

Small and Medium Sized City Regions

Scottish Enterprise

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Introduction

In January 2008 Scottish Enterprise commissioned Experian to deliver a study on learning from other successful small and medium sized city regions. The focus of the study was on identifying the learning outcomes and translating this into an action plan for strategic dialogue between agencies in Aberdeen City and Shire (AC&S) and their counterparts in comparator city regions. Ultimately this learning will enable AC&S to maximise its contribution to Scotland's economic performance and may also highlight learning for other city regions in Scotland (e.g. Dundee).

The project was undertaken in three key phases:

- **Phase one:** this phase involved a review of the AC&S economy, identification of the respective roles of the city and shire, international comparisons and key issues and priorities of AC&S as identified from the consultations;
- **Phase two:** this phase investigated five comparator city regions in more detail to establish what key transitions took place and the role of policy interventions in effecting these transitions; and
- **Phase three:** builds on the foregoing work by discussing the lessons learned from the case study cities and establishing an action plan for agencies in Aberdeen City and Shire to develop strategic learning relationships with agencies in other city regions.

1 Phase 1: Economic Review of Aberdeen City and Shire

1.1 Introduction

Phase one sets the context for phase two and three, by summarising Aberdeen City and Shire's economic performance relative to Scotland and the UK. This chapter highlights key strengths and weaknesses and illustrates the themes that will frame the analysis of comparator city regions (phase two) and the learning and action plan (phase three).

Phase one of the research was developed using a combination of desk research and consultations with key stakeholders around agencies and individuals in the city region.

1.2 Structure and performance

This section reviews the structure and comparative performance of the Aberdeen City and Shire economy.

1.2.1 Performance

The headline measure of economic activity is Gross Value Added (GVA).¹ In 2006 Aberdeen City and Shire's Gross Value Added (GVA) was £9,990 million. This is equivalent to 12% of the Scottish economy, although the City and Shire has less than 9% of Scotland's total population. This illustrates that **the City and Shire's economic contribution to Scotland is disproportionately large** relative to the resident population of the region. As a result, GVA per head of population in 2006 (£22,661) was 38% above the average for Scotland. However, **GVA growth (1.0% per year on average) has been below that achieved in Scotland (2.0%) and the UK (2.8%)**. Experian forecast that Aberdeen City and Shire's GVA growth will be more rapid between 2007 and 2010 (2.2% per year on average) but also that this growth will still lag behind Scotland (2.4%) and the UK (2.6%).

Figures 1.1 and 1.2 provide a comparative overview of recent economic performance in the region, its composite Local Authority areas, Scotland and the UK. These indicators illustrate some of the key challenges facing the regional economy, despite its current prosperity.

The region has a very **tight labour market** thanks to the success of the energy industries and other sectors. The unemployment and inactivity rates are significantly below Scottish and UK rates and the employment rate is higher. However, this success in creating employment for such a high proportion of the working age population means that capacity for future economic expansion is more limited.

Ideally in such a tight labour market, the city region would be drawing in addition population to ensure expansion. However **population growth has been more modest than that at the Scottish level** and as a result employment growth has been muted (0.9% compared to 6.5% for Scotland). It is **important that the City and Shire maintains the recent trend of modest**

¹ GVA is gross sales income less spending on goods and services. It is equivalent to profits plus employee costs.

population expansion (or at least stabilises population at current levels) in order to retain or improve its competitive position in relation to its City Region peers.

Figure 1.1: Summary of economic performance indicators – demographics and labour market

	Aberdeen City	Aberdeenshire	Aberdeen City and Shire	Scotland	UK
Population growth (1999 to 2006)	-3.6%	4.0%	0.3%	0.9%	3.6%
Proportion of population of working age	65.8%	62.2%	63.9%	62.6%	62.1%
Employment rate	80.6%	81.4%	81.0%	75.7%	74.3%
Unemployment rate	4.2%	3.5%	3.8%	5.3%	5.5%
Inactivity rate	15.9%	15.7%	15.8%	20.0%	21.4%
Working age population growth (1999 to 2006)	-2.9%	3.3%	0.2%	2.2%	2.9%
Employment growth (residents) (1999 to 2006)	-4.2%	6.0%	0.9%	6.5%	3.9%

Source: Experian 2008 (based on GRO (Scotland) and Annual Population Survey, ONS)

In terms of labour demand, the **growth in employee jobs (4.4%) has been below Scottish and UK growth** since 1999. This only tells part of the story. Figure 1.1 showed how the ability of businesses to expand employment may be constrained by lack of slack and supply side growth in the labour market. This would suggest that there **may be unsatisfied demand for labour**. Other evidence backs this up. The 2006 Employer Skills Survey (Futureskills Scotland) estimates that 26.5% of all skill shortage vacancies² in Scotland were in Aberdeen City Region.

One of Aberdeen City and Shire's economic strengths is its **strong culture of enterprise**. This is reflected in the high business start-up rate (measured as number of new VAT registrations relative to population), with 36 registrations per 10,000 adults compared with 28 for Scotland. Despite a strong enterprise culture, the total number of businesses in the economy has declined more steeply than at the Scottish level. However many of the sectors where firms have declined (e.g. agriculture, fishing, food and drink processing and energy) have actually been experiencing marked **consolidation activity**. Consolidation has been variously driven by competitive pressures, global competition, rising input costs, regulation (e.g. fishing) and changes in markets (e.g. retail consolidation driving food and drink consolidation). In many of

² A skill shortage vacancy is a specific type of hard-to-fill vacancy that occurs when applicants lack the required skills, qualifications and experience for the job. Skill shortages do not occur where the employer judges the vacancy is hard-to-fill because there are not enough applicants for the post or where candidates are perceived to lack the right motivation or attitude.

these sectors, overall growth in turnover and Gross Value Added (GVA) has been robust despite a declining business stock.

Another feature of the Aberdeen City and Shire economy is its **success in global markets**. Exports per worker were estimated at just under £9,400 in 2005 compared with under £8,000 at the Scottish level. Even this is an underestimate for Aberdeen City and Shire as the survey does not cover the direct oil and gas activity and some of the services related to it. Global markets are therefore a key opportunity for the economy, allowing market diversification and ensuring that firms are not dependent on small local, regional, Scottish or UK markets for revenue and growth.

Figure 1.2: Summary of economic performance indicators – business base

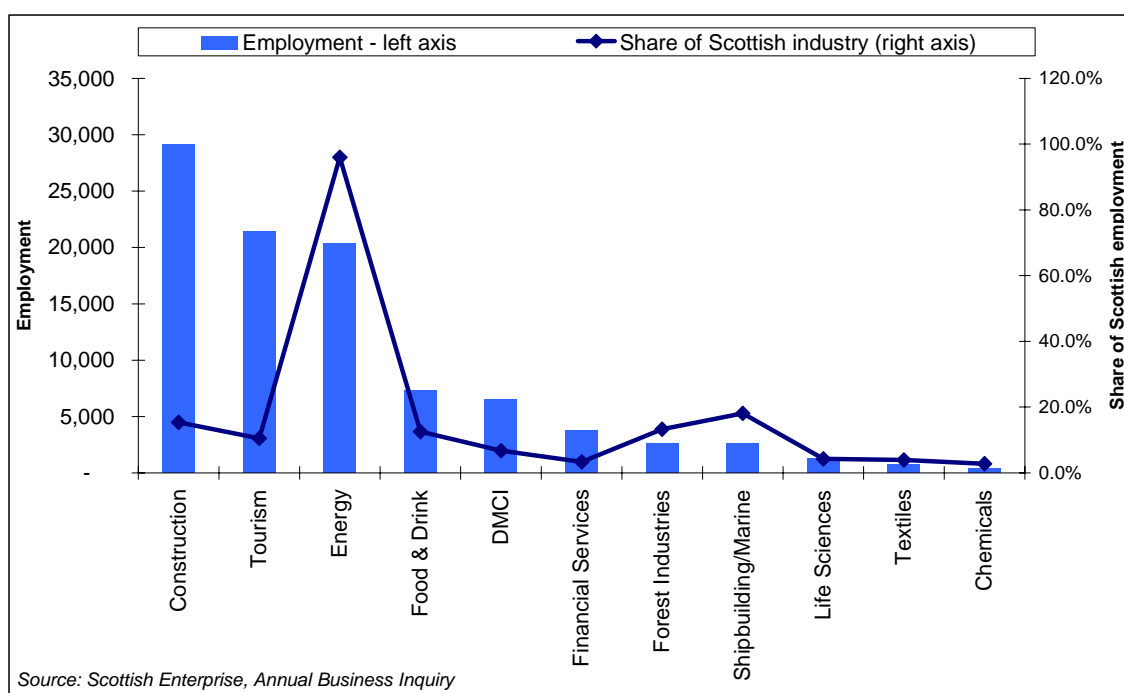
	Aberdeen City	Aberdeenshire	Aberdeen City Region	Scotland	UK
Growth in employee jobs (1999 to 2005)	2.3%	8.6%	4.4%	10.4%	6.7%
Growth in number of businesses (2000 to 2006)	-9.2%	-0.2%	-4.0%	-0.8%	8.1%
New VAT registrations per 10K adult population (2005)	34	38	36	28	37
£, Exports per worker (2005) ¹	-	-	9,369	7,967	-
Source: Experian (based on ABI, ONS and IDBR/BERR and Global Connections Survey, Scottish Government)					
Notes: ¹ Excludes some oil and gas (SIC11.1).					

The **significance of the energy industries to Aberdeen City and Shire** is illustrated in figure 1.3. This shows the total number of employees in each of the Scottish Enterprise Priority Industries and the region's share of total Scottish employment in each Priority Industry. Energy industries³ account for around 20,000 jobs directly, over 90% of the Scottish industry. However, the impact of energy is also evident in the region's share of the shipbuilding/marine industry (which captures many subsea and oil and gas-related companies) and of the construction industry (which captures some sub-contractors that supply the industry).

However, **there are other industries that play a significant role in the regional economy**. Food and drink is a major employer, particularly in the shire, with firms in the whisky, bakery, canned, meat and seafood sub-sectors. Tourism is also important to both city and shire. Life science is a difficult sector to measure using traditional economic tools. Although employment is estimated as being low in the life sciences sector (SE 2004) this does not capture university employment and activity (e.g. research and proof of concept activity) and other mainstream health service activities that may be related to the commercial life science industry.

³ This is based on a narrow definition of energy (oil and gas production and services related to production) in order to highlight the City and Shire's unique role in the energy industry in Scotland.

Figure 1.3: Employment in Priority Industries, 2004



1.2.2 City and Shire economic roles

The City and Shire are roughly equivalent in population size but the City has a greater concentration of economic activity. The region as a whole is a functional economic region, as illustrated by the travel to work map (figure 1.4).

There are a range of interactions and complementary contributions, including travel to work, that can be summarised by the phrase ‘city and shire interaction’:

- Labour;
- Retail;
- Visitor;
- Industry; and
- Housing.

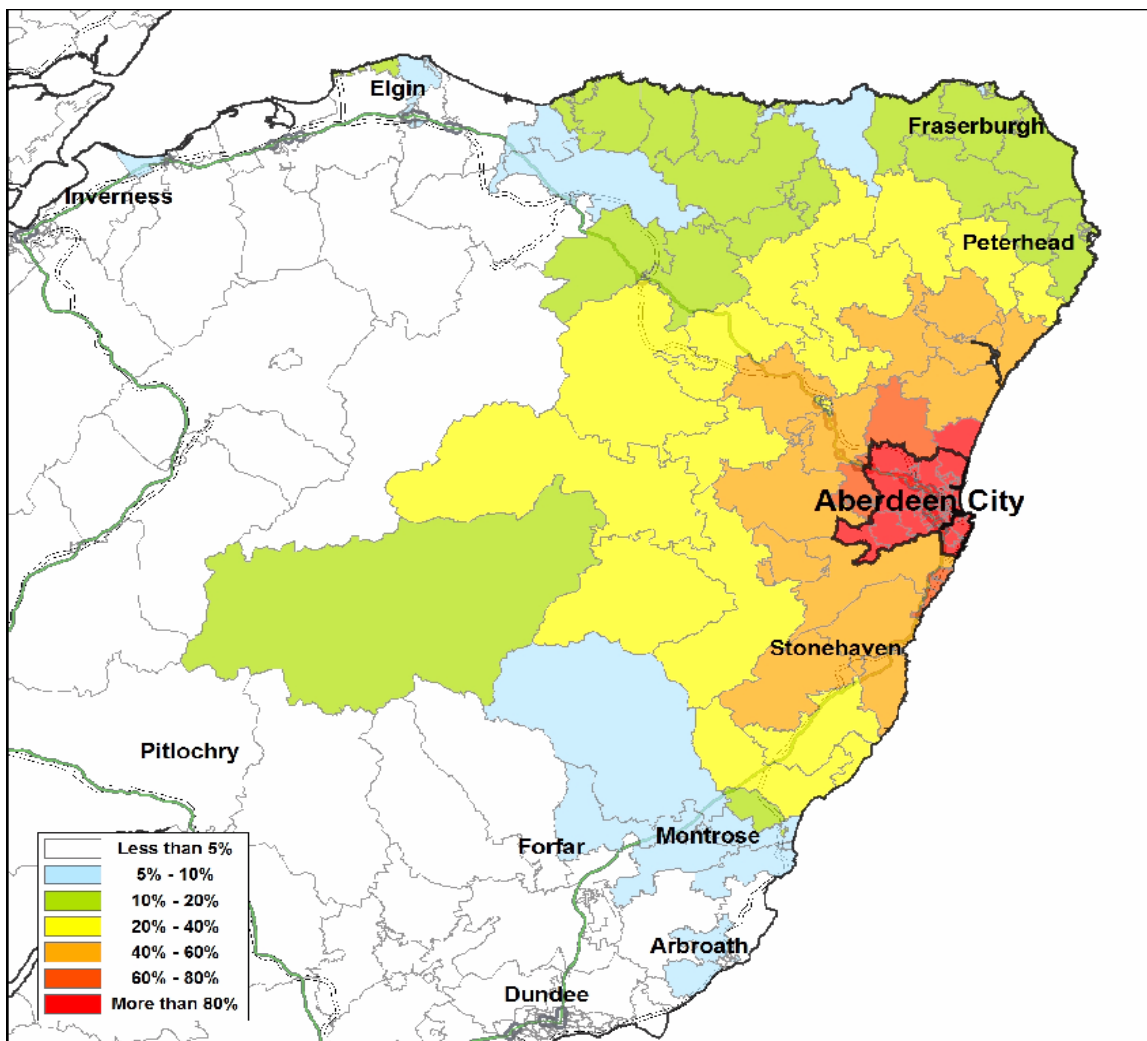
Beyond this general summary there are some clear roles played by different parts of the region:

- the City is the dense focal point of economic activity, retail, leisure and logistics;
- in the immediate hinterland business park and production contributions are significant (e.g. Westhill, Portlethen, Stonehaven, Inverurie etc) – this is mainly subsea, engineering and oil and gas related activity;
- there are a large number of accessible small commuting towns that play less significant industry roles (Peterculter, Ellon, Laurencekirk, Kemnay, Cove Bay and Johnshaven);
- there are more diverse ‘production towns’ further out from the city boundary, such as; Banff and Macduff (shipbuilding), Turriff (agriculture), Huntly (food) and Fraserburgh (fishing, seafood); and

- there is then a further belt of towns which can be characterised as tourism-based and long distance commute towns and include the small service centres in more remote areas (Ballater, Banchory and Aboyne).

A key feature of this summary is that the Shire plays a more significant production role - which is related to the *City's* economic specialism - than in the case in other city regions in Scotland and throughout the UK. The Shire also helps to diversify the regional economy (e.g. food and drink, primary industry and tourism). In terms of future potential, the opportunities appear to be to invest in transport to strengthen the production and commuting contributions that Shire towns make and investing to create critical mass in housing, culture and retail in the City.

Figure 1.4: Travel to work flows to Aberdeen City (2001)



Source: Experian Ltd 2007 Copyright based on Crown Copyright material

1.2.3 International context

The analysis has shown that Aberdeen City and Shire is a relatively unusual economy in the Scottish and UK context. It is one of the most prosperous regions of the UK (in terms of GVA per head) and, partly as a result of this prosperity, is experiencing supply side capacity constraints on future growth. These issues mean that it is important to look at how Aberdeen City and Shire performs in an *international* context, partly to see how competitive the economy is on a global scale. It is also important to view the City and Shire as a city region which

competes with other city regions in a global market place, this perspective being underlined by the importance of global energy industries to the City and Shire economy.

Analysis carried out for the Aberdeen City and Shire Economic Review 2007⁴ **compared Aberdeen City and Shire with a selection of (8) high performing European city regions. Aberdeen City and Shire was towards the bottom of the rankings on most indicators**, with the exception of employment growth (3rd of 9) and GDP per capita (4th of 9). Most significantly, Aberdeen City and Shire experienced the most modest population growth of all the regions between 1999 and 2006 although it is mid-ranking on population growth to 2010.

This European perspective on economic performance underlines the **crucial supply side issues that need to be addressed** to enable future economic growth in Aberdeen City and Shire. It also shows the case for trying to understand what policy drivers and projects have helped to enable growth in other high performing city regions elsewhere and what could be learned from this to support growth in Aberdeen City and Shire.

1.3 Key Issues and Priorities

This section summarises the key issues and priorities facing Aberdeen City and Shire, as expressed by a small number of stakeholders consulted for this study. We asked stakeholders for their views on the key issues necessary for future development of the city region. Stakeholders also offered views on governance issues for the economic development of the region.

Before summarising specific feedback from the stakeholder consultations it is worth presenting some general views on the City and Shire economy and the challenges facing it;

- There was a broad consensus that the ACSEF Economic Manifesto objectives were well identified;
- There was a general recognition that the Aberdeen City and Shire economy is, and has been, very successful. Therefore the challenge is how to continue economic success and sustain and continue economic diversification, before any over-dependence on the UKCS has a negative economic impact on the region;
- In addition to the diversification imperative the peripheral location of the city region is viewed as being a fundamental driver behind the type of economic development that needs to take place to support future growth; and
- Although some stakeholders emphasised the prime importance of a particular issue (e.g. transport or attracting skills) the majority stated that future success could only be assured if all elements of the strategy are implemented and in a coordinated way.

The following section is organised under the headings (with the exception of City and Shire economic roles) of the *key drivers of economic performance*, taken from the Urban Competitiveness Framework as developed for the Core Cities work for UK Government.⁵

⁴ Scottish Enterprise, 2008

⁵ *State of the Cities Report*, ODPM/DCLG, March 2006.

1.3.1 Economic diversification

The key message was that the issue is not about getting *away* from energy but about diversifying *into* other energy sectors. Most stakeholders asserted that it *was* possible to develop the critical mass to have a global centre of excellence in **energy** even beyond the UKCS being a productive province. One consultee noted that the current high price of oil is a short term constraint on this diversification. The UKCS is currently profitable so some firms, although aware of the need to diversify their markets, currently do not have the capacity to do this.

Diversification is also about maximising the economic potential of non-energy industries. There was broad recognition that the food and drink processing sector is an industry that is significant, particularly in the Shire economy, and has potential for growth. A number of stakeholders also emphasised the potential from the link between the food and drink industry and the life science sector. An example of this is the move of the Rowett Institute to University of Aberdeen and the development of the National Centre for Food and Nutrition. Together, the research base in food and nutrition in the region and the strong food and drink processing sector were seen as assets which have opportunity for joined-up commercial exploitation.

1.3.2 Transport

There was a broad consensus on the importance of addressing transport constraints to the economic development of the City and Shire. Within this there was recognition that transport is not an end in itself but it is important for unlocking the economic potential of City and Shire. However, there was also an appreciation that successful implementation of strategic projects such as the Western Peripheral Route (WPR) would also be symbolic in terms of demonstrating change.

1.3.3 Quality of life

Quality of life was viewed as being crucial to the economic development of the City Region. All stakeholders who raised the issue referred to a difference between external perceptions of the City and Shire as a place to live and the actual experience of living and working in the region. Therefore although there were improvements that could be made to improve quality of life, there was also a need for better place marketing. Within this, many stakeholders suggested that the quality of life offer in the *city* itself is in need of improvement. As a result of the City and Shire's economic success relative to other parts of Scotland, the city centre has had less investment than other cities and large towns. This was recognised as having undermined the region's current offer.

In order to improve the city's offer, a number of key issues recurred; improve retail offer and attraction of key retailers, improve housing offer for skilled people, lack of key cultural attractions, lack of contemporary iconic buildings and lack of arts / culture offer. There was also a view that other cities were developing contemporary waterfront housing but that this cannot currently happen in Aberdeen whilst there is still a working port. The Shire was seen as having good quality of life but that this message was not always getting through.

Scottish Enterprise have commissioned a separate project to benchmark Aberdeen City and Shire's quality of life.

1.3.4 Human capital

The need to develop and maintain high quality human capital assets in Aberdeen City and Shire was clearly related to quality of life by all stakeholders. There was general agreement that skill shortages are an issue in the region. However, there were varying opinions on whether these are very specific to the oil and gas sector or whether they affect the breadth of the economy. A few stakeholders identified recruitment and skills as the top priority and constraint for the region's economy. Many stakeholders reported that attracting people to jobs in the region can be difficult (e.g. *perceptions* about the city's peripheral and industrial character and also high cost of living). However, there was also general agreement that retaining people, once they have moved to the region, is not so difficult. There is also a specific need to retain graduates, although many do stay after study and some stakeholders reported that student retention is good.

In some sectors there is an appreciation that skills shortages are driving rising costs. This is particularly evident in the oil and gas and related sectors. There is now a global market for engineers in the oil and gas industry and Aberdeen City and Shire have to compete with other provinces and economies for these skills. At the lower end of the skills spectrum (e.g. some food and drink and hospitality roles) migrant workers from central and Eastern Europe have played an important role in filling labour gaps.

1.3.5 Innovation

Innovation was rated quite highly in the region by some stakeholders. In addition to a general culture of enterprise the Higher Education sector was noted as being important to the energy, life sciences and food and drink sectors. One stakeholder identified that there is a need for more test facilities for new technology. If there were test facilities, private partner organisations and financiers could come on board sooner in the process and before commercialisation. It was recognised that the private sector is good at innovating but that there is a need for other private sector partners to come in after testing not once the product is proved (this is partly a public role). There is a clear public sector role in the innovation system too. At present, it was felt that innovation is done on a company by company basis and there is not enough of a comprehensive, coordinated approach between industry, the universities and the public sector. This is currently limiting ability to develop energy critical mass in the energy sector beyond the UKCS.

1.3.6 Investment

As noted elsewhere there is a consensus that the City and Shire require increased capacity to accommodate future growth. In order to accommodate industry, employment and population expansion additional land and investment is required in both the City and the Shire. One issue noted by a few stakeholders is that the key land assets around city are in a few private hands and there is not much land in the public sector. This represents a difficulty for ACSEF partners in striving to realise aspects of the Manifesto. Whilst there are examples of the private sector seeing the opportunities and taking an active role (e.g. Peterhead Port) there is also recognition that there are competing demands for land owned privately (e.g. employment versus housing demands).

Many stakeholders highlighted that there are a few corridors of investment potential around the City. For example, the 'Energetica corridor' north up the A90 to Peterhead, the A90 corridor south through Portlethen to Stonehaven, the A93 out south west through Peterculter to

Bachory, the Inverurie Road (A96) and the road and the A947 past the airport to Banff. Other constraints on these land assets being developed are the lack of funding, infrastructure constraints (e.g. services) and the speed of the planning system. In relation to the latter point, some respondents cited the WPR as an example of the slow speed of the planning system. In addition to these constraints the view was offered by some stakeholders that there was still too little land actually zoned for development in the Development Plan for the City and Shire.

1.3.7 Decision making

Mirroring the city and shire nature of the functional economic region, Local governance is provided by a Local Authority for the Shire and another for the City. Some stakeholders regarded this arrangement as an opportunity which helps to enable effective regional decision making. The view was offered by one stakeholder that the two Local Authorities are equal partners and views were also offered that with only two Local Authorities (rather than the nine in Edinburgh City Region or the ten-plus in Glasgow City Region) developing and implementing economic development planning was easier.

There were also contrary views offered, namely that having two Local Authorities covering one regional economy was a constraint on economic planning. For instance, some stakeholders viewed the 50:50 split of development in the emerging Structure Plan as a political outcome rather than as an optimal economic planning outcome. One stakeholder went as far as to suggest that a regional council would be the best arrangement. However, the majority of stakeholders cited ACSEF as a positive piece of the economic planning infrastructure in the City and Shire and no negative views of the Forum itself were presented.

A number of stakeholders mentioned the importance of leadership to the economic development aspirations of the City and Shire. Many, particularly in the private sector, looked to the Local Authorities (particularly the City Council, in terms of place marketing for example) for providing this leadership. There were some concerns raised that the Local Authority role was perceived, by the private sector, as being about development planning and control rather than providing leadership and expressing economic vision. Moreover, some respondents went further to suggest that an over-emphasis on land use planning roles made local government appear as if they were constraining rather than inspiring growth. This was not a universal view.

Most stakeholders referred to public and private roles within economic development. The general consensus was that public-private collaboration has been quite positive in the region. There was also a broad consensus that the role of public sector was to provide leadership, enable economic development and deliver benefits that cannot be achieved on a company by company basis (e.g. a more developed innovation system, with systematic Higher Education-business interaction and well developed innovation testing facilities). The private sector was seen as the primary agent in economic development, comprising the economic assets of the region and driving economic performance.

1.3.8 City and shire economic roles

There was a variety of views on whether the city and shire 'model' works well. In one sense the City and Shire is a more fully functioning city-region economy than others in Scotland. The Shire plays such an important production role which supports the industrial specialisation of the City. This is unusual for Scotland and the UK. However, the less positive views of how well the City and Shire operate together largely related to political and administrative arrangements. A number of stakeholders argued that the City and Shire must be 'seamless' with no boundary in terms of economic development planning and decision making. However, there was recognition that with two Local Authority areas, this was sometimes difficult to achieve.

1.4 Selecting comparators

The issues raised in the consultations clearly have implications for the selection of small and medium sized cities to research. Figure 1.5 summarises the key issues from the consultations and the implications for selecting comparisons.

Figure 1.5: Issues and implications for comparisons

Key driver	Issues	Implications for comparison
Economic diversification	<ul style="list-style-type: none"> • Diversifying into other energy sectors • Research base attraction for future inward investment (e.g. life science, nutrition) • Branding / marketing required (e.g. life sciences) • Lack of tourism accommodation and city attractions • Enterprise culture is key opportunity 	City regions that have successfully diversified away from dependency on key sector/market; university-business links; city branding projects; inward investment
Transport	<ul style="list-style-type: none"> • Transport developments (esp. WPR) key to unlocking land supply • Need for more rapid inter-city links • Air development important because of peripherality & global markets • Internal – need WPR and rail for commuting (modal shift) • Minimising need for travel – home working 	Examples of transport-led city region regeneration/improvement; city regions with similar peripherality challenge
Quality of life	<ul style="list-style-type: none"> • Intrinsic part of economic development • Perception issues • Improve city offer – e.g. culture, retail and housing 	City regions that have successfully developed and communicated a reputation based around quality of life
Human capital	<ul style="list-style-type: none"> • Top of some people's priorities is skills shortages • Skills and pay currently quite high • Cost of living is high – difficult to attract people • Need for population <i>growth</i> • Retaining graduates 	High cost city regions that attract people; city regions that have managed population growth
Innovation	<ul style="list-style-type: none"> • Higher Education sector important to energy, life science and food and drink sectors • New technology – need for more testing facilities (needs to be coordinated) 	City regions with successful innovation systems, where public sector, Higher Education and business are partners
Investment	<ul style="list-style-type: none"> • Current under supply of land, utility/service constraints • Land around city owned by a few in private sector (a constraint) • Economy has become 'too big' for the city • Some corridors need to be developed (Aberdeen-Peterhead, A90 etc) • Need capacity growth to accommodate population growth (e.g. key worker housing) 	Examples of how a city and its region have collaborated to generate capacity for growth
Decision making	<ul style="list-style-type: none"> • City and Shire Councils – opportunity or constraint? • Regional decision making • Leadership and vision • Private sector 	Examples of public-private collaboration and leadership which has driven transformation
City and Shire	<ul style="list-style-type: none"> • City and Shire interact to drive regional economy 	Examples of different regional models

1.4.1 Selection criteria

A long list of potential comparator areas was drawn up to form a pool from which to select the short list. The long list was based on; previous research undertaken for and by Scottish Enterprise (e.g. economic review 2007), a search of Experian's NUTS3 European cities model and ideas from the research steering group.

In order to identify potential comparator areas we applied the following criteria to places that we reviewed:

- scale;
- key industry dependency (not oil and gas);
- oil and gas dependency;
- relative remoteness from other city regions;
- city and hinterland interaction; and
- extent to which the city region is in the process (or has recently completed) a significant economic transition.

Therefore, depending on how well a given city region meets some or all of the criteria we included them in the long list. For most of the comparators it was possible to use quantitative sources to measure most of these features (e.g. changes in employment share of manufacturing and services in the last decade as a proxy for transition) but this was also backed up by qualitative sources (e.g. marketing websites, brochures and government documents). Quality of life was more difficult to measure in some places than others and the extent of city-hinterland interaction has mainly been inferred from geographic features.

In the consultations we also sought views from stakeholders on places that they thought offered potential learning for Aberdeen City and Shire. Many stakeholders did not feel that this was an area of which they have a great understanding. Many of the suggestions made of places where transition had evidently occurred were much larger than Aberdeen City and Shire. This included places such as Barcelona, Houston, Adelaide, San Francisco, Birmingham, Hong Kong and Washington. Some known energy-dependent places were also mentioned by some stakeholders, such as Perth (Australia), Calgary and Houston, again. Other useful ideas were that perhaps the examples of University-industry interaction in the Netherlands might be useful. Edinburgh, Dublin, Portuguese cities, Hamburg, other Scandinavian cities and Glasgow were also mentioned, but usually with little specific evidence to justify their consideration.

There were mixed views on whether looking at places of similar scale was important. Some stakeholders felt that it was the potential lessons that should be most important or the similarity in features (e.g. Adelaide has little developable land but is managing to grow).

1.4.2 Long list

In the paragraphs that follow we present a summary of each of the potential comparator areas in the long list. More detailed information on each potential comparator (across the criteria outlined above) was provided in the phase one report.

Stavanger, similar in size to Aberdeen both in terms of population and is a peripheral location, dependent on the oil and gas sector. However, its share in the sector is declining and the increase in the business and other services sector suggests the city is becoming more service

sector based like most cities today. Unlike Aberdeen City Region, Stavanger has seen an encouraging growth in its population over the last decade.

The strength of the **Halifax** (Canada) economy rests on traditional defence and port functions, and its expanding and diversifying service sector. The area has a regional prominence in new producer services such as research activities in the health, marine and university sectors. Although remaining port and marine dependent, Halifax is progressively being replaced by the professional service industry. The second largest employer is the public sector where Halifax is home to the Canadian Naval bases. Like Aberdeen Halifax has a strong pull on suburb and rural hinterland areas for labour and has achieved youthful in-migration in recent years. There are also plans for population expansion of 100,000 by 2028 in Halifax.

Calgary, approximately double the size of Aberdeen, is the energy capital of Canada with rich proven reserves of coal, oil and natural gas. Calgary is in a peripheral position however its closest city Edmonton also has a strong presence of the energy industry. Like Aberdeen, Calgary is the main city within the Alberta area serving its hinterland as a service, industry and export hub. In response to oil volatility, Calgary has diversified following a government lead to professional services and science-based industries. The population of Calgary has also expanded in recent years.

Like Aberdeen, **Anchorage** (Alaska) is a producer of petroleum. Other important sectors are government, military and tourism. Anchorage host two military bases. The city also serves as an important port for trade and travel, with 95% of the state's freight going through Anchorage's port. The city is similarly peripheral to Aberdeen and has a pull on the surrounding hinterland given its nearest city region is Fairbanks, over 360 miles away. Anchorage has also been named "All American City" four times.

Bristol, similar in size to Aberdeen, has a considerable pull effect on wider Somerset and also has some links with South Wales. Bristol's key industry is aviation where it is home to 9 out of 12 of the largest aerospace companies in the UK including Rolls Royce and Airbus. However the city has experience a recent expansion of the business and other services sector. The city has also undergone a waterfront development which has undoubtedly would aided in the increase in quality of life Bristol has to offer.

Bergen is similar to Aberdeen both in size and its peripheral location (given its distance from Oslo), where it serves the wider hinterland. The former shipbuilding centre of Bergen is now making a transition to service based industries, given its recent growth in the business and other services sector. The construction sector has also witnessed an expansion. Bergen, where quality of life is also on the increase has hosted the title European Capital of Culture.

Bremen serves as a hub for the Kreisfreie Stadt region of Germany. The city, which is similar in size to Aberdeen, does not have a dominant oil and gas sector. Bremen, although showing a decline in recent years, has manufacturing as its key sector (with aerospace, car manufacturing and space technology being crucial to the economy), however business and other services and public services have seen growth over the same period. Bremen's old town has a cultural offering of art, museums and events.

Aarhus' harbour is paramount to the city's success. The port is a trade platform for the agriculture and manufacturing sectors, both of which are key sectors in Aarhus. Like the Aberdeen City Region, agriculture is more prominent in the rural hinterland areas of Aarhus,

while the IT and service sectors are concentrated in the city itself. The city has also experienced positive population growth, resulting in the average age of the population being lower than Denmark as a whole.

The economic structure of **St Louis** (Missouri) has not changed significantly in recent years, although like most cities there has been a decline in manufacturing. The city's main sector is trade, transportation & utilities; however there has been a slight decline in the sector over that last decade. St Louis' closest neighbouring city is Kansas City, over 260 miles away and as such St Louis has a strong pull on labour from the surrounding hinterland.

The **Tampere** city region is similar in size to Aberdeen; however it does not have the presence of the oil and gas sector. Tampere's most dominant sector is manufacturing, although there has been a decline in the industry over the last decade. The city is the largest city outside the Helsinki area and has a significant pull on population. Tampere is also consistently rated high amongst Finland's most popular cities to relocate to.

Christchurch is the largest city of the south island of New Zealand, yet smaller in size to Aberdeen. Manufacturing is a key sector in Christchurch; however heavy industry has been relocated to Asia and replaced by lighter manufacturing, electronics and services. Wellington is the Christchurch's closest neighbouring city which is located on the north island of New Zealand resulting in Christchurch serving a large part of the south island. The city has recently experienced positive employment growth and offers an attractive cultural experience for residents by cathedrals, civic and park areas.

Portland, Oregon, similar in size to Aberdeen is not dependent on the oil and gas sector for income and employment. Following a decline in the manufacturing industry the city has diversified into advanced manufacturing and IT, although the recent burst of the dotcom bubble affected the city. Portland is the key state hub of Oregon as there are no nearby competing cities and like Aberdeen has a significant pull on the surrounding hinterland. The city has also witnessed positive population growth over the last decade.

Gothenburg (Sweden) is known historically for its trading port and as such manufacturing (including ship building) has been an important sector for the city. Despite the closure of the ship yards, manufacturing is still dominant especially car manufacturing. Service sectors like banking and finance are also growing as well as tourism. Similarities to Aberdeen include Gothenburg's peripheral location and population size.

Dublin is both the largest and capital city of the Republic of Ireland and has a considerable pull effect on the east of Ireland, particularly because the closest city to Dublin is Manchester. Its rapidly expanding population is almost three times the size of Aberdeen mostly likely correlated to the increase in quality of life that the city offers. Dublin's key industry is high value added manufacturing however over recent years there has been a decline in this activity. The main growing industries are information technology, bio technology and financial services. Dublin offers a unique cultural experience given its writers' museums, four universities and its recent award of Cultural Capital of Europe.

Like Aberdeen, **Perth** (Australia) has a dominant energy industry, more so than the rest of the country. Retail and manufacturing sectors are important to Perth along with the growing tourism sector. The isolated city which dominates its hinterland of Western Australia attracts a vast

volume of commuters and is the largest city of Western Australia. The city's population and quality of life have both expanded over the last decade causing in-migration.

Charlotte is the largest city in North Carolina, however similar in size to Aberdeen. The city is a key financial centre which has transitioned from a once traditional manufacturing dependent city to advanced manufacturing and finance. Charlotte services the broad region bordering Greensboro and Columbia. Like Greensboro, Charlotte's closest large city is Atlanta. Charlotte offers a favourable climate, unrivalled sports and leisure facilities, affordability, an urban-rural mix and quality HEIs, all of which adds to the cities attractiveness to in-migrants.

Lisbon is similar in size to Aberdeen and as Portugal's capital and most prosperous city Lisbon, has a considerable pull on the country. There are no other cities of its scale in the country; in fact, the closest city to Lisbon is Madrid (Spain). Lisbon is dissimilar to Aberdeen insofar as it is not dependent on the oil and gas sector. Reflecting the decline in manufacturing that Lisbon has experienced, there has also been growth in the business and other services sector. The main sector is the service sector with creative and media industries, financial services and high-tech industries being the strongest. The biotech industry is also expanding in Lisbon.

Greensboro (North Carolina) smaller in size to Aberdeen is similarly peripheral due to its distance from its nearest neighbouring city of Atlanta. Greensboro serves its hinterland as part of a string of large towns and small cities along with Winston-Salem and Durham. Traditional industry such as textile, furniture and tobacco industries remain important to Greensboro's economy; however the once manufacturing dependent city is witnessing a transition into the service sector. Quality of life has also improved making it attractive to in-migrants.

Houston, (Texas) has a dominant energy sector and despite a recent fall in the industry share energy still remains the city's key sector. Public sector led diversification has reduced dependency on the energy sector and increased the importance of finance, life science and aerospace. Houston, one of the USA's largest cities is considerably larger in size to Aberdeen and as such has a significant pull on the rest of the region. The city's quality of life has increased over recent times.

Nimes is a small French city neighbouring Arles, both of which are influenced by the close proximity to the city of Marseilles. The historic city has in the past been dependent on employment in the manufacturing sector. Nimes however has recently seen a shift from manufacturing to business and other services sector. Quality of life has also increased in the city which is home to a vast selection of cultural offerings including Roman ruins, Spanish bull-fighting and bird refuge parks.

's Hertogen-bosch is part of a network of five cities in Noord Brabant in the Netherlands. The city is similar to Aberdeen both in size and level of employment however; unlike Aberdeen the 's Hertogen-bosch has experienced recent population growth. The closest neighbouring city to 's Hertogen-bosch is Amsterdam. The once dominant manufacturing sector is in decline in 's Hertogen-bosch making way for the growing business and other services sector. The city is the largest financial centre in the south of the Netherlands including ING and Van Lanschot Bank.

Huntsville is the largest city in north Alabama. Employment in the city is concentrated in aerospace and military technology, however the manufacturing sector is declining and the economy is shifting towards the service sector. Huntsville is also home to the second largest research park in the USA, CRP. In 2005, Forbes Magazine named the Huntsville-Decatur

Combined Statistical Area as 6th best place in the nation for doing business, and number one in terms of the number of engineers per total employment.

Hamburg, Germany's second largest city has a population almost four times that of Aberdeen. Hamburg's closest city is Bremen, both of which are hubs to their hinterland. The previously manufacturing dependent city is becoming more concentrate in the business and other services sector. The city's service sector compromises of real estate services, consulting and insurance industries. Furthermore, Hamburg has becoming a favourable choice location for multi-media and internet related services companies.

2 Phase 2: Small and medium sized city case studies

2.1 Introduction

The main aim of phase two of the research was to investigate five comparator city regions to:

- Analyse overall economic performance;
- Establish key transitions of the city region economy;
- Understand the role of policy interventions in effecting these transitions; and
- Highlight the lessons for Aberdeen City and Shire.

2.2 Selecting comparators

In order to choose comparators from the long list presented at the end of chapter one we applied a scoring system across the criteria that are of key importance to the study:

- | | |
|-------------------------------------|-----|
| • Scale | 20% |
| • Economic transition | 20% |
| • Dependency on oil and gas | 12% |
| • Dependency on another industry | 12% |
| • Distance from larger city regions | 12% |
| • City and hinterland interaction | 12% |
| • Quality of life | 12% |

Larger weights were applied to the ‘**scale**’ and ‘**economic transition**’ criteria to reflect the importance of these criteria to the project outcomes. Each comparator area was scored on a scale of 1-5, (where ‘5’ fully meets the criteria and ‘1’ meets only certain characteristics of the criteria).⁶ Based on this method and in consultation with Scottish Enterprise we chose the following five cities to research in more detail:

- **Bristol (UK);**
- **Aarhus (Denmark);**
- **Stavanger (Norway);**
- **Calgary (Canada); and**
- **Huntsville (US).**

2.3 Methodology

The method for this phase of the research has involved the following:

- Review of available statistical sources and Experian’s European Regional Service data (for Bristol, Aarhus Amt, Stavanger only) to establish economic performance and evidence of economic transition;

⁶ For example, if a case study city region was a similar size to Aberdeen City and Shire it would score a ‘5’.


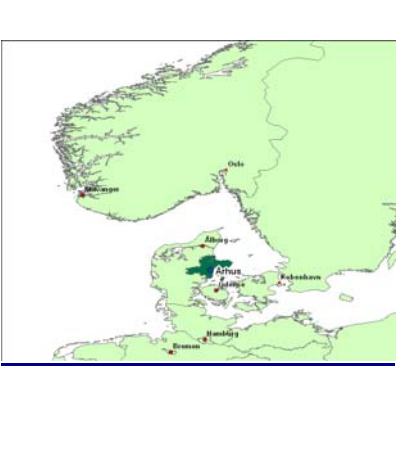
- Desk based review of available policy and performance evidence on the case study economies; and
- Consultations with economic development agencies in each case study city region to consolidate the desk based research and fill any information gaps.

2.4 Introducing the five case study cities

As discussed above the five case study cities were selected based on a scoring system which used multi-criteria analysis. The final selection also took account of the likely learning potential from each of the cities and the application of this learning to Aberdeen City and Shire. Scottish Enterprise was also consulted over the choice of case studies and their preferences were taken into account when making the final selection.

Therefore, the selection includes other energy centres (Calgary and Stavanger), high-tech knowledge based cities (Huntsville), city regions with other economic clusters (e.g. food and drink clusters in Aarhus and Stavanger) and port-towns (Bristol, Aarhus and Stavanger). In addition, in each of the cities chosen there was evidence of a focused, public-led effort to improve place attractiveness and promote the city-region to migrant labour and mobile business. Figure 2.1 provides a brief description of each of the five comparator city regions.

Figure 2.1: The five comparator small and medium sized city regions

Benchmark region	Description
<p data-bbox="228 1104 371 1133"><u>Bristol, UK</u></p> 	<p data-bbox="651 1104 1348 1317">Bristol (located in the south west of England) is similar in size to Aberdeen and has a considerable pull effect on wider Somerset and also has some links with South Wales. Bristol's key industry is aviation; it is home to 9 out of 12 of the largest aerospace companies in the UK including Rolls Royce and Airbus.</p>
<p data-bbox="228 1496 451 1525"><u>Aarhus, Denmark</u></p> 	<p data-bbox="651 1496 1348 1888">Aarhus Amt is Denmark's second largest city and is located on the east coast of Jutland (on mainland Denmark). The region is the fastest growing in Denmark and is forecast to experience continued population, employment and economic output growth. Aarhus has a major port, with much of Denmark's international trade passing through the city. As a consequence, the region has developed a number of industrial niches (e.g. logistics, packaging, manufacturing, refrigeration) in addition to its strengths in food and drink processing and growing knowledge-based service strengths.</p>




<p><u>Stavanger, Norway</u></p> 	<p>Stavanger, has many similarities to Aberdeen, it is similar in size both in terms of population, is a port city, is geographically close to Aberdeen, and it's economy has grown up around the oil and gas sector. The city has firmly established itself as Norway's energy capital. In addition to the energy industry, the aquaculture and fish processing industries are particularly important to the economy.</p>
<p><u>Calgary, Canada</u></p> 	<p>Calgary is located in the western Canadian province of Alberta and with over one million residents is the third largest city in Canada and significantly larger than Aberdeen. However, its role as Canada's energy capital and the associated rapid economic growth witnessed in recent years makes Calgary a relevant case study.</p>
<p><u>Huntsville, USA</u></p> 	<p>Huntsville is located in the south eastern U.S. state of Alabama and has a population of 370,000. The economy is highly research and development orientated and has grown up around the U.S. army's Redstone Arsenal and NASA's Marshall Space Flight Centre. Huntsville is home to the world's fourth largest research park, which may be a useful role model for <i>Energetica</i>.</p>

Figure 2.2 presents a summary of headline statistics for Aberdeen and the five comparator city regions. Apart from Calgary, the city regions are all around the same size in terms of population and economic output (GDP). The statistics shown in figure 2.2 for Aberdeen, Bristol, Aarhus and Stavanger all come from Experian's European Regional Service database and are therefore all consistent and directly comparable.

The statistics for Calgary and Huntsville are sourced from Statistics Canada and the U.S. Department of Commerce respectively. The historical coverage is not as good as it is for the European regions and the GDP values are in the city regions' domestic currencies. Therefore, the data for Calgary and Huntsville cannot be directly compared with the European cities or each other. However, it is still provides a good indication of scale and rates of growth can be compared to gain an idea of economic transformation.

Figure 2.2: Headline statistics

	UK	UK	Denmark	Norway	Canada	USA
2000	Aberdeen	Bristol	Aarhus	Stavanger	Calgary	Huntsville
Resident population (000s)	503	991	638	375	1,020	342
Area (sq km)	6,499	7,465	4,561	9,378	5,083	2,085
Pop. density (persons sq/ km)	77	133	140	40	201	164
GDP (millions)	€15,481	€27,987	€15,358	€9,110	\$41,600 ¹	\$10,880 ²
Employment (000s)	255	461	284	149	569	166
Value added per resident	€30,799	€28,200	€24,108	€24,324	\$40,784	\$31,813 ²
Value added per worker	€60,769	€60,700	€54,135	€61,104	\$73,111	\$65,542 ²
Source: Experian from National Statistical Agencies and Eurostat						
	UK	UK	Denmark	Norway	Canada	USA
2007	Aberdeen	Bristol	Aarhus	Stavanger	Calgary	Huntsville
Resident population (000s)	505	1,050	663	406	1,140	359 ³
Pop. density (persons sq/ km)	78	141	145	43	224	172 ³
GDP (millions)	€16,919	€34,743	€17,558	€12,500	\$52,386 ¹	\$16,058 ³
Employment (000s)	263	490	297	176	689 ²	186 ³
Value added per resident	€33,479	€33,100	€26,370	€30,794	\$47,784 ²	\$44,770 ³
Value added per worker	€64,392	€70,800	€59,175	€70,863	\$78,475 ²	\$86,020 ³
Source: Experian from National Statistical Agencies and Eurostat						
	UK	UK	Denmark	Norway	Canada	USA
Average real annual % change	Aberdeen	Bristol	Aarhus	Stavanger	Calgary	Huntsville
Resident population	0.1%	0.8%	0.6%	1.2%	2.8%	0.9% ³
GDP (constant prices)	1.3%	3.1%	1.9%	4.6%	4.7% ¹	8.1% ³
Employment	0.4%	0.9%	0.6%	2.4%	3.2% ²	1.6% ³
Value added per resident	1.2%	2.3%	1.3%	3.4%	3.1% ²	7.1% ³
Value added per FTE worker	0.8%	2.2%	1.3%	2.1%	1.2% ²	5.6% ³
Source: Experian from National Statistical Agencies and Eurostat						
* Euros reported in 2002 constant prices. GVA values for Calgary and Huntsville in national currencies.						
¹ Calgary GDP is for 2001 not 2000 and 2006 not 2007. The annual growth rate refers to 2001 to 2006.						
² Estimated by Experian.						
³ Huntsville data for 2005 not 2007. Annual growth rates refer to 2000 to 2005.						

2.5 Key findings

Figure 2.3 presents the key findings from the case studies. These findings are explored in more detail in the each of the individual case studies (provided to Scottish Enterprise in the phase two report). However, it useful to draw out some general findings which are important to bear in mind when considering the case study evidence and what it means for Aberdeen City and Shire:

- All five case study city regions are high performing regional economies in *national* economies that are also performing very well – clearly **national economic performance** and economic policies have a major bearing on *regional* performance;
- All the case study areas have performed well in the past 10-15 years but there is some **variation in the pace of growth and development** – in Calgary and Huntsville growth has been very rapid whereas growth has been strong but less dramatic in Bristol, Stavanger and Aarhus;
- Although an important objective of this study has been to identify *effective policy* interventions, the evidence from these case studies is that economic success and **transformation is predominantly driven by the market**;

- **Evaluating the effectiveness of various public policy interventions** on effecting economic transformation in a study such as this is difficult – it is possible that some effective policy interventions are more subtle and less easily identifiable than, for example, projects and programmes with budgets;
- At the *passive* end of the intervention spectrum, public policy has supported economic development in all the case study city regions by **permitting physical development**; and
- There are **examples of more active support for economic development and transformation**, such as enabling regional innovation systems or use of regional fiscal powers. Such interventions appear to have had significant impacts on effecting economic change in the case study city regions.

Figure 2.3: Summary of key findings

	Growth	Key Drivers	Key Enablers	Future Direction
Bristol	Population has grown above UK average in recent years, as has economic output	<ul style="list-style-type: none"> - Growth of aviation and financial and business services - Waterfront redevelopment - Innovation system, university-business collaboration 	<ul style="list-style-type: none"> - Harbour-side and city centre investment - Location of major aviation procurement agency - Enabling development through land use planning 	Bristol city region is expecting considerable population growth, requiring major city and regional housing expansion. Policy aim is to develop quality of offer further.
Stavanger	The fastest growing of the European City Regions in terms of GDP and Population.	<ul style="list-style-type: none"> - Oil and gas reserves & high oil prices led to market driven growth - Status as Norwegian Energy Capital - Foreign Investment 	<ul style="list-style-type: none"> - Localisation policy (policy to attract key organisations and companies) - Policies to promote technology transfer - Active development of local higher education and research capabilities 	No planned change of direction is expected in Stavanger over the next twenty to thirty years – largely due to substantial North Sea oil reserves.
Aarhus	In terms of population Aarhus Amt is Denmark's fastest growing region.	<ul style="list-style-type: none"> - Aarhus University has grown rapidly - Quality of life, education - Cultural offer 	<ul style="list-style-type: none"> - City investment (culture, leisure, public realm) - Public role in regional innovation system - City branding ('education' city) 	Denser development to house future population growth. Policy aim to develop more knowledge-intensive niches in the economy.
Calgary	Calgary has achieved exceptional levels of GDP growth particularly between 2003 and 2007.	<ul style="list-style-type: none"> - Huge oil reserves & high oil prices led to market driven growth - Status as Canadian Energy Capital - Investment by oil companies and supporting services 	<ul style="list-style-type: none"> - Low corporate and income tax rates (set at provincial level) - No provincial sales tax - Investment in infrastructure 	Vast oil reserves in Northern Alberta mean the industry focus will remain constant for the foreseeable future.
Huntsville	Huntsville has achieved consistently robust growth over the last ten years and is in many ways unique as it is a centre for the U.S. Army's procurement budget.	<ul style="list-style-type: none"> - Location of U.S. Army's Redstone Arsenal which has a huge procurement budget – much of it spent locally - Clustering effect, high-tech aerospace and defence companies attracted to area 	<ul style="list-style-type: none"> - Provision of first-class business accommodation in the Cummings Research Park - Carefully planned research park and supporting infrastructure - Business friendly environment - low corporation taxes, grants, land provision etc - Government, industry and university collaboration 	The expansion of the U.S. Army's presence in Huntsville means the high-tech aerospace and defence cluster will remain the key driver of growth.

2.6 General Lessons

This section presents the *general* lessons for Aberdeen City and Shire, the *specific* lessons from each case study are highlighted at the end of each of the case studies which are included in their entirety in the separate phase two report. In the following sections we discuss the recurring lessons under the following headings:

- **Business Base**
- **People**
- **Infrastructure**
- **Quality of Life**
- **Governance**

These themes are of course inter-linked. The attractiveness of a city region to business is influenced by characteristics such as: the presence of other firms in the same industry (agglomeration economies); infrastructure quality; labour cost and quality; quality of life; stable political situation; international links; access to markets; sufficient business accommodation and transport links. In turn the presence of businesses (jobs) attracts skilled labour into the region, as does the quality of life on offer. Therefore the characteristics of the region and the interaction and synergy of these characteristics are key to identifying the likely attractiveness and development of a location.

2.6.1 Business base

To a large extent a city region's economic competitiveness in the developed world economy emanates from the nature and quality of its business base. Therefore under this theme we are interested in how other city regions' business bases compare with that in Aberdeen City and Shire and how this is supported by the public sector.

The key lessons in developing the business base are:

- Economic success and transition is predominantly **market-driven**. In all the case studies – key **economic clusters have developed out of the cumulative commercial decisions** of numerous firms to locate in the same city-region. However, there is still a public role in ensuring that such positive economic trajectories take place efficiently (e.g. infrastructure provision, information provision and providing incentives) and for Aberdeen City and Shire the lesson may be to help reinforce the city region's attractiveness as a number one location for identified sectors (energy, food and drink, life science); and
- Another area of interest in the development of the business base is the **role of universities in supporting innovation**. This is generally an area of weakness in UK universities as their roots and strengths are in teaching and in pure research rather than applied research supporting local industries. Across the case studies there are examples of universities playing a key role in supporting innovation, often because they are *newer* institutions and their objectives are **more tied to local industry** needs than to pure research and teaching. For Aberdeen City and Shire the pertinent lessons are the co-location of Universities and companies on science parks (e.g. Huntsville) and the development of a *regional* innovation system with funding support, a public sector role and buy in from universities and companies (Bristol, Aarhus, Stavanger, Calgary).

2.6.2 People

There is widespread recognition across the economic development strategies of each case study area that economic success has not, and cannot, take place without an adequate **supply of skills** to serve and create it.

The key lessons in developing people assets are:

- The evidence from these case studies and from previous research (e.g. the Aberdeen City Region Economic Review 2007) is that the fastest growing and most **successful city region economies are also those that are experiencing the most rapid population growth**. In contrast with Aberdeen City and Shire, all five case study city regions in this research are experiencing quite pronounced population growth. This underlines the imperative to make Aberdeen *City* an attractive choice for a broader range of skilled people;
- Although economic growth in itself drives population expansion, most of the case study areas have had **additional public sector support for attracting in-migrants**. There are key lessons from Calgary (influencing national skilled in-migrant priorities and marketing the city effectively) and Aarhus Amt, Stavanger and Bristol (developing the quality of life and liveability on offer); and
- There are also examples of **specific collaborations between universities and businesses** to ensure that the supply of higher level skills to the economy match those required by employers (e.g. in Calgary and in the university-business collaboration in Bristol).

2.6.3 Infrastructure

Infrastructure refers to the general economic 'place making' required to create a competitive business environment. It encompasses transport, ICT, public services, business property and the other features that provide the necessary **backcloth for economic activity**. The key questions in this sub-section are whether other places have a superior infrastructure to Aberdeen City and Shire and how they are ensuring their infrastructure remains adequate for emerging needs.

The key lessons in developing infrastructure are:

- All the case study city regions have a **good quality infrastructure**, which can be regarded as a pre-requisite for any high-performing small or medium sized city region economy. Typically the case study city regions demonstrated; road infrastructures that can cope with demands, extensive direct air transport links, good logistics capacity and viable alternatives to private car use (e.g. C-Train system in Calgary). This finding underlines the need for transport and logistics capacity investment in Aberdeen City and Shire to support the nature and scale of economy envisaged in the future. In this regard it is useful to note that in Calgary, plans for a ring-road were brought forward by several years to support anticipated economic growth;
- Phase one of this research project identified the constraints in Aberdeen City and Shire – at the current time the region would struggle to **accommodate a significantly greater population**. However, across the case studies there are examples of places that have managed to accommodate significant population growth in recent years. In

Aarhus Amt, Stavanger and Bristol there has been a common approach to re-locate commercial maritime activities away from the city centre and dedicate the city centre to denser urban development (enabling population growth);

- To a greater or lesser extent, all the city regions in this study are relatively small and peripheral. In all cases this has led to some **policy emphasis on the need for fairly extensive air connections and supporting infrastructure**. The key lessons in this regard are from Calgary and Huntsville. In both case study city regions, the air and logistics infrastructure is of such a quality that a diverse range of firms are attracted to these regions as competitive places to site export businesses or businesses requiring good international access; and
- A more general area in relation to infrastructure development is the **assembly of developable land**. The economic strategic partners in Aberdeen City and Shire, as consulted in phase one of this research (and as summarised in the ACSEF Economic Manifesto, *Building on Energy*), recognise the lack of land for development. A good example of a direct public role in this regard is the City of Huntsville Council who provided the land and infrastructure for the expansion of the Cummings Research Park, ensuring its growth into the future.

2.6.4 Quality of life

There are two key areas of intervention in relation to quality of life – **investment in the creation of an attractive, competitive place** and **the communication of a place's attractiveness**.

Therefore in this sub-section we review interventions in relation to both actual place change and in place marketing.

The key lessons in developing quality of life are:

- The case studies provide evidence of public-led strategies to **re-develop the role played by city centres**. In Bristol, Aarhus and Stavanger the decision to re-locate the industrial ports were at least partly driven by an aim to ensure that the city centre is focused on living, working, leisure, retail and cultural activity, rather than industrial production or freight handling;
- Quality of life is a difficult concept to pin down but this should not be a barrier to reviewing evidence in relation to investments and interventions that are, in a common sense way, related to place improvement. One particular area where most of the city regions have tried to invest in improvements (with an aim of improving place attractiveness) is **cultural development**. In Aarhus, for example, there is a public-led focus in the city itself to develop the media industries and sporting sector to simultaneously develop new industries whilst improving the range and depth of cultural attractions for residents, in-migrants and visitors. The City of Bristol Council and SWRDA have taken a similar approach to develop visitor/resident attractions and the film/media industry to create a new 'feel' to the city centre;
- In Huntsville, part of the approach to developing a **joined-up career/residential offer** is the physical development of the workplaces in Cummings Research Park. A good example of this is the development of Bridge Street, a new public and commercial area within the site itself. This may prove to be a useful model for the planning and development of the *Energetica* corridor in Aberdeen City and Shire; and
- **Marketing** a city region's attractions is a key part of the strategy to compete for skilled people. Calgary probably has the most advanced approach with well developed marketing tools and materials for attracting people to work in the city region. Already the

city benefits from internal migration within Canada but increasingly the city region as a whole needs to attract *international* in-migrants. In Aarhus and Stavanger **attracting key events** (e.g. sports, music acts, festivals) has been an important mechanism for raising quality of life, diversifying the cultural offer and creating opportunities to market the city region to visitors. This is an area of activity that could be of greater benefit to Aberdeen City and Shire.

2.6.5 Governance

We have already highlighted some of the key areas where the public sector has been involved in helping to facilitate economic transition. However, it is important to compare the organisation of public sector powers and in particular the powers that are available at city and regional level to enable economic development.

The key lessons in relation to governance are:

- Calgary stands out as having some advantages in **regional powers**. One of the main advantages is the ability of the state (Alberta) to vary regional income tax rates. In Alberta, regional revenue from the oil and gas industry has enabled the state to reduce income tax to 10%, providing a fiscal incentive to in-migrants (helping to explain the high net migration inflows from other parts of Canada). These powers are difficult to replicate directly but it does provide an agenda for Aberdeen City and Shire to lobby UK and Scottish government for policies that promote *international* competitiveness for the energy sector in the region;
- One area of consistency in terms of regional governance is the operation of **long-term planning** at regional level. In Aarhus Amt⁷, this has been given more focus by the re-organisation of the regional tier of government, identifying strategic land use planning as a major role of the Regional Councils. In the case of Denmark, this capability has been married with the role for controlling the use of European Structural Funds, potentially providing Aarhus Amt with a more coherent system for regional development than Aberdeen City and Shire. Although Aberdeen City and Shire has a strong public-private sector collaborative approach to economic strategy development and implementation, it lacks an economic development agency with sole focus on the region. Such an agency is an asset in both Calgary and Stavanger. Also Bristol benefits from being the 'capital' city in a government office region (whereas Aberdeen is third largest within Scotland).

2.6.6 City and hinterland interaction

In Aberdeen City and Shire, the wider regional area plays a range of significant roles including; industry (energy, food and drink, visitor economy), choice of high quality settlements and leisure environment, visitor attractions (including Cairngorms National Park) and supply of labour (commuting).

The case study comparator areas highlight some useful lessons:

- An important function of a city region economy is the availability of a **larger pool of labour than can be provided by a city alone**. In this respect Huntsville and Calgary are notable

⁷ However, the Regional Council covers a larger area than simply Aarhus Amt.

as having fairly large labour catchment areas, the latter courtesy of a large-scale passenger system, which is an advantage when trying to attract new businesses;

- The physical footprint of a travel to work area is partly determined by **commuting tolerances and the density of urban development**. In this respect, both Aarhus and Stavanger are interesting examples where denser development is being permitted in core city areas and where most people commute relatively short distances to work or learn (10-30 minutes in Stavanger). This means urban sprawl is limited and the character and scale of the non-city areas is preserved;
- As predominantly non-urban areas, the **hinterlands of city regions offer something that urban areas cannot**, such as natural environments and low density settlements. The region around Aarhus is nationally recognised as being of a high quality and is an important visitor draw in Denmark. Calgary's region benefits from National Parks (like Aberdeenshire) and international-quality winter sports conditions and facilities, providing a distinct attraction which complements the region's urban offer; and
- Many of the **regional innovation systems** we have reviewed in this study have a predominantly city focus. However, in Bristol city region there are a range of innovation initiatives that involve all higher education institutions in the region, creating a more dispersed and inclusive system for creating, sharing and commercialising knowledge. This is, however, difficult to replicate in Aberdeen City and Shire as there are no other large urban areas with Higher Education institutions unlike Bristol city region (e.g. Bath, Cirencester, Gloucester).

2.6.7 Summary

Figure 2.4 below summarises the key lessons for Aberdeen City and Shire. The purpose of this figure is to highlight some of the key lessons that are worthy of further investigation. We have highlighted the three best examples under each heading.

Figure 2.4: Key lessons

Key issue	Lesson 1	Lesson 2	Lesson 3
<i>Business base</i>	<ul style="list-style-type: none"> Public sector role in developing regional innovation system for knowledge-based industry (Aarhus, Stavanger) 	<ul style="list-style-type: none"> Permitting growth and development to enable key clusters to reach critical mass (Bristol – aviation, Calgary – energy, Stavanger – energy, Huntsville – defence) 	<ul style="list-style-type: none"> Research, marketing and commercial collaboration to promote food and drink industry (Aarhus, Stavanger)
<i>People</i>	<ul style="list-style-type: none"> Multi-faceted approach to attracting skilled in-migrants (e.g. communication, incentives, lobbying) (Calgary) 	<ul style="list-style-type: none"> Developing place competitiveness around liveability offer and developing industry niches to support this (Aarhus) 	<ul style="list-style-type: none"> Collaboration between business and universities on skills supply for regional clusters (All)
<i>Infrastructure</i>	<ul style="list-style-type: none"> Relocating industrial uses of city waterfront to free up city for residential/leisure development (Aarhus, Bristol, Stavanger) 	<ul style="list-style-type: none"> Long term infrastructure and business property planning (Huntsville, Calgary) 	<ul style="list-style-type: none"> Development of strategic sites focusing on business space, innovation and liveability (Huntsville)
<i>Quality of life</i>	<ul style="list-style-type: none"> City centre investment across a broad range of activities – retail, office, cultural, sports (Aarhus, Bristol) 	<ul style="list-style-type: none"> Developing a vision for the purpose for the city centre and creating relevant development and activity (Aarhus, Bristol, Stavanger) 	<ul style="list-style-type: none"> Attracting events which create new economic opportunities and market the city region (Stavanger, Aarhus)
<i>Governance</i>	<ul style="list-style-type: none"> Long term land use planning which serves the needs of key local industries, ensuring they reach and sustain critical mass (Stavanger, Huntsville, Calgary) 	<ul style="list-style-type: none"> Regional economic development agency with budget and powers (Calgary CED, Stavanger - GSED) 	<ul style="list-style-type: none"> Lobbying national level government on place investment needs (Calgary)

3 Phase 3: Learning and Action plan

3.1 Introduction

The main aim of phase three of the research was to draw together the key findings from phase one and two and develop an action plan which identifies specific topics and issues that would benefit from further discussion.

Our research coincided with the publication of the Aberdeen City and Shire Economic Forum (ASCEF) 'building on energy' economic action plan for Aberdeen City and Shire which aims to deliver the 2025 vision laid out in the economic manifesto published in the summer of 2007. The ASCEF economic action plan is fairly comprehensive and highlights many similar themes to our research. This is discussed further later in the chapter.

3.2 Business Base

3.2.1 Lesson 1: Public sector role in developing regional innovation system for knowledge-based industry

The importance of innovation in driving productivity and economic growth is well documented. In their work on productivity growth HM Treasury identified innovation as a key driver of productivity, stating that '*a successful innovation system requires a strong science and engineering base to provide quality research outputs and skilled personnel*'. In Aberdeen City and Shire (AC&S), as in many other parts of the UK, the innovation system is not as effective as it could be and, although becoming more common, collaborations between the public and private sector are not effectively utilised.

The Government's Innovation Nation White Paper published in March 2008 highlights the important role of the public sector in stimulating innovation and the role of collaborations between universities, business and regional government to align efforts and develop innovative solutions to local and regional challenges.

A number of the case studies identified the important role of the public sector in creating an environment that lets innovation flourish and drives productivity growth and in turn raises the quality of life. The approaches adopted in Stavanger, Aarhus and Huntsville are of particular interest:

- In **Stavanger** the innovation system and the role of the public sector appeared to be particularly effective. Strong collaborations between public and private institutions exist and are supported by the local and national governments. There are numerous examples (**The International Research Institute of Stavanger and the Norconserv Seafood Processing Research Centre**) in both the energy and food or fish processing sectors of research institutes where companies collaborate with universities and government to undertake research and development activities and deliver industry relevant educational programmes.
- In **Aarhus** the development of an '**Innovation Institute**', with the aim of developing specific innovation and technology projects in partnerships with regional businesses is

likely to have driven innovation and productivity growth in the economy. The institute, 'Østjysk Innovation A/S', is focused on assisting people translate their ideas into viable business propositions and has a strong relationship with Aarhus University. Its main aim is to increase the throughput of entrepreneurial talent from the region.

- The public sector role in fostering innovation in **Huntsville** has been important in relation to the design and land use planning of the Cummings Research Park. By locating businesses, government and educational establishments in close proximity the design of the park maximises knowledge spill-overs and collaborations. There are numerous examples of public-private sector collaborations, for example **National Space Science and Technology Centre**.

There are a number of ways of increasing the public sector role in developing an effective innovation system in AC&S. Approaches could involve close involvement and management of the design of the *Energetica* research park, resource provision for the establishment of sector research centres which involve inputs and close collaboration from industry and universities and developing a regional innovation partnership. The regional innovation partnership would appear to be a logical first-step in increasing the public sector's role in the innovation system. Sector research centres and innovation partnerships could then grow out of this partnership.

In AC&S the links between innovation in life science and food and drink (through the Rowett Institute) are innovative and may be of interest to agencies in other city regions. This example is interesting because it tries to create synergies between two key, local industries whereas many examples of innovation support are based around the needs of a single industry or a narrow range of technologies. Interest may be in what successes this initiative has had or is likely to have and what benefits can be gained from cross-industry innovation that might not otherwise happen.

3.2.2 Lesson 2: Permitting growth and development to enable key clusters to reach critical mass

A common theme across the case study cities is the importance of clusters of businesses acting as a catalyst for economic growth, for example oil and gas in Stavanger and Calgary and defence and aerospace in Huntsville. Once a critical mass of businesses has been reached in any particular industry this helps to attract further investment, gaining economies of scale, attracts expertise, raises innovation levels through increased knowledge transfer and usually raises infrastructure investment. Clusters not only refer to attracting businesses in one sector but also attracting university research capabilities, supply chains and trade associations.

The cities examined in the case studies employed a multi-dimensional approach to cluster development. The cluster development in each of the case studies was market-driven and this highlights the fact that sustainable clusters can not be artificially created. Interventions should only facilitate the operation of market forces and the best examples of this from the case studies are:

- Alberta's wealth of natural resources led to large investments from global oil and gas firms. **Calgary** became the business hub for all business functions for the oil and gas sector in the province. Low taxation rates helped to attract oil and gas firms and ensure the development of a leading energy cluster and Calgary's status as a Canada's energy capital.

- In **Huntsville** the conditions were right for the creation of a defence and aerospace cluster as a result of the U.S. Army's Redstone Arsenal and the purchase and investment of infrastructure by the local council lead to the rapid investment by companies. Finances raised from selling the land were then re-invested to further improve infrastructure. A business friendly environment (low taxes) also facilitated investment.
- Local government in **Stavanger** worked hard over a number of years to attract investment by large international oil and gas companies and also trade and regulatory bodies to ensure the city was regarded as the Norwegian Energy Capital. For example authorities had a role in ensuring the airport attracted the international routes business leaders required.

The range of possible interventions to support the development of clusters is extensive. However, policy in AC&S should focus on the current key industries. A first key step is to ensure all relevant strategies and the structure plan prioritises the needs of key industries. Consultation with business in the development of policy and infrastructure is important as demonstrated in Calgary, Stavanger and Huntsville.

Aberdeen City and Shire's experience in growing the energy sector may be interesting. In particular it may be interesting for other city region's to learn how the Shire region has made a major contribution to providing the land for businesses to locate in the region. This may contrast with other city regions where businesses are predominantly located in the city itself. Indeed, there are no strong examples amongst the five city region case studies of significant industry contributions from the non-city areas. Aberdeen City and Shire is, however, fairly unique in the UK context in having such a geographic spread of its core industries.

More generally, AC&S offers interesting lessons in terms of how both city and shire contribute to economic diversity and how this is supported. AC&S is arguably unique amongst Scottish city regions in that the non-city regional area makes a significant contribution to economic diversity. Across the shire areas industries such as agriculture, food and drink processing, tourism and shipbuilding help to diversify the economic base of the region as a whole. This is important as it means that the city region as a whole is not solely reliant on energy industries for its prosperity and for employment. In terms of support for this pattern of economic activity across the region, the following may be interesting examples; (a) Grampian Food Forum, which promotes the industry in the region, (b) Building Buchan New Beginnings (which furthered economic diversification through tourism, cultural and industrial developments), (c) Cairngorm National Park Authority (promoting a unique NP area in Europe), (d) Aberdeen Renewable Energy Group, and (e) Aberdeenshire Towns Partnership.

3.2.3 Lesson 3: Research, marketing and commercial collaboration to promote industry

Lesson 3 is closely linked to lessons 1 & 2 under the business base theme. The case studies highlighted examples of the public sector supporting business in terms of provision of research, marketing and collaboration activities. Raising the profile of specific sectors in AC&S could provide substantial developments in encouraging further investment and collaborations with universities which would in turn raise innovation levels. The case studies provided a number of examples of the importance of promoting industries and the role of the public sector in doing so:

- **A city region development agency** – Calgary and Stavanger both have economic development agencies (Calgary Economic Development and Greater Stavanger) who actively market the city to both businesses and individuals. Calgary Economic Development appear to be particularly good at this with a range of initiatives marketing the city and individual sectors and also providing research information to industry (the future occupational demands for example).
- **City branding** – Stavanger, Calgary and Huntsville have all developed city 'brands' that market the city's key industry. Huntsville has named itself 'Rocket City' and Stavanger and Calgary have worked hard to be recognised as the national energy capitals.
- **Collaborations** – Numerous examples exist of collaborations between business, government and university to establish industry research institutes (**The International Research Institute of Stavanger and the National Space Science and Technology Centre in Huntsville**).

There are many lessons to be learnt from these examples. AC&S would benefit from a marketing perspective if it is firmly recognised as an 'Energy Capital'. The Energetica development is likely to help in gaining this reputation. A city-level economic development agency with a particular focus on marketing AC&S as an energy centre is an interesting option for Aberdeen. Both of these may take some time to develop and are longer-term goals. However, in the shorter term, expanding the role of Grampian Food Forum to increase collaboration between food and drink businesses, the public sector and possibly universities would benefit the growth and future direction of the food and drink industry. Initial actions on this front would include the scoping out of future roles in terms of marketing, exporting, skills development and innovation.

AC&S may learn quite a lot from the support for the food and drink industry in Aarhus and Stavanger. However, AC&S also has some useful experience to offer. Industry promotion activity in AC&S is most active around the oil and gas industry. This includes trade bodies such as Oil and Gas UK, the role of the City Council and ACSEF's role.

3.3 People

3.3.1 Lesson 4: Multi-faceted approach to attracting skilled in-migrants

The quantity and quality of skilled labour available in an economy is an important determinant of economic performance and productivity growth. Therefore attracting skilled in-migrants was important to all of the cities in our case studies but particularly Calgary which has experienced particularly rapid employment growth and therefore experienced labour shortages. A range of factors are important for attracting and retaining skilled migrant workers including employment opportunities, wage levels, quality of life and the cost of living. Policy also has a role to play. Calgary's approach to attracting skilled in-migrants is summarised below:

- **Calgary** has experienced very strong population growth over the past ten years and has been successful in attracting skilled labour to fuel the rapidly expanding economy. High wages, a diverse range of career opportunities, low income tax rates, a high quality of life and a low cost of living all contributed to Calgary's success in attracting in-migrants. However, policy has also played a part. **Calgary Works** is a multi-faceted workforce initiative program run by Calgary Economic Development. One of the strands of the program focuses on communication tools and the Calgary Economic

Development website provides detailed information for individuals interested in living and working in Calgary. The Alberta Government is currently developing mechanisms in consultations with the Canadian government to make it easier and quicker to get foreign workers clearance to work in the state.

AC&S could develop a joined-up strategy for increasing skilled in-migration. An important part of this strategy would be the development of effective communication tools. For example a website which provides details of living and working in AC&S including the types of careers on offer.

AC&S can learn quite a lot from the experience of Calgary in attracting migrant workers. Calgary Economic Development may be interested to learn about the emphasis on marketing AC&S as a place with an urban core and a shire area which offers a high quality of life. This is emphasised in national and international recruitment drives led by the two Councils.

3.3.2 Lesson 5: Developing place competitiveness around liveability offer and developing industry niches to support this

Increasingly cities and city regions are aiming to compete for investment, businesses and people on the basis of their quality of life assets. In many instances this has gone hand in hand with the growth of industries that are inextricably linked with improved quality of life, such as culture, tourism, events and creative industries.

The case study analysis for this research uncovered some useful examples of city regions that have successfully differentiated themselves from other city regions on the basis of their quality of life offer, or are in the process of doing so. Key examples are:

- **Aarhus Amt** has established itself as the key growth region of Denmark. Our research indicates that quality of life, particular in the city, is a key attraction which drives in-migration. In the last decade, a number of **concurrent developments** has driven this reputation – the public sector has focused on attracting or establishing the kind of new, urban, knowledge-based industries (e.g. film, culture, education) that flourish in the most successful cities; the university has grown rapidly, drawing in a youthful population; physical regeneration projects have revitalised the city centre and complemented the creation of new business space (e.g. for film and media); the small business sector has helped to drive the creation of a much improved base of restaurants and the non-urban offer (e.g. Lakes tourism area) has been widely marketed.
- In **Bristol** there has been a similarly intense, public-driven focus on altering the nature of economic activity in the city centre. In the city centre, **significant land-use change** has driven the changes, with city apartments replacing the industrial harbour and new business property (for knowledge-based industry and the catering sector) replacing warehousing. These changes have enabled new industries to develop, such as digital media, education-based tourism and the creative sector, helping to influence perceptions about what is on offer in the city.
- Greater Stavanger has enjoyed considerable population growth in recent years, driven not only by the growth of the energy industries but by the city's quality of life offer. Like AC&S, the region has a **high quality non-urban environment** with access to fjords and mountain resorts. This has been complemented by development of the city as a

competitive location for events (e.g. food and drink, sports) and to live (e.g. international schooling). Like Bristol and Aarhus, the re-use of the previously industrial port area for dense, residential development has helped both to accommodate population growth and create the kind of urban environment expected in a modern city.

One possible area for AC&S to intervene is in the creation of a strong, coherent brand for the city and shire. This could be complemented with the identification of some 'quick wins', small scale public realm or events projects that could start to build the kind of city attractiveness that is currently absent.

Agencies in the case study city regions stand to learn a fair amount from AC&S, but mainly around the non-urban assets. Phase one of this research reinforced the argument that Aberdeen's city centre lacks the kind of cultural, retail, tourism and residential offer that has been developed in many small and medium sized cities (e.g. Bristol, Aarhus, Bergen, and Glasgow). However, the research also confirmed the perception that in AC&S the quality of life offer in the Shire is quite distinctive. Industries which support this are food and drink and tourism. Indeed the food tourism offer is a good example of how local industry is joined up and helps to support Aberdeenshire's identity as a place to live.

3.3.3 Lesson 6: Collaboration between business and universities on skills supply for regional clusters

Meeting the future skills needs of key industries in each of the case study cities was an important priority. There are numerous examples of collaborations between universities and businesses to ensure a sufficient supply of graduates with skills that are relevant to industry:

- **Huntsville** – Calhoun College, in cooperation with the US Army Ordnance Missile and Munitions Centre and School, provides a specialised Associate in Applied Science degree for graduates of the missile programs controlled by Redstone Arsenal. This program allows career military personnel to earn college credit through a combination of civilian and military education.
- **Bristol** – The South West Regional Skills Partnership brings together the region's business and learning community to create a demand-led approach to tackling any future shortages that the South West's skills base may experience.
- **Calgary** – There are several examples of the university partnering with large energy companies to offer specialised degrees to meet industry demands. For example the Oil and Gas Engineering program at the University of Calgary was initiated by, and developed in collaboration with, the oil and gas industry to respond to its need for graduates trained in technologies specific to oil and gas exploration and production.

Developing a working group around priority occupations would be an important first step for AC&S to investigate future occupational and skills needs of industry and determine the areas where shortages are likely.

In AC&S there is considerable emphasis on the need to attract skilled people across a range of sectors but particularly to energy-related industries. However, the collaboration between universities and businesses to achieve this is less developed than in some of the case study city regions (e.g. aviation in Bristol).

3.4 Infrastructure

3.4.1 Lesson 7: Mixed use of city waterfront areas

In Stavanger, Aarhus and Bristol the industrial ports were relocated away from the city centre to make space for residential and leisure development. In each of these cases this development appears to have been important in adding to the attractiveness of the city centre and acting as a catalyst for the development of other industries. In the case of Bristol, the former industrial harbour area has been used for retail and leisure including art and exhibition centres. It also home too much of the high growth creative industries sector including the Watershed Media Centre.

Re-locating the industrial port away from Aberdeen city centre would be a huge undertaking. Therefore a key lesson that may be more applicable to Aberdeen in the short to medium term is to seize opportunities for mixed use development on available waterfront sites. However, as the case studies have shown relocating the port in the longer term could have significant benefits in terms of liveability offer, tourism and new industry development. A scoping plan to investigate the practicalities and economic impact of such a development would be an initial first step of this more ambitious option.

There are no direct examples of relocating industrial activity for housing and leisure purposes in AC&S and indeed this is one area where AC&S can learn from Aarhus, Stavanger and Bristol. However, *Energetica* is the key project that will be of interest to agencies in other city regions. Interest will be in many aspects, including; (a) the role that waterfront location plays in the vision for the project and how it will function, (b) co-location of different activities (living, working, research, leisure) and (c) how the project will transform land values and help regenerate priority areas (e.g. Peterhead).

3.4.2 Lesson 8: Long term infrastructure and business property planning

Evidence from the case studies suggests that a long term planning horizon for infrastructure development is important. In Calgary, Huntsville and Stavanger long-term approaches (up to 30 years) were adopted in strategies and investment plans.

- In **Huntsville** for example a long-term view was adopted for the Cummings Research Park, with a large area of land purchased and developed by the Huntsville City Council in anticipation of future inward investment and development.
- In **Calgary** the transport strategy took a long-term view (30 years) and developed a clear vision for transport infrastructure in Calgary. The plan highlighted the need for specific developments such as the Calgary Ring Road.

The long-term planning approach would benefit AC&S by creating a clear signal to private sector of investment plans and thereby providing some certainty over the future. It also provides a common vision for the public sector to work towards. It would be useful for AC&S to identify 2-3 key projects that would transform AC&S capacity for growth in 20-30 years time and provide clear plans and a vision of what they will mean for the economy.

Energetica is the key example for AC&S to discuss in future consultations. *Energetica* is a long term project which is *ambitious* in that it will need to attract additional assets (people,

businesses, investors) in order to be deliverable. In this way shares some features with some of the good practice examples from the case studies, such as the expansion of Cummings Research Park, bringing forward the ring-road plans in Calgary and harbour-side redevelopment in Aarhus.

3.4.3 Lesson 9: Development of strategic sites focusing on business space, innovation and liveability

The case studies presented some clear examples of strategic sites where the role of business space, innovation and liveability are of central importance. The best example is given by the highly successful **Cummings Research Park** in Huntsville. The park has been developed to cater for high-tech, innovative companies. The master-plan of the park focused on attractive business space and an attractive environment including man-made lakes, constant and specific requirements for landscaping and coordinated management of the outward appearance of all structures. The recent construction of a commercial centre for the park adds to the liveability offer by including hotel and conference facilities, recreation space and retail and leisure services. The design of the park aids innovation and knowledge spill-over by clustering similar industries in certain areas within the park.

These lessons could prove highly valuable for the development and master plan for Energetica. More detailed studies of how the Cummings Research Park was master planned and key elements to consider would benefit the Energetica development.

In terms of AC&S examples of best-practice in this area, again the key project is *Energetica*. This project deliberately focuses on co-location of different types of economic activity which, as a joined-up offer to people, businesses and investors, should be mutually reinforcing.

3.5 Quality of life

3.5.1 Lesson 10: Broad-based city centre investment

Cities are recognised as the hubs of modern city region economies. Even with ICT-enabled, knowledge-based industries in the ascendancy, the need for well functioning and attractive city centres which are easy to move around is widely recognised. Many city centres have experienced transformation in recent decades, particularly where they have had a need to recover from the economic and physical impacts of manufacturing decline (e.g. Newcastle, Glasgow, Bremen). Many of the issues around city centre investment are highlighted elsewhere in this report but in summary:

- **Aarhus** is probably the best example of broad-based city centre investment amongst the case study city regions. Changes in the priority land use for the city centre, public realm improvement and business property investment have gone hand in hand with private sector investment to create a place which creates strong, positive perceptions across the country.
- The breadth of investment in **Bristol** city centre has been similar to that in Aarhus, with land re-use, business property and the creation of space for creative industries and restaurant businesses helping to change the nature of economic and social activity in the city centre.

- The thrust behind city investment in **Stavanger** has been similar to that in Bristol and Aarhus, although the scale of change has not been as dramatic.

At present there are a number of significant city investment projects being delivered, planned or considered in Aberdeen. Arguably they are not joined up as a cohesive step-change plan for the city. A city investment plan would be well supported by strong city and region branding and by the identification and implementation of a small number of 'early win' projects (e.g. attracting new events to the city).

Although the city of Aberdeen has not been an exemplar for city investment in recent decades, some of the towns in Aberdeenshire are interesting non-city examples. Building Buchan New Beginnings is a good example of the kind of physical and economic results that can be achieved in a smaller semi-urban setting. Some of the other Aberdeen Towns Partnership towns, such as Inverurie and Turriff, also provide useful non-city examples.

3.5.2 Lesson 11: Vision for the purpose of the city centre

This research project has underlined the need for city centre development in Aberdeen. Although there is project by project development in the city (e.g. Bon Accord, Union Square) there is no physical vision of the kind of city centre that partners are working to achieve over the next 10-20 years. Evidence from the case studies uncovered some useful pointers in this regard:

- In **Aarhus** a vision has generally preceded development. For example, the opening up of Aarhus stream and the relocation of the port were driven by a vision of the city centre as a place for culture, retail, creative industries and civic space rather than as a location for industrial activity. The Light House project is a good example of how this visioning approach is being rolled out across the next phase of waterfront revitalisation.
- A very similar vision accompanied the relocation of the port in **Stavanger**. Again, here there was recognition of the type of residential and civic space that people were expecting to find in a modern, successful small European city.

The important aspect of developing a vision for Aberdeen city centre is that it inspires the people who may benefit from it as well as those who will be required to bring it about. Any vision should also have enough resonance that it helps drives people towards a common purpose. As with the above lesson, the best examples of visioning in practice in AC&S are from the shire, particularly the Building Buchan project.

3.5.3 Lesson 12: Attracting events

As has been discussed elsewhere, effectively marketing a city region's attractions is a key part of the strategy to compete for business investment and skilled people. From our case study cities, Calgary probably has the most advanced approach with well developed communication tools for attracting people and businesses. However our research also highlighted the importance of attracting key events (e.g. sports, music acts, and festivals) as an important mechanism for raising quality of life, diversifying the cultural offer and creating opportunities to market the city region to visitors.

- **Stavanger** has been successful in attracting a number of events which have helped to raise the city's profile. Most notably, Stavanger was chosen as the European Capital of Culture in 2008. The authorities in Stavanger have made a concentrated effort to win high profile events. Other important events recently won include the 2009 World Beach Volleyball Championship and the Bocuse d'Or Europe 2008 (Europe's foremost food and drink competition).

Attracting key events to AC&S would help to market the city to businesses, in-migrant and tourists. In addition, industry specific events would help to promote the local industry. Developing an action plan for creating and / or attracting new events to AC&S which identifies and prioritises events and lead organisations would be an important first step.

3.6 Governance

3.6.1 Lesson 13: Long term land use planning which serves the needs of key local industries, ensuring they reach and sustain critical mass

In AC&S, the energy industries are central to the region's current and future prosperity. It is also true that other industries (e.g. food and drink, life science) may come to play more significant economic roles in the future than they do now. Although such trends are market-driven the public sector can play a key role in facilitating them and enabling more efficient and more rapid growth. The case studies provide strategic examples of public sector roles in the long term planning for industry development:

- In **Huntsville**, the city council has played a key role in providing the land and infrastructure necessary for the *next* growth phase of Cummings Research Park. This forward planning to meet *future* needs was crucial in allowing the Park to upscale and reinforced the critical mass of defence-related industry in the city region. However, locally there are not concerns that Huntsville is overly dependent on defence and thereby vulnerable. There are two reasons for this. Firstly, the expansion that is being enabled by the city council is *reinforcing* the critical mass of activity in the region and the sense that Huntsville is the premiere location for defence-related business. Secondly, the investment in facilities (e.g. land, property, and logistics) has attracted a wider range of exporting businesses and encouraged existing firms to access new markets, thereby diversifying the economy.
- Similarly, city planning in **Calgary** has to some extent revolved around the emphatic growth of the energy industry. City and state government have both worked to ensure that the city's potential around energy has been achievable. This has included measures to improve workforce attraction, training and development, tax incentives to encourage in-migration and bringing forward the ring-road plans to enable up scaling of the city.

The evidence from AC&S is that growth has occurred in a less planned manner. However, Energetica is the kind of project that has the appropriate long term vision to create a more coherent contribution to long term growth in the energy industries in future. More generally, there may be need for a business-led grouping which can ensure that long term industry needs (and therefore the city region's long term future) are kept high on the agenda. Although not a case study here, there may also be useful learning from the **Committee for Perth**, Western

Australia, which is a private-led body which is influencing government to meet the long term needs of industry across SMEs and large corporations.

AC&S offers some useful learning. The key example here is Energetica which is a long term project that, if successful, will help the energy industries to attain and sustain critical mass in the region. It is also possible that agencies in other city regions may be interested in how previous structure plans have helped to create the employment land which has enabled expansion in the sector.

3.6.2 Lesson 14: Regional economic development agency with budget and powers

The findings from this research have a lot to say about joining up organisations and initiatives to create more effective and coherent economic development planning. It is therefore arguably self-evident that there will be benefits from having the main economic development functions at city region level 'under one roof'. In terms of the city region organisation of economic development functions, the creation of a regional or city level economic development agency with a budget and powers has been of significant benefit. The following are the key lessons:

- The **Greater Stavanger Economic Development (GSED)** organisation is a good example of a body that seems to have the correct combination of city region economic development powers and covers the most relevant economic area. In addition to driving and guiding the delivery of strategy, the GSED has an office in Houston to influence inward investment and effect collaboration and information sharing.
- Bristol benefits from being the undisputed regional city within the government office region area covered by the **South West Regional Development Agency (SWRDA)**. Aberdeen, on the other hand, is the third largest city in Scotland which has a total population of similar size to the South West. For Bristol, this convenience has meant that certain urban development has been concentrated in the city, to the benefit of developing new and existing industries there.
- **Calgary** is one of two cities covered by the **Alberta** State Government (indeed the State is headquartered in the other city, Edmonton) but the city council has successfully lobbied the State for the investment needed to drive its economic development. **Calgary Economic Development** was established in October 2002 to provide new leadership and a focused direction for the Calgary Region's economic development activities.
- **Aarhus Amt** was the 'old' administrative region which conveniently covered the functional economic region around the city of Aarhus. The new Regional Council covers a much larger area, which in theory could have led to some loss of focus of land use planning around city region needs. However, this does not seem to have happened and indeed the **Vækstfora** (regional growth forum) is a business-led economic development organisation which is keeping the city region's economic development needs high on the agenda.

ACSEF is a key strength in AC&S and offers the kind of joined-up economic development leadership at city region level that is not as strong in other parts of Scotland. Indeed, there would appear to be merit in considering the feasibility of augmenting the forum's current roles to develop a more effective economic development organisation for the North East.

AC&S offers some useful learning. ACSEF, as a city region level economic development partnership, may be of interest for a number of reasons; (a) its is multi-agency partnership rather than a single agency or statutory body, (b) private sector involvement is a key strength of the partnership, giving it more weight in strategy, communication and delivery and (c) the partnership has a clear and distinctive strategy.

3.6.3 Lesson 15: Lobbying national level government on place investment needs

In recent decades the city of Aberdeen has been one of the most prosperous parts of the UK and therefore has not attracted public investment in the way that many post-industrial UK cities have (e.g. Glasgow, Sheffield, and Manchester). However, this legacy of under-investment is now a concern, as competing city regions have at their core vibrant city centres, with public sector investment helping to usher in future private investment. Across the case studies, there is quite a wide variety of evidence on how national public investment priorities have been influenced:

- In **Calgary**, both State and National government have recognised the strategic importance of the energy sector, the sector's potential to fuel future growth and the significance of Calgary within this dynamic. Having won the argument about the city region's importance, State government have adopted a 10% personal tax rate and are enabling future development in the city region through infrastructure investment.
- In lobbying for investment, agencies in **Bristol** have had a couple of advantages. Firstly, the city is viewed as being crucial in the UK's aviation industry capability. This recognition has been backed up by the location of a strategic procurement agency in the region. Secondly, the city is the main centre in the South West region, which has been helpful in attracting scarce urban investment.
- In many ways **Huntsville** shares the advantages outlined in Calgary and Bristol but national support is even more assured. Huntsville role in supplying the US defence industry's needs has enjoyed cumulative reinforcement in the form of the consolidation of defence assets across the US (to the benefit of Huntsville).

Energy is a strategic industry in Scotland, as recognised by the Scottish Government and its agencies.⁸ Moreover, AC&S is the single most significant strategic location for the energy industries in Scotland, with a significant majority of economic activity in the sector being located in the region. This argument is important to the future of the region. Having reviewed examples across the case studies, there is a sense that agencies in AC&S have not yet won this argument with the Scottish Parliament. Lobbying the Scottish government is important to ensure that the potential of the energy industries to Scotland's future economy is recognised *and* that there is acceptance that this potential is inextricably associated with AC&S.

AC&S offers some useful learning. Aberdeen is the third largest city in Scotland and in recent decades has experienced levels of prosperity that are above those of other Scottish cities and levels of unemployment and multiple deprivation that are below average. Arguably the level of national funding that the city has attracted has not been sufficient, given its capacity for future growth. To this end, the work of ACSEF and local government in the region has been important to raise the profile of AC&S in Holyrood and Westminster. Agencies in other city regions may be

⁸ See for example the Government Economic Strategy, Scottish Government autumn 2007.

interested in; (a) the *arguments* agencies in AC&S are using to attract public investment (e.g. investing in potential rather than just investment where need – economic exclusion – is greatest), (b) some of the *battlegrounds* where these arguments are being played out (e.g. locating national energy institutions, attracting inward investment, immigration rules for skilled workers, oil taxation, the need for city centre investment) and (c) the *evidence* of under-investment in Aberdeen city (e.g. public realm, retail, culture) and what partner agencies are now doing about it.

3.7 Action Plan

Phase three of the study brings together all the key lessons on initiatives, projects, programmes and approaches that have played a part in economic change in the case study city regions. This evidence has been summarised in the following tables which provide an action plan to enable agencies in AC&S to establish contact with project managers, economic development agencies, industry fora and universities. The tables summarise the information discussed earlier in the report and provide recommendations based on the lessons from the five case study cities. It also includes rationale for recommendations, benefits, suggested initial actions, lead agencies, local constraints and opportunities and contact organisations. A detailed contacts database has been provided to Scottish Enterprise as a separate output.

The recently published Aberdeen City and Shire Economic Forum (ASCEF) 'building on energy' economic action plan for Aberdeen City and Shire aims to deliver the 2025 vision laid out in the economic manifesto published in the summer of 2007. The ASCEF economic action plan is fairly comprehensive. It highlights many similar themes to our research including a need to increase innovation through collaboration between universities, attracting skilled migrants to the region, business and government, increasing the status and role of AC&S as an energy capital and involving the private sector in master planning.

Based on the findings from our research on the five case study cities there are some potential gaps in the economic action plan that could benefit the AC&S economy. Although the need for increased university and business collaboration is identified in the ASCEF action plan, the partnership between universities, colleges and businesses to identify future industry skills and occupational needs and jointly develop training courses that will produce graduates to fill these needs is not specifically mentioned. There were several examples of this from the case studies including oil and gas courses in Calgary and aerospace and defence courses in Huntsville.

The ASCEF action plan highlights the importance of quality of life in driving the success and competitiveness of the AC&S economy. Place attractiveness is an important aspect of quality of life and the case studies highlighted the strategic use of waterfronts as a pleasant place to live and work. This often involved the re-location of industrial waterfront uses to make way for leisure and residential uses and the regeneration of former industrial land on the waterfront. The ASCEF action plan may want to consider measures to maximise on Aberdeen's waterfront location and increase place attractiveness. Edinburgh, Glasgow and Dundee all have ongoing regeneration and development projects on their waterfronts.

Finally, the ASCEF economic action plan identifies the need to develop a co-ordinated marketing approach for AC&S. The findings from the small and medium cities research indicate that city branding is important; Huntsville as Rocket City, Calgary as Canada's Energy Capital and Stavanger as the Energy Capital of Norway. The ASCEF action plan may benefit from considering a branding approach for Aberdeen. In addition, a co-ordinated strategy to identify

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and target specific events to bring to Aberdeen will help raise the city's profile and may be worth considering in the economic action plan.

Figure 3.1: Business base

#	Lesson	Recommended AC&S initiative(s)	Rationale	Objective	Benefits	Initial actions	Location(s)	Lead	Time-scale (S, M, L)	Local constraints	Local opportunities	Contacts
1	Public sector-led regional innovation system	Develop regional innovation partnership	Innovation is currently sporadic and uncoordinated	To raise level of innovation activity across all key sectors in AC&S	Raise awareness of imperative to innovate; new product development; synergies; improve attractiveness as business location	Talks to scope out type of body required	City and 1-3 shire towns	Scottish Enterprise	M	Lack of higher education presence in shire	Two universities with innovation agendas; range of key sectors across city and shire;	IRIS Stavanger; Southern England Technology Triangle; Østjysk Innovation A/S' (Innovation Institute)
2	Permitting growth to enable clusters to reach critical mass	Ensure all relevant strategies and the Structure Plan prioritise needs of key industries	All case studies (with exception of Aarhus) feature a sector which has reached critical mass and has received support to do this.	To enable energy (especially renewables) to reach critical mass	Long term economic sustainability and competitiveness of the region; jobs growth; compelling attraction to businesses; attracting skilled workers	Audit current and emerging strategies for extent to which they enable growth of key industries; building alliances to strengthen key industry support	City and Shire	ACSEF	M	Balancing with environmental and social objectives	ACSEF is agreed by all key agencies and has private sector support;	South West Regional Development Agency; Greater Stavanger Economic Development; Chamber of Commerce of Huntsville; Calgary Economic Development
3	Multi-faceted Industry collaboration	Expand role of Grampian Food Forum	In Aarhus and Stavanger support for food and drink sector was broader	To grow the food and drink industry more rapidly	Raise productivity and growth in the sector; raise profile of sector; attract investment; encourage start ups	Scope out new roles	Shire	Grampian Food Forum	S	Currently lack of collaboration across marketing, skills development, innovation and exporting	Forum is an established body; large local firm base; high profile & large companies	Culinary Institute of Norway; Norconserv AS; Schlumberger Stavanger Research Centre; Aerospace Innovation & Growth Team

Figure 3.2: People

#	Lesson	Recommended AC&S initiative(s)	Rationale	Objective	Benefits	Initial actions	Location(s)	Lead	Time-scale (S, M, L)	Local constraints	Local opportunities	Contacts
4	Attracting skilled in-migrants	Develop joined-up strategy for increasing skilled in-migration	Case study city regions (esp. Calgary) have more forceful and multi-dimensional methods of attraction	To increase inflow of skilled in-migrants to reduce skills shortages	Reduced skill shortages; firm growth; higher employment; population growth; urban and rural renaissance	Develop website; influence national skilled in-migrant occupational priorities	City focus	Local Government	M	Lack of cultural, retail and quality of life offer in city	High demand for skilled workers; local earnings levels;	Calgary Economic Development; Municipality of Aarhus / University of Aarhus; City of Huntsville Council
5	Developing competitiveness around quality of life offer	Create and market strong brand for AC&S as region focused on high quality of life	Case studies (esp. Aarhus) have used quality of life as key differentiator in city-region branding and marketing	Influence perceptions about what AC&S is all about	Higher in-migration; attracting events; tourism growth; attract investment	Establish partnership group; target events to attract / create;	All areas	Local Government	M	Tourism accommodation	Fits with ACSEF strategy; partners are already moving in this direction	Municipality of Aarhus; City of Huntsville Council; Bristol City Council
6	University-business collaboration on skills supply	Develop working group around priority occupations	In the case studies, there were numerous examples of collaborations based on key industry needs	To identify priority skills requirements and how to deliver them	In-migration; teaching relevance; identification of training needs	Set up working group	City	Employers / ACSEF	M	Lack of collaboration currently	ACSEF; local universities; high demand for labour	West of England Aerospace Forum; Calgary Works; Alabama Industrial Development Training (AIDT) program

Figure 3.3: Infrastructure

#	Lesson	Recommended AC&S initiative(s)	Rationale	Objective	Benefits	Initial actions	Location(s)	Lead	Time-scale (S, M, L)	Local constraints	Local opportunities	Contacts
7	Mixed use of city waterfront areas	Seek opportunities to use available waterfront land to invest in quality of life, leisure and public realm assets	In all coastal case study cities, waterfront revitalisation has been a key trend (facilitated by relocation of port facilities)	Help to rejuvenate city centre and change perceptions of city	Visible evidence that city is under going transformation; in-migration; visitor growth; industry development (tourism, retail, culture, construction)	Scoping plan	City centre	Scottish Enterprise (supported by City Council)	M-L	Port is currently extensively used commercially	Harbour-side is centrally located in city; demand for city apartments;	Greater Stavanger Economic Development; South West Development Agency; Municipality of Aarhus
8	Long term infrastructure planning	Identify 2-3 key projects that would transform AC&S capacity for growth in 20-30 years time	Evidence from Huntsville, Calgary and Stavanger of public and private sectors taking long term view on needs	To create clear signal to private sector of investment plans	Market has some certainty; public sector agencies have common vision;	Review current projects; identify gaps and ideas to take forward	City and main growth corridors	ACSEF / NEST	M	Administrative boundaries; political issues	Some agreement of current priorities	Aarhus Amt Central (Regional Council); City of Calgary Council; City of Huntsville Council; South West Regional Development Agency
9	Mixed-use strategic sites	Deliver <i>Energetica</i>	The case studies provide plenty of evidence that such mixed-use, ambitious initiatives can be transformational in their impacts	To significantly raise the economic potential of AC&S	Enable energy sector to reach critical mass; create compelling business location; grow tourism sector; enhance quality of life offer; in-migration	As per plans	As per plans	As per plans	L	Investment	Much of the planning and partnership infrastructure is in place	Cummings Research Park; Cabot Circus; Stavanger Innovation Park; Science Park Aarhus

Figure 3.4: Quality of life

#	Lesson	Recommended AC&S initiative(s)	Rationale	Objective	Benefits	Initial actions	Location(s)	Lead	Time-scale (S, M, L)	Local constraints	Local opportunities	Contacts
10	City centre investment	Create 20 year investment plan	In all coastal case study cities, the city centre has experienced broad-based investment (linked to waterfront regeneration)	To engender a step change in the facilities, the industries and the liveability in the city centre	Attract companies and people; retain and capture visitor and retail spend; revitalise tourism	Identify private sector partners	city	City Council	M	Public funding	Broad consensus on the city centre needs	Municipality of Aarhus; City of Huntsville Council
11	City centre vision	Develop and communicate inspiring vision for the city	City centre is recognised as strategic weakness in regional offer	To create inspiring vision of what centre city will be like in 10-20 years time	Clear signal to private sector; inspire residents; help to attract new in-migrants; influence tourism market	Create coherent masterplan and vision for city	city	City Council	M	none	Support from ACSEF manifesto	Municipality of Aarhus; Bristol City Centre
12	Attracting events	Develop an action plan for creating and / or attracting new (to City and Shire) events	Small cities such as Aarhus and Stavanger have 'punched above their weight' in attracting events, helping to drive cultural offer	Help to influence perception of what Aberdeen City and Shire can provide and host	Increased visitor spending; influencing perceptions of potential in-migrants; develop new niches in the economy	Target events to attract	city and shire	City and Shire Councils	S-M	Marketing funding	Visitor accommodation; conference venues; international airport	Municipality of Aarhus; Greater Stavanger Economic Development

Figure 3.5: Governance

#	Lesson	Recommended AC&S initiative(s)	Rationale	Objective	Benefits	Initial actions	Location(s)	Lead	Time-scale (S, M, L)	Local constraints	Local opportunities	Contacts
13	Long term planning around needs of key industries	Create high level private sector executive group which influences public policy	In places such as Calgary, long term planning revolves around envisaged growth of energy sector (also true of Huntsville)	To develop a vision and strategy that enables a planned progression to highly competitive key industries	All relevant strategies based around industry needs; private sector leading on what needs to be done	Establish group remit; recruit to group; design agenda	City	Private sector / ACSEF	M	Much strategy is public -led at present	ACSEF already in place with private sector engagement	Chamber of Commerce of Huntsville; Greater Stavanger Economic Development
14	Regional economic development agency	Strengthen ACSEF's role as the economic development agency for the city and shire	Many of the case studies have dedicated economic development agencies at city region level, driving strategy and key initiatives. In AC&S this is arguably a more dispersed activity.	Create a single agency with key roles and powers to effect economic development	Higher profile and greater influencing power; single voice for city region; single entity to run key initiatives (e.g. broker university-business collaborations around skills)	Scope out nature of enhanced role	City and Shire	ACSEF	S-M	Economic development is currently dispersed; Scottish Enterprise re-organisation	Acceptance of city region as relevant, functional area	Huntsville Regional Economic Growth Initiative; Greater Stavanger Economic Development; Vækstfora (regional growth forum - Aarhus)
15	Lobbying national government on investment needs	Councillor grouping to lobby governments with specific, private sector-backed agenda	AC&S lacks the state level powers that the Alberta government has used to good effect in Calgary. Lobbying for national funding is a second best option.	To secure greater funding for region and recognition of key role in national economy	Higher investment; greater practicability of key projects; higher profile	Convert ACSEF manifesto into agenda for lobbying governments	City and Shire	Local Government / ACSEF	S-M	Local Authority boundaries	ACSEF manifesto	City of Calgary Council; Greater Stavanger Economic Development; Municipality of Aarhus; City of Huntsville Council

