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Data Quality Insight



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EXECUTIVE SUMMARY

A Data Quality Management (DQM) survey was conducted in May 2012, following similar surveys conducted in 2010 and 2008.

In many areas of data quality, the results of this survey show stagnation in the trend towards improved data quality. With continuing stressed trading and operating conditions, organisations are becoming introspective with regards to their data, and many results are very similar to those of 2010. The continuing depressed global economic conditions appear to have had a dampening effect on spending on IT initiatives, leading to more conservative investment patterns and a more inward looking perspective of their data. Organisations have become more concerned with how data quality can benefit internal business processes and less with how it affects brand awareness or customer satisfaction. Furthermore, external influences such as third-party data sources and customer data entry are increasingly being blamed for data quality issues above internal processes and systems.

Organisations are, increasingly understanding, the high importance that good data quality has for the health of their company, and are gradually seeing data quality as an issue for higher level management.

As in 2010, though many organisations recognise the importance of data quality management to a business, its penetration amongst all



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organisations as a strategic agenda is still not high. There has been some improvement in the numbers of organisations measuring the financial value of data at a strategic level, but the rates are still low, and contact information collected by organisations in many cases is still not checked or validated, despite its value and importance. The results also show the continuation in the trend that the type of information collected by organisations is changing, with email becoming more popular and older technologies like fax becoming less so.

The results show many organisations still face huge challenges in terms of managing data. Practical operational problems such as keeping data up-to-date and accurate and making sure it is secure and well managed remain the primary concerns for these businesses, and data decay and the poor quality of data from outside an organisation is still a headache for most respondents.

Many organisations do not truly understand the benefits of data quality management and its ability to help them to achieve better customer relations, a single customer view and better strategic marketing. For most organisations, DQM is about operational improvement rather than strategic development, with few realising that data quality can have a significant impact on customer satisfaction or brand image. The gap between the organisations stating that they have a data quality management strategy and them realising it is still very wide.



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INTRODUCTION

Following similar surveys in 2008 and 2010, Capscan conducted a survey in 2012 to measure the perceptions that companies have about data quality and the actions that they are taking to achieve improvement. The 2010 survey found that whilst many companies continued to believe in the importance of data quality, far fewer had taken the actions required to allow poor data quality to be tackled effectively. Furthermore, many overestimated the quality of their in-house data.

What changes, if any, have there been since the 2010 survey? Are companies continuing down the path of improved data quality or are the continuing rigorous economic decisions causing resources to be redirected? Are companies understanding better their data health and are their actions matching their intentions? To answer these, and other, questions, Capscan repeated its data quality management

Fig 1: Respondents' Breakdown

	CATEGORY	2008	2010	2012
PRIMARY BUSINESS OF ORGANISATION	Advertising/PR/Marketing/Sales	42.0%	30.5%	3.8%
	Government/Local Government	5.3%	9.1%	3.8%
	Education/Training	6.9%	7.7%	7.6%
	Computing/IT	4.8%	7.7%	30.6%
	Telecommunications	10.1%	6.8%	2.4%
	Charity	3.2%	5.5%	1.4%
	Social Services/Welfare	0.5%	3.2%	0%
	Health	1.1%	2.7%	2.8%
	Housing/Property	3.2%	2.3%	0%
	Arts/Entertainment	5.3%	1.8%	1%
	Printing/Publishing	2.1%	1.8%	1%
	Banking/Insurance	0.5%	1.8%	9.6%
	Retail	2.1%	1.8%	4.8%
	Manufacturing/Production	1.1%	0.5%	4.8%
	Other	11.7%	16.9%	21.3%
SIZE – NUMBER OF EMPLOYEES (UK)	Less than 26	12.2%	22.7%	26.6%
	26 to 100	9.6%	13.6%	11%
	101 to 250	4.3%	6.8%	7.9%
	251 to 750	8.0%	11.8%	11.7%
	751 to 1500	7.4%	5.9%	7.6%
	Above 1500	58.0%	37.3%	32.3%
	Don't know	0.5%	1.8%	3.1%
COUNTRY OF RESPONDENT	UK	79.3%	89.5%	93.8%
	Rest of the world	20.7%	10.5%	6.2%

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research from 2010 amongst the readers of a business IT publication. 291 completed questionnaires were received. The readers are skewed towards higher management, particularly in information technology, within large organisations and mostly within the United Kingdom.

The profile of the respondents is somewhat different to those of 2010, with a rise in the number of IT companies responding and a dip in the number of those in Advertising/PR/Marketing/Sales. The outlook of companies in these different sectors regarding their data can be somewhat different, and this has been taken into account in this analysis.



KEY FINDINGS

Responsibility

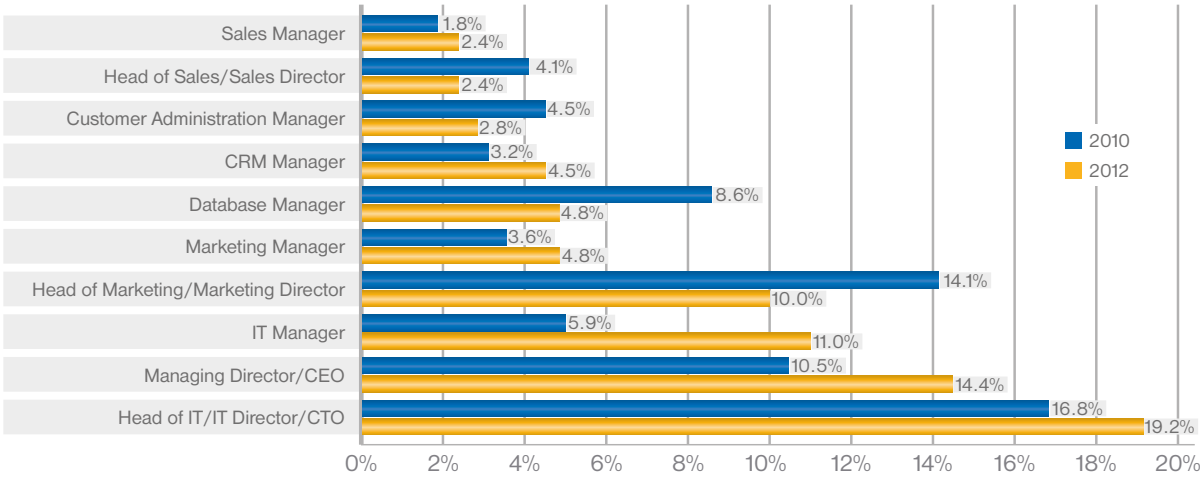
"Who is responsible for data quality? Notionally, everyone = in practice, no-one"

The majority of respondents (77.7%) had an internally managed contact database. The pattern of responsibility for data quality differs somewhat from the results of the 2010 survey. Some of this is a reflection of the increased numbers of staff in IT companies who responded to this survey, and the lower numbers of staff in companies involved in marketing and sales. Apart from a clear increase in the number of respondents who felt that data quality is an IT issue, an encouraging trend is for data quality to be viewed more as an issue to be tackled by upper management, with 14.4% naming the managing director or CEO as responsible as against 10.5% in 2010.

The idea that data quality is something that is the responsibility of a single person, or department, remains firmly entrenched, though. Data quality is a firm-wide issue and requires working practices and processes which affect almost every employee. Without a general understanding that data quality is everybody's responsibility many corporate quality initiatives will hit the bumpers.

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Fig 2: Who is responsible for data quality within an organisation 2010 vs 2012



> **"Data quality management needs to be understood as being a life-giving part of the body of the business, and cuts in data quality improvement projects will affect an organisation's core health and strength."**

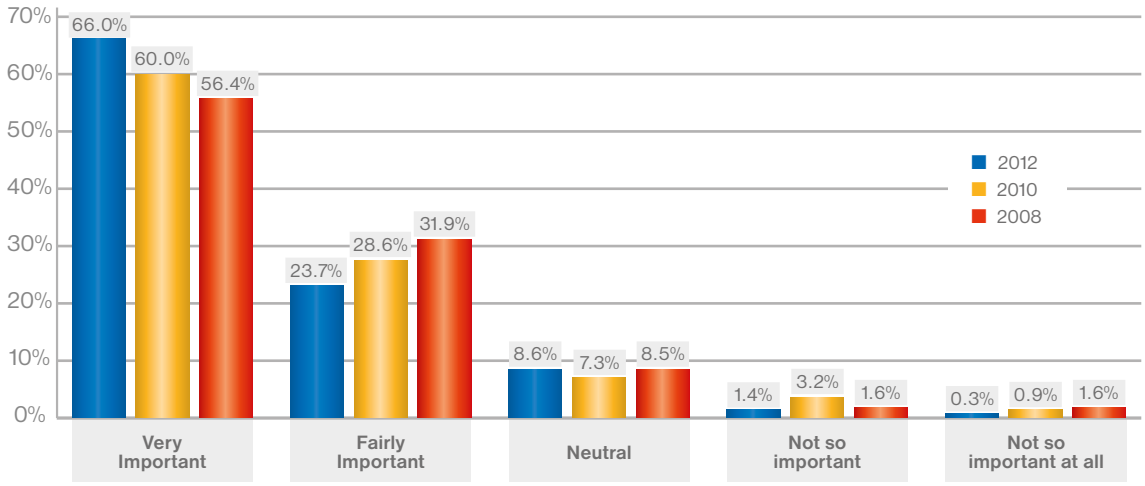
Importance

With continuing economic uncertainty, belt-tightening can be expected across the board in most organisations and data quality initiatives are not immune to this. Data quality, though, is essential as it is the basis upon which businesses work and allows decisions to be made which directly support the current and future health of the company. Good data quality is part of the infrastructure which allows organisations to operate smoothly and with agility in hard times and improves their competitiveness when economic conditions improve. Companies recognise data quality management as good practice but often don't succeed in implementing it holistically throughout the organisation. Data quality management needs to be understood as being a life-giving part of the body of the business, and cuts in data quality improvement projects will affect an organisation's core health and strength.

Though companies are not always acting to improve data quality, the message that data quality is of fundamental importance to the health of a company is seeping through. Responses from each survey since 2008 show; that data quality is increasingly being perceived as more important by more respondents. Though the number of respondents who do not recognise the importance of data quality has remained stable, those who do increasingly understand that it is 'very important' rather than 'fairly important'. With over 90% of respondents viewing data quality as very or fairly important, one would expect more action to be undertaken by companies to increase quality.

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Fig 3: How important is data quality within the organisation from 2008 to 2012

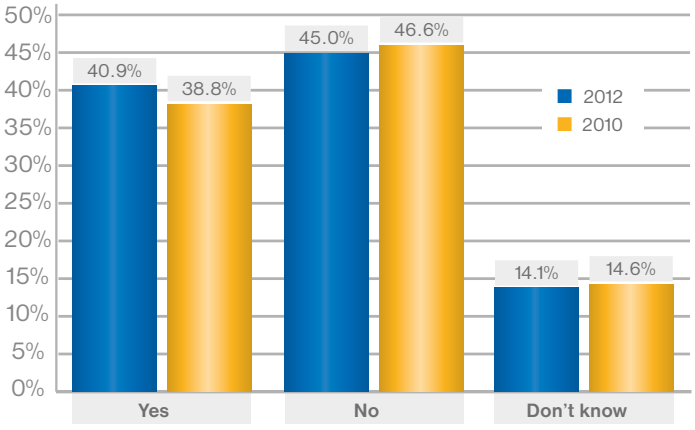


> "Only 40.9% of respondents had an enterprise-wide data quality management strategy in place, a figure hardly changed since 2010."

Action

The actions taken by companies to ensure data quality, are in reality, not commensurate with the perceived importance of data quality to the organisation. Only 40.9% of respondents had an enterprise-wide data quality management strategy in place, a figure hardly changed since 2010. Equally, only 46.2% of those with an enterprise-wide strategy measured the financial worth of their data, but this does show a slight positive trend in relation to the results for 2008 and 2010.

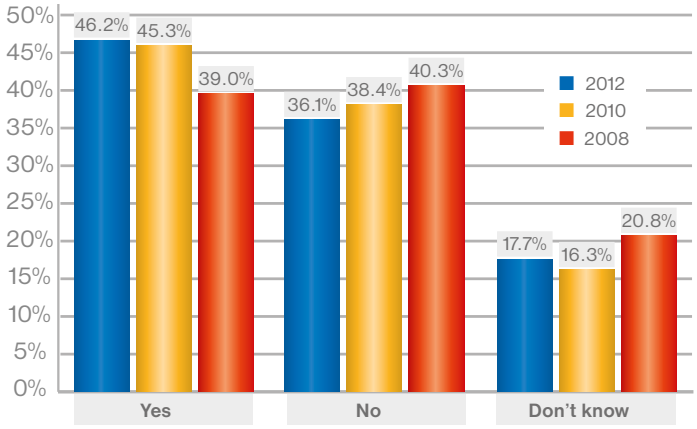
Fig 4: Does the organisation have an enterprise-wide data quality management strategy 2010 vs 2012



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> "The results give a clear impression that continuing tough trading conditions are causing organisations to become more inward looking."

Fig 5: Does the organisation measure the financial worth of its data 2010 vs 2012

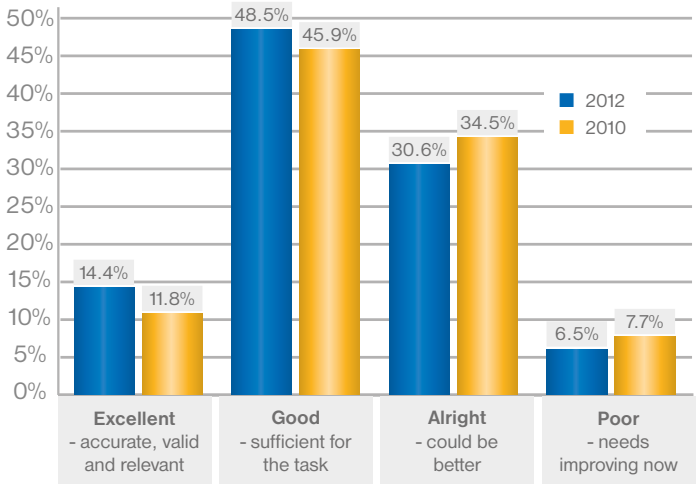


Stagnation

Whilst perceptions are changing, actions are stagnating. The results give a clear impression that continuing tough trading conditions are causing organisations to become more inward looking. The hatches are being battened down, and data quality is increasingly being assessed as data's fitness for internal use (in one or a few company areas) rather than as an issue affecting the whole company and its customers.

Companies have become more convinced about the quality of their own data.

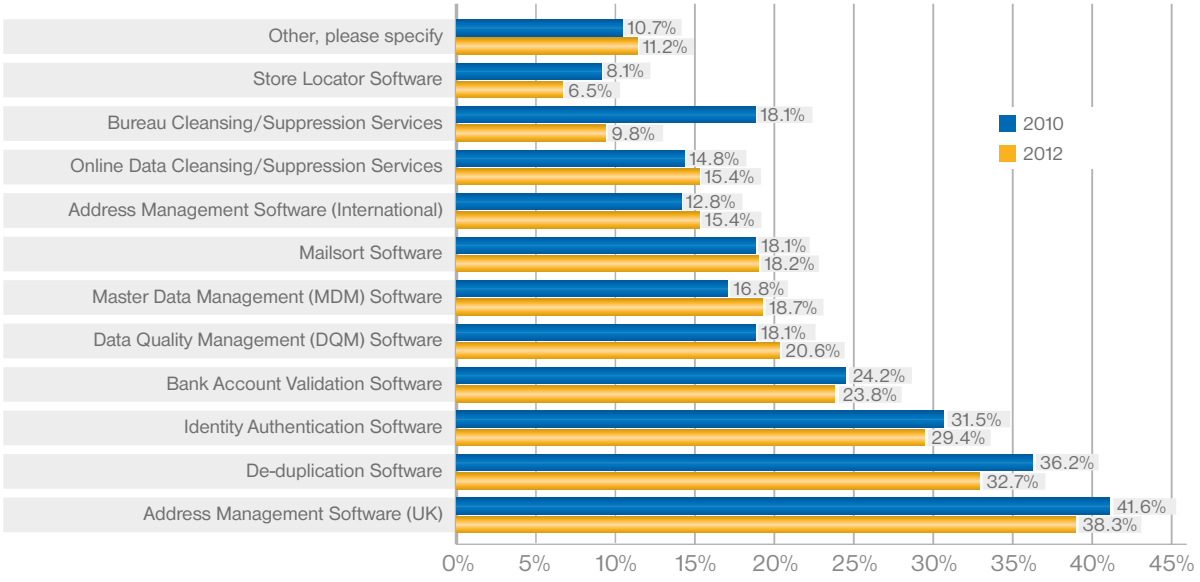
Fig 6: The quality of the data within the organisation 2010 vs 2012



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Those respondents who feel that their data quality is good or excellent have risen from 57.7% in 2010 to 62.9% in 2012. Some of this rise may be explained by the increase in the number of IT respondents (who are traditionally the data stewards) and a decrease in respondents from departments, which are traditionally data consumers (marketing, sales etc.). It may also be a reflection of how data is being used. However, that this perceived improvement is not supported by reality can be seen by responses in other parts of the questionnaire. The number of respondents using any data quality and related software has decreased by 4.5% between the 2010 and 2012 surveys, with decreases in the most popular product types: identity authentication software, de-duplication software and address management software.

Fig 7: The software products/services used by the organisation 2010 vs 2012



Though postal volumes are declining, and the use of addresses outside of product delivery is becoming less important, names and addresses remain an essential component of any data profile. It is one of the more stable pieces of information one acquires about a customer, it shows their location (an increasingly important piece of information for most marketing and sales activities) and it continues to be needed for most database processes – identification, linking, merging, de-duplication and so on.

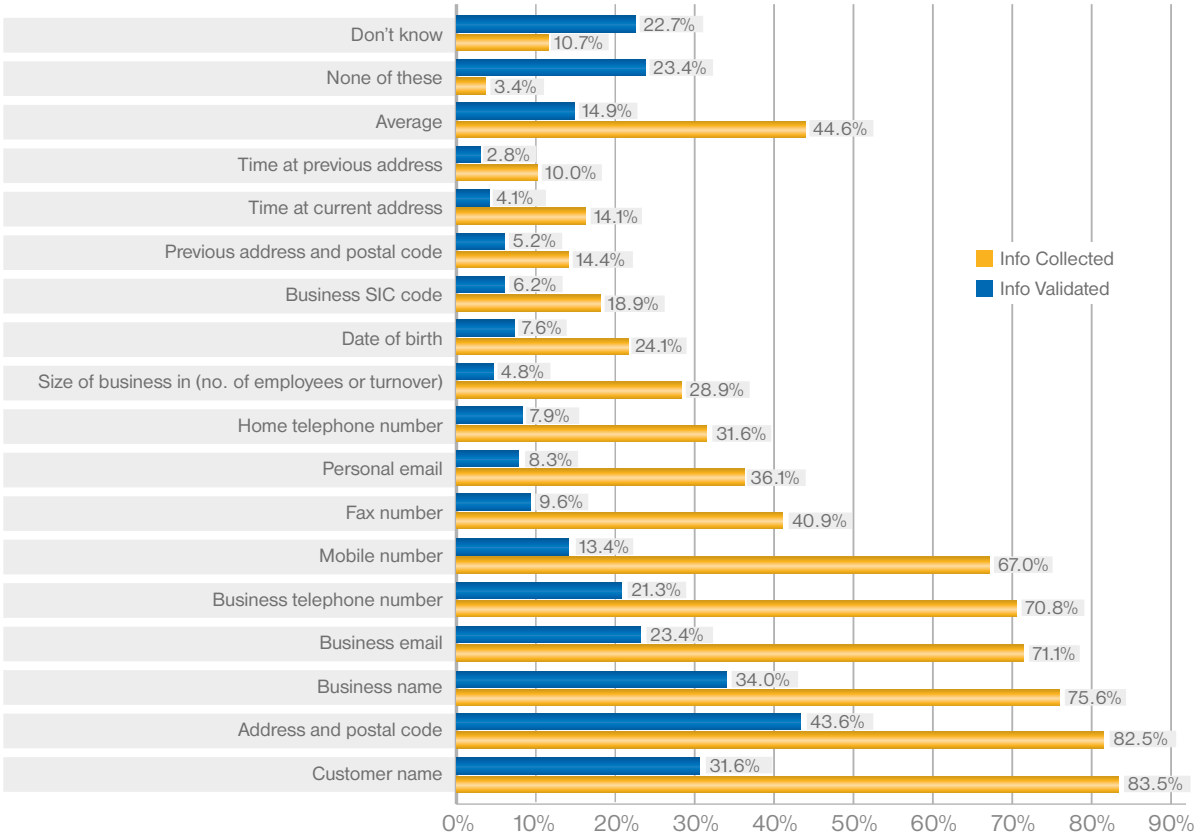
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Yet whilst the name and address remain essential information, an increasing breadth of richer information is being acquired and used by organisations as part of their marketing and sales mix – other locational indicators such as latitude and longitude, social media interaction, electronic contact information and so on – and these all need to be collected, stored and managed with the same data quality principles in mind as are currently widely applied to name and address data. As e-commerce booms, especially those with automated 24/7 systems covering the whole globe, this becomes a more important part of quality requirements.

Stagnation is similarly evident in responses about which contact data is collected and which is validated at source for internally held contact databases. Despite the increase in confidence about internal data quality, no major improvement in validation rates for any data is noticeable. 52% of companies collecting address information, for example, still do not validate it. Data entered incorrectly in poorly designed systems without validation wash downstream and spread

Fig 8: The information collected vs validation by the organisation



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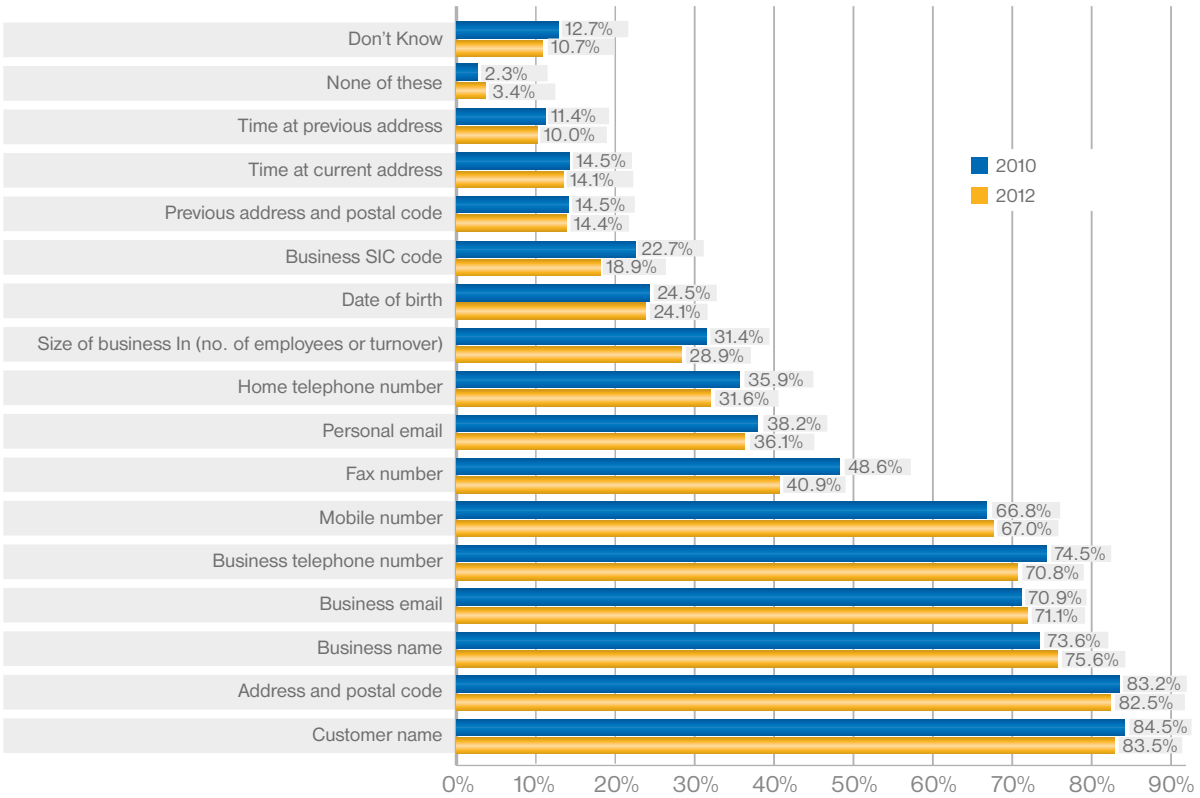


into systems throughout an organisation. Corrections are harder to make after the data collection stage, and often a correction made in one place does not dissipate to other occurrences of the same data in other systems. Worse, in some systems corrections are overridden by incorrect and polluted data held elsewhere in the organisation. Higher quality data can only be achieved by improving data entry systems, validation and correction rates at the data entry stage in data's lifecycle in a company, and high levels of trust in data where this is not occurring is misplaced.

Clearly, while organisations recognise the importance of data quality, there has been little progress in implementing the systems and processes necessary to give credence to its importance.

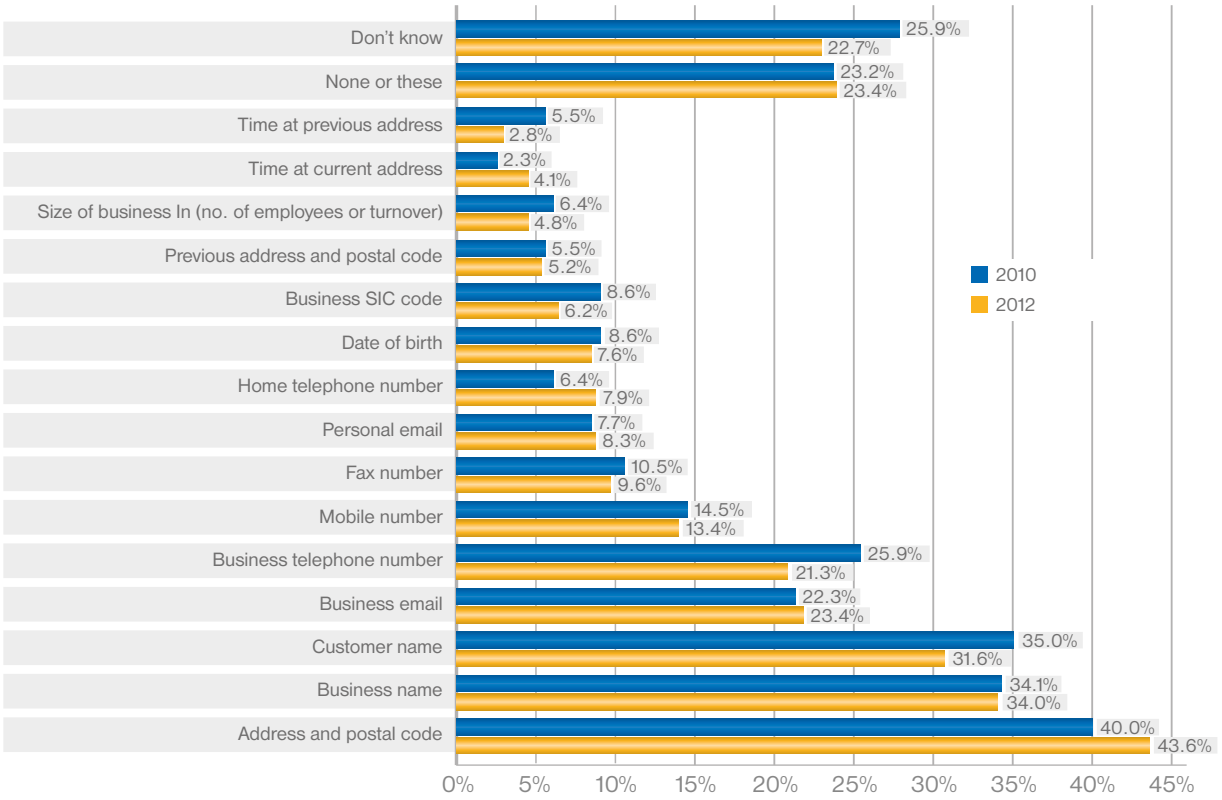
Some small changes in responses reflect marketing and technological trends, with e-mail addresses being validated to a slightly greater extent, whilst information about older technologies such as fax numbers is being collected and validated less. The rates of validation remain, however, far too low to ensure the high quality of the data being gathered.

Fig 9: The contact information collected by the organisation 2010 vs 2012



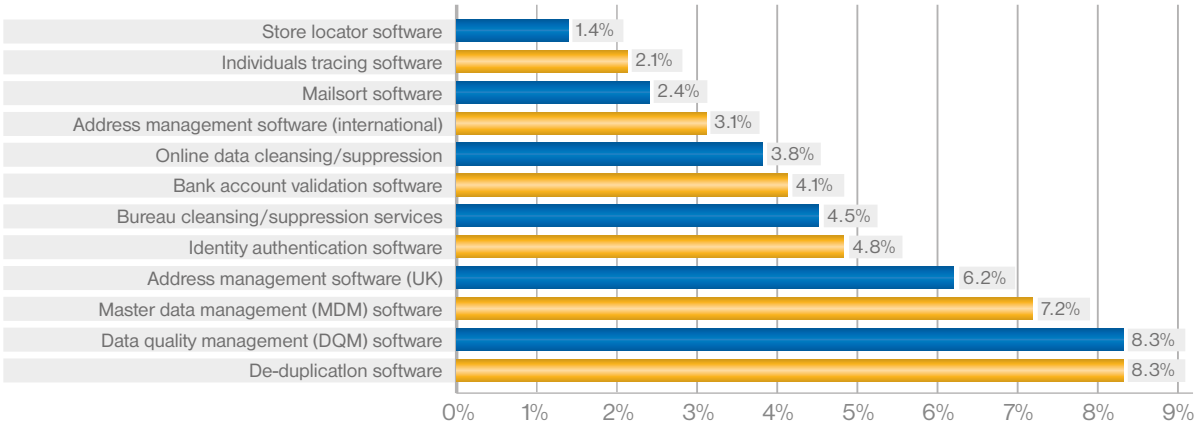
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Fig 10: The contact data validated by the organisation 2010 vs 2012



There is, though, some cause for optimism. Many respondents do plan to invest in data quality products or services in the next twelve months.

Fig 11: Investing in the following software product or services in the next 12 months



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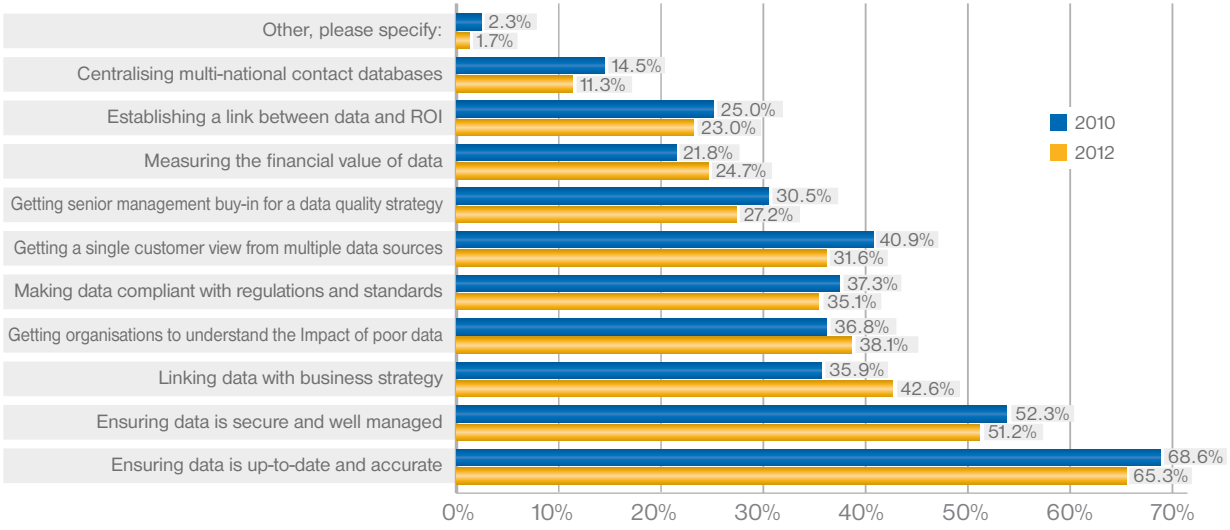
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> "Most organisations still fail to appreciate the importance of maintaining or improving customer satisfaction to the health of the organisation."

Introspection

The sense that organisations are becoming much more introverted with regards to their data and its use and quality is shown when respondents are asked about the biggest challenges facing their business today in relation to their data. The only challenges to show an increase in importance are measuring the financial value of data and linking data with business strategy. Challenges related to the inherent quality of data, such as ensuring that it is up-to-date and accurate, remain the most important, but show some decline. The most significant change is the reduction in the numbers regarding getting a single customer view from multiple data sources as their most significant challenge. These changes may illustrate a failing to understand the strategic use of data in value creation and how to maximise its benefits.

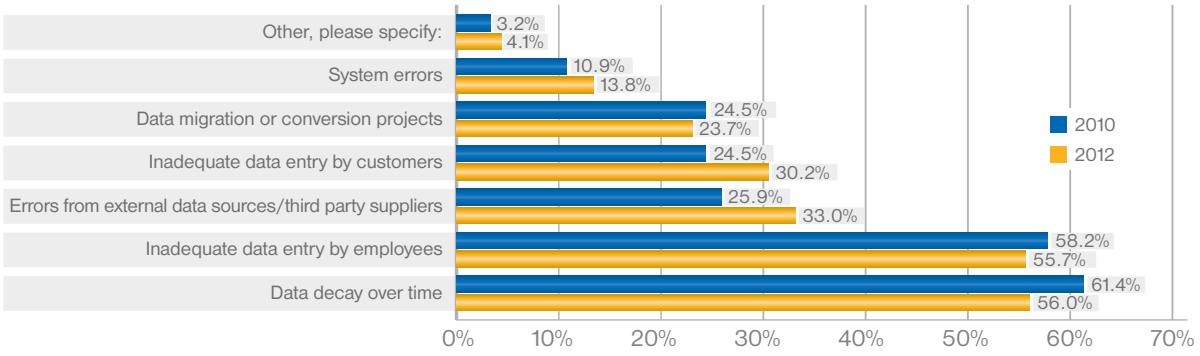
Fig 12: The biggest challenges facing businesses today 2010 vs 2012



Related to this internalisation of organisational perceptions of data quality, respondents increasingly view external sources as the cause for their data quality problems. Whilst data decay over time and inadequate data entry by employees remain the most quoted main sources of problems, inadequate data entry by customers and errors by data courses/third party suppliers show strong growth as problem areas. Often data entry errors could be prevented through the use of better data entry processes and on-the-fly validation of input.

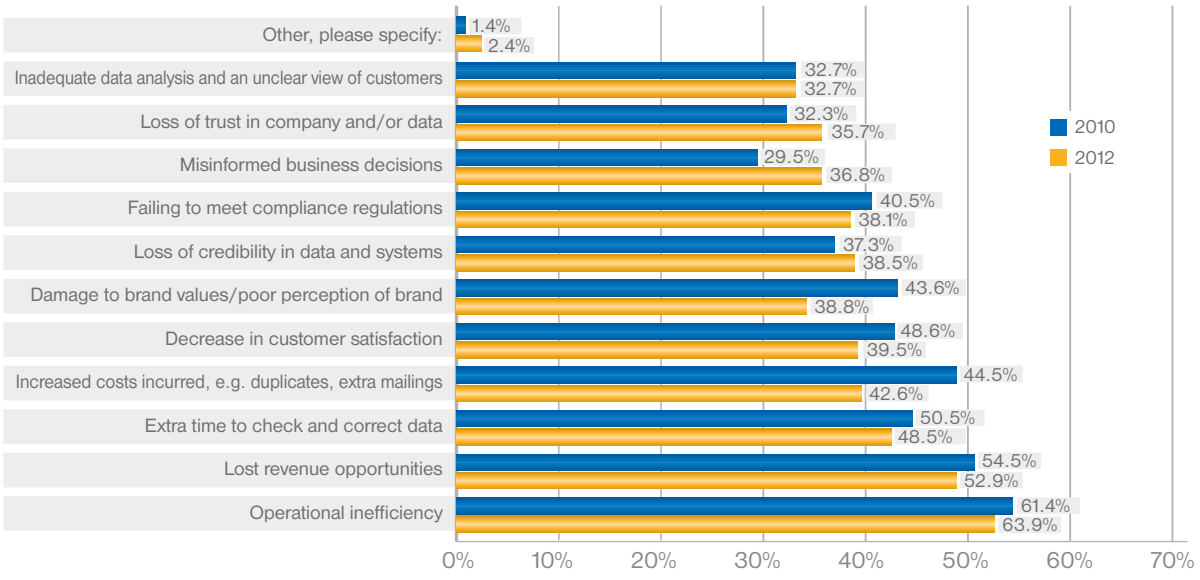
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Fig 13: The main sources of data problems 2010 vs 2012



Internalisation is also illustrated in the perceptions of the impact of poor data quality on an organisation. Whilst results are broadly similar to those of the 2010 survey and companies recognise the cost to their organisation of data quality issues, in their operational efficiency, loss of revenue opportunities and so on, the major decreases are shown in the areas of customer satisfaction and brand damage and perception. Companies are looking more to their own visible and direct needs and less to those of the customer, though this is short-sighted as ultimately those customers are responsible for the health and success of the organisation.

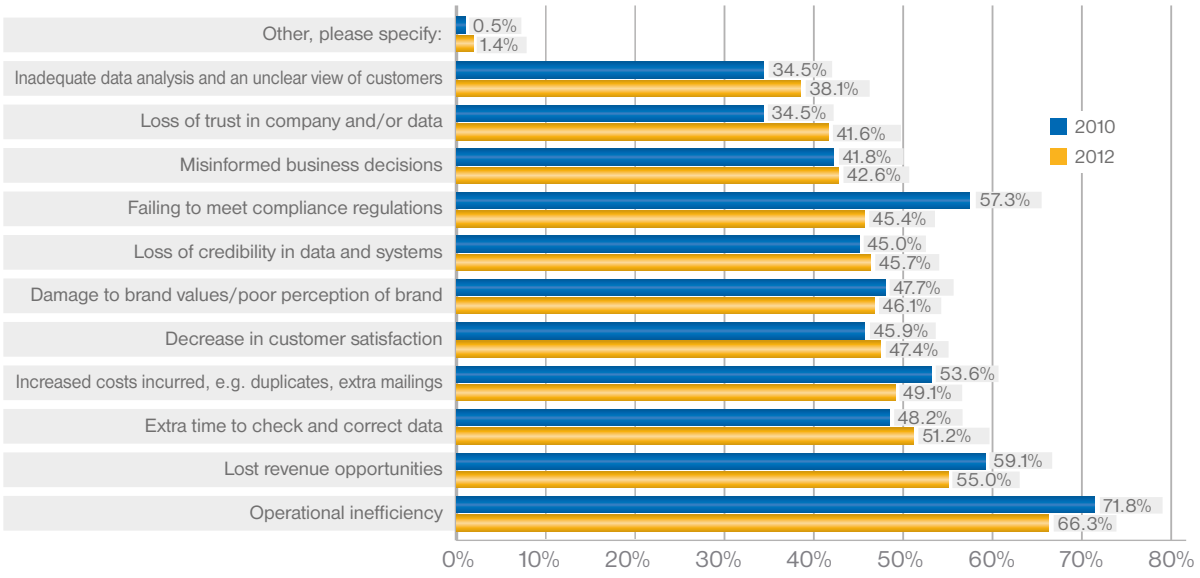
Fig 14: The negative impact of bad data quality on the organisation 2010 vs 2012



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Again, when looking at the benefits of good data quality management, the benefits which relate to customers, such as increasing customer satisfaction, have suffered a sharp fall in relation to 2012 results, whilst those benefits relating to operational benefits have remained stable or increased in relevance to the respondents. Most organisations still fail to appreciate the importance of maintaining or improving customer satisfaction to the health of the organisation.

Fig 15: The business benefits of good data quality management 2010 vs 2012





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Conclusion

A comparison of the 2010 and 2012 survey results show a lack of progress towards improved data management and quality initiatives. Organisations are increasingly recognising the importance of data quality and the role that upper management should be playing in ensuring this. At the same time financial stresses and weak trading conditions are forcing companies to look inward and not provide the means, processes or systems required to allow data quality initiatives to be successful. There is a continuing gulf between perceptions and actions. Contact information collected by organisations is, in many cases, still not checked or validated, and data is not measured or financially valued enough at a strategic level. Organisations do not truly understand the benefits of data quality management (DQM) and its ability to help them provide better customer service, achieve a single customer view, or improve strategic marketing. For most organisations DQM remains an issue of operational improvement and not something of true strategic relevance. The gap between the organisations stating that they had a data quality management strategy and realising it is still too large.



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About the author

Graham Rhind is an acknowledged expert in the field of data quality. He runs his own consultancy company, GRC Database Information, based in The Netherlands, where he researches postal code and addressing systems, collates international data, runs a busy postal link website and writes data management software. Graham speaks regularly on the subject and is the author four books on the topic of international data management.

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About Capscan Ltd

Capscan, part of the GB Group of companies, was originally established in 1969 and is a leading supplier of customer registration and international data quality management (IDQM) solutions. The company is headquartered in London with more than 1800 customers worldwide across a wide range of commercial and public service sectors. In the UK alone, there are currently more than 140 different government departments, agencies and local authorities using Capscan products or services. In the private sector, Capscan's customers include a wide range of leading blue chip companies as well as small to medium sized businesses.

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