Future Models of Grocery Distribution

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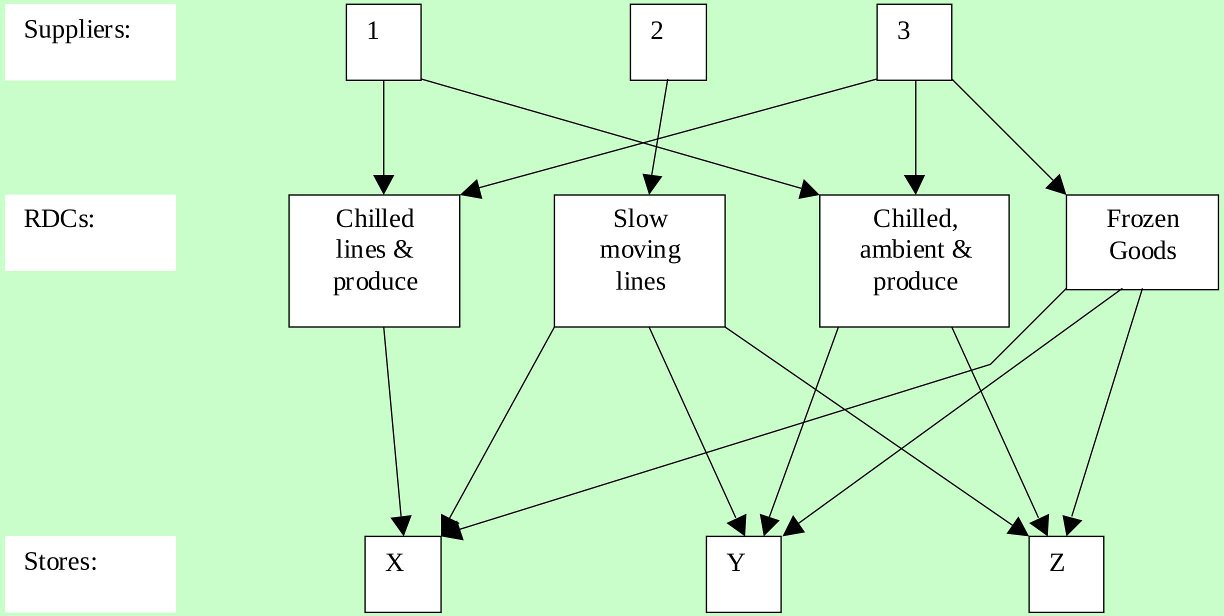
Objectives

- Establish form of e-commerce grocery distribution models in UK
- Investigate influencing factors on home delivery break even point
- Compare industry expectations of demand with National scenarios
- Review reaction of other market sectors
- Establish research needs

Store Distribution Model



Store Home Delivery

- Increased transaction values
- Local management flexibility
- Expensive to operate
- Costs covered through extra profits
- Frequently contracted out
- Useful experience for e-commerce delivery operations

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Demand Scenarios

Scenario	% of adult population using e-commerce frequently	% of adult population using e-commerce occasionally
Explosive	50	90
Dynamic	37.5	75
Active	20	50
Sluggish	10	30

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Grocery Demand Scenarios

- Retailer expectations: 2.5-10% of UK grocery market by 2005
- Maximum take-up: 10% by 2005, 15% by 2010
- Requires traditional distribution system
- Perishable produce leads to a perception problem
- Restricted range available

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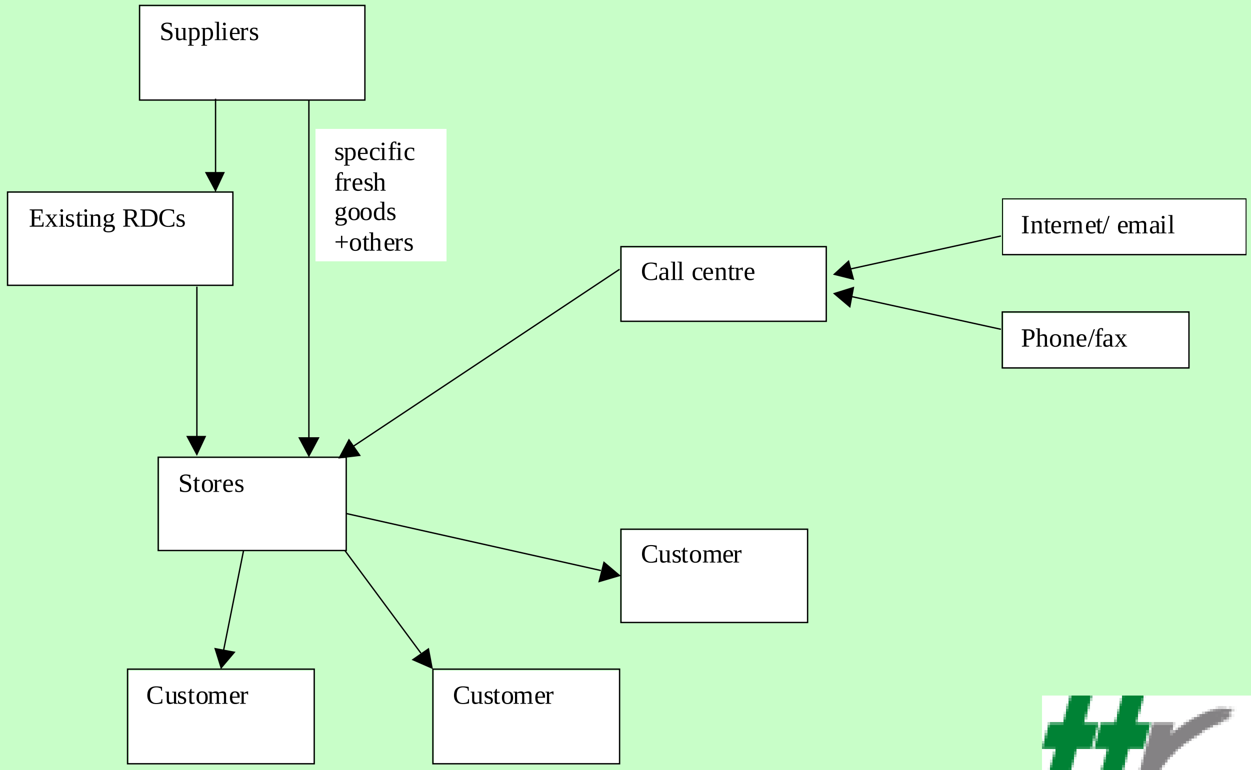
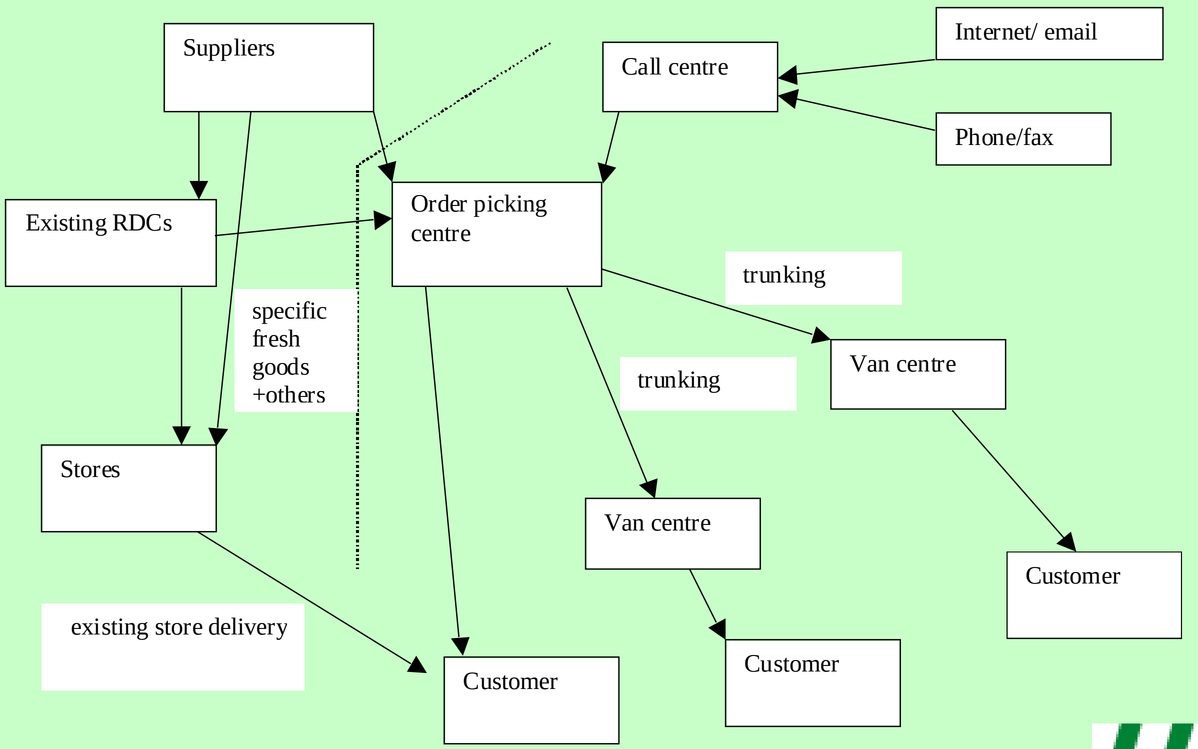
Store-based Picking Model



Dedicated Picking Centre Model



Rationale for Entering the Grocery E-commerce Market

- Highly competitive market with relatively low margins
- Gaining new customers
- Increasing sales
- Securing existing customers

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E-commerce Costs

- Infrastructure investment
- Marketing
- Orders taking & processing
- Assembly of order (picking)
- Delivery

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Rationale for Store-based Picking

- Minimum initial investment
- Quick implementation
- Good geographic coverage
- Benefits from existing customer relationship

But...

- Potential conflict with in-store shoppers
- Stock unavailability

Dedicated Picking Centres

- Focused operation
- Reduced overheads
- Efficient picking
- Stock availability

But...

- Significant investment
- Longer lead time to going live

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Service Levels

- Cost
- Explicit delivery charges
- Product availability
- Delivery slots offered
- Adherence to delivery schedule
- Conduct of delivery driver

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Performance Indicators

- Assembly cost
- Deliveries per round
- Geographic order density
- Vehicle utilisation (use through the day)

Also...

- Average order value
- Regularity of order
- Customer cannibalisation rate

Future Developments

- Mixed picking centres
- Central picking and local cross-docking
- Workplace deliveries
- Unattended delivery
- Collection (onward distribution) Points
- Order tracking

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Local Collection / Distribution Centres

- Increased delivery efficiency
- Service level
- Legal responsibility / health & safety

Demand Scenarios

Scenario	% of adult population using e-commerce occasionally	% of adult population using e-commerce frequently	% of adult population using grocery e-commerce
Explosive	90	50	12.5 - 20
Dynamic	75	37.5	7.5 - 12.5
Active	50	20	4 - 7.5
Sluggish	30	10	< 4

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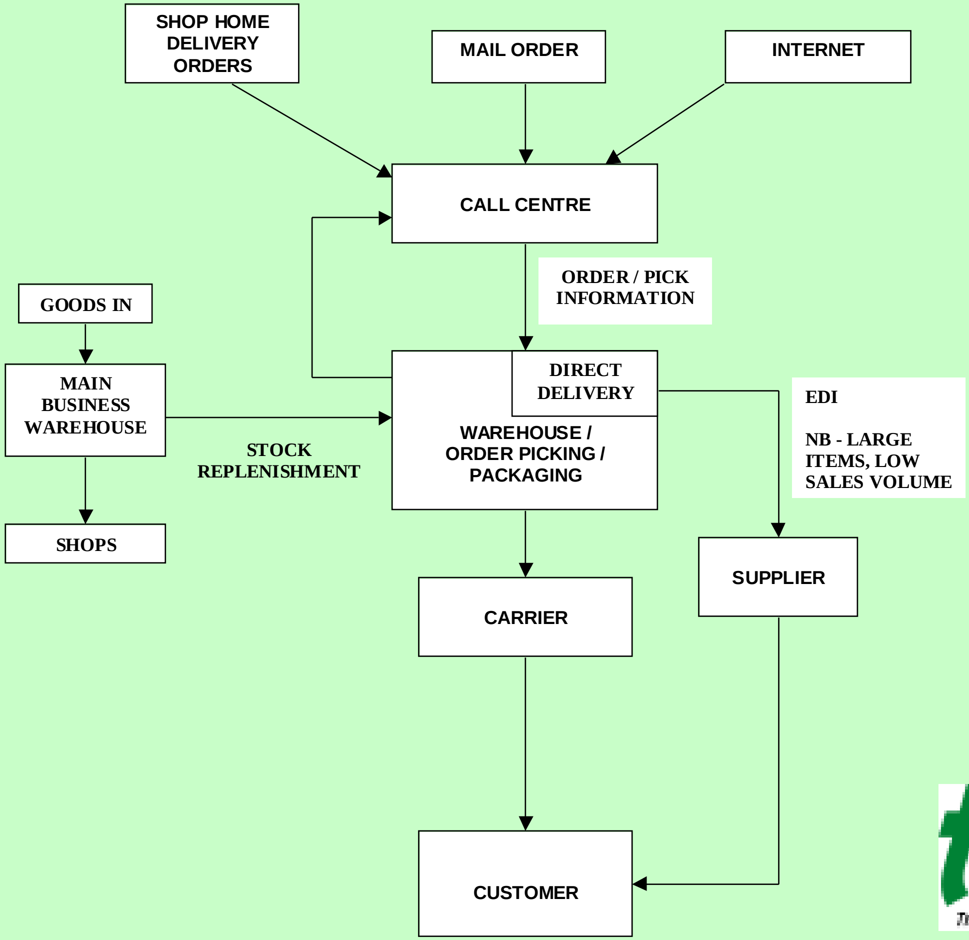
Model Used in Other Sectors



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Sector Comparisons

- Contracted Delivery
- National Picking Centre
- No need for temperature control
- Range of delivery options
- Smaller consignments
- Regular routing patterns
- Longer final delivery schedules

Specialist Producers

- Small regional scale
- Own transport

Co-operation allows...

- Choice of whether to be a transporter
- Complementary marketing
- Wider customer base
- Additional marketing

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Conclusions (1)

- 2 current distribution models
- Both lead to increased distance travelled by supply side vehicles
- No understanding of impact on consumer travel behaviour
- Initial competition is for lucrative London market

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Conclusions (2)

- Outside London service provision is patchy
- Service extension will be targeted
- Rural provision dependent upon existing social services contracts & other schemes to increase delivery density
- Local collection points / collaboration on delivery rounds offer potential, but institutional and legal barriers must be overcome

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Future Research

Studies

- Impact on traffic flows (consumer behaviour)
- Establish breakeven point for delivery models

Pilots

- Demonstration of local collection points
- Co-operative marketing and distribution of specialist products

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