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WP3 Case study: UK wheat to bread chains
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UK chains selected:

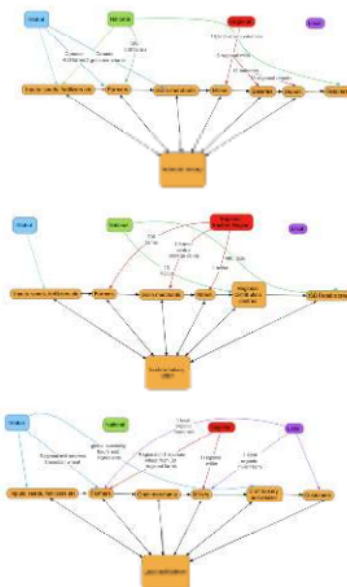
- i.) industrial plant baker (GC) more global - 80% by volume market share
- ii.) In-store bakery chain (ISB) regional aspects - 17% by volume market share
- iii.) craft bakery chain (CRFT) more local - 3% by volume market share

Key factors for making distinction between global and local for comparison with Italy:

Source of wheat; size of market, technological innovation, governance, and intention to be local/global



Local and global value chains features



Selected attributes for WP3 case studies

Attribute	Critical issues	Relevance	Best performance
Biodiversity	Technological versus traditional perspectives	Nitrogen fertilizers. Eco-system management	Local chain
Technological Innovation	Optimize resource use efficiency. Reduce CO2 emissions	40% GHG emissions from wheat production. Energy usage in baking main opportunity for resource use efficiency.	Not yet completed
Nutrition	Nutritional qualities (composition) Nutritional value (health and well-being)	Protein quality in wheat, effects of milling process, usage/impact of additives in baking process on nutritional value and health.	Not yet completed

Highlights and remarks

METHODS

- 16 semi-structured interviews with key stakeholders;
- supplemented by data from secondary resources.

Participatory approach central to research

Calculating indicators integrated:

- stakeholder-specific inputs (practice-based); with
- verifiable data from secondary sources (performance based)



Table 4: Assessment methodology for calculating the indicators (source: authors)

Attribute and indicators	Evidence to assess overall performance and progress towards more sustainable practice
Biodiversity:	
- wheat: locally adapted varieties and breeds;	<ul style="list-style-type: none"> ✓ use of locally adapted varieties and breeds; ✓ knowledge of regulation/incentives to use locally adapted varieties and breeds; ✓ degree of consideration for consumer opinion; ✓ public statements of commitment (eg. website/labelling etc.)
- saving of seeds and breeds;	<ul style="list-style-type: none"> ✓ knowledge/adoption of seed-saving practices; ✓ knowledge of regulation/quality payments; ✓ degree of consideration for consumer opinion; ✓ public statements of commitment (eg. website/labelling etc.)
- on farm eco-system management.	<ul style="list-style-type: none"> ✓ systems to help manage natural resources and enhance biodiversity; ✓ knowledge of regulation/incentives for managing biodiversity; ✓ degree of consideration for consumer opinion; ✓ public statements of commitment (eg. website/labelling etc.)



Table 5: Rating mechanism for global, regional and local chains (source: authors)

Rating mechanism	Score	Color
Baseline: no evidence	(score 0)	Grey
Awareness but progress (td	(score 1)	Orange
Partial implementation	(score 2)	Yellow
Implementation	(score 3)	Green

- **No evidence: Baseline:**
- **Awareness:** evidence indicates awareness of the indicator in the value chain but overall performance and progress towards more sustainable practice is limited.
- **Partial implementation:** evidence indicates awareness of the indicator in the value chain and actions have been taken to manage overall performance and progress towards more sustainable practice and there is demonstrable knowledge of standards/regulations;
- **Implementation:** evidence indicates awareness of the indicator in the value chain and actions have been taken to manage overall performance and progress towards more sustainable practice and there is demonstrable knowledge of standards/regulations and consumer opinion plays a role in decision-making and public statements of commitment are made (e.g. on website/labelling).

