Communities and Local Government

Predictors of Beaconicity: Which local authorities are most likely to apply to, be short listed and awarded through the Beacon Scheme

Long-term Evaluation of the Beacon Scheme

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SUMMARY

Communities and Local Government (formerly the Office of the Deputy Prime Minister (ODPM)) and the Improvement and Development Agency (IDeA) jointly commissioned Warwick Business School to undertake a three year evaluation of the Beacon Scheme. The aim of the research is to evaluate the impact and effectiveness of the Scheme for local authorities.

Previous research (Hartley and Downe, 2007) has shown variation in application, short list and award rates for the Beacon Scheme, indicating that whilst some authorities are very engaged, others are less so. This element of the research aims to gain a better understanding of what factors are associated with high and low levels of engagement with the Scheme in terms of application by addressing the following questions:

- Are certain internal characteristics of local authorities associated with repeated and successful Beacon applications?

- Is it possible to develop 'profiles' of councils with high and low levels of Beacon applications?

- Are certain characteristics of the local authority context associated with repeated and successful Beacon applications?

- Can we predict which authorities are more likely to successfully apply to the Scheme?

The paper examines the following hypotheses using multiple regression analysis:

1) Rurality (how rural the authority context is) is negatively related to repeated and successful Beacon applications.

2) Deprivation is negatively related to repeated and successful Beacon applications.

3) Size is positively related to repeated and successful Beacon applications.

4) Recency of establishment (how recently established the authority is) is positively related to repeated and successful Beacon applications.

5) Performance improvement is positively related to repeated and successful Beacon applications.

6) A culture of learning and improvement is positively related to repeated and successful Beacon applications.

7) Engagement with external sources of learning is positively related to repeated and successful Beacon applications.

8) Involvement with the Beacon Scheme through learning is positively related to repeated and successful Beacon applications.

9) Capacity is positively related to repeated and successful Beacon applications.

Of the predictor variables analysed, rurality, attendance at Beacon learning events and authority size were those that contributed to variation in involvement with the Beacon Scheme (over Rounds 1 to 7) in terms of application, short list and award (variable titled 'Beaconicity'):

- Authorities with higher levels of involvement with the Beacon Scheme through learning have higher levels of repeated and successful Beacon involvement in terms of application.

- Larger authorities have higher levels of repeated and successful Beacon involvement in terms of application.

- Authorities in more rural contexts have lower levels of repeated and successful Beacon involvement in terms of application.

However, after Round 3 a number of important changes were made to the Beacon Scheme. To examine the possible impact of these changes we carried out an additional analysis using 'Beaconicity' over Rounds 4 to 7 only. The findings show that while authority size and authority involvement with the Beacon Scheme in terms of learning predict Beaconicity over Rounds 4 to 7, rurality does not.

The research raises some potential policy and practice implications:

- Building on the changes implemented after Round 3 of the Beacon Scheme, there is possibly still more that can be done to encourage smaller councils to apply, including the potential for specialised, targeted themes for particular categories of authority, e.g. districts. The analysis also suggests there may be benefits from further increasing financial support for Beacon activities.

- Encouraging and supporting non-Beacon authorities to engage in learning from Beacon councils can potentially lead to their eventual involvement with the Scheme in terms of applications, short list and award.

- Initiatives to build capacity in local government should not neglect resources as an important route to improvement. The increased involvement of rural authorities with the Scheme in terms of application, short list and award may be at least in part attributable to the increase in financial support that formed part of the changes to Rounds 4 to 7. Additionally, the finding that larger authorities have higher Beaconicity scores is potentially attributable to advantages of scale and scope that they can access.

CHAPTER 1: Brief introduction to the Warwick evaluation of the Beacon Scheme

Communities and Local Government (formerly the Office of the Deputy Prime Minister (ODPM)) and the Improvement and Development Agency (IDeA) jointly commissioned Warwick Business School to undertake a three year evaluation of the Beacon Scheme. The aim of the research is to evaluate the impact and effectiveness of the Scheme for local authorities, whether as authorities with a Beacon award or as attendees of learning events hosted by Beacon councils.

The purpose of an evaluation is to assess the effects and effectiveness of something, typically some innovation, intervention, policy, practice or service (Robson, 2002: 202).

The Beacon impact evaluation aims to examine the changes and continuities over time in local government services which may be attributed to the Beacon Scheme. The evaluation focuses on continuities and change in local authority corporate and service performance; processes of learning and improvement; elected members', council officers' and partner representatives' perceptions of and attitudes to the Beacon Scheme; and innovation and capacity-building in local government.

CHAPTER 2: Aims of the research on predictors of involvement

The purpose of this element of the research is to examine what factors predict engagement with the Beacon Scheme in terms of applications, short listing and award. Previous research (Hartley and Downe, 2007) has shown variation in application and award rates, indicating that whilst some authorities are very engaged, others are less so. The Beacon Scheme is a voluntary initiative (unlike much of the Local Government Modernisation Agenda) so it is worth gaining a better understanding of what helps or hinders engagement.

In the field of organisation studies there has been extensive research into organisational characteristics and processes. However, very few studies look at these characteristics and processes in relation to organisational outcomes. In this research, engagement with the Beacon Scheme in terms of applications, short listing and award is an outcome, in that it is an indicator of externally-evaluated performance of an authority. This research examines what organisational and contextual factors influence this outcome.

The over-arching aim of this research is to gain a better understanding of what local authority factors are associated with high and low levels of engagement with the Scheme. Underpinning this aim is a number of research questions:

1. Are certain internal characteristics of local authorities associated with repeated and successful Beacon applications?

2. Is it possible to develop 'profiles' of councils with high and low levels of Beacon applications?

3. Are certain characteristics of the local authority context associated with repeated and successful Beacon applications?

4. Can we predict which authorities are more likely to successfully apply to the Scheme?

CHAPTER 3: Hypotheses

In order to focus the research, a number of hypotheses were developed, based upon research conducted by the Warwick evaluation team and more widely. These hypotheses relate to the potential associations between repeated and successful applications to the Beacon Scheme and various contextual and authority characteristics. Our model of the impact of contextual and authority characteristics on successful Beacon applications contains nine explanatory variables and hypotheses (all of which are specified on the assumption that 'other things are equal').

3.1 Authority context

The local context within which English local authorities operate is diverse and varied, both between authorities and within council boundaries. The local context shapes service needs and (ideally) council strategy and actions to meet these needs.

Rurality

How rural the authority context is can have an impact upon the expense and complexity of service delivery. In rural areas, delivering services to a population that is highly dispersed can be more complicated and costly because economies of scale are harder to achieve. Additionally, 'static' facilities may have to be complemented with 'outreach' services (Andrews et al, 2003). In a more urban context with a less dispersed population, costs of service delivery per capita will be less as services can be located to provide for more people. Authorities in rural areas may have less resource capacity to successfully pursue Beacon status.

H1: Rurality is negatively related to repeated and successful Beacon applications.

Deprivation

The level of deprivation in a local community influences the service needs of that community, both in terms of type and quantity (Andrews et al, 2003) of services. Areas of high deprivation place added pressures on local authorities to meet both output and outcome targets and have an impact upon their locality. Authorities in areas of high deprivation may have less resource capacity to pursue Beacon status.

H2: Deprivation is negatively related to repeated and successful Beacon applications.

3.2 Structural characteristics of the authority

Analysis conducted on Beacon applications over rounds 1 to 6 (see Hartley and Downe, 2007) and rounds 1 to 7 identified that annual Beacon applications from county, metropolitan, London boroughs and unitary councils ranged from 35% to 78% (as a

percentage of total councils of that type). In contrast applications from district councils range from 11% to 40% (as a percentage of district councils) over 7 rounds. This analysis shows that district councils are making relatively fewer applications than other council types. Case study research conducted as part of this evaluation (Withers et al, 2007a and 2007b) indicates that the resource pressures associated with both applying for, and disseminating as a result of, Beacon status are concerns for many authorities; these pressures may be considered greater for smaller authorities.

H3: Size is positively related to repeated and successful Beacon applications.

The case study research also indicated that a key consideration for many Beacon councils was the opportunity provided by Beacon status to raise their profile with central government in order to assist in accessing pilot status and funding. In particular, in-depth studies of two new unitary councils revealed that pursuing awards and external accolades was perceived to be an important way of raising the positive profile of the new organisations.

H4: Recency of establishment is positively related to repeated and successful Beacon applications.

3.3 Organisational characteristics of the authority

The Warwick evaluation team's 2006 survey of English local authorities provides a range of data on the reported characteristics of local authorities.

Performance improvement

Authorities' corporate and service performance is an influential factor in both applying for and gaining Beacon status. The case study research (Withers et al, 2007a and 2007b) indicated that in a number of cases, authorities achieving process and service improvements sought to promote these achievements and recognise and reward staff. Additionally, Beacon status is conferred on the basis of both corporate and service success and performance.

H5: Performance improvement is positively related to repeated and successful Beacon applications.

Culture

The case study research (Withers et al, 2007a and 2007b) and survey analysis (Rashman and Hartley, 2007a; Rashman et al, 2007b) indicated that Beacon status was associated with a culture of learning and improvement. Consequently, we hypothesise that the more that a culture of learning and improvement stimulates improvement, the higher the engagement with the Scheme in terms of applications, shortlist and award will be. We had intended to examine issues of innovation as well as improvement, but analysis of the 2006 National Survey data shows that respondents correlate innovation and improvement so the level of multicollinearity is too high to include both concepts (Rashman and Hartley, 2007a).

H6: A culture of learning and improvement is positively related to repeated and successful Beacon applications.

External sources of learning

The case study research suggested that Beacon status was associated with an outward-looking approach to networking with other authorities and engaging in external learning opportunities. The Beacon authorities emphasised their engagement in learning networks. Consequently, we hypothesise that those authorities that look outwards to learn from good practice will have a higher degree of Beacon engagement.

H7: Engagement with external sources of learning is positively related to repeated and successful Beacon applications.

Involvement with the Beacon Scheme through learning

The involvement of an authority in Beacon learning activities is another indicator of their utilisation of external sources of learning and their willingness to look outwards in order to build capacity. Additionally, attending Beacon learning events is a way for authorities to learn about the Scheme itself, and can (and does; see case study research) encourage authorities to develop their own application.

H8: Involvement with the Beacon Scheme through learning is positively related to repeated and successful Beacon applications.

Capacity

Hartley and Rashman (2006A, 2006B) define organisational capacity as consisting of 4 key components: strategy, structure, knowledge and learning and culture (See Table 1).

Table 1: **Definition of Capacity**

Strategy	Structure	Knowledge & Learning	Culture
Alignment of internal & external context	Internal learning networks	Tacit diagnostic skills	Enabling conditions for learning & change
Political & managerial leadership & influence	Cross-boundary collaboration & communities of practice	Experimentation	Adaptability
Vision & goals	Flexible boundaries & responsive structures	Assimilation, diffusion, collective knowledge & learning	Performance management, HR, planning systems
Engagement with stakeholders	Multi-level governance	Knowledge of organizational functioning	Public value

Council capacity potentially relates to successful Beacon applications in the following ways:

– Authorities with extensive capacity will have the resource and capabilities to allocate a Beacon application.

– Extensive capacity impacts positively upon corporate and service performance, in turn creating greater likelihood of Beacon success.

H9: Capacity is positively related to repeated and successful Beacon applications.

CHAPTER 4: Variables

This section presents the dependent and independent variables used to examine the hypotheses.

4.1 Beaconicity

The outcome variable in this research is 'Beaconicity' which is a measure of local authority involvement with the Beacon Scheme in terms of the authority's interest and dedication in applying, being short listed and winning the award.

The Beacon Scheme is a competitive award scheme. Local authorities throughout England are eligible to apply in particular service themes in each year. Applications (which may be by single authorities or joint applications in partnership with other authorities) are assessed by the Beacon Advisory Panel. The Panel consists of both generic members and specialists appointed to assess specific services. Applicants have to meet three criteria to be considered for the award. They must be judged to have an excellent (and or innovative) service in the nominated theme; they must have good overall corporate performance judged by a range of evidence including the results of recent inspections, and they must show how they will offer opportunities for others to learn from their good practice.

A shortlist is publicly announced by the Beacon Advisory Panel, responsible for the assessment. Following further assessment through interview and site visits, selected authorities are awarded with Beacon status for one year and a financial award to assist with dissemination. The attainment of Beacon status requires authorities to carry out dissemination activities over the period of the year from gaining the award, in order to share their good practice with other organizations. Dissemination is described on the IDeA website as including "learning exchanges, open days, peer support and other learning activities". The processes of applying for Beacon status and carrying out dissemination activities can be very resource-intensive for authorities, both in terms of financial costs and staff time.

Beaconicity measures a local authority's involvement with the Beacon Scheme in terms of how many times it has applied, been short listed and awarded across Rounds 1 to 7. Constructing the Beaconicity index involved a substantial amount of work by the Warwick researchers, together with individuals from Communities and Local Government and the IDeA, to collect and verify Beacon application, short-listing and award data for all 388 English local authorities. The data was collected from various sources in the IDeA and Communities and Local Government and cross-checked. To our knowledge this is the most accurate database of Beacon application, short-listing and awards.

Beaconicity = (number of applications) + (2 × number of times short listed) + (3 × number of times awarded)

Beaconicity is a measure of involvement with the application, short listing and reward parts of the Scheme. It is weighted to reflect the greater value of achieving an award

compared with being short-listed or simply having made an award. The weightings for the different components of the Beaconicity index reflect our knowledge through case study research carried out as part of the Warwick evaluation (Downe et al, 2004; Rashman et al, 2005; Withers et al, 2006 and 2007; Hartley and Downe, 2007) of the degree of achievement each stage (application, short listing, award) requires from a local authority. The weighting for the 'number of times short listed' reflects the fact that in order to be short listed, an authority will have been identified as having promising practice and will go through a resource-intensive short listing interview and presentation process. The weighting for the 'number of times awarded' figure reflects the fact that an awarded Beacon has been through a rigorous application and short listing process and an intensive year of Beacon learning events.

In this analysis we are using Beaconicity as an 'outcome' indicator: it is a measure of the achievements of the authority.

4.2 Predictor variables

Predictor variables were drawn from the following sources:

1) The 2006 national survey of English local authorities (See Rashman and Hartley, 2007a, for details). The objectives of this survey were to gather quantitative data from the experiences of local authority elected representatives and managers on:

   - Levels of engagement amongst local authorities with the Beacon Scheme and Beacons events;
   - The attitudes of local authority elected members and officers towards the Beacon Scheme and how it could be improved;
   - The impact of the Beacon Scheme and Beacon events on authority corporate and service performance;
   - Methods employed by local authorities to improve services and stimulate innovation.

Six self-completion questionnaires were mailed to the Chief Executive's office in 387 English local authorities. 175 authorities participated in the survey and returned at least one questionnaire, representing a response rate by authority of 45%. Questionnaires were completed by chief executives/heads of policy, elected members and/or heads of service.

2) Data on local authority type and local context (including population density and Index of Multiple Deprivation) collected from the Office of National Statistics and the Department for Communities and Local Government.

Table 2 outlines the predictor variables.

Table 2: **Predictor Variables of Beaconicity**

Construct	Measure
Rurality	Population density 2004 (Office of National Statistics). This measures the population per square kilometre.
Deprivation	Index of Multiple Deprivation 2005 (Communities and Local Government). This widely used measure measures deprivation across 7 domains: Income, Employment, Health Deprivation and Disability, Education Skills and Training, Barriers to Housing and Services, Living Environment, Crime.
Size	Small (district councils) versus large (county, metropolitan, unitary, London borough councils).
Recency of establishment	New (unitary councils) versus established (county, metropolitan, district, London borough councils).
Performance improvement	Authority's rate of improvement as assessed by 2006 survey respondents and also based on respondents' perceptions of how service users rated authority improvement.
Culture	The contribution of 'a culture of learning and improvement' to stimulating improvement as assessed by 2006 survey respondents. Based on a Likert scale.
Involvement with the Beacon Scheme through learning	Extent of involvement with the Beacon Scheme through learning as reported by 2006 survey respondents. Based on a Likert scale.
External sources of learning	Index of intensity and range of utilisation of external sources of learning as reported by 2006 survey respondents. Based on a Likert scale.
Capacity	Index of council capacity (leadership; performance and planning; internal alignment; knowledge management; performance; structural; enabling conditions) as reported by 2006 survey respondents. Based on a Likert scale.

For more detail on selected variables please see Appendix 1.

4.3 The sample

This analysis is based on a sample size of 175 councils, i.e. those authorities that returned at least one completed questionnaire for the 2006 survey. From a population of 388 English local authorities, this makes a sample of 45%. Responses by type of authority are shown in the table below, which shows that they are representative, in terms of council type, of the population of English local authorities.

Table 3: **Description of Sample in Terms of Authority Type**

	Total number of authorities	Authority type as a % of all English councils (n = 388)	Number of authorities in sample	Authority type as a % of all councils in the sample (n = 175)	% of authority type in the sample
Single Tier	**116**	**30%**	**60**	**34%**	**52%**
Metropolitan Authorities	36	9%	18	10%	50%
Unitary Authorities	47	12%	25	14%	53%
London Boroughs	33	9%	17	10%	52%
Two Tier	272	70%	115	66%	42%
District Councils	238	61%	97	55%	41%
County Councils	34	9%	18	10%	53%
Total	388	100%	175	100%	45%

The variable scores were calculated for each council; where there were multiple responses from one authority, the mean was calculated and used.

CHAPTER 5: Analysis

5.1 Descriptive analysis of the variables

Descriptive analyses were conducted across the outcome and predictor variables, for the sample of 175 authorities.

Outcome variable: Beaconicity

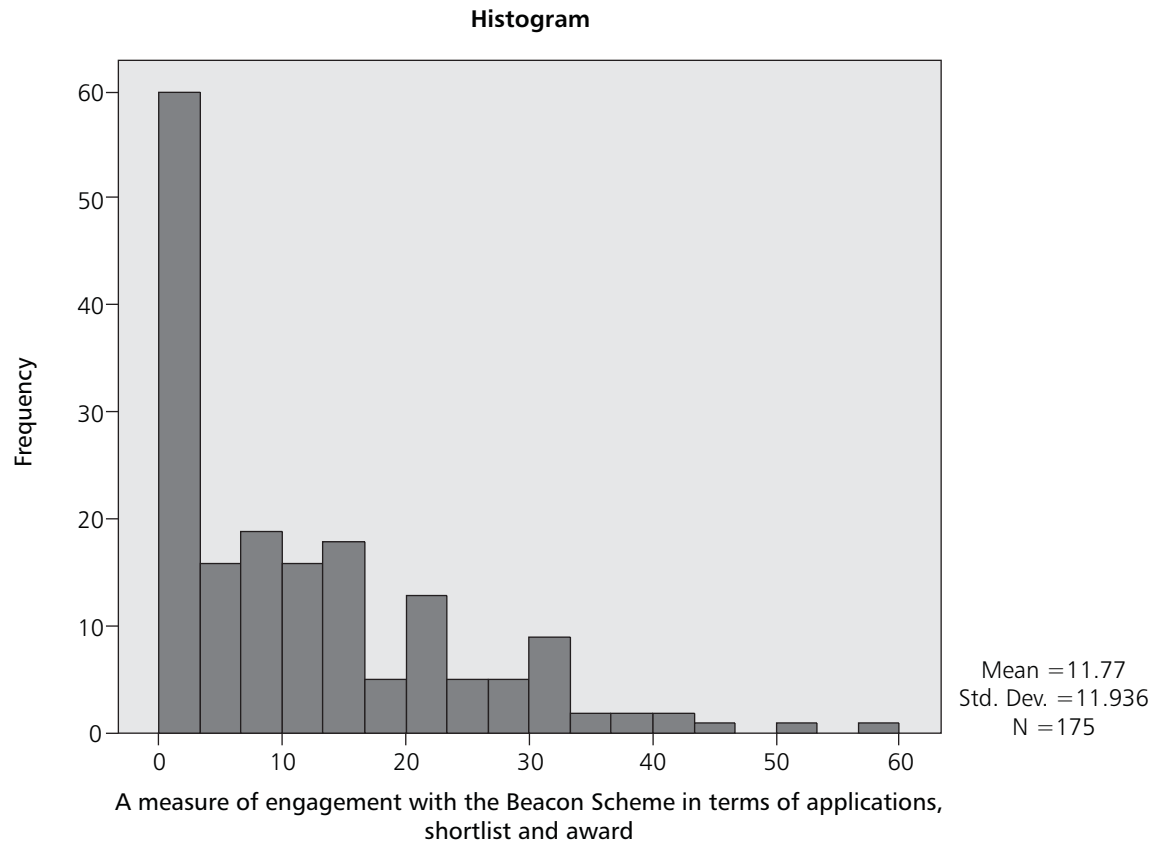
Data for the outcome variable of Beaconicity was available for all 175 authorities. The table below presents descriptive statistics for this variable.

Table 4: **Beaconicity Descriptive Statistics**

Mean	Median	Std. Deviation	Skewness	Kurtosis	Min. Value	Max. Value
11.77	8	11.936	1.238	1.260	0	57

The following histogram shows the distribution of Beaconicity across the councils in the sample.

Figure 1: **Distribution of Beaconicity in the Sample**



The Beaconicity index ranges from 0 to 57, the mean is 11.77, and the median is 8. We can compare this to Beaconicity for the population (all 388 English authorities): the mean is 10.41; the median is 6.5; the range is from 0 to 57. From this we conclude that our sample is broadly representative of the population in terms of Beaconicity, although the sample authorities have a slightly higher average Beaconicity score. The data are not normally distributed and the distribution is positively skewed, possibly an impact of the significant number of authorities which have never applied for, been short listed for, or awarded a Beacon (24 councils or 14% cf. 13% of the population).

Predictor variables:

For the predictor variables, data was available for most of the authorities in the sample. The table below presents the descriptive statistics for each variable.

Table 5: **Predictor Variables Descriptive Statistics**

Measure	N		Mean	Median	Std. Deviation	Skewness		Kurtosis		Min Value	Max Value
	Valid	Missing				Statistic	Std Error	Statistic	Std Error		
Involvement with the Beacon Scheme through learning	173	2	2.18	2.00	.70	.49	.185	.20	.365	1	4
External sources of learning	175	0	27.00	28.60	12.43	–.43	.184	–.22	.365	.00	54.00
Capacity	165	10	155.67	156.50	19.78	–.16	.189	.26	.376	92.00	208.00
Improvement rate	164	11	7.57	7.67	1.17	–.39	.190	.15	.377	4.00	10.00
Deprivation	157	18	171.74	164.00	104.00	.06	.194	–1.35	.385	4	349
Size	175	0	.45	.00	.50	.20	.184	–1.98	.365	.00	1.00
Recency of establishment	175	0	.86	1.00	.35	–2.06	.184	2.27	.365	.00	1.00
Rurality	175	0	1485.90	463.80	2291.77	3.03	.184	11.45	.365	27.05	15338.00
Culture	166	9	3.41	3.50	.87	–.57	.188	.84	.375	1.00	5.00

The values in the table have been rounded to 2 decimal points.

5.2 Correlation analysis

Correlation analysis enables us to see which variables are highly correlated and are possibly measuring the same, or closely related, phenomena. It is important to establish if any of the predictors are highly correlated because one of the assumptions of regression analysis, which we will use to establish which variables predict Beaconicity (see section 5.3), is that variables are not highly correlated with each other. The correlation table below highlights those variables that are significantly correlated with each other[1]. Pearson correlation = the correlation coefficient of the two variables;

1 Significant in this context means statistical significance. This means that the finding is unlikely to have occurred by chance. The significance level is either 0.01, which means there is a 1% risk that the correlation occurred by chance or 0.05, which means there is a 5% risk that the correlation occurred by chance.

Table 6: **Correlation of Predictor Variables**

		Size	Recency of establishment	Performance improvement	Capacity	Deprivation	Rurality	Culture	External sources of learning	Involvement with Beacon Scheme through learning	Beaconicity
Size	Pearson Correlation	1	–.450(**)	.027	.113	–.548(**)	.445(**)	–.073	.024	.048	.449(**)
	Sig. (1-tailed)		.000	.367	.074	.000	.000	.175	.376	.267	.000
	N	175	175	164	165	157	175	166	175	173	175
Recency of establishment	Pearson Correlation		1	.066	.004	.178(*)	–.091	.141(*)	.092	–.093	–.158(*)
	Sig. (1-tailed)			.201	.479	.013	.116	.035	.114	.112	.019
	N		175	164	165	157	175	166	175	173	175
Performance improvement	Pearson Correlation			1	.403(**)	–.056	.115	.259(**)	.111	.103	.046
	Sig. (1-tailed)				.000	.249	.072	.001	.079	.096	.278
	N			164	158	147	164	158	164	163	164
Capacity	Pearson Correlation				1	–.013	.072	.523(**)	.093	.192(**)	.212(**)
	Sig. (1-tailed)					.437	.179	.000	.117	.007	.003
	N				165	148	165	161	165	164	165
Deprivation	Pearson Correlation					1	–.480(**)	.013	–.091	–.108	–.355(**)
	Sig. (1-tailed)						.000	.436	.129	.091	.000
	N					157	157	148	157	155	157
Rurality	Pearson Correlation						1	.021	.006	–.081	.337(**)
	Sig. (1-tailed)							.392	.469	.146	.000
	N						175	166	175	173	175
Culture	Pearson Correlation							1	.262(**)	.076	.042
	Sig. (1-tailed)								.000	.166	.296
	N							166	166	166	166
External sources of learning	Pearson Correlation								1	.056	–.029
	Sig. (1-tailed)									.231	.354
	N								175	173	175
Involvement with Beacon Scheme through learning	Pearson Correlation									1	.411(**)
	Sig. (1-tailed)										.000
	N									173	173
Beaconicity	Pearson Correlation										1
	Sig. (1-tailed)										
	N										175

** Correlation is significant at the 0.01 level (1-tailed); * Correlation is significant at the 0.05 level (1-tailed).

this shows whether they are correlated or uncorrelated. Sig. (1-tailed) = the statistical significance level of the correlation (see footnote); this shows whether the correlation is statistically significant or not. N = sample size (this differs across the variables due to varying availability of data).

Field (2005:175) suggests that correlations of above .80 or .90 are high and are cause for concern. According to this rule, none of the predictors show a high degree of multicollinearity. In terms of the outcome, the predictors that show the highest correlation with Beaconicity are: involvement with the Beacon Scheme through learning (.411); size (.449); deprivation (.355) and rurality (.337). We may expect to find that these variables best predict Beaconicity.

5.3 Multiple regression analysis

In order to examine the relationship between the independent (or predictor) variables in combination (see Table 2) and the dependent variable (Beaconicity), we conducted multiple regression analysis. Multiple regression analysis is a statistical method that involves predicting an outcome variable (in this case, Beaconicity) from a range of predictors (Figure 2). In multiple regression we are seeking to find the linear combination of predictors that correlates maximally with the outcome (Field, 2005: 157).

The process can be expressed as an equation:

Outcome = (Model, or predictors) + error

Figure 2: Predictors and outcome variables

Predictors: rurality; deprivation; size; recency of establishment; performance improvement; culture; involvement with the Beacon Scheme through learning; external sources of learning, capacity.

Outcome: Beaconicity.

There are a number of criteria that must be met in order for conclusions to be drawn about a population based upon regression analysis (see Field, 2005 for detail).

There are a number of methods of regression analysis available. We adopted 'Forced entry' (Field, 2005: 160) which involves putting all the independent variables into the regression model simultaneously to analyse their impact on the dependent variable (Beaconicity). It is possible to adopt this method rather than the alternatives because:

1) We have a relatively small number of predictors: analysing large numbers of indicators runs the risk of multicollinearity, amongst other things.

2) The predictors have been selected on the basis of past research so have a strong reason for being included in the analysis.

In our analysis we chose to exclude cases pairwise, which means that if an authority has data missing for a particular variable, then their data is excluded only from calculations

involving the variable for which they have no score, rather than excluding them entirely from the analysis.

The findings from the regression analysis are reported below.

Overall, how well do the independent variables predict Beaconicity?

The first step in the analysis is to establish how well our overall model (i.e. all the variables together) predicts Beaconicity. The following table (see highlighted figure) shows how much the variance in Beaconicity scores are predicted by our model. The table is explained in-depth in Appendix 2.

Table 7: **Model Summary**

R	R Square	Adjusted R Square
.644	.414	.376

The highlighted .376 is the proportion of variance in the dependent variable (Beaconicity) which can be predicted from the independent variables. All together the predictor variables (rurality; deprivation; size; recency of establishment; performance improvement; culture; involvement with the Beacon Scheme through learning; external sources of learning, capacity) account for 37.6% of variance in Beaconicity. It is important to note that this is an overall measure of the strength of association, and does not reflect the extent to which any particular independent variable is associated with Beaconicity.

The table below tells us that overall, our model is statistically significant (see highlighted significance 'p' value) at $p<0.05$. Essentially, the predictors do reliably and reasonably strongly predict Beaconicity.

Table 8: **Analysis of Variance**

	Sum of Squares	df	Mean Square	F	Sig.
Regression	8621.595	9	957.955	10.776	.000
Residual	12178.701	137	88.896		
Total	20800.296	146			

Individually, how well do the independent variables predict Beaconicity?

The next stage is to analyse the contribution of each individual predictor variable to the regression model – or put another way – the impact of each predictor variable on Beaconicity.

The table below indicates the contribution of each predictor and whether its contribution is statistically significant. The highlighted variables are those that make a statistically-significant ($p<0.05$) contribution to Beaconicity.

Table 9: **Coefficients**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	–12.709	7.633		–1.665	.098
Involvement with Beacon Scheme through learning	6.855	1.169	.401	5.865	.000
External sources of learning	–.071	.066	–.074	–1.076	.284
Culture	–.026	1.110	–.002	–.023	.981
Rurality	.001	.000	.203	2.567	.011
Size	7.893	2.189	.330	3.605	.000
Recency of establishment	2.308	2.556	.068	.903	.368
Deprivation	–.006	.010	–.055	–.656	.513
Capacity	.072	.051	.120	1.426	.156
Performance improvement	–.761	.741	–.074	–1.027	.306

The 'B' values tell us about the relationship between Beaconicity and each predictor. If the value is positive, then there is a positive relationship and if it is negative then there is a negative relationship. They also tell us the degree to which each predictor affects Beaconicity if the effects of all the other predictors are held constant. The values tell us the amount of increase in Beaconicity scores that would be predicted by a 1 unit increase in the predictor. For example:

- ***Size of authority***: A 1 unit increase in size (i.e. from small to large) results in a 7.893 unit increase in Beaconicity.

- ***Rurality***: A 1 unit increase in rurality (i.e. in population per square km) results in a .001 decrease in Beaconicity[2].

- ***Involvement with the Beacon Scheme through learning***: A 1 unit increase in Involvement with the Beacon Scheme through learning results in a 6.855 increase in Beaconicity.

The 'B' values are not standardised and so cannot be compared across the variables. However, the standardised 'Beta' values are all measured in standard deviation units and so are directly comparable. They can therefore provide a better insight into the relative contribution of the predictors (Field, 2005:193). For example:

- ***Size of authority***: Beta value is .330. This value indicates that as size increases by 1 standard deviation (.49906; from 'small' to 'large'), Beaconicity increases by .330. The standard deviation for Beaconicity is 11.936[3] and so this constitutes a change in Beaconicity of 3.94 (.330 × 11.936), or 4. Therefore, for an increase in authority size

2 The table does not show a negative relationship because the measure of rurality is population density: a positive relationship between density and Beaconicity is conversely a negative relationship between rurality and Beaconicty.

3 See Table 5 for standard deviations. Please note that the figures in Table 5 are rounded to 2 decimal points.

from 'small' to 'large', Beaconicity increases by 4. This interpretation is only true if the effects of 'rurality' and 'Involvement with the Beacon Scheme through learning' are held constant (Field, 2005).

- ***Rurality***: Beta value is .203. This value indicates that as 'rurality' increases by 1 standard deviation (2291.28 per square km), Beaconicity increases by .203. The standard deviation for Beaconicity is 11.936 and so this constitutes a change in Beaconicity of 2.42 (.203 × 11.936), or 2. Therefore, for an increase in population density of 2291 people per square km, Beaconicity increases by 2. To put this in another way: a decrease in rurality of an authority context leads to an increase in Beaconicity. This interpretation is only true if the effects of 'size' and 'Involvement with the Beacon Scheme through learning' are held constant (Field, 2005).

- ***Involvement with the Beacon Scheme through learning***: Beta value is .401. This value indicates that as 'Involvement with the Beacon Scheme through learning' increases by 1 standard deviation (.698), Beaconicity increases by .401. The standard deviation for Beaconicity is 11.936 and so this constitutes a change in Beaconicity of 4.79 (.401 × 11.936), or 5. Therefore, for an increase in authority involvement with the Beacon Scheme in terms of learning (from 'not involved' to 'involved a little'; from 'involved a little' to 'a fair amount of involvement'; from 'a fair amount of involvement' to 'a great deal of involvement'), Beaconicity increases by 5. This interpretation is only true if the effects of 'size' and 'rurality' are held constant (Field, 2005).

5.4 Multiple regression analysis on later Beacon rounds

Over the eight years of its life so far, the Beacon Scheme has undergone a number of changes. In Round 4 (2003), as well as being expanded to cover all Best Value authorities, the Beacon Advisory Panel was made a Non-Departmental Public Body (NDPB), giving it the capacity to exist for as long as is needed, rather than for a pre-set lifespan. This essentially provided the Scheme with more permanency. The financial support for dissemination was increased from an average of £16,500 to £75,000 per authority (Hartley and Downe, 2007) plus additional funding was supplied which Beacon councils could bid for to enable them to work more closely and directly with 'learner' authorities. Additionally, the announcement of the annual Beacon themes was extended to three years to give '*authorities longer to link themes to their own corporate priorities and to prepare an application*' (Hartley and Downe, 2007: 337). Finally, from Round 4 onwards, the Beacon themes became increasingly cross-cutting, involving multiple local authority services and partner agencies. This change reflected the complex policy context within which local authorities operate and the priorities of central government.

Some of the modifications to the Beacon Scheme were particularly important for smaller, less-resourced authorities. The increased financial award potentially makes Beacon status more attractive and feasible and the announcement of Beacon themes three years in advance provides authorities with more preparation time. Consequently, it was worthwhile conducting the regression analysis for Beaconicity across Round 4 to 7, to reflect the changes made to the Scheme and the potential impact of these on smaller authorities' application, short listing and award status.

The first stage of this analysis produced the descriptive statistics for Beaconicity (Rounds 4 to 7) for the sample of 175 authorities presented below.

Table 10: **Beaconicity Descriptive Statistics (Rounds 4 to 7)**

Mean	Median	Std. Deviation	Skewness	Kurtosis	Range	Min. Value	Max. Value
7.4857	6.0000	8.17682	1.220	.922	36.00	.00	36.00

We can compare this to Beaconicity (Rounds 4–7) of the population of local authorities (388): the mean is 6.6; the median is 4; the range is from 0 to 38. Our sample is broadly representative of the population in terms of Beaconicity. Of the sample, across the Rounds 4–7, 40 authorities (23%) have not applied for, been short listed for or awarded a Beacon; across the population the figure is 88 (23%).

Conducting a regression analysis with the same variables as previously, results in the following findings (significant results highlighted as before):

Table 11: **Coefficients for Regression Analysis of Rounds 4–7**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	–8.736	5.351		–1.632	.105
Performance improvement	–.351	.520	–.050	–.676	.500
Capacity	.039	.036	.094	1.086	.279
Measure of service need Rank of Average of ward scores 2004	–.008	.007	–.100	–1.156	.250
Recency of establishment	2.777	1.792	.119	1.550	.124
Size	5.582	1.535	.341	3.637	.000
Rurality	.000	.000	.083	1.024	.308
Culture	.027	.778	.003	.035	.972
External sources of learning	–.076	.046	–.115	–1.641	.103
Involvement with Beacon Scheme through learning	4.964	.819	.424	6.058	.000

Adjusted R-squared = .347, $p<0.05$.

The analysis shows that authority size and authority involvement with the Beacon Scheme in terms of learning make a statistically-significant contribution to Beaconicity for Rounds 4–7. In contrast to the analysis conducted with Beaconicity across all 7 rounds, rurality does not make a contribution to variation in Beaconicity. This possibly reflects the changes made to the Scheme from Round 4 onwards, making the Scheme more attractive to less well-resourced authorities with dispersed service needs. The analysis indicates that whilst involvement with the Scheme through learning and authority size continue to have an impact on whether an authority applies, is short listed and awarded Beacon status, the effect of rurality has decreased and is no longer statistically significant.

CHAPTER 6: Discussion

The predictor variables explain 38% of variance in Beaconicity scores. This means that there are other variables that we have not considered that also have an impact upon authorities' repeated and successful engagement with the Scheme.

Of the predictor variables analysed, rurality, attendance at Beacon learning events and authority size were those that contributed to variation in Beaconicity. The hypothesised relationships between these variables and Beaconicity were found to be true:

- Involvement with the Beacon Scheme through learning is positively related to repeated and successful Beacon applications: Authorities with higher levels of involvement with the Beacon Scheme through learning have higher levels of repeated and successful Beacon involvement.

- Size is positively related to repeated and successful Beacon applications: Larger authorities have higher levels of repeated and successful Beacon involvement.

- Rurality is negatively related to repeated and successful Beacon applications: Authorities in more rural contexts have lower levels of repeated and successful Beacon involvement.

The majority of our hypotheses were not substantiated. This does not necessarily mean that they are not valid; instead it may indicate that our measures were not sufficiently refined.

Our findings go some way to addressing our research questions:

1) Are certain internal characteristics of local authorities associated with repeated and successful Beacon involvement?

Our research indicates that larger authorities are associated with higher Beaconicity. This confirms our previous research (Hartley and Downe 2007), suggesting perhaps that resource constraints play a role in limiting repeated and successful Beacon applications. However, on this occasion, we have not only confirmed this earlier, cruder analysis, but also shown that size has an impact even in the presence of other potentially-explanatory variables.

2) Is it possible to develop 'profiles' of councils with high and low levels of Beacon involvement?

A possible profile of high Beacon involvement suggested by the research of high Beacon involvement is a large urban authority. Involvement with the Beacon Scheme through learning and involvement through repeated successful application are also part of the profile.

3) Are certain characteristics of the local authority context associated with repeated and successful Beacon involvement?

Less rural contexts and larger authority size are associated with repeated and successful Beacon involvement, though the impact of rurality is not significant in analysis based on later rounds, suggesting that policy changes have mitigated the extent of certain barriers such as rurality.

4) Can we predict which authorities are more likely to successfully apply to the Scheme?

The research suggests that applications from large, urban authorities with a history of involvement with the Scheme in terms of learning are more likely to be successful.

6.1 Future Research

There is scope for further research into the predictors of Beaconicity to build on the analysis in this report. One possibility is to include more potential predictors of Beaconicity, including alternative contextual and authority characteristics. It may also be useful to consider authority involvement in alternative improvement and capacity-building initiatives or performance management processes.

Another approach is to gain a better understanding into exactly what authorities mean by 'involvement with the Beacon Scheme in terms of learning' in order to refine the variable. This is a broad concept and may have different meaning in different authorities. An objective measure of authority involvement with the Scheme based upon actual attendance at learning events or receiving peer support from a Beacon authority would be useful but difficult to obtain.

Finally, it is important to track changes over time in the Beacon Scheme and possible subsequent changes in the predictors of authority involvement in terms of applications, short list and award.

CHAPTER 7: Policy and practice implications

The research shows that over seven rounds of the Beacon Scheme, authority size, rurality of local context and degree of 'involvement with the Beacon Scheme through learning' influence authority engagement with the Scheme in terms of application, short list and award. However, the analysis conducted over the rounds four to seven, after important changes were made to the Scheme, shows the decreasing influence of rurality upon Beaconicity.

Building on the changes implemented after Round 3 of the Beacon Scheme, there is possibly still more that can be done to encourage smaller councils to apply. Earlier research by the Beacon team (Downe et al, 2004) found that concerns about resource pressures influenced decisions regarding whether or not to apply, particularly for authorities with a smaller corporate function and less financial and staffing capacity to manage initiatives. Given that size seems still to be an important factor, the research raises the question of the possibility of specialised, targeted themes for particular categories of authority, e.g. Districts, that may encourage smaller councils to apply. It also indicates that there may be benefits from further increasing financial support for Beacon activities because one possible explanation for fewer applications from smaller councils is the financial burden of both application and Beacon status. In addition to financial concerns there are other resource pressures, for example staffing, for smaller councils.

The analysis also suggests that getting involved with the Beacon Scheme through attending learning events and engaging with Beacon councils is potentially a 'stepping stone' into applying for, being short listed and gaining Beacon status. The findings suggest that encouraging and supporting authorities to engage in learning from Beacon councils can potentially lead to their involvement with the Scheme in terms of applications, short list and award.

Other research conducted by the Warwick evaluation team (Downe et al, 2004; Rashman et al, 2005) has shown the potential positive impact of the Scheme on learning and improvement for involved authorities, therefore increasing take-up of the Scheme is a potential route to performance improvement in local government. The research indicates that initiatives to build capacity in local government should not neglect resources (including financial support) as an important route to improvement. The increased involvement of rural authorities with the Scheme in terms of application, short list and award may be at least in part attributable to the increase in financial support. Additionally, the finding that larger authorities have higher Beaconicity scores is potentially attributable to advantages of scale and scope that they can access.

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APPENDIX 1: Variable details

In this appendix, more details are provided on particular variables.

Rurality

- Population density 2004 (Office of National Statistics): population per square kilometre.

Deprivation

- The Index of Multiple Deprivation 2005 (Communities and Local Government)
- Rank of average of ward scores (wards lie within local authority areas; the area scores are averaged and this is used as the figure for the local authority). This measure is a relative indicator, not an absolute deprivation measure.
- 1 = Most deprived.
- The ID 2004 contains seven domains (Income, Employment, Health Deprivation and Disability, Education Skills and Training, Barriers to Housing and Services, Living Environment, Crime), and contains 37 indicators in total. The Education Skills and Training, Barriers to Housing and Services and Living Environment Domains each contain two sub-domains (ODPM, 2004).
- Scope: Single tier and district councils; NOT county councils.
- Precedent: Andrews et al (2005) use the Index of Multiple Deprivation 2000 (average ward scores) as a measure of the quantity of service need in a local authority area.

Performance improvement

Authority's rate of improvement

Developing this variable involved two stages:

1) Checking correlation of the following two survey items: rate of authority improvement as rated by respondent and respondent's perception of service users rating of authority improvement.

Question in the survey (Q23: Elected member/Chief executive/Policy survey/Q26: Head of service survey):

How do you rate your local authority's rate of improvement in performance overall?

Answer: Substantial improvement; Fair amount; Slow, steady improvement; Little improvement; None.

Question in the survey (Q24: Elected member/Chief executive/Policy survey/Q27: Head of service survey):

How do you think that your local authority's improvement is rated by others?

Answer: Substantial improvement; Fair amount; Slow, steady improvement; Little improvement; None.

		Rating of own rate of improvement in performance overall	How respondents think authority's improvement is rated users of services
Rating of own rate of improvement in performance overall	Pearson Correlation	1	.486(**)
	Sig. (1-tailed)		.000
	N	165	164
How respondents think authority's improvement is rated users of services	Pearson Correlation	.486(**)	1
	Sig. (1-tailed)	.000	
	N	164	171

** Correlation is significant at the 0.01 level (1-tailed).

The improvement factors are fairly highly correlated (.486), which means that if we use these variables separately in our analyses it is difficult to assess which variables are important in predicting Beaconicity.

2) Totalling the items to give a score for overall performance improvement. This rules out the risk associated with correlated factors.

Culture

The contribution of 'a culture of learning and improvement' to stimulating improvement.

- Question in the survey (Q17: Elected member/Chief executive/Policy survey/Q20: Head of service survey):

To what extent did the following factor ('Culture of improvement and learning') contribute to stimulating improvement in your local authority over the last two years?

Answer: 1–5 (Limited- moderate- extensive)

External sources of learning

Intensity and range of utilisation of external sources of learning.

This variable is an index made up of a range of survey items related to learning from external sources.

Question in the survey (Q11: Elected member/Chief executive/Policy survey; Q14: Head of service survey):

What sources of learning did you draw upon to support the specific improvements (over the last two years) in your local authority?

– *External Audit and Inspection*

– *Collaboration with national agencies*

– *Collaboration with central government departments*

– *Collaboration with regional government offices*

– *Participation in learning from Beacon councils*

– *Participation in learning as a Beacon council*

– *Participation in ODPM Capacity building initiative*

– *Participation in national learning programme*

– *Performance support*

– *Regional networks*

– *Electronic sources of good practice (e.g. DPM, IDeA website)*

– *Local professional network*

– *Local service based benchmarking*

– *Collaborative learning with partners*

– *Participation in local learning programme*

– *Peer to peer support between councils*

Answer: To a very little extent; To a little extent; To some extent; To a great extent; To a very great extent.

Involvement with the Beacon Scheme through learning

Extent of involvement with the Beacon Scheme through learning.

Question in the survey (Q3: Elected member/Chief executive/Policy survey/Head of service survey):

How would you describe your local authority's use of and involvement with the Beacon Scheme, through making applications?

Answer: Not involved; involved a little; A fair amount of involvement; A great deal of involvement.

Capacity

Council capacity (leadership; performance and planning; internal alignment; knowledge management; structural; enabling conditions).

Developing this variable involved three stages:

1) Creating an index for each capacity item (capacity A,B,C,D,E,F)

Question in the survey (Q19: Elected member/Chief executive/Policy survey; Q22: Head of service survey):

Please indicate your perception of the extent of your authority's performance in the following areas:

(Capacity A: Internal alignment)

– *Elected members, managers and staff genuinely value learning*

– *In this council, we are keen to be innovators, as well as making improvement*

– *Staff regularly contribute ideas for service improvement*

– *Staff feel proud of council achievements and good practice*

– *Managers and staff share ideas and good practice across the council*

– *Managers and staff are keen to learn new ways of doing things*

– *It's easy to try out new ideas in my service*

(Capacity B: Leadership)

– *Elected members and managers talk positively about our aims and ambitions*

– *Managers don't just talk about improvement, they do it*

– *Elected members and managers are willing to take risks and learn from mistakes*

– *Managers constructively challenge barriers to good practice*

– *Staff understand the part they play in council aims for change and improvement*

– *Change champions really make a difference to improving services*

– *Managers encourage sharing of ideas and information with other councils and agencies*

– *Everyone in the council is involved in a programme of cultural change*

(Capacity C: Structural flexibility and networks)

– *Staff can easily work with colleagues across internal boundaries*

– *We are trying out new forms of service design that do not depend on retaining services in-house*

– *Members and managers tend to make important decisions with partners*

– *We get new ideas for service improvement from joint working with other agencies*

– *The council listens to its users, customers and stakeholders*

– *Elected members, managers and staff are able to work collaboratively*

(Capacity D: Knowledge Management)

– *Managers and staff know how to identify gaps for learning and improvement*

– *Elected members, managers and staff regularly take part in learning networks with other agencies*

– *Managers and staff regularly seek out ideas for service improvement*

– *We encourage bringing in new ideas from outside the organization*

– *Managers and HR officers understand how to support complex learning needs*

– *Managers and staff use performance data in their everyday work*

– *Links with national agencies are a source of ideas and improvement*

– *Staff can easily access the information they need to do their job effectively*

(Capacity E: Enabling conditions)

– *On a day to day basis, staff manage their own area of work effectively*

– *Staff are involved in making important decisions and plans*

– *We prefer to share information face to face as much as possible*

– *Members and managers encourage diverse opinions*

– *Managers and staff learn through a wide variety of opportunities inside and outside the council*

– *We can rely on team members for maintaining high standards of work*

– *Managers understand how to involve staff in making change*

(Capacity F: Performance and planning)

– *We plan what we need to know*

– *Staff and managers prepare before taking part in learning activities*

– *When we have a good idea, we test it out and evaluate its effect*

– *The council's performance management system helps individuals to improve*

– *Managers know how to plan and implement change*

– *Managers and staff can easily integrate innovative ideas into mainstream services*

– *The council builds on past success*

– *We are good at delivering better services without needing more resources*

– *There are good opportunities to put learning into practice*

– *We evaluate and learn from new initiatives*

Answer: 1–5 (Limited-moderate-extensive).

2) Checking the correlation of the capacities.

		Index of internal alignment capacity	Index of leadership capacity	Index of structural capacity	Index of knowledge management capacity	Index of enabling conditions capacity	Index of performance capacity
Index of internal alignment capacity	Pearson Correlation	1	.815(**)	.664(**)	.738(**)	.690(**)	.706(**)
	Sig. (1-tailed)		.000	.000	.000	.000	.000
	N	171	171	168	169	170	167
Index of leadership capacity	Pearson Correlation	.815(**)	1	.681(**)	.706(**)	.663(**)	.629(**)
	Sig. (1-tailed)	.000		.000	.000	.000	.000
	N	171	172	169	170	171	168
Index of structural capacity	Pearson Correlation	.664(**)	.681(**)	1	.663(**)	.649(**)	.597(**)
	Sig. (1-tailed)	.000	.000		.000	.000	.000
	N	168	169	169	168	169	166
Index of knowledge management capacity	Pearson Correlation	.738(**)	.706(**)	.663(**)	1	.718(**)	.767(**)
	Sig. (1-tailed)	.000	.000	.000		.000	.000
	N	169	170	168	170	170	168
Index of enabling conditions capacity	Pearson Correlation	.690(**)	.663(**)	.649(**)	.718(**)	1	.694(**)
	Sig. (1-tailed)	.000	.000	.000	.000		.000
	N	170	171	169	170	171	168
Index of performance capacity	Pearson Correlation	.706(**)	.629(**)	.597(**)	.767(**)	.694(**)	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	
	N	167	168	166	168	168	168

** Correlation is significant at the 0.01 level (1-tailed).

The capacity factors are all fairly highly correlated (.597 to .815), which means that if we use all the factors separately in our analyses it is very difficult to assess which variables are important in predicting Beaconicity.

3) Totalling the items (capacity A,B,C,D,E,F) to give a score for total overall capacity. This rules out the risk associated with correlated factors.

APPENDIX 2: Multiple regression

Descriptive statistics

	Mean	Std. Deviation	N
Beaconicity	11.77	11.936	175
Size	.4514	.49906	175
Recency of establishment	.8571	.35093	175
Deprivation	171.74	104.004	157
Capacity	155.6695	19.77585	165
Performance improvement	7.5663	1.16571	164
Rurality	1478.9995	2291.27751	175
Culture	3.4065	.86908	166
Involvement with Beacon Scheme through learning	2.18	.698	173
External sources of learning	27.0033	12.43490	175

Model summary

This tells us how much variance in the dependent variable (Beaconicity) can be explained by the predictors.

R	R Square	Adjusted R Square
.644	.414	.376

Predictors: rurality; deprivation; size; recency of establishment; performance improvement; culture; Beacon learning events; external sources of learning, capacity.

Dependent Variable: Beaconicity.

R: The values of the multiple correlation coefficient between the predictor model and the outcome.

R-Square: This tells us what proportion of the variance in Beaconicity scores can be predicted from the independent variables. In this case, the predictors explain 37.5% of the variance in Beaconicity.

Adjusted R-Square: This tells us the proportion of variance in the dependent variable (Beaconicity) which can be predicted from the independent variables like R-square but also takes into consideration the number of predictor variables and as such is more accurate. It is important to note that this is an overall measure of the strength of association, and does not reflect the extent to which any particular independent variable is associated with Beaconicity.

Analysis of variance (Anova)

This analysis tests whether the overall predictor model is statistically significant. The total variance is divided into the variance which can be explained by the independent variables (Regression) and the variance which is not explained by the independent variables (Residual) (UCLA website).

	Sum of Squares	df	Mean Square	F	Sig.
Regression	8621.595	9	957.955	10.776	.000
Residual	12178.701	137	88.896		
Total	20800.296	146			

Significance value of less than 0.05 indicates that the regression model is statistically significant.

Coefficients

This table shows the direction of the relationship between the individual predictors and Beaconicity, and whether or not these relationships are statistically significant.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	–12.709	7.633		–1.665	.098
Involvement with Beacon Scheme through learning	6.855	1.169	.401	5.865	.000
External sources of learning	–.071	.066	–.074	–1.076	.284
Culture	–.026	1.110	–.002	–.023	.981
Rurality	.001	.000	.203	2.567	.011
Size	7.893	2.189	.330	3.605	.000
Recency of establishment	2.308	2.556	.068	.903	.368
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Capacity	.072	.051	.120	1.426	.156
Performance improvement	–.761	.741	–.074	–1.027	.306