



**Research into software products  
for the food and drink sector:  
*findings and options going forward***

For:

**Devon County Council**

Prepared by:

**STEP AHEAD RESEARCH LTD**

October 2008



INVESTOR IN PEOPLE

Coppergate House  
16 Brune Street  
London  
E1 7NJ  
Tel No. 0207 9538423

23 Southernhay East  
2<sup>nd</sup> Floor Office Suite  
Exeter  
Devon  
EX1 1QL  
Tel No. 01392 433288

790 Innovation Buildings  
Kent Science Park  
Sittingbourne  
Kent ME9 8HL  
Tel No. 01795 438827

## CONTENTS

1. BUSINESS REQUIREMENTS OF THE SECTOR.....	1
2. PRIORITISING SUPPORT .....	3
APPENDIX 1: BUSINESS PROCESS REQUIREMENTS FOR SOFTWARE .....	5

## 1. Business requirements of the sector

The 90 food and drink businesses that were engaged in the 2008 programme of summer and autumn “ICT animation events” completed qualitative questions in the Essential Information form (*What are your business targets and objectives?* and *What are your current challenges?*) and the Food and Drink Sector Individual Development Plan. The responses were analysed in conjunction with the set of 59 specific requirements (see Appendix 1) to produce the following five ‘software appropriate’ groups:

1. Integrating order processing and stock control (n = 27; 30%);
2. Website development and e-marketing (n = 34; 38%);
3. Farming (particularly livestock) (n = 4; 4%);
4. Labelling (for batch control and product branding) (n = 3; 3%); and
5. Basic ICT / general Office software needs (n = 22; 24%).

*The contact details for these groups will be returned to Devon County Council’s care, sorted according to these groups in a password protected Excel spreadsheet for easy reference for future approaches to the sector (see Section 2: Prioritising support, below).*

The first two groups had the highest proportions of business respondents, each with their own cluster of business process issues for which they required software support. These clusters are illustrated in Figures 1 and 2 below.

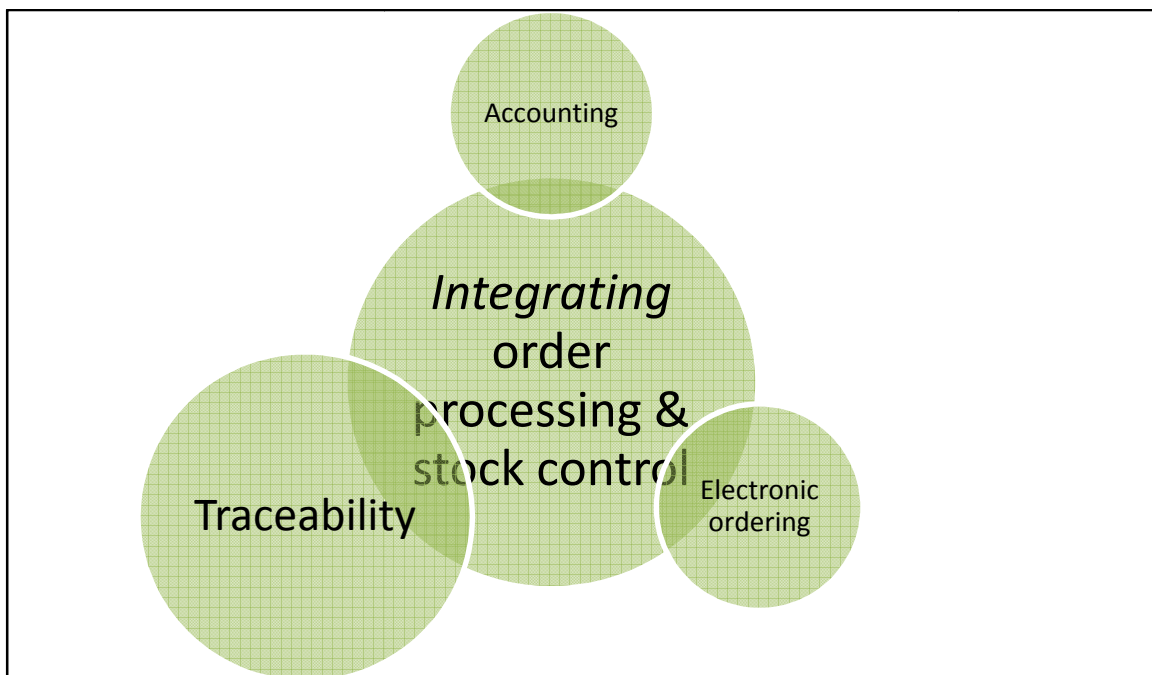


Figure 1: Integrating order processing and stock control clusters with traceability, electronic ordering and accounting



Figure 2: Website development clusters with e-marketing, e-commerce, product databases & traceability and accounting

The first group, *Integrating order processing and stock control* represents a potentially significant group of businesses who have recognised the likely benefits of automating their production processes to support anticipated growth. Whilst Review 1 ‘Manufacturing, order processing, stock control systems’ is likely to be of direct interest to this group, Section 2 below discusses the profile of this group and outlines the possible future engagement options.

The second group, *Website development and e-marketing* represents an ICT need that is normally met through in-house expertise (e.g. a member of staff up-skilling in web-design, advertising through *Yell.com* or local directories) or by commissioning a web design / marketing and advertising agency to develop marketing materials and a bespoke website with the required functionality (e.g. product images, e-commerce ordering facility). Review 3 containing generic software packages, could be of use to this group for covering the clustered needs of this group.

## 2. Prioritising support

The training needs analysis found that 54% of food and drink businesses who attended the “ICT animation events” were in the ‘Advanced’ category. Taking these into account with the proportion of those businesses with more sophisticated software needs (30% for *Integrating order processing and stock control*) suggests that between 16% and 30% of the food and drink businesses who have been engaged with could benefit from support in selecting and purchasing specific software to enable their core production processes.

Communicating the whole research project to a diverse group drawn from the estimated 4,000 food and drink businesses in the county is likely to encounter significant challenges due to fragmentation of the audience. In short, the entire catalogue of over 100 products will not be relevant to everyone. So, instead a targeted engagement strategy based on the ‘software appropriate’ groups identified in Section 1 above could be more appropriate and manageable.

Since the businesses in the first group, *Integrating order processing and stock control* already form a self-selected group by choosing to attend an animation event; a further round of engagement should be carefully planned, to ensure maximum engagement and minimal “event fatigue” in the medium term. In addition, those businesses with clear growth plans and a history of consultation with Devon County Council are likely to require clarification over any future grant allocations available before committing more time to software selection activities (both in-house or at similar ICT training events).

### 2.1 Engagement options

Although not exhaustive, the following three options could be considered by Devon County Council and its funding partners as means of engaging with food and drink businesses anticipating growth and wishing to automate aspects of their production processes. Under each option, **the emphasis would be on each business to “own” the software selection process itself so that they can understand the specific implications of each product for their business functions and the types of adjustments likely to be needed to gain full value from the software.** This process of decision-making can take several months (for example, Sanderson have highlighted that decisions to purchase their Formul8 package normally take 6-12 months from the point of initial contact with a customer). This underlines the need for impartial brokerage and clear guidance on grant funding opportunities so that the decision-making process can begin on a level playing-field.

#### **Example Option 1: Hosting an online forum to support discussion of software options and the decision-making process**

- **Strengths:** Low overheads (for example, no transport or venue costs); on-demand service minimising disruption to businesses; peer support network; direct links to supplier websites and invitations for web chat room conferences with suppliers.
- **Weaknesses:** Internet connection dependent, ICT user knowledge base.

**Example Option 2: One-to-one brokerage to explain software options and grant support details with recently engaged businesses**

- Strengths: Can be done quickly beginning with telephone conversations to “strike whilst the iron is hot”; direct contact is likely to be reassuring to businesses who are used to “getting things done” through personal contacts.
- Weaknesses: Resource intensive.

**Example Option 3: Trade fair / networking event for higher-adopting food and drink businesses to browse software products and see demos at stalls**

- Strengths: local bespoke software development companies and leading commercial software suppliers ‘under one roof’; running stalls offering information on their products and services (e.g. leaflets, demos, etc.) to the invited Devon businesses; direct contact is likely to be reassuring to businesses who are used to “getting things done” through personal contacts.
- Weaknesses: Organisation time; ensuring sufficient turnout so that the leading suppliers prioritise attending.

At this stage, it is unclear how ICT training could be easily “piggy-backed” on to these options; firstly because of their “brokerage” emphasis is likely to require a looser organisational approach; and secondly because defining the subject of the training could be challenging. For example, even in defining a theme of “selecting appropriate software solutions”, care would have to be taken in extracting the best practice from the large volume of academic literature which exists on the subject of Requirements Engineering.

## Appendix 1: Business Process Requirements for Software

The following set of atomic requirements were gathered during consultation with food and drink businesses in September - October 2008 and from responses to the qualitative questions in the Essential Information form (*What are your business targets and objectives?* and *What are your current challenges?*) and the Food and Drink Sector Individual Development Plan. Following a published requirements engineering methodology<sup>1</sup>, each of the high specification software products were scored against each applicable requirement using a 0 – 5 scale, providing the composite requirements compliance scores shown in the accompanying software Review documents.

R.No	Requirement	Group
59	Future system shall enable traceability of products going out to the customer via ingredients and batch code and handle finances too – in one package.	IS general Stock & sales
36	Software shall pass information / communication between business processes connecting: customers (through orders), admin (order processing) and production.	Stock & sales Order processing IS general
37	Software shall manage barcoding of products.	Stock & sales Order processing IS general
38	Future system shall enable linking of freezer readouts and cold room records to computer.	Stock & sales Order processing IS general
23	Future system shall support a medium-long term business plan for 5-10 years.	IS general Stock & sales
2	Future system shall enable connection of tills with accounts.	Stock & sales
53	Future system shall plot what cuts / products sell and when (purchases range from a till that itemises what is sold each week to a computer application, where the till downloads the information to a computer afterwards), avoiding manual entry to a spreadsheet (time consuming data transfer) and enabling forecasting of what produce to make available that is likely to be in demand.	Stock & sales
10	Future system shall support integrated stock control (to answer: "how much meat is there 'lost in the (processing) system'?").	Stock & sales
11	System shall display/record carcass information specialised for butchers (like Avery scales).	Stock & sales
12	Future system shall enable customer code reporting (like a TAS upgrade to Sage Monthly, since TAS has limited product analysis).	Stock & sales
18	Future system shall replace spreadsheets for stock control and section performance analysis.	Stock & sales

<sup>1</sup> 'Acquiring COTS Software Selection Requirements', N. A. Maiden and C. Ncube, City University London, pp. 46 – 56, *IEEE Software*, March/April 1998

**Devon County Council: Research into software products for the food and drink sector  
Findings and options going forward**

19	Future system shall work alongside Sage for managing a restaurant and garden centre, it identify how each section is performing.	Stock & sales
20	Future system shall integrate computerised tills; measuring stock levels in kitchen (by recording barcodes as stock comes in) and forecasting of replenishment orders.	Stock & sales
21	Future system shall identify location of stock in storage (possible via RFID or by recording last position in system notes).	Stock & sales
22	Future system shall allow different sales outlets to be controlled centrally.	Stock & sales
35	Software designed for integrating e-commerce site with database and “administration”.	Stock & sales
43	Future system shall integrate accounting, barcoding and stock control: as a simple program / database, provide information identify stock movements in relation to customer sales (“where stock is going”); instead of inputting weekly till logs (with inconsistent use of PLU codes) into spreadsheets.	Stock & sales
45	Future system shall allow batch control, printing of use-by dates on (waterproof) labels (per batch).	Stock & sales
46	Software to enable product labelling for batches of 1,500 bottles of cider.	Stock & sales
39	Future system shall correlate orders from till to packing sheet (per customer) in a common data format.	Order processing
40	Software shall include customer information (address, phone number) on order number sheets with peel-off labels.	Order processing
29	Software for label printing.	Order processing
3	Integrated order processing shall integrate at the level of the single item order; get the timing right in / identify the correct positioning for improving the business processes, and replace (in a bespoke way) the manual interfaces between customer orders and estimates; generation of a cutting list and initial invoices; despatch, variations and final invoices and reconciliation of business accounts with final invoice records.	Order processing
4	Integrated order processing shall handle at least 30 orders a week and produce a weekly butcher’s cutting list plus additional cutting instructions (e.g. customer preferences) and butcher comments (e.g. extra trimming, variation in fresh produce).	Order processing
54	System shall accommodate changes to orders resulting from variation in cuts, replacing handwritten alteration of invoices to reflect changes using a calculator in the butchery.	Order processing
55	Integrated order processing system shall generate initial invoices, collate orders to produce a weekly cutting list, support packing planning with order completion and despatch, automating variations to orders and replacing a calculator and photocopying of handwritten changes.	Order processing
5	Integrated order processing shall allow printing of peel-off sticky address labels combined with (accounts-based office records) order documents (final invoices) at order completion / despatch stage; without creating dummy customer account orders, and integrate with initial sales invoices (from CMS) and any additional credit notes / delivery instructions recorded by the CMS.	Order processing
6	Integrated order processing shall be linked to weigh scales (using wireless connection and screen – possibly a wall-mounted touch-screen) to tap in weights; replace physical adding up for ‘proper’ final invoices with correct costs, allowing automatic reports for end of month; individual customer totals for lamb/beef sales.	Order processing
7	Integrated order processing shall allow multiple users (unlike TAS, instead a database functionality).	Order processing
8	Integrated order processing shall allow user-friendly reporting for sales / market research, more sophisticated than currently by CMS (e.g. by volumes of particular cuts, not just unit quantity) and bespoke report templates, better than currently by TAS for product volumes and weights and batch traceability (instead of folders of original order documents).	Order processing

**Devon County Council: Research into software products for the food and drink sector  
Findings and options going forward**

44	Future system shall interface with weighing tills.	Order processing
33	Future system shall manage order processing, production records and produce reports.	Order processing
30	Future system shall support order processing (replacing a spreadsheet ordering system) and traceability (either off the shelf or bespoke database development) and work alongside Sage Accounts and payroll. <i>"Interesting that most of us are facing identical problems"</i>	Order processing
31	Future system shall enable control of supplies, traceability and counter costs of fuel, raw materials and removing waste products.	Order processing IS general
41	Future system to support control and admin of traceability.	Order processing IS general
28	Future system shall enable tracking of production costs.	Order processing IS general
13	Future system / software product should demonstrate value-for-money through a cost-benefit analysis, which covers an optimised installation.	IS general
14	Software purchases (e.g. herd management software) must be compatible with Norton Antivirus and 'dongles' on a standalone machine.	IS general
16	Future system shall enable tracking of multiple operations and accounting for wide income streams.	IS general
32	Future system will include management database shall support infrastructure development; increase productivity and profit in face of rising prices (e.g. help cut costs).	IS general
17	System shall ensure compliance and be fit for purpose covering future legal implications for locating the source of ingredients (e.g. South West Food and Drink – 'food security' re. the targeting of imports).	IS general
27	Future system should maximise efficiency, replace double entry into spreadsheets, run from a server (to be added) which hosts applications for remote access, and integrate sales and contact management into accounts package.	IS general
42	Future system shall link computer systems: for accounting and stock control.	IS general
51	Future system shall enable basic financial record keeping (e.g. accounts packages).	IS general
56	Future system shall include databases to organise online trading and communications to support customer care.	IS general
57	Future system shall accompany introduction of an IT strategy and support customer contact management, order processing, e-marketing and have a back-up facility.	IS general
1	Livestock cattle management software shall handle pedigree herd information / register (a program to cope with pedigrees better than Sum-It's 'Total'; a stand-alone for cattle accounts; something sufficiently good for pedigree breeders).	Livestock
15	System shall manage cattle passports.	Livestock
47	System shall support animal recording – breeding, medical, movement history and link with British Cattle Movement Service.	Livestock
48	System shall integrate with handheld devices, sending data to online suppliers and systems (e.g. NMR, British Cattle Movement	Livestock

**Devon County Council: Research into software products for the food and drink sector  
Findings and options going forward**

	Service and vets).	
52	System shall enable parlour management – automatic milk recording, animal recording and link with livestock Electronic Identification tags (EID)	Livestock
49	System shall support field recording (e.g. sprays, work done, yields).	Farm Management
50	System shall integrate with Global Positioning System (GPS) solutions.	Farm Management
9	E-commerce facility allows customer to agree to changes in quantity from guide price cost per kilo, overcoming trade description issue, product volumes.	E-commerce
24	Website shall support 3 services which are changing all the time (courses, nursery, restaurant) by updating information page.	E-commerce
25	E-marketing (All).	E-commerce
26	Future system shall integrate with / update accounts package and integrate with sales / contact management.	E-commerce
34	Desktop publishing (All).	E-commerce
58	Software required to organise content of email repository to support an e-marketing programme.	E-commerce