

Food Data Collaboration

Insights & Innovations from three years of Research & Development

"You can't change society with tech.

You have to have the **VISION** for society first,

then build the tech to do it."

Karen Palmer

Vision

We envision a food system powered by independent businesses - enterprises that put **social and ecological values first**, delivering **nutritious**, **affordable food for all**.

Monocultures might be economically efficient. But the natural world models another way: mutually beneficial, interdependent relationships.

We build digital infrastructure to bridge the gap between uniformity and diversity, enabling agroecological food businesses to collaborate - unlocking **shared economies of scale**, **nurturing diversity** and creating the conditions to **coordinate as a movement**.

R&D Pilot: Regional cross-selling

Two Regional Pilots

South West England Pilot



Can we increase efficiency for Hodmedods to supply small food hubs and box schemes?

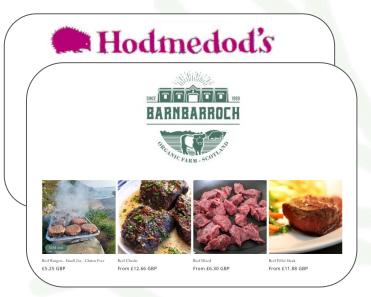
Galloway Pilot





Can we reduce the administrative load for Barnbarroch Organic to supply their local food hub?

Linking Platforms







- 1. **Authenticate** businesses between platforms
 - 2. **Share** supplier inventory with food hub
- 3. Aggregate food hub customer orders for wholesale supply
 - 4. Automatically **place order** in supplier system

Hodmedods -> Good Food Loop



- Delivery mileage 1,926 (vs 21,454 point-to-point)
- Packaging for 6 aggregated orders (vs 82 individual customer orders)

- From the customer's perspective, the **ordering process was seamless**. "Our customers were really pleased to see the range of produce."
- Clear value in reducing the time spent on both the administration and logistics of stocking additional suppliers and fulfilling these orders.
- An early bug demonstrated that it is possible for errors to negate the time savings. **Quality assurance** is critical for scale.

Hodmedods -> Good Food Loop

This could really help us supply more small box schemes and food hubs. Their orders are small and fiddly and end up being quite costly for us to fulfil. Having an efficient way to aggregate and supply these orders, the cost savings for us would be massive. And the benefit comes with the volume.

Josiah at Hodmedod's

Currently we, and our producers, have to manually manage the inventory of the produce we sell on our hub. If we could connect with their existing inventories it would save us all so much admin time. I can really see the potential of this to increase the number of cross-selling collaborations we can support, and to extend our range, which in turn increases our average basket size.

Claire at Tamar Grow Local

Barnbarroch -> Galloway Food Hub



Time saving 30hrs

up to 2 hrs per order cycle saved on updating stock and prices and checking low stock across platforms

- Automating the admin of cross-selling unlocks the potential for more collaborations, including with procurement, catering, wholesale and retail.
 - Clear value in simplifying operations, saving time, money and precious mental energy.

Scale requires clear, **shared error handling across integrations** and strong quality assurance processes.

Barnbarroch -> Galloway Food Hub

The integration gave us access to new stock when we needed it, and showed the potential to connect with more producers. We have more demand than supply, especially for ethical and local products, and we want to work with more producers like Kylie.

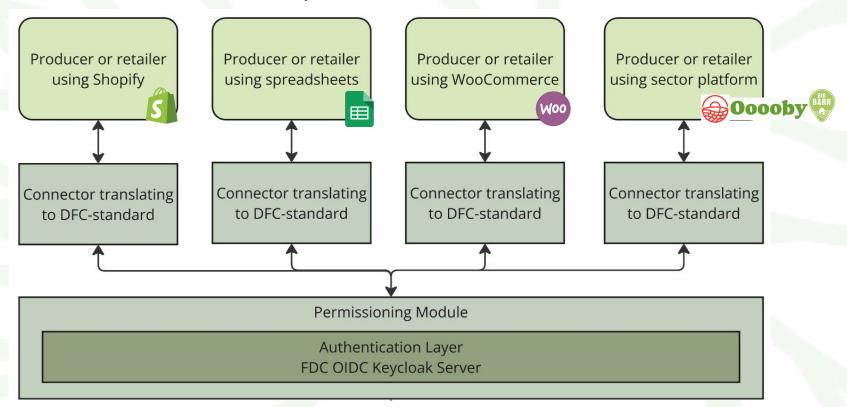
Lesley at Galloway Food Hub

The integration means we only need to update stock in one place - that's huge. This lets us stay connected to the grassroots Food Hub without the overhead of running two inventories and avoiding double allocation of stock. We reach more customers, make use of special offers and benefit from the features of our preferred ecommerce tool.

Kylie at Barnbarroch Organic

Technical background

Technical concept



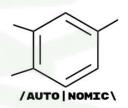
Delivery Strategy

- → No in house software development
- This enabled us to:
 - work in parallel to deliver responsively at pace (agile)
 - and more effectively leverage the specialist skills of different teams











Integrations

- Stage 1 **Authentication**: integration with OIDC authorisation layer
- Stage 2 **Product & Inventory**: sharing with the product/inventory data models and API endpoints
- Stage 3 **Orders & cross-selling**: integration with data models, API endpoints and business logic to enable cross-platform ordering

Open Food Network	Shopify (Hodmedod's)	Ordle (Cambridge Organics)	Big Barn	Ooooby	
Stage 3	Stage 3	Stage 2	Stage 2	Stage 1	
Orders & cross-selling	Orders & cross-selling	Products & Inventory	Products & Inventory	Authentication	

Working group deep dive into governance

Governance Working Group

Our Governance Working Group involved farmers, retailers, digital providers, sector membership orgs, a group that shared deep values alignment - social + ecological outcomes - agroecology

We met 10 times (4 in person and 6 virtually) over the 3 years



















Governance Findings

On governance

- -> Data sovereignty & data commons
- -> Be careful not to burden actors with responsibilities too early
- -> Take time to build shared vision and adequate resources first

On agroecological focus

- -> Deep dive research to explore scale, certification and monitoring
- -> Practical ways to create a boundary to our agroecological commons

On scaling

- -> Create flexibility in data sharing
- -> Storytelling to navigate complexity
- -> Build partnerships & aim to move at the pace of trust - which means having the right funders.

On viability

- -> Scale revenue models low margin
- -> Focus on creating real value for farmers, producers, retailers.
- -> Grow sector adjacent revenue streams data products

Looking ahead

Strategic Approach

Experience-first approach

Delightful experiences.
Tech that is simple to use and understand.
Tech that is always free from errors.

Sector ownership

Governance for participation, transparency & inclusivity. Move at the pace of trust. Flexible data sharing to suit wide-ranging needs.

Focus on value

Cut admin, increase collaborations, boost sales, streamline operations, increase visibility, create data & insights

Building Blocks

Reaching this stage has meant investing in a range of reusable components and building blocks, which decrease the costs of future developments

Authentication Component	Authentication Components OIDC Authentication					Data Permissioning Module		
Data integrations - analys	Un	Unstructured data import			Data store & capture			
Functional integrations - movement building tools Map Components Directory Components								
Sales Integrations - supply networks		Shopify		OFN	Ooooby	BigBarn	Ordle	
Connector Libraries In Ty	ypescript	cript PHP Ruby To simplify integration development						
DFC-Standard Ontology & Vocabularies - the defined common language								

Growing Adoption

Sector...

Our next project is a scoping project in partnership with Soil Association, Pasture For Life, Landworkers' Alliance, Biodynamic Association and Better Food Traders to explore risks and benefits of integrating members and licensees.

Internationally...

Groups in France, Australia and Canada are also using the FDC-standard, building integrations, and contributing toward the global commons of sector infrastructure.

Growing Adoption

Technical...

Adding WooCommerce to our current integrations will integrate 72% of food retail SMEs

Linking with gov/industry partners eg Food Data Transparency Partnership

Regional...

Partnering with with local authorities and Local Food Partnerships

Platform	Businesses		
WooCommerce	21%		
Shopify	17%		
Spreadsheets/email	16%		
Ooooby	11%		
Custom/bespoke	7%		
Wix	6%		
Open Food Network	6%		
Squarespace	6%		
Growing Good	3%		
Phone orders	2%		
Other	5%		

Achieving Viability

It goes without saying that this project must be commercially viable, which is a unique challenge for an infrastructure project...

Trade-based revenue - Tiny (\sim 0.5%) margins on cross-selling trade facilitated by the infrastructure.

Data & insights revenue - Meta-data licensing and meta-data insights portals.

Integration support - Bespoke support packages for platforms and businesses integrating.

Novel tool development - The possibilities are yet to be imagined.



With Thanks To

Team

Core project team: Lynne Davis, Garethe Hughes, Sophie Paterson, Guru Thiru

Technical delivery stream: BigBarn, Cambridge Organic, Data Food Consortium, Hodmedod's, Ooooby, Open Food Network, Yalla Cooperative, Autonomic

Governance stream: Bob Mehew (Apricot Centre), Julia Kirby-Smith & Natasha Soares (Better Food Traders), Anthony Davidson (BigBarn) Duncan Catchpole (Cambridge Organic), Tony Little & Peter Samsom (Landworkers' Alliance), Pete Russell (Ooooby), Martyn Bragg (Shillingford Organics), Rachel Jones & James Woodward (Sustain)



Our funders & fiscal hosts

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