburgh (subject to drive time analysis etc); we will foster regional pride and empowered regional teams.
6. We recognise the value of Super Partners such as the Non Native Species Secretariat, State of Nature Partnership, all National Recording Schemes and Museums and Botanic Garden Collection Curators and we will determine the support that these partners need in a separate workshop.
7. We recognise we need to understand if and how data analytics are common across the UK or bespoke to a country and we will investigate further before determining how analytics could be fulfilled.
8. We recognise that lessons learned and the approach to secure buy-in for Scottish Environment Web (SEWeb) may be useful to inform our approach when seeking buy-in for our vision.
9. We recognise that some workshop attendees prefer an evolutionary approach (and that we all have different assumptions about what exactly is in scope - which needs clarification) but feel a revolutionary approach is significantly more likely to deliver the improvements we seek.

Draft regional boundaries



REGION	COUNCIL	POP	AREA	PLANS	TOTAL POP	TOTAL AREA	TOTAL PLANS
Highland	Highland	234,770	25,657	2,772	348,800	35,625	4,508
	Na h-Eileanan Siar	26,900	3,059	425			
	Argyll and Bute	87,130	6,909	1,311			
North East	Aberdeen City	229,840	186	1,173	1,048,620	18,720	8,521
	Aberdeenshire	262,190	6,313	2,644			
	Angus	116,520	2,182	842			
	Dundee City	148,270	60	610			
	Moray	96,070	2,238	709			
	Perth and Kinross	150,680	5,286	1,683			
	Orkney Islands	21,850	989	488			
	Shetland Islands	23,200	1,468	372			
South West	South Ayrshire	112,470	1,222	866	2,337,940	13,142	11,591
	East Ayrshire	122,200	1,262	648			
	North Lanarkshire	339,390	470	1,103			
	South Lanarkshire	317,100	1,772	1,690			
	East Dunbartonshire	107,540	174	720			
	East Renfrewshire	93,810	174	686			
	Glasgow City	615,070	175	2,792			
	Inverclyde	79,160	160	388			
	Dumfries and Galloway	149,520	6,427	1,110			
	Renfrewshire	175,930	261	703			
	North Ayrshire	135,890	885	639			
	West Dunbartonshire	89,860	159	246			
South East	Falkirk	159,380	297	612	1,669,340	10,424	11,275
	Fife	370,330	1,325	2,558			
	Clackmannanshire	51,350	159	237			
	Stirling	93,750	2,187	790			
	City of Edinburgh	507,170	263	3,808			
	East Lothian	104,090	679	970			
	Midlothian	88,610	354	493			
	Scottish Borders	114,530	4,732	1,083			
	West Lothian	180,130	428	724			

-  National Hub
-  Regional Hub



Review of funding workshop scope and design principles

SESSION 3

Funding Workshop Scope and Design Principles

Workshop Scope and Design Principles

In scope:

1. Focus on what Scotland needs within Scotland and from the Centre
2. Options for different levels of funding to support our preferred models for data flow, services and governance
 - *A Mini Makeover*
 - *An Economy model*
 - *An Added-Value model*
 - *A Full Monty model*
3. Revenue streams required to support each option
4. An assessment of potential Return on Investment realised from each revenue stream and our impact and appeal for funders

Discussion covered:

- **Why the goal of 2025?** 2020 is too soon to have completed the transformation, 2030 is too far away, so 2025 is simply a milestone year to aim for.
- **Is it really a new organisation?** Yes, to achieve necessary improvements in governance, but it is not necessarily an additional organisation, there are lots of ways to evolve an existing one to occupy the right space in future.

Design Principles - our Funding Model will:

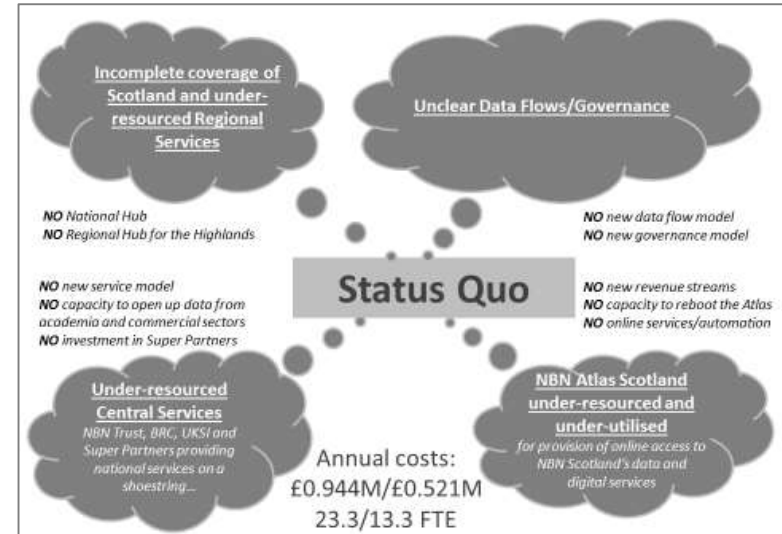
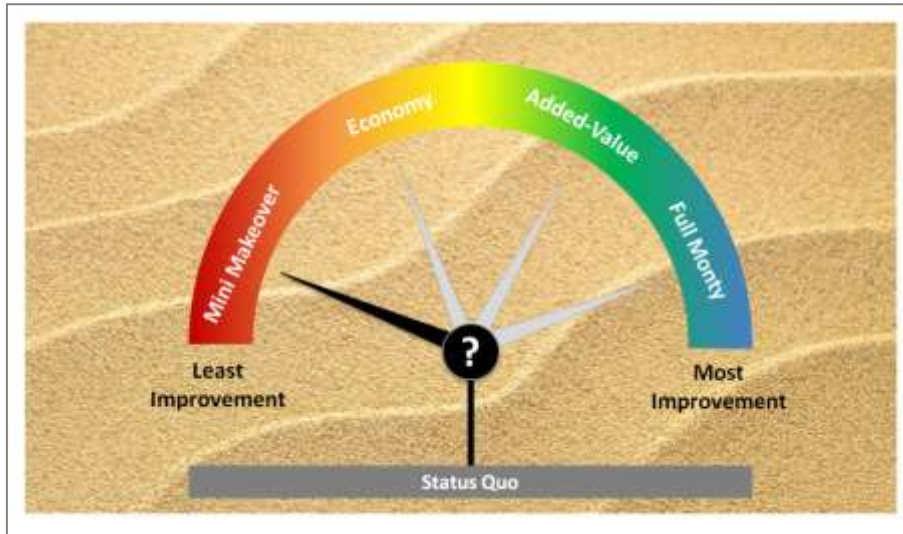
1. Comprise funding streams motivated by a desire for open access to biodiversity data for public, private, academic, charitable, personal or environmental benefit.
2. Support all stages of the Data Flow Pathway and our preferred models for data flow, service provision and governance.
3. Cover the costs of starting up and operating our new infrastructure model so that we achieve a sustainable operational state by 2025.
4. Share the costs of collecting, verifying, curating, aggregating and analysing biodiversity data in perpetuity between all sectors and countries gaining value from open access biodiversity data.
5. Provide strategic investment in a new organisation to build capability and capacity across all sectors and roles, to engage the public in the natural world, and to deliver significant 'ROI'.
6. Set-aside a proportion of annual revenue for helping cover i) the costs of volunteer Recorders for under-recorded taxa or locations; ii) the costs of national recording schemes; and iii) the costs of fast track digitising or verification when key data flows are impeded.
7. Be scalable to support set up and sustainable service delivery in other regions and countries in the UK or UKOTs (if and when appropriate).
8. Charge for added-value services such as planning screening and 'National Biodiversity Infrastructure as a Platform' (Naap).

Considering investment options

SESSION 4

4) Considering Investment Options

“What do you think of our initial ‘lines in the sand’?”



STATUS QUO MODEL

Not considered as an option in this session as improvement is required but the status quo would not provide any.

Overview of the original content and cost of each option:

Key: ● - fully resourced
◐ - partially resourced
○ - not resourced/trivially resourced

Infrastructure Services and Features

		Status Quo			Mini Makeover edition			Economy edition			Added-Value edition			Full Monty edition		
		Level	FTE	£	Level	FTE	£	Level	FTE	£	Level	FTE	£	Level	FTE	£
CENTRAL																
Shared Services	Central Management	●	1	£70,000	●	1	£70,000	●	1	£70,000	●	1	£70,000	●	1	£70,000
	Administration	○	0	£0	○	0	£0	●	1	£33,400	●	1	£33,400	●	1	£33,400
	Finance, HR and IT Support	◐	0.6	£20,040	◐	1.5	£53,700	●	4	£138,400	●	4	£138,400	●	4	£138,400
	PR, Comms, Events	◐	1.2	£42,240	◐	1.2	£42,240	◐	2	£70,400	●	3	£103,800	●	3	£103,800
	Income Generation	○	0	£0	◐	1	£37,000	◐	1	£37,000	●	2	£70,400	●	2	£70,400
Partner Services	Legal, Performance & Governance	○	0	£0	○	0	£0	○	0	£0	◐	1	£37,000	●	2	£70,400
	Affiliation & Standards	◐	1	£33,400	◐	1	£33,400	◐	2	£66,800	●	3	£100,200	●	3	£100,200
	Partner Development	◐	4	£137,200	◐	4	£137,200	◐	4	£137,200	●	6	£204,000	●	6	£204,000
	UKSI/HabDict/Verification Support	◐	0.5	£16,700	◐	1	£33,400	◐	1	£33,400	●	2	£79,400	●	2	£79,400
	Product Development & Support	◐	5	£245,000	◐	5	£245,000	◐	5	£245,000	●	7	£354,000	●	7	£354,000
Technical Services	Data Warehouse Administration	○	0	£0	◐	1	£47,000	◐	1	£47,000	◐	1	£47,000	●	3	£156,000
	Digital Content	○	0	£0	○	0	£0	◐	2	£136,000	◐	4	£260,000	●	6	£384,000
	Technical Infrastructure	○	0	£0	○	0	£0	◐	1	£47,000	◐	1	£47,000	●	3	£156,000
Other	Legal/Event Expenses & Contingency @ 10%	○	0%	£0	○	0%	£0	◐	10%	£106,160	◐	10%	£154,460	●	10%	£192,000
Sub-Total			13.3	£564,580		16.7	£698,940		25	£1,167,760		36	£1,699,060		43	£2,112,000
NATIONAL																
National Services	National Management	○	0	£0	●	1	£64,000	●	1	£64,000	●	1	£64,000	●	1	£64,000
	Administration	○	0	£0	○	0	£0	●	1	£31,000	●	1	£31,000	●	1	£31,000
	Chief Ecologist	○	0	£0	○	0	£0	○	0	£0	●	1	£46,000	●	1	£46,000
	Product & Data Development	○	0	£0	◐	1	£37,000	◐	1	£37,000	●	2	£83,000	●	2	£83,000
	GIS Analysis & Support	○	0	£0	◐	0.5	£18,500	◐	1	£37,000	◐	2	£70,400	●	3	£103,800
	Education & Outreach	○	0	£0	○	0	£0	◐	1	£37,000	●	2	£70,400	●	2	£70,400
	Site Data & LNCS	○	0	£0	◐	0.5	£18,500	◐	1	£33,400	●	2	£70,400	●	2	£70,400
Other	Habitat Data & HabMoS	○	0	£0	○	0	£0	○	0	£0	◐	2	£83,000	●	5	£186,800
	Capital/Establishment Costs & Contingency @20%	○	0	£0	◐	20%	£27,600	◐	20%	£47,880	◐	20%	£103,640	●	20%	£131,080
Sub-Total			0.0	£0		3.0	£165,600		6.0	£287,280		13.0	£621,840		17.0	£786,480
REGIONAL																
Regional Services	Regional Management	◐	1	£46,000	◐	0.25	£11,500	●	1	£46,000	●	1	£46,000	●	1	£46,000
	Administration	○	0	£0	○	0	£0	○	0	£0	●	0.5	£12,500	●	0.5	£12,500
	Ecological Services	◐	0.5	£16,700	◐	1	£33,400	●	2	£66,800	●	2	£66,800	●	2	£66,800
	Engagement Services	◐	0.5	£16,700	◐	1	£33,400	◐	2	£66,800	●	3	£100,200	●	3	£100,200
	Data Services	◐	0.5	£15,500	◐	1	£31,000	◐	1	£31,000	◐	1	£31,000	●	2	£62,000
Other	Recorder Expenses & Bursaries @ 10%	?	?	?	◐	10%	£10,930	◐	10%	£21,060	◐	10%	£25,650	●	10%	£28,750
Sub-Total			2.5	£94,900		3.3	£120,230		6.0	£231,660		7.5	£282,150		8.5	£316,250
Sub-Total x4			10.0	£379,600		13.0	£480,920		24.0	£926,640		30.0	£1,128,600		34.0	£1,265,000
SUPER PARTNERS																
Super Partner Services	Affiliated Scheme Services	○	0	£0	◐	4	£140,800	◐	8	£281,600	◐	12	£422,400	●	16	£563,200
	Museum & Garden Services	○	0	£0	◐	8	£281,600	◐	16	£563,200	◐	24	£844,800	●	32	£1,126,400
	Non-Native Species Services	○	0	£0	○	0	£0	◐	1	£33,400	◐	2	£70,400	●	3	£103,800
	State of Nature Services	○	0	£0	○	0	£0	◐	2	£83,000	◐	3	£120,000	●	4	£157,000
Sub-Total			0.0	£0		12.0	£422,400		27.0	£961,200		41.0	£1,457,600		55.0	£1,950,400
Unadjusted total (with 100% of central and partner costs):																
Scotland and UK only: TOTAL £				£944,180			£1,767,860			£3,342,880			£4,907,100			£6,113,880
Scotland and UK only: TOTAL FTE				23.3			44.7			82.0			120.0			149.0
Adjusted total (with 25% of central and partner costs*):																
Scotland's part: TOTAL £				£520,745			£926,855			£1,746,160			£2,539,605			£3,067,080
Scotland's part: TOTAL FTE				13.3			23.2			43.0			62.3			75.5

*Assuming Wales pays 25%, Northern Ireland 10% and England 40% - if these countries come on board

4a) Considering Investment Options

“What do you think of our initial ‘lines in the sand’?”



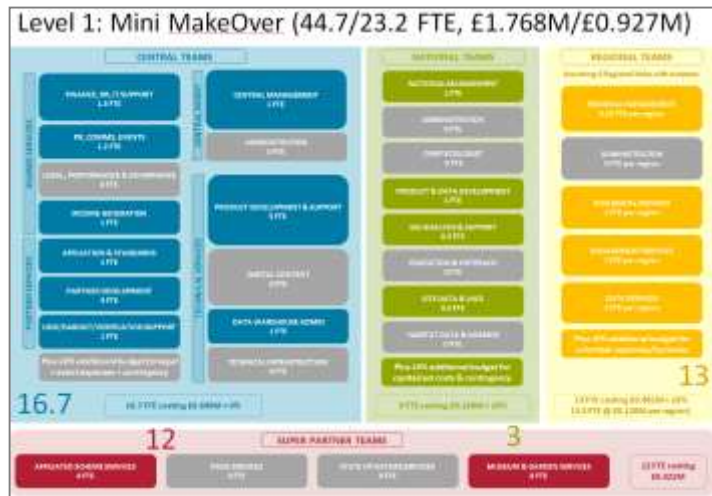
Group 1 - MINI MAKEOVER MODEL

This model has a tick for affordability and economy...

But, felt it doesn't give a sufficient improvement so won't make a big enough difference. Maybe the national innovation centre could be added and is not critical at the outset. More concerned at the lack of budget for recorders, so as an enhancement to this look at adding in the budget for recorders. Some elements like data flows and sharing with other countries should be done centrally and are not vital to this option.

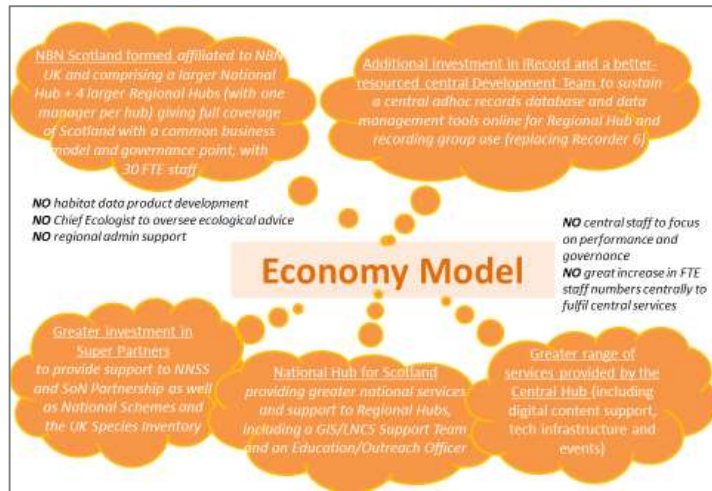
Four main points/questions:

- What is the persuasive investment case, what will attract investment across sectors?
- In public service a lot of contraction in budget is being made up in shared services (shared admin etc) so can we capitalise on those to make better use of what we already have?
- Build up this option more fully in due course – but if this option does deliver business benefits and is adequate then persuading additional investment may not be attractive but unless it attracts more it is hopeless. Perhaps there is a level of progression in this option.
- A key part of the business case is in the planning casework and the emphasis should be focusing on protected or priority species rather than full geographic coverage to get business benefits as soon as possible.



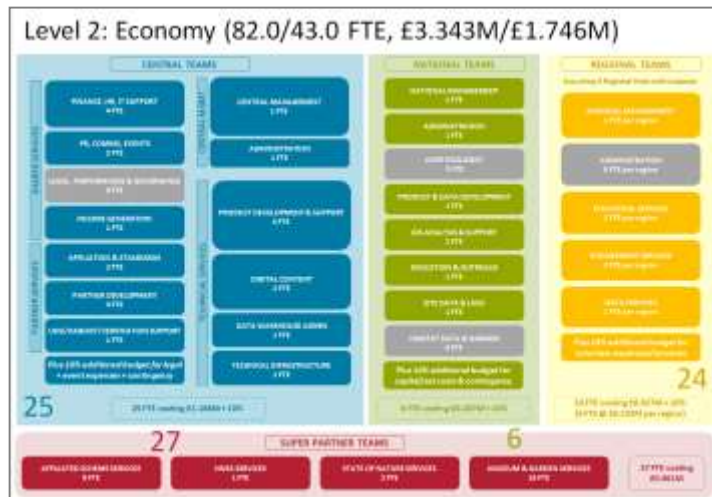
4b) Considering Investment Options

“What do you think of our initial ‘lines in the sand’?”



Group 2 - ECONOMY MODEL

We felt this was the absolute minimum with some improvements too. If we are to put this investment in we need to monitor performance so want to add some resource for this. Feel HabMoS should be included but confused as to why this is not already funded. Resource for super partners is already £1M but not sure if this is coming from existing sources so need some clarity around super partner resourcing before being able to say if it is the right level for this model. The level of increased resources for the regions was very welcome and we need to be able to do this/their role properly.



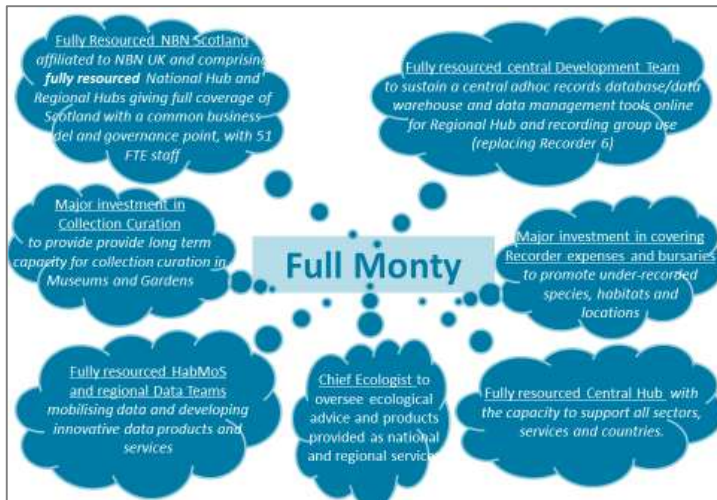
"What do you think of our initial 'lines in the sand'?"



General points – Jo’s point on HabMoS is right i.e. that the investment should not fall to this model but rather to bring it into general biological recording and use. It is making fuller use of that resource. Ellen: HabMoS and habitat data are in scope given the focus of the SBIF Vision. We need to know how much is new investment and how much is existing? Super Partners could source their own funding? David – very different funding models between super partners. Museums and Gardens stand out like a sore thumb (Ellen – it is to allow for 1 curator per million specimens). Need to prioritise which bits of each model are ‘musts’ and ‘shoulds’ so you can keep just the key bits.

4d) Considering Investment Options

“What do you think of our initial ‘lines in the sand’?”



Group 4 – FULL MONTY MODEL

A few more things to be added with the expensive version – there might be advice/interpretation involved so need public liability insurance. More investment in senior stakeholder advocacy and engagement people i.e. lobbyists keeping government on track to invest. Also increase the income generating posts, have more, and increase the posts for quality assurance.

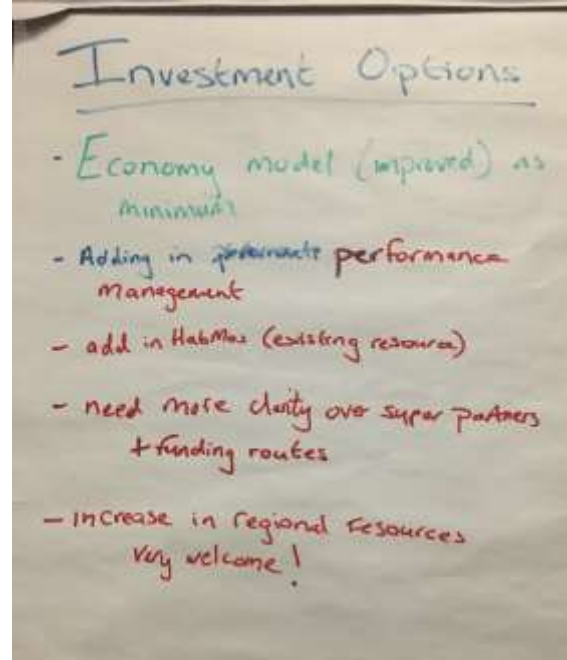
Level 4: Full Monty (149.0/75.5 FTE, £6.114M/£3.067M)



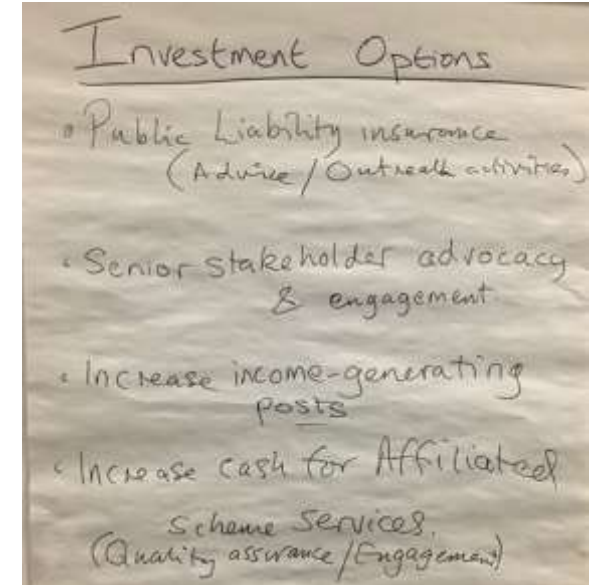
Group 1 – Mini Makeover



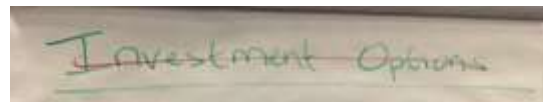
Group 2 – Economy



Group 4 – Full Monty



Group 3 – Added Value



[Nothing captured on a flip chart]

Identifying revenue streams and funding mechanisms

SESSION 5

Identifying revenue streams and funding mechanisms

Revenue Streams

Current

- National Government
- Local Government
- Ecological Consultants/Developers
- Individuals
- Foundations/Trusts
- NGOs
- Recording Groups
- Recording Schemes

Future

- National Government
- Local Government
- Ecological Consultants/Developers
- Individuals
- Foundations/Trusts
- NGOs
- Recording Groups
- Academia
- Corporates

Funding Mechanisms

- Purchase
 - Pay As You Go Credits
 - Fee per transaction
 - Licence
- Subscription
 - Pay monthly
 - Annual subscription
 - Lifetime subscription
 - Add-ons
 - Bespoke Tariffs
- Donation
 - Monetary
 - In-Kind
- Levy/tax
- Sponsorship
 - Individual
 - Corporate
- Membership
 - Individual membership
 - Professional membership
 - Corporate membership
 - Additional benefits
- Grant
 - Restricted
 - Unrestricted
- Endowment
- Legacy

Discussion covered:

- **Are Recording Schemes a net beneficiary?** *Probably, they will contribute parts of the infrastructure in kind, but need funding to do so as a sustainable public service.*
- Change 'individuals' to '**individuals and communities**'
- Include '**research fellowships**' which may fund data development in academic areas
- Include **EU and UN funding**; it may also be possible to shared costs and platforms with GBIF.
- Include organisations that must demonstrate biodiversity duty being done (local authorities and farm businesses) as all these have a need for data to inform their duty – so include **farms and other businesses.**
- Include '**advertising**' as a possible mechanism

Post-workshop addition: potentially include community benefit schemes (shareholders from the community benefitting)

Key Question 1:

What is motivating each revenue stream/funding community?



"What in particular is the funder looking to gain for themselves or their community from providing funding?

Why would they be interested in supporting the biological recording infrastructure?"

Key Question 2:

Which funding mechanism(s) would suit each revenue stream?



"Which mechanism(s) would best allow the funder to access the value that they seek, while leveraging the greatest revenue for the infrastructure?

Which mechanism(s) would be preferred by the funder?"

Key Question 3:

How could any preferred mechanisms operate?



"Design the simplest possible way of using each of your chosen mechanisms to facilitate payment for services or value received; how would it work?

What form of payment plan would work best for your funding community?"

Funding Mechanisms

Key Questions:

1. What is motivating each revenue stream/funding community?
2. Which funding mechanisms would suit each stream?
3. How could any preferred mechanism operate?

For:

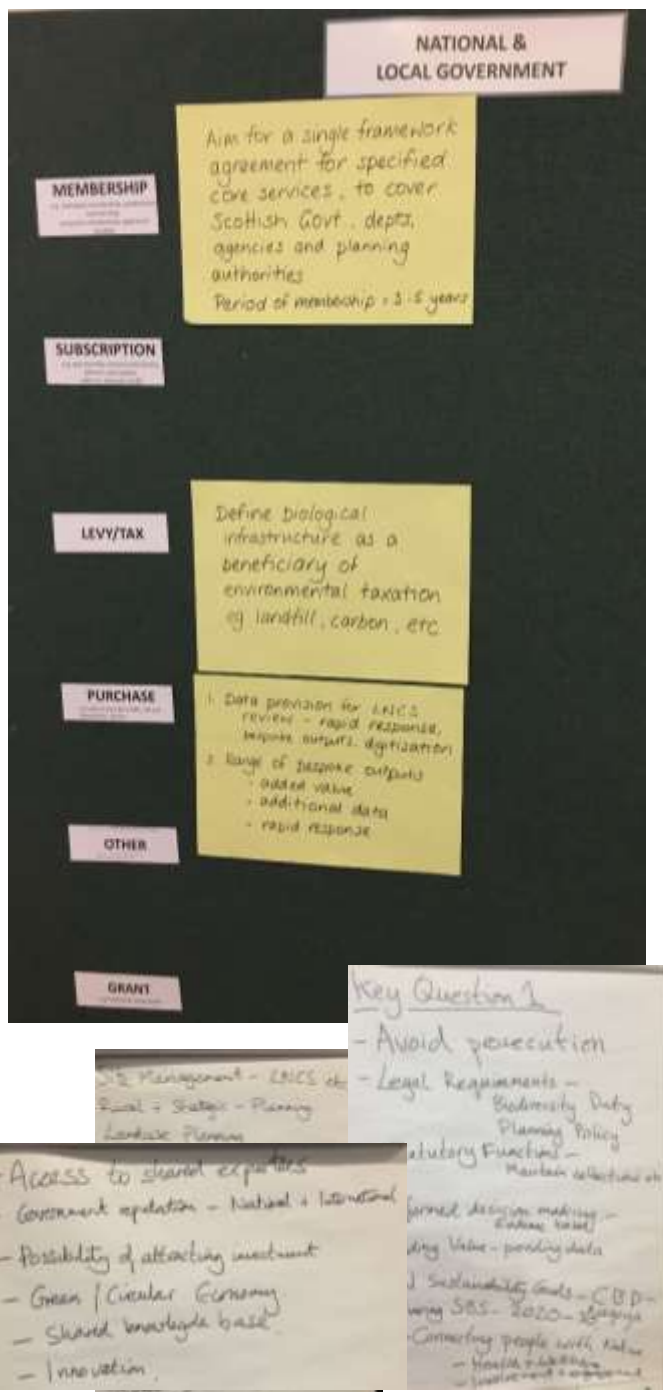
- National and Local Government
- Commercial and Corporates
- Individuals and Recording Groups
- Academia
- NGOs

Funding Mechanisms

Feedback from Group 1 – National and Local Government:

Motivation – was very strong and did 3 pages of avoiding prosecution, meeting legal requirements, biodiversity duty, planning policy, statutory functions, informing decision making on proper evidence base, adding value, convention on biodiversity 2020 challenge, connecting people with nature, health and well-being, involving people, site management, using rural and strategic planning, forestry strategies, climate adaptation planning, sustainability, Ecosystem Services, identifying threats/invasives, making more out of our money by joining up, increasing value of our investment, being able to track SoN, early response to change, access to shared expertise, reputation nationally and internationally and attracting investment in Scotland on the back of that, green circular economy, it is going to be marvellous!

Top things was model aiming for a single framework agreement for specified core services to cover Scottish gov, local auths etc with membership of 3-5 years. Also looked at a purchase system which would cover extras eg rapid response for LNCS to get additional data, a range of bespoke added value outputs listed with Local authorities being the ones to pay for these added value things. We looked at tax/levy with the big concept being to define the biological infrastructure as a beneficiary of landfill taxes etc and whether this is possible with the existing taxation system is possible or whether it is too localised eg within 6km of a landfill site but anyway having a view to bringing this in to aid the infrastructure.



National/Local Gov flip charts in full:

- Key Question 1
- Avoid prosecution.
 - Legal Requirements -
Biodiversity Duty
Planning Policy.
 - Statutory Functions -
Maintain collections etc.
 - Informed decision making. -
Evidence based.
 - Adding Value - providing data
 - UN Sustainability Goals - CBD -
 - Delivering SBS - 2020 - 30 Nagoya
 - ⇒ Connecting people with Nature
 - Health + Wellbeing.
 - Involvement + engagement.

- Site Management - LNCS etc.
Rural + Strategic - Planning.
Landuse Planning.
Forestry Strategy.
- Public engagement.
 - Climate Change - Adaptation Planning
 - Sustainability
 - Ecosystem Services
 - INWS - Threat Alerts
-
- Increase effectiveness of Investment with joined up scheme
-
- (Monitoring) State of Nature.
Tracking
- Early response to change.

- Access to shared expertise
- Government reputation - National + International
- Possibility of attracting investment
- Green / Circular Economy
- Shared knowledge base
- Innovation.

COMM
& CORP

Motivation – association with or for green credentials, assist with business having biodiversity duty needs, good for self promotion, should be some business or monetary gain from getting involved with the infrastructure, social responsibilities, reduced costs of surveys/of carrying out surveys, could be cost savings, speed in planning and assessment needs associated with development, confidence levels in the data being high and confidence in the service levels too; direct investment or a place at the table or raised profile, regional identity boost to the donor eg from association with a city; lobbying all the biodata services could raise money with corporates that they may otherwise not give. Mechanism- had to try to work out what each mechanism was; liked pay as you go with different service levels, eg search or search and manipulate with charges fully covering the costs to the infrastructure of providing the service; there could be a system of credits that could be time limited and cheaper per unit than pay as you go for a single item; included contract that had more use with unlimited use but with cost related conditions; other benefits for the business would be having control and an interface so control on both sides of the interaction benefiting both (so a need for more staff to control this); greater value to the business and financial benefit to the infrastructure. Corporate memberships could include some of the large NGOs with similar drivers to achieve the same thing; one strand of the membership structure could be a stakeholder with invites to events etc.

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Feedback from Group 2 CONTINUED

Commercial and Corporates:

Other "Bite end" -> Big policy step change!

Currently, developers (eg windfarm company for illustrative purpose) have to conduct pre construction survey, baseline survey and in some cases post construction monitoring as requested by planning conditions. These data may never see light of day once EIA submitted - monitoring reports often never read, data not added to databases etc. One consequence of this is that, despite 25 yrs + of on-shore wind, we still can't answer questions such as "do windfarms impact birds".

The following would require buy in from SNH, planners etc, but instead, developers could contribute money they would have spent on surveying non-contentious sites into central biodiversity "pot". This is controlled by someone in "national" office who has overview of whole picture nationally - data gaps etc, and can use pot of money to conduct strategic national monitoring where required. Data go into infrastructure.

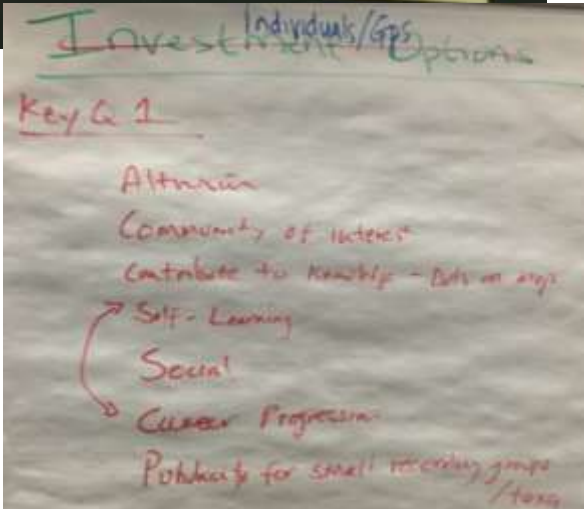
- Requires - site to be non-controversial (eg no nesting raptors)
- Buy in from SNH to allow this
 - Sufficient existing data for area to allow this to happen with confidence
 - Planners to consider this with planning conditions
 - List of priority species agreed upon set up

- Wins
- Huge ££ for infrastructure 😊
 - Strategic national data collection + collation
 - Meaningful monitoring that can actually answer questions!
 - Cheaper for developer - not wasting money on base testing
 - Faster for developer - eg re-powering / extensions / quicker turnaround
 - Data go into public database - available for everyone
 - Data gaps get filled - better for SNH's etc

As a potential dream: rally car end of spectrum, example using birds and windfarms imagine if I want to build a windfarm I have to do multiple surveys and monitoring over 20+ years depending on conditions attached, these conditions are almost never seen by anyone else. This is a huge waste of cash and despite 20 years of investment we still can't answer basic questions such as do windfarms affect birds... imagine if instead we invested in a pot with someone taking an overview from a Stirling Biodiversity Hub: you'd be able to undertake strategic monitoring to fill data gaps so you'd actually have the data you need to answer the questions with all the data being available to answer the questions. Lots of dev happens where you have predictable species... SNH would need to allow it to happen, you'd need to agree a list of priority species in advance, you'd get lots of cash, meaningful monitoring, cheaper for developers not spending so much on surveys and don't have to do 4 years surveys of precondition monitoring etc...

Feedback from Group 3 – Individuals and Recording Groups:

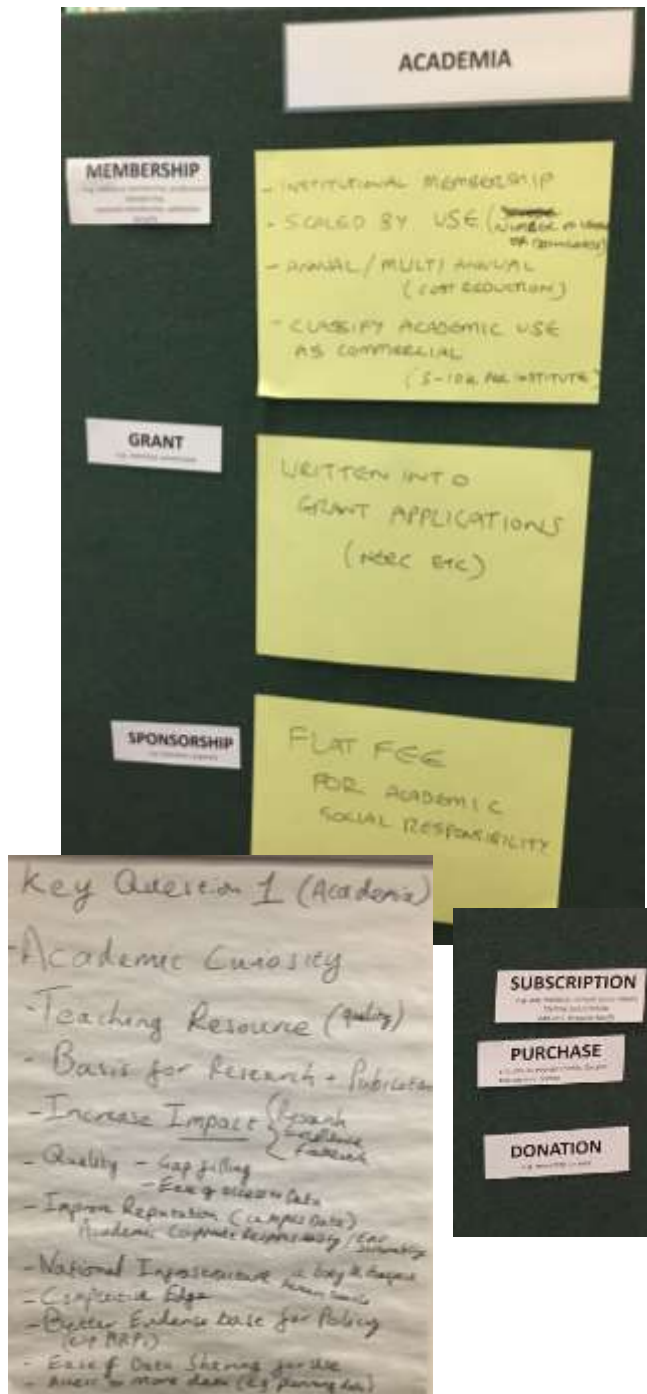
might bring in nothing so have left it blank.



Funding Mechanisms

Feedback from Group 4 – Academia:

Motivation – reasons why academia might want access to services eg academic curiosity and for teaching (lots of use for teaching and training students) and increasingly the need to have impact beyond just publishing things and having broad impact for society or the economy for universities; also some thought of identifying need for supporting this is supporting the academic reputation and social responsibility and having a better evidence base to support policy development. In terms of how it could be paid for, talked a lot about commercial and academic data and came to conclude that academia works as a commercial use so thought institutional membership scaled by use or download could be best mechanism with annual licencing/subs; also talked about grants with SBIF needs being written into grant applications if the data are a core part of research, and scope for sponsorship and highlighting social responsibility in supporting the infrastructure.



Funding Mechanisms

Feedback from Group 5 - NGOs:

Motivation: what would motivate NGOs to provide resource, generally being charities have to fulfil charity objectives and represent supporters... So we would be able to provide resource if it represents our supporters in advancing their values or gives them a better service or if it is enabling us to make more efficient use of the funds they provide us... this is the key motivation. Most NGOs operate at a UK level though with country level representation, providing resource at a country level does not make sense it only makes sense at a UK level. Most of our contributions might be mostly in kind rather than a bag of cash. Also key about NGOs although we might buy in services to be more effective but each charity does need to maintain a level of distinctiveness which supporters recognise and buy into so they continue to support it. TYPES OF RESOURCING STREAMS –our most extensive support is likely to be in kind esp volunteer time worth millions, staff expertise and public engagement which is required for this infrastructure and we do a lot of this anyway so it could be bolstered by our teams. IPR could also be thrown into the mix. Going down the scale, grants less likely but there could be opportunities for making joint bids for the SBIF/UKIF(!) thing; or we thought HLF and other funding distributors often give money to create new citizen science surveys but to date not a lot of recognition of the long term resourcing costs of that to manage, curate and verify it long term so could convince there should be a surcharge on any application but it comes centrally this would be good. Put subscription and purchase together as hard to tell apart, but as charities need to be value for money, emphasis on the subs or purchase creating efficiency. Of some sponsorship eg lunch for today...



in-kind : extensive, esp. if vol time can be used as match-funding (HfMsc)
- often space, staff expertise, public engagement, IPR.

grant : - joint bids of NGO + 'SAFE thing'
- ask HLF (etc.) to contribute to long-term data management via this route.

subscription : - depends what we get
- needs to be value for money

sponsorship : small amounts ? (but costs more than worth it)
e.g. events ?

NGOs
Motivation
Represent our supporters - better service
Mostly operate UK level - (country level too much)
Contributions mostly in-kind ?
Need to maintain distinctiveness (in-kind offerings)

Seeking return on investment

SESSION 6

Key Question 4:

What value or ROI is expected to unlock each revenue stream?



"What value does your funding community expect in return?
What ROI is necessary to facilitate at least a basic level of funding?
What further value or ROI would unlock a higher level of funding?"

SBIF

SCOTTISH BIODIVERSITY INFORMATION FORUM

Partnership
between
SBIF
and
the
Scottish
Government

Key Question 5:

What does success look like?



"If the Infrastructure performs well, what would it look and feel like for the Funder?
What would make the Funder give the Infrastructure a five star rating?"

SBIF

SCOTTISH BIODIVERSITY INFORMATION FORUM

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Return on Investment

Key Questions:

4. What value or ROI is expected to unlock each revenue stream?
5. What does success look like?

For:

- National and Local Government
- Commercial and Corporates
- Individuals and Recording Groups
- Academia
- NGOs

Key Question 4

Gov

- Shared definitive evidence base.
- Quality-assured data, complete & up-to-date
- Rapid access (within agreed timescales, eg. 1 week)
- Long-term security of data + assured access indefinitely
- Legislative compliance + assured standards
- Citizen science metrics
- Tracking ecosystem health
- Damage alerts (Invasives/environmental damage)

Return on Investment

Feedback from Group 1 – National and Local Government:

NATLOGOV – Q4 shared view of everything that everyone uses in the same format, rapid access to data as Qs time sensitive, long term security to data, long term assured access, metrics on citizen science projects, tracking ecosys health, damage alerts to invasives etc.

Value Q5 – value for money, doing more for less, access to data that was previously inaccessible and mobilising this, fast and responsive information service, secure/reliable/resilient at reduced effort without having to reinvent the wheel every couple of years; cross sector buy in and agreements.

KEY QUESTION 5

VALUE FOR MONEY

- DO MORE FOR LESS

ACCESS TO NEW DATA /
PREVIOUSLY INACCESSIBLE
DATA

FAST, RESPONSIVE INFO.

SYSTEM SECURITY,
RELIABILITY, RESILIENCE,
SUSTAINABILITY

REDUCED EFFORT
CONTINUITY OF SERVICE
REDUCED CONFLICT

CROSS SECTOR
BUY-IN + AGREEMENT

ROI - CORPORATE

for data requests

key Q 4
Commercial

- Quick, accurate data returns
- ~~fulfil~~ role "Infrastructure" to fulfill role currently filled by lots of individuals/orgs. - quicker - smarter etc
- More data available

for donors/sponsors

- Recognition
- further work?
- member perks - eg conference places etc

key Q5
corporate

- Enough data not to have to do another survey.
- A good online portal
- Full open access to data

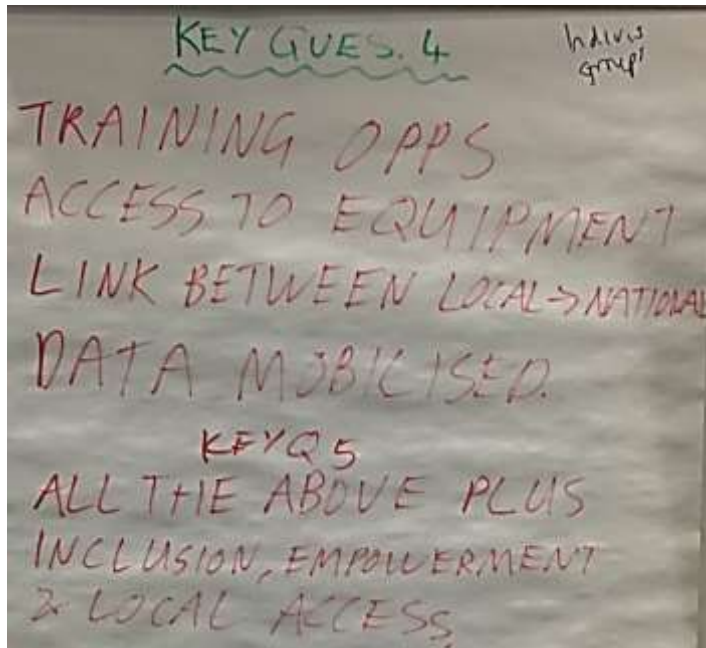
Return on Investment

Feedback from Group 2 – Commercial and Corporates:

COMMERCIAL – create accurate data returns from the infrastructure; we want to be able to go to one person rather than ten to get to data, and if more additional data sources as yet untapped are also available even better and this for people who subscribe; for licence holders, need membership perks such as cheap conference places etc.

For what would make us give it a 5 star rating – if there were enough datasets not to have to do another survey, good portal, open access to data...

Return on Investment

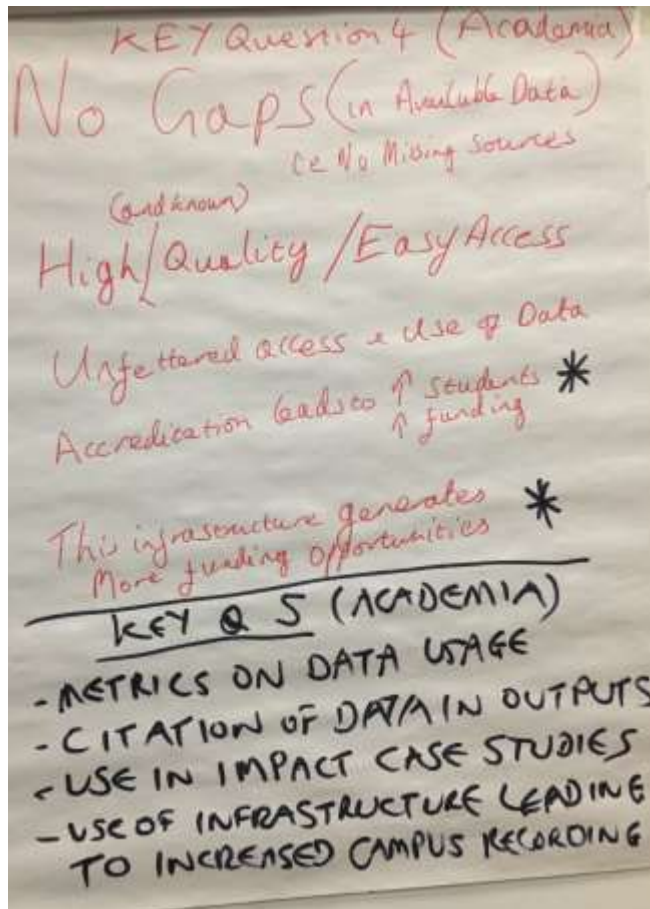


Feedback from Group 3 – Individuals and Recording Groups:

INDIVS/GROUPS – training opportunities, access to equip, start of recording career useful to be able to access kit, link between local and national and also seeing data mobilised.

Success looks like all of the above plus inclusion, access empowerment.

Return on Investment



Feedback from Group 4 – Academia:

ACADEMIA – Q4: similar to others in terms of having no gaps in available data and not having to go to multiple data, having high known quality of data, easy access so it is not burdensome to reformat, also unfettered access so once access is given there are no restrictions on use to not constrain novel uses; sub question on high level investment – higher levels of investment could involve accreditation so university has joined something and gained benefit to allow them to market themselves and gain market opportunities.

Q5 – hard data to quantify metrics on use within academic institutions and how the use data translates into research outputs and where universities demonstrate wider impacts and how they affect policy making and society and how they use biodata is highlighted in these impact statements. Universities may want to improve their environmental credentials so another measure of success is for campuses to monitor their own environments and monitor changes.

Return on Investment

Feedback from Group 5 - NGOs:

NGOs – Q4: would need to at least cover costs and be able to cover charitable objectives in a better way than BAU, this is more likely to happen towards the full monty end, otherwise if a change is not sufficiently big it would be too difficult to jump to another model. Pursuing an underfunded approach could lead to unforeseen costs for us with the generation of new professionals within an NGO creating new demands on staff within each NGO.

Q5 recognition. Success also would be that we could concentrate in our real areas of expertise and not have to focus on resources all of the time and not funding bids.... As this is why we got into it. Would want to have confidence in staff of new org and its longevity and its ability to change. Not just a flash in the plan. Clear roles and reduced duplication/competition as a result of the new org coming about.

④ - NGOs - what ROI is required?

- Need to at least cover costs
- Need to deliver our charitable objectives better than business as usual.
- Way that under-funded approach might lead to unforeseen costs (eg advice?).

The bigger the 'scheme' (eg Full Monty) the easier to buy-in
- too small & not worth it?
- return looks for obvious.

Needs to be significant change to allow investment in change mechanisms.

Q5 NGOs

- Feel that our contributions are recognised & resourced
- We can concentrate on our real areas of expertise & not on chasing resources.
- We would want confidence in the organisation, its staff & its products
- Need confidence in its longevity, must be here to stay or we won't have confidence to change.
- Clear roles & reduced competition

Challenging our thinking

SESSION 7

Dragons Den

Key Question:

6. Are the Dragons In or Out?

Dragons:

- National and Local Government
- Commercial and Corporates
- NGOs
- Individuals and Recording Groups
- Academia

Key Question 6:

Is each Dragon in or out?

I'm out



I'm in

"Are we likely to achieve sufficient ROI and impact for each Funder?
How can we further refine our value proposition to increase our
appeal to Funders?"

SBIF

SCOTTISH BIODIVERSITY INFORMATION FORUM

Developing
resources for



Challenging our thinking

Part A: Regional and National Pitch:

Pitching Scotland's biodiversity superhighway – scottish biodiversity superhighway is going to be a ground breaking national system that collates all spp and hab info available to us in one central location. Exciting as it lets us answer qs eg habitat impacts has queens ferry crossing got impacts or gov projects got any impacts on biodiversity. Before we think to put it into context, biodiversity lends itself to Ecosystem Services - 4 categories valued at 21 billion pounds annually that provides enormous benefit for people of Scotland and it is important we conserve it. Service itself is spread across Scotland we want to build capacity and skills in some more remote regions too and important to build up skills before current generation retires. The system we envisage involves four regional hubs in approx. 4 quarters... if you give us the full amount we would like to introduce a biodiversity innovation centre in stirling. We want to compile all data into one place, everything from family collected data to government monitoring to allow us to conserve 21 bill pounds worth of funds, the price of two community centres or point 0.01 percent of QF crossing we will deliver this package, to deliver upskilling, training, cohesive planning decisions, and lots of other things... One Scotland...

What

- open access to biological data for all

Easy to discover information about species + habitats

Sound basis for evidence based planning decisions

Right project in the right place

Biodiversity Super highway

Why

- save the planet!

- inclusion / employability

- skill / capacity building

- local engagement

- Ecosystem services (£21 bn. annually)

(Bargain price of 1 comm. centre)
0.001% of QF crossing

- One Scotland

Challenging our thinking

Part B: Partners and Central Pitch:

Good afternoon, we are in Scotland the home of some of the greatest biologists in the world over 100s years, scot has immensely long history of biological recording back to 1700s; we are a world leader in the environmental sector and we want to push ahead and reign in that position. Our pitch is the result of many months of hard work in pulling together people from all across different elements of our sector and we are in a positive position pulling in the same direction, great intellectual inputs to address q of management of biodiversity data and its use. We already have a current system but it is not working, status quo is not working we need change to seize the moment, eg Scotland could go alone Brexit out there, lots of effort put into reviewing the situation, our team involves all sectors and we acknowledge biodiversity data and getting it together to use with govs, to general public and the new infrastructure helps champion expertise and to raise it above what we already have. But we need a new generation, most of the expertise is in this room, so we need to grow a new generation of experts and progressive people, we can capitalise but we need to develop and coordinate. Although ambitious, we are ready to put our blueprint into action. New tech is giving us unforeseen gains, we asking for money, not much, 20p per person per year, to show our commitment so we have all pledged our contributions – hands over 20p!!!

1 Long proud history of biological recording need a legacy

Scotland are a world leader in the environment

3 Positive vibe - all pulling in same direction

4 Investment + effort joint commitment to address issue across sectors

5 Status Quo is no longer an option

6 Timely - Brexit opportunities

7 We acknowledge our Shared responsibility + the Shared benefits this will bring

8 The new infrastructure Championing the current expertise raising awareness of the value of this expertise

9 growing next generation of experts capitalising on public interest

10 Ambitious but achievable Blueprint is already there

11 All about cooperation, the unforeseen gains new technology new audiences

12 ~~20p per person~~ 20p per person per year (UK)

Challenging our thinking

Dragon 1 – Nat/Local Gov

Dragon 1: Very persuasive cases! How will all this make government more efficient and effective? We already put a lot of money into supporting the biological recording infrastructure but this money is not yet being spent effectively, there is much dupes and gaps and inefficiencies so a lot of this would be existing money redeployed more effectively today! Supplementary question – how would you sell the link between people and nature?

Response from group: This link is already there... we are planning on getting people right in amongst nature, getting the data mobilised so more people can go to the right places... We have tended to take a particular view of citsci engagement, but what we have been talking about here is something bigger and broader, involving greater involvement across all sectors not just biological recording as citizen science. anything that gets people out of their houses and into the country will be worth it as it reduces expenditure in nhs, greater productivity at work so some obvious winners in health and business productivity. By having one joined up system we are able to use one system more effectively and can use existing data we have eg to get trend info... can get people enthused about their communities...

Dragon 1: We have a stronger message than this – when we are talking about people we are talking about the whole of Scotland with people who are highly skilled whose enthusiasm can create something that is more than we have at the moment, it is some way of deploying our sophisticated knowledge in the room into growing public engagement....

Challenging our thinking

Dragon 2 – Commercial/Corporate

Dragon 2: As a developer investing across Scotland often in remote and rural areas, how will the national group gain buy in from national regulators to ensure the data can be used?

Response from Group: it is very important that we can use the data... concerned that all developers spend all their time working out where to put stuff, but if you knew with available data you could put the right dev in the right place. Have all the ducks in the row before the spade goes in the ground so no surprises in advance.

Dragon 2: Both groups talked about succession planning - will this be part of the infrastructure management policy going forward?

Response from Group: It has to be! A really important part of bio data mgmt is the verification pinch point. Lots use biological records but quality control is at the pinch point and is a key thing. We recognise that and that we need to invest in the processes around verification, rather than paying verifiers for their time as much will continue to be so, we can build the tools to support them to develop the skills of the next verifiers and we have developing models where we might triage a group of taxa so the job of verifying can be devolved to the top expert who works on the very hardest cases who helps decisions on easier cases and this way of working builds capacity for the future. The other things we are doing now is to build educational resources that can be used to build for verifiers education and new future changing.

Dragon 2: Will you use ISO auditable systems?

Response from Group: Yes we will be doing it all! Investors in people... etc! Need more money if to deal with ISO....

Challenging our thinking

Dragon 3 – NGOs

Dragon 3: What benefit will this setup bring to those who already generate, manage and use their data quite effectively, will there be any added benefit?

Response from Group: You are right - a number of NGOs, volunteer groups and recording schemes already do all this – collecting/managing/using data - but one of the main benefits is that they could do a lot more very effectively. There are groups working on developing skills, but what a lot of NGOs struggle with is spending time confirming their budgets for the future and there is decline in gov budgets so lots of uncertainty in where they can invest. Putting the biological recording infrastructure on a sound footing for the future will allow skilled and expert NGOs and individuals to spend their time on their expert areas. By bringing everyone together there is a reduction in risk, and putting data into this new infrastructure means opening up to a whole new audience so NGOs could get a whole new level of membership and people being more willing to fund current NGOs. In terms of the national collections, there is a huge cost to this at the moment, we do it well but we need to link up and be more integrated with recording schemes in order to know which collections in future should come in so we can spend money on big future priorities so we need to work with recording schemes so we hold the right vouchers in future. Also, we are lucky in Aberdeenshire with an excellent record centre but we don't see a level playing field across Scotland and we would like to see a situation where developers move from one local authority to another and have the same access to information in each one, same back up to be rolled out uniformly across Scotland to allow devs to have this picture. It is true NGOs do have all this data, but if they add their data to this and invest their data they will be able to get back a lot more data from others so even more data that are useful to NGOs.

Dragon 3: How will we cover the costs of NGOs? Will this system be able to cover all of the inputs required? *Response from Group: It may save people validation as all part of the system....*

Challenging our thinking

Dragon 4 – Individuals and Recording Groups

Dragon 4: as a member of a recording group and an individual recorder, what how might be perceived by some as a monolithic overarching organisation, how is that going to minimise negative effect on membership of groups like my own and how it reduces impact/reduction on our membership income? I.e. what effect this infrastructure will have on membership our group receives?

Response from Group: Would not foresee the infrastructure having any effect on membership, the benefits is that there will be more support for the group, there will be fewer administrative worries for the group so you will be able to do more for your local members and it might increase the number of members and so support and benefit you get.

Dragon 4: Both pitches mentioned training etc of next generation... are we going to be able to train them at the speed needed for our timetable?

Response from group: Some going on already, won't want to disrupt this at all, however by centralising more systems it will free up verifiers et al to work with the next generation and to deliver this training as they wont have to chase funding themselves to manage a complex database, and legal and HR too could be done from this bigger org so people on the ground can spend extra time working with the people it all hinges on ie those who collect the data...

Challenging our thinking

Dragon 5 – Academia

Dragon 5: Enjoyed both presentations, noticed one group put all pressure on one person, other group were more involving of all... So how will your proposal lead to the use of biological records in biodiversity reporting? Why would we not spend our money on structured biodiversity surveillance instead?

Response from Group: Conducting structured surveys every time you need to produce a report is not an effective use of cash though it can provide the data you need. This is not an effective use of cash as it is very time intensive (having just done a ten year global marine mammal surveys) but there must be a better way of doing it. If you collected all data already out there you can id gaps, locations and time periods and species that need doing still to better target survey effort to make whole procedure cheaper and much more effective.

Response from Group: With all due respect Dragon, that's a very narrow and short term view on the world given the problems we are addressing! In that I'd agree with all said in previous comment, but would add that by taking that view you are forgetting the benefits in terms of involving people in the process of collecting biological records which invests them in the natural world and ownership of environmental problems and it leads to greater engagement with nature and health benefits from this and taking ownership of the env they live in. long term problems cannot be addressed by short term single taxa surveys, it needs a long term perspective, across wide geographic areas and across many taxa that tell us different things about the environment given all the functions they fulfil in the environment and all these benefits can only be delivered through a volunteer lead well resourced infrastructure...

Dragon 5: I'm going to come back at you as the things I was thinking of weren't narrow minded/short term, eg countryside survey which has run for a long and how we monitor site condition - site condition monitoring – all these things are being cut so if we have a big pile of money why are we putting it here rather than in these which people argue we should not be cutting?

Response from Group: Because this is much more cost effective than these other surveys – not sure of exact costs but countryside survey had narrow benefits but just as many costs, did not tell us about priority spp/habs that we care most about and does not engage people in the process of collecting data and all the societal benefits that go with this.

Dragon 5: Really like the way you put it as 0.01% of the QF crossing example, but what will innovation centre do that we don't do already? To get large whole strategic level... there is no where else that does it that coordinates in Scotland... there is a centre for carbon etc, nothing else, it doesn't happen. We have a large amount of indiv species records but if we can join up experts in species population modelling, GIS etc you can add so much more value. If we can join up the benefits for all, pop dyn, can add a huge amount of value and this allows you to build up value across Scotland and beyond (south of the border as species go beyond...). Start to look at records through going beyond presence records. We haven't brought these experts together before... Til we do that we don't know some of the things they are going to come up with.

Challenging our thinking

Key Question:

6. Is each Dragon in or out?

Dragon 1 – Nat/Local Gov: Partner/Centre Group - I like your knowledge and passion but not on your own you haven't fully persuaded me, but in combination with National/Regional you would. I'm out on group 2 but in if a partnership. National/Regional Group - I liked your vision and innovation and this is key selling point, bit concerned about 12m price tag though comparison with Countryside Survey (CS) which was a one off but cost this too. In last set of considerations for CS it was considered to be unaffordable and we are in a difficult financial climate today. One element that replaced it was the fantastic national plant monitoring scheme which seems to fit very well with your business model. You are on the right lines, we need to promote this business approach, we need to do things more fully, better, in terms of cost it is going to have to be examined very carefully in the business case. As a dragon I cannot put up the whole cost so I would have to have other dragons come in with me, though you'd look from the lions share from me, so very optimistically I'd put in £5M of the cost dependent on other dragons coming in with me.

Dragon 2 – Commercial/Corporates - liked style and pitch, gave exceptionally good performance by partners/central, national/regional group's style is lacking, with a lot of reliance on one person but content very sound. On behalf of commercial sector happy to offer £2M if they (regional/national and partners/central) decide to come together.

Dragon 3 – NGOs - I'm convinced proposals are much better than status quo, speaking on behalf of NGO sector, am reassured on basis of assurances sector will be funded and represented and it will give everyone else more bang for their buck... so I'm in, happy to put in the money on the basis that some of it comes back to the NGO sector.

Dragon 4 – Individuals/Recording Groups – have never seen Dragons Den but enjoyed both groups, only improved by the use of rap, like previous dragons, happy to handover all of my money to both groups to work together.

Dragon 5 – Academia – national/regional: triumph of substance over style, partners/central said a lot with flair and quite feisty! Put me back in my box! One thing worried me 20p per person if we can't get 1p per NHS. don't do this, but a tiny proportion of QF crossing this really works. As you say, we don't know what these experts will do once we put them all together but it is a really good way of unlocking innovation and I'm prepared to put in my cash. *Not 20p in pound it was 20p per person per pound...* Need to pitch it better... from academia might be £1M as a 12th...

Given all the responses, Dragon 1 now fully in with £5M! Dragon 2 will offer £2M with a hope that we break even at least. So have about many £M but in kind from the NGO sector...!



Home About

As slow as it gets

25 years of SNH – from two wood-kent fairs around Galloway

Reviewing the biological recording infrastructure in Scotland

Published on November 30, 2017 by Scottish Natural Heritage

Scotland is famed for wildlife – bringing fascination and enjoyment on land, in our lochs and rivers, and surrounding seas. Our knowledge of wildlife distribution is founded on the skill and dedication of volunteer naturalists, recording plants and animals as they encounter them or by taking part in structured recording schemes.



Our ability to access and use biodiversity data continues to be developed through the NBN Atlas web site – a technical advance pioneered in Scotland – with improvements and enhancements underway. Limiting factors to creating a more complete knowledge base are the sufficiency and security of resources to support recording. A comprehensive [review of the biological recording infrastructure in Scotland](#) is therefore being undertaken by SBIF to gather ideas on how to improve collaboration, engagement and associated investment.

"The review is timely: it demonstrates connecting people with nature for a prosperous and secure future. Importantly, its findings will be relevant throughout Scotland, including and beyond traditional biodiversity interests."

Sally Thomas, Director of Policy and Advice



Lithos growing in a woodland at Barrowman, Angus. ©Lorna Gifford 2020/VISION

Day 1 closing remarks by Ed Mackey

As mentioned, fortune favours the brave, [this workshop has been] thoughtful, systematic, a perfect opportunity for the future. Things are slightly turbulent in turmoil but here is something new that can carry us forward. Have been promoting this to scot gov – they are a target for the business case and it is our joint responsibility to communicate it to them in the new year. So this joint blog is a way of raising their awareness in advance so as not to catch them unaware. This blog has been put up for this series of workshops, the wording in crimson is from Sally Thomas. The review is timely, demonstrates connecting people with nature for prosperous secure future and its findings will be relevant in Scotland including and beyond traditional sectors. Looking at its conclusions – interested in SNH as to how this can give stimulus to our biodiversity strategy route map.. and how our future vision of Scotland being recognised as Scotland being a world leader... everyone is involved, going beyond with a much broader perspective, everyone benefits, the whole nation is enriched. This is our prep to extend awareness and to get message across. One thing Ed has taken away from this workshop, if knowledge is expensive, try ignorance. Ed can remember CCBR review that formed NBN in 2000, SBIF in 2010, then SBIF/NBN in 2016 alliance. Yes we are thinking of pioneering things for others, and it becomes more complex if you roll it out across the UK, but it is a chance to do something that is more widely applicable. We have all shared in this process... this is a transformative time in the future of scot heritage and pitching this right is very important...

<https://scotlandsnature.wordpress.com/2017/11/30/reviewing-the-biological-recording-infrastructure-in-scotland/>

Confirming our preferred investment level

SESSION 8

Recommended Level of Investment

Confirming our preferred investment level
- exercise



Mix and match the right sized central, national and regional hubs...

Group 1 Group 2 Group 3 Group 4



SBIF SCOTTISH BIODIVERSITY INFORMATION FORUM

Key Question:

7. Which level of investment do we recommend?

Key Question 7:

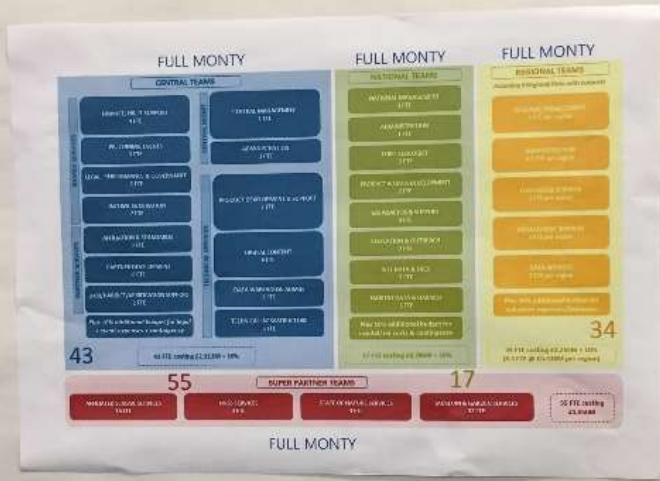
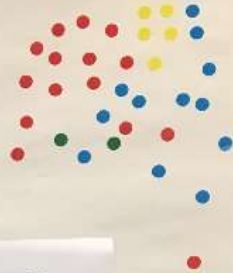
Which level of investment do we recommend?



Vote as individuals...

SBIF SCOTTISH BIODIVERSITY INFORMATION FORUM

34



319 FTE (ALL UK COUNTRIES)

149 FTE (Scotland)

For comparison

Key Question 7:

Which level of investment do we recommend?



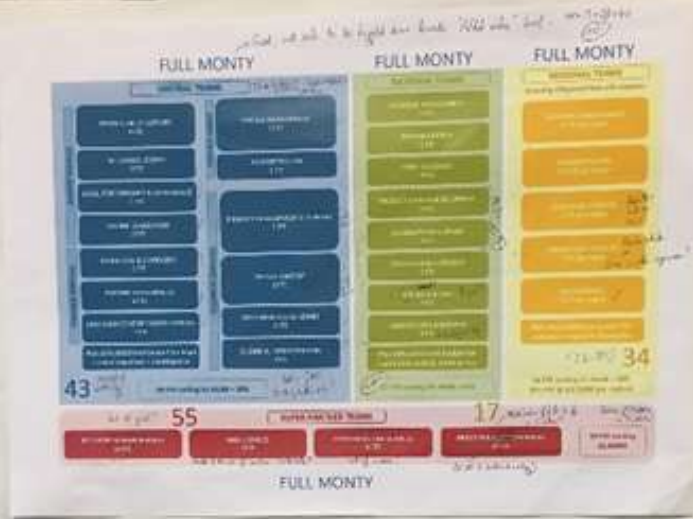
And the winner is...

Group 2 – thought go big or go home, have gone for full monty but talked it through at length. Discussed super partners and whether we needed that level, but talking it through and thinking about the number of specimens needing mobilisation, we agreed did need this level of FTE. Feel funders will want a combined cross-UK project to fund as they are then sharing the risks and costs. We don't have to get other countries to agree to having similar governance/infrastructure immediately, we can put the Scottish/central infrastructure in place before corralling any where else so have a 'hopefully they will come' attitude!

Group 2 Model

34 votes

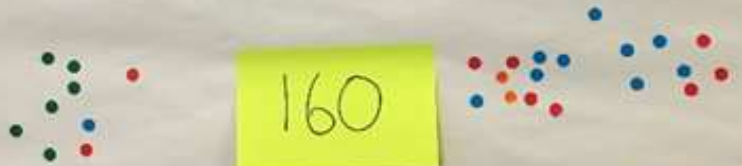
GROUP 1



160 (could haggle to 120)

FTE

- ASSUMING UK: IF SCOTLAND ONLY THEN ~100

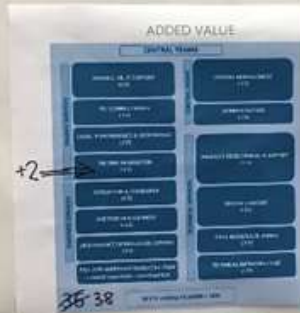


27

Group 1 – we started with the take the full monty approach and see what we think of each element. Think regional teams pretty good but could cut on engagement side of things as this is already covered by other organisations effectively. The national team – we would do it one way if UK and another way if Scotland only. If Scotland only you would merge national and central. But with expectation it becomes a UK level endeavour, we felt national team was too heavy on data – eg why you need habmos team to be 5 but don't really know what that entails if a one off task or not. Central team sounds overblown if just for Scotland 43 is high if Scotland only, if scot only look for 30-35. As far as affiliated schemes, 16 sounds great, NNSS – get the politics/value of this, info is tricky to coral as the info does not flow as it should. Get it right and it will. State of Nature services not sure... Change name of Museum and Garden services to Collections. Be clear if we are talking about data mobilisation too – ie what you get – versus ongoing operation of collections. If we can get this level of resource then fantastic; if only Scotland, 32 is too many but if Scotland only, 5-10 may be more appropriate but don't know size of estate very well. With digitising, a lot is a one off job so amenable to a lot of grants though an ongoing need to digitise new specimens. Overall we felt we like the 160 FTE for full monty, could be haggled down to 120 which is Added Value level assuming UK, but if Scotland only, could work with 100 quite happily.

Group 1 Model
27 votes

(21)



16

5

ADDED VALUE

16

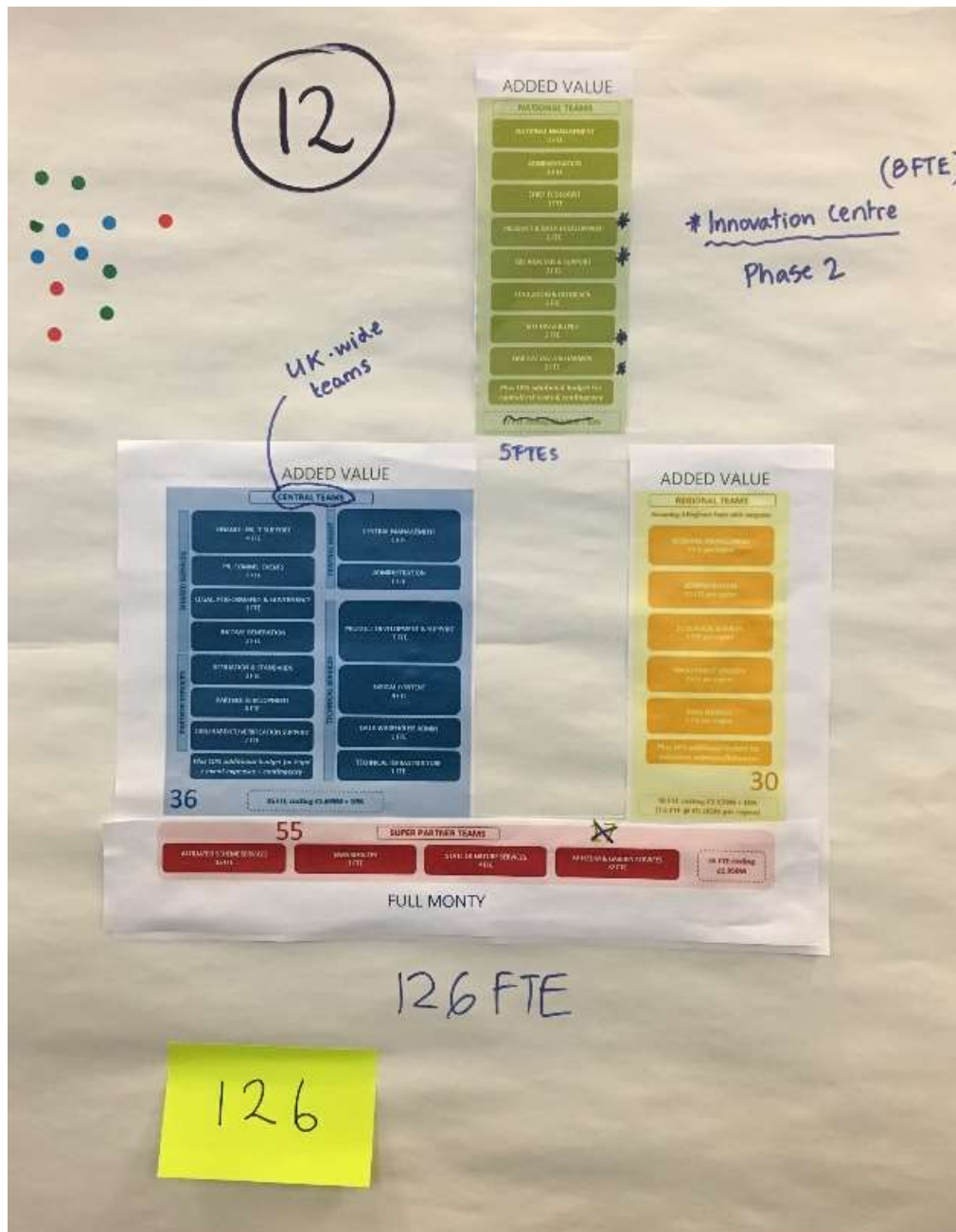
FULL MONTY

109

TOTAL 109 FTE

Group 4 – were happy with the full monty to begin with. Then got thinking, and looked at model being an ask for just Scotland so felt central over the top. So looked more closely at added-value level for central and just doubled income generation part to 4. For national and regional teams were happy with the full monty but tweaked costs for vols etc to double it to 20% to allow for trainers and training. For super partners, did some tweaking, like full monty for affiliated schemes but reduced other three. For state of nature and non-natives left it as added value, kept in for political value of non-natives and state of nature and their value for being there. Had economy model for museums. 109 FTEs overall.

Group 4 Model
21 votes

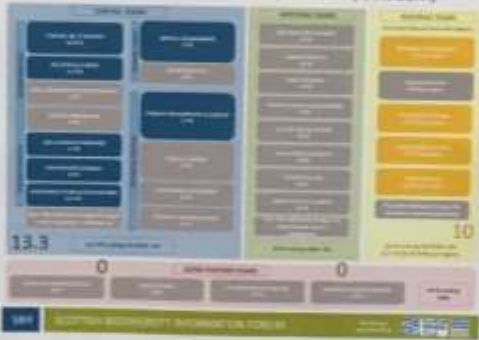


Group 3 – felt added-value almost in its entirety was what was wanted, then realised wanted a phased approach because of cost of innovation centre. So took staff out for this to run as a separate project to bring down the national bit to 5 FTEs. Also had some slight concerns about the name for the central level and wanted to call it UK and to reflect it being disparate teams. People are currently all spread about diff orgs – wanted to do this to keep the focus on Scotland and feel this would better suit funders. Felt super partners deserved the full monty. Got 126 FTEs.

Group 3 Model
12 votes

①

Level 0: Status Quo (23.3/13.3 FTE, £0.944M/£0.521M)



TOTAL 23.3 FTE

23.3 + ?

Status quo – no group working on this, but it was included to allow the option to be available for voting alongside the options developed by each group...

Status Quo – 1 vote

Assessment of the business changes needed

SESSION 9

Business changes to achieve the new model

START

- Sustainable funding
- Contribution from all Local Authorities (funding + engagement)
- Expanding centralised services
- Increase engaging with international initiatives (e.g. GBIF)
- Regional teams in gaps for Scotland
- Conveying importance + benefits of biodiversity to all sectors (e.g. businesses, farming etc)
- Enabling much more use/capture of consultancy + academic data
- Continue pushing a common SBIF Vision (UKBIF)
- Unlocking potential for new uses (e.g. national capital)
- Bringing rest of UK along with Vision
- SG Chief Planner to require sharing of data from surveys for planning applications (set format)
- Academia to share data
- Las to ensure consultant reports do not just harvest data from Atlas covered by NC licences
- [Continue] training + support of next generation of recorders
- Grants for env. Improvements should incl. data search to ensure no protected species on habitats impacted on e.g. forestry applications
- Partners using data!
- SEPA + FCS need to put in funding & data
- Increasing engagement with schools
- Advocating for the new infrastructure – build momentum for what is coming
- Horizon scanning for new opportunities

Feedback for START from Group 1

Struggled to think what is really starting – perhaps we aren't already aware what is going on, some things might start. Need to move to continue. Sustainable funding, engagement/funding from local authorities and recognition this is a shared need, start central service expansion where they add value to the network, engaging internationally eg with GBIF, need to recognise local rec centre cov is incomplete... fill in gaps; sell what we have to offer outside our bubble of biodiversity - people to sell benefits to businesses, farming community etc; gathering data from other sources eg consultancy and academic sources and actively pursue this. Make it an obligation of funding that consultancy and academic data should be shared rather than sitting in reports. Push SBIF momentum as a shared vision within our own networks so we can all push in same direction; expand use of biodiversity data and what it has to offer for natural capital. Realise the success of the core functions – need the rest of the UK to come along and put money behind it too. Share data from source esp for planning and make it a requirement that this happens. Make sure Local Authorities allow record centres to continue to be viable in the interim phase and do still do proper data searches and due diligence while we start up the new phase. Training and support... when money is given to organisations esp around improvement use all available sources. SEPA and FCS to put money in rather than piggy back on other funders. Increase engagement with schools, advocate new structures and collectively get behind the SBIF vision; horizon scan for opportunities, and don't just stand still.

Business changes to achieve the new model

STOP

- Working in silos
- Duplication and reinventing wheels
- Competing for funding
- Being territorial about records (areas + taxa)
- Having multiple databases + entry points (i.e. have an agreed data flow pathway)
- Making excuses – lets get on with it!
- Underselling value of data + services + recorders/verifiers etc
- Relying purely on goodwill
- Reviewing (start doing)
- Allowing LAs to ignore Biodiversity Duty + other orgs
- Relying on/exploiting good will of volunteers (stop assuming vol effort is free)
- Cutting funding for biodiversity functions
- Focusing only on biodiversity sector – start to expand involvement
- Thinking small (Think BIG!)
- Allowing biodiversity to be poor relation to economy etc
- Stop short term funding – replace with long term!
- Stop env. Improvements destroying env!! Do a data search first...
- Stop asking for impossible grant targets
- Stop demonising those not sharing data + solve it

Feedback for STOP from Group 2

General points: stop working in silos, duplication of effort with slightly diff versions of the same things, stop competing with each other esp for funding, find ways to collaborate rather than go it alone, stop being territorial about records and taxa, stop having multiple databases. Stop making excuses just get on with it, stop reviewing and get on with it. Stop underselling the value of recorders and verifiers. Build up the profile inside and outside stop allowing people to ignore their biodiversity duty. Think big – stop thinking small. Stop short term funding. Stop env improvements destroying the env, do a data search first! Tree-planting on sensitive habitats via forestry grants (more about making people aware they should look for what is there first – some of the schemes that support farmers are crap). Stop asking for impossible grant conditions: eg asking TWIC to upload all its data given TWIC don't own it all. Stop demonising those not sharing data and solve the barriers they have instead.

Business changes to achieve the new model

CONTINUE WITH CHANGES

- Supporting Recorders – better training
- Consistent funding for core costs
- Funding based on delivery of services
- Improve data collection + verification
- Long term sustainable funding (what long term sustainable funding???)
- Better coordination between national organisations for planning
- Conversation with Government
- Developing the technical infrastructure
- Working together across all sectors
- Raising profile of biodiversity across society
- Working internationally
- Fill gaps – knowledge/data
- Continue developing innovative tools for B.R.
- Engaging with new audiences for recording
- Increasing pathways to expertise
- Improving mentoring
- Continue developing outdoor learning
- Continue developing access to recording equipment
- Improved access to museum + collection records
- [Improved realisation of all benefits listed in the Benefit Dependency Network green boxes] see list of benefits in business case

Feedback for CONTINUE WITH CHANGES from Group 3

Supporting vols to get better resources, consistent funding for core costs rather than going from grant to grant, funding based on delivery of services, improvement of data collection, long term sustainable funding, better coordination between national organisations for planning, conversation with gov, developing the tech infrastructure including Recorder 6. Working together across all sectors, raising the profile of biodiversity across society, working internationally, filling gaps in knowledge and data, continue innovating tools for recording, engaging new audiences, improving mentoring, continue developing outdoor learning, access to collection records, and do everything in the BDN!

Business changes to achieve the new model

CONTINUE WITHOUT CHANGES

- Continue where we have existing good practice – improvement needed in all areas
- Continue positive dialogue between all organisations
- Share best practice
- Supporting + valuing local recording communities
- Distributed model
- SBIF
- Recording
- Volunteer ethos for recording – i.e. enjoyment of the activity
- Keep talking about intrinsic value of nature
- Use of OPEN data (shared data?)

Feedback for CONTINUE WITHOUT CHANGES from Group 4

Continue with existing good practice, did talk about other things – positive dialogue, supporting and valuing local recording communities, distributed model with lots of diff people doing diff parts of the process, SBIF, recording, volunteer ethos for recording, keep talking about intrinsic value of nature and use of open/shared data...

CONTINUE WITHOUT CHANGES

- Continue where we have existing good practice — improvement needed in all areas

CONTINUE PARTIAL DIALOGUE BETWEEN AN ORGANISATION

SHARE BEST PRACTICE

SUPPORTING + VALUING LOCAL ORGANISATIONS + COMMUNITIES

- Distributed Model
- SBIF
- RECORDING
- Volunteer Ethos for recording & enjoyment of the Activity
- Keep talking about Increasing Value of Nature
- Use of OPEN Data (Shared Data)

CONTINUE WITH CHANGES

SUPPORTING RESEARCH

BETTER TRAINING
CONSISTANT FUNDING FOCUS WITH FUNDING GATED ON DELIVERY OF SERVICES
IMPROVE DATA COLLECTION + VERIFICATION

LONG TERM SUSTAINABLE FUNDING

BETTER COOPERATION BETWEEN NATIONAL ORGANISATIONS FOR FUNDING

CONNECTION WITH GOVERNMENT DEVELOP THE TECHNICAL INFRASTRUCTURE

WORKING TOGETHER ^{IN} ACROSS SECTORS
RAISING PROFILE OF BIODIVERSITY
ACROSS SECTORS

WORKING INTERNATIONALLY
FILL GAPS - EDUCATE / DATA

CONTINUE DEVELOPING INNOVATIVE TOOLS FOR ENGAGING WITH RESEARCHERS FOR RECORDING

INCREASING EFFORTS TO EXPAND DATA RECORDING MONITORING
CONTINUE DEVELOPING / OUTDOOR RECORDING
• NEED TO RECORDING EQUIPMENT

Improve access to museum collection records



STOP

- Brooming in sites
- Duplication of recording wheels
- Competing for funding
- Being territorial about records (mine + team)
- Having multiple databases + entry points
(to have some agreed data flow pathway)
- Making excuses - let's get on with it!
- Underestimating value of data = services + research/monitoring etc.
- relying ~~only~~ purely on good will
- Reviewing (stop doing)
- allowing LAs to ignore Biodiversity Duty
+ other laws
- relying on / exploiting good will of volunteers
- cutting funding for biodiversity functions
- Focusing only for biodiversity sector - that is regional involvement
- Thinking small (Think BIG!)
- Allowing biodiversity to be poor relative to monitoring etc

- STOP SHORT TERM FUNDING REPLACE WITH LONG TERM!
- STOP ENV. IMPROVEMENTS DESTROYING ENV!! DO A DATA SEARCH FIRST
- STOP ASKING FOR IMPOSSIBLE GRANT TARGETS.
- STOP DEMONISING ~~FOR~~ THOSE NOT SHARING DATA + SOLVE IT!

START

- Sustainable Funding
- Contribution from all local authorities (funding + engagement)

Expanding

Centralised services

- Engaging with international initiatives (e.g. GBIF)

Regional teams in gaps for Scotland

Continuing

- Conveying importance of biodiversity to all sectors (e.g. business, farming etc)

- Enabling ~~more~~ use/capture of consistency + decision data

Continue

- Pushing a common ^{SBIF} vision

- Unlocking potential for new users (e.g. Natural Capital)

- Bringing rest of UK along with vision

- SG Chief Planner to require sharpest data from surveys for planning applications (set format)
- Academia to share data
- LA's to ensure consultant reports do not just harvest data from Atlas covered by NC licences
- ^{continue} Training + support of next generation of recorders
- Funds for ~~new~~ improvements should include data search to ensure no protected species or habitats impacted on any Forestry apps.
- Partner using data!
- STPA + FCS need to put in funding data!

- Increasing engagement with schools
- Advocating for the new infrastructure - build awareness of what's coming
- Horizon scanning for new opportunities

Business change flip charts

Workshop feedback/last words

SESSION 10

Workshop feedback/last words

- Thanks for huge amount of effort put into this.... The workshop design allowed the best use of people's time to come here to engage.
- Convinced this is unique and we should make more of it... we need press people to get this story out there of how we have worked together as well as what we are achieving.
- The plan is ambitious and it is incumbent on all of us to go back to our own organisations to sing its praises and to put pressure on to get all this to happen, otherwise it will fizzle out. If we do it together it will seem a smaller ask and we will get it done.