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Abstract	The role of universities and university researchers in fostering communities and regional development has been discussed at the academic and policy level for the past 30 years. The involvement of universities with their region has been seen as a positive factor for economic development and widening participation in the region. At the same time, the need for a dialogue with the public and public participation in science have been seen as crucial for the public understanding, legitimisation and advancement of science. Accordingly, third mission, civic outreach or public engagement roles are increasingly being institutionalised. However, a successful model of public engagement is crucial for positive results, for both academics and communities. This document presents a case study of engagement activities at the University of Nottingham. It contends that successful engagement depends on the university's culture, organisation and policies as well as on the public's response to scientific research.

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GLOSSARY

BIS	Department for Business, Innovation and Skills
CASE	Collaborative Awards in Science and Engineering
CKE	Centres for Knowledge Exchange
CRD	Collaborative Research and Development
DfEE	Department for Education and Employment
DfES	Department for Education and Skills
DIUS	Department for Innovation, Universities and Skills
DTI	Department of Trade and Industry
ECIF	Economic Challenge Investment Fund
EI	Economic Impact
emda	East Midlands Development Agency
EPSRC	Engineering and Physical Sciences Research Council
ERDF	European Regional Development Fund
EU	European Union
GDHI	Gross Disposable Household Income
GO	Government Offices
HEACF	Higher Education Active Community Fund
HE-BCI	Higher Education and Business Community Interaction
HEFCE	Higher Education Funding Council for England
HEFCW	Higher Education Funding Council for Wales
HEI	Higher Education Institutions
HEIF	Higher Education Innovation Fund
HERA	Higher Education Regional Associations
HERDF	Higher Education Regional Development Fund
HEROBC	Higher Education Reach-Out to Business and the Community
KE	Knowledge Exchange
KTN	Knowledge Transfer Networks
KTP	Knowledge Transfer Partnership
LEP	Local Economic Partnership
NCCPE	National Co-ordinating Centre for Public Engagement
NHS	National Health Service
NTU	Nottingham Trent University
OECD	Organisation for Economic Co-operation and Development
OST	Office for Science and Technology
PE	Public Engagement
PTP	Post-graduate Training Partnership
QMC	Queen's Medical Centre
R&CF	Restructuring and Collaboration Fund
RCUK	Research Councils UK
RDA	Regional Development Agency
REF	Research Excellence Framework
SDF	Strategic Development Fund
SE	Social enterprise
SEA	Social Enterprise Award
SEC	Science Enterprise Challenge
SFC	Scottish Funding Council
SME	Small and Medium-sized Enterprises
TCS	Teaching Company Scheme
TSB	Technology Strategy Board
UCF	University Challenge Fund

1 INTRODUCTION

Policy makers and academia are increasingly discussing the role of universities in engaging and fostering communities and regions (e.g. Etzkowitz et al. 2000; Arbo and Benneworth 2007). The policy discourse on engagement was long dominated by knowledge and technology transfer objectives that stressed the importance of university-business links and commercialisation of university research for wealth creation and regional economic development (Etzkowitz et al., 2000). The science communication discourse, on the other hand, focussed on public understanding of science and the problem of communicating academic research and engaging the wider public (Pieczka and Escobar, 2013). The two discourses are merged in recent years with an increasing emphasis on "third mission", outreach and engagement that is inclusive of all publics (civic and business) and research areas (humanities and sciences).

Theory and policy that encourages the university's engagement with a non-academic community expects a positive link between invested resources, the expertise of public engagement professionals, the level of university contribution, and economic growth and participation in the region. Similarly, theory also predicts a positive correlation between engagement and research and teaching. Dialogue with the public (civic and business) could help develop new lines of research, especially research close to the needs of society, and could help better react to teaching requirements. It is thus in the interest of policy and academia to adopt a successful public engagement model that will have a positive effect on the region and on the research strength of the university.

However, a precise understanding of universities' third mission in regions is still missing in the literature, as well as amongst academics and engagement professionals. In the past few years several reports were issued that all found that existing university structures and cultures inhibit public engagement (BIS, 2010). The Royal Society's report 'Survey of factors affecting science communication by scientists and engineers' found that many researchers had too little time outside research to dedicate to engagement activities and that such activities were less well regarded (Royal Society, 2006) and little encouraged due to the negative effect they may have on academic careers (Burchell et al., 2009). This paper aims to provide a nuanced view of public engagement by discussing external and internal factors. It looks at engagement activities at the University of Nottingham including research interactions with external organisations, business formation, school outreach and contacts to the voluntary and community sector. It follows prior work on the engaged university, which contends that successful engagement depends on the university's culture, organisation and policies as well as on the public's need for scientific research (Bretznitz and Feldman, 2012).

The paper is organised as follows: Section 2 discusses theories and prior research on public engagement and third mission considering both community and business engagement. Section 3 gives an overview over the methodology, and section 4 discusses national and regional-level policies contributing to the university's third mission as well as intra-university factors, including culture and organisation. Finally the paper discusses and concludes.

2 THE ENGAGED UNIVERSITY

2.1 CONCEPTUAL MODEL

Various authors have discussed the new role of the university that has emerged alongside research and teaching (Goddarrd and Chatterton, 1999; Etzkowitz et al. 2000), and several competing models have appeared in the literature (see Uyarra, 2010 for a review). Most of these theories focus on the commercial or entrepreneurial role of the university and see collaboration with industry, knowledge transfer or commercialisation as the main emerging missions (Uyarra, 2010). The concept of the engaged university, or engaged scholar, instead aims to understand the university's role in the region and in regional development (Boyer, 1996; Chatterton and Goddard 2000; Uyarra 2010). It sees the university as crucial for local development that goes beyond knowledge generation but requires interaction and responsiveness towards regional needs (Boyer 1996; Gunasekara, 2006). The engaged university is perceived as contributing to local society and culture which results in a more vibrant cultural landscape (Boucher et al., 2003) and shapes regional identity (Breznitz and Feldman, 2012). Chatteron and Goddard (2000) call them 'regional animators' in an economic, social and cultural sense. If universities reanimate their regional role, they would no longer be viewed as ivory towers but "as staging ground[s] for action" (Boyer, 1996: 32).

The engaged university in the most general terms thus describes transactions between a university and its region. These transactions may differ but aim to reinforce the developmental role of the university with benefits for both, the university and its region. Several authors have looked at the factors that drive universities' engagement with the region and have identified a series of facilitators and barriers. Firstly, universities are complex institutions with their own culture and incentive structure and goals beyond regional development that may affect their capability to engage with the region. Secondly, regions face the challenge of engaging universities in the various aspects of regional development processes (innovation, education and culture) with its various private, public and civic actors (Chatteron and Goddard, 2000).

Figure 1 shows the conceptual framework of the engaged university that incorporates the processes that affect engagement within the university, within the region as well as external factors that need to be considered. Gunasekara (2006) found that a university's culture, expressed in its mission and history, is important for explaining its engagement in the region. Older, more traditional universities are less engaged than new institutions, perhaps because they are more concerned with national and international university rankings rather than their regional development role (Boucher et al., 2003). Gunasekara (2006) also points at the importance of engagement champions or advocates in furthering the engaged university.

In the region, the level of regional control and funding power positively affects university engagement, as does regional identity (Boucher et al., 2003). However, existing regional structures could also inhibit new collaborations. Regional actors may already be organised in collaborative and development projects and university involvement may be seen as disruptive. Gunasekara (2006) further points out the different requirements for university engagement depending on the types of regional actors and their demands. Not all actors have the ability or need for university led development. In fact, many local actors are reluctant to engage with universities (Gunasekara, 2006) or lack the capacity for engagement (OECD, 2007).
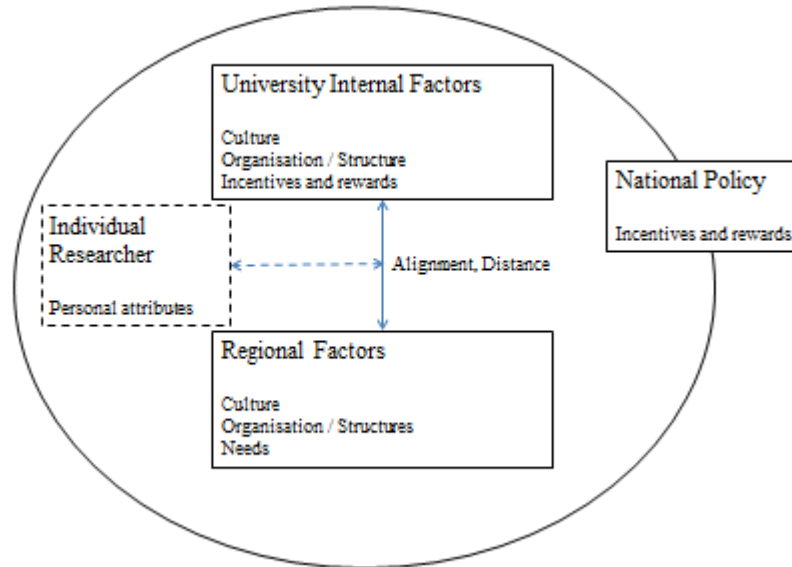
FIGURE 1: ENGAGED UNIVERSITY MODEL

Further, the two need to be well aligned. Subject complementarity between universities and regions is crucial for engagement as is the university's location in relation to potential beneficiaries (Gunasekara, 2006). Overall the enabling ability is greater in remote, non-core regions where universities are more likely to play an important animating role (Boucher et al., 2003).

The relationship between universities and their regions is further explained by policy conditions (Gunasekara, 2006), and financial incentives are crucial to make engagement a priority (Boucher et al., 2003), but are often inadequate (OECD, 2007). The European Union (EU) structural fund has been described as particularly vital in driving the policy focus from national to regional topics (Uyarra, 2010), though the report of the Organisation for Economic Co-operation and Development (OECD, 2007) remarks that national and international policy is poorly supported at the regional level. Moreover, in the UK, funding is based on research quality assessment which is often described as being in conflict with engagement activities (Boucher et al., 2003).

However, the few successful cases of engagement are usually small scale and initiated by individual researchers and not the university, the region or through national policy (OECD, 2007). These individuals are driven by their goal to further research and to provide community service (Wigren-Kristoferson et al., 2011). Individual attributes are thus crucial for furthering engagement activities and in shaping future policy for a scholarship of engagement.

While all four elements for successful engagement can be identified, they are difficult to align. For too long, universities have encouraged 'disengagement' and Boyer (1996) calls for a return to the historic civic mission of the university where civic and university lives are inseparably linked. Uyarra (2010) argues that other university functions, i.e. teaching and research, could be better aligned to regional development through joined-up policies. For example, a regional focus could be embedded in all key functions of academic work. However, it is not clear how universities can integrate these different functions effectively (Trippl et al., 2012). Changes in student and academic populations that are highly international have created a distance to regional issues (Trippl et al., 2012). Indeed, Uyarra (2010) notes that universities "pay lip

service to regional engagement [...] without evidence of a clear commitment and effective coordination between this and other objectives" (p.1240). Moreover, an individualistic culture and reluctance of academic staff to participate in engagement activity (Gunasekara, 2006) combined with leadership constraints, complex organisational structures and inadequate funding (OECD, 2007) limits engagement initiatives. Gunasekara (2006) further notes that governments overestimate universities' ability to realign to national policy.

2.2 ENGAGEMENT ACTIVITIES

The rich resources of the university can be used in a variety of communities and address a variety of problems. As such, engagement is not a third mission but an element of the existing roles of the university, i.e. teaching and research, and a regional role could be embedded in the system. However, most empirical studies of the university's engagement mission have focussed almost exclusively on commercialisation through spin-off and patents. Other studies have put an emphasis on collaboration with industry and business consulting, but little attention has been given to engagement with a non-business community, e.g. charities, schools and museums, and other, non-commercial forms of public engagement: e.g. informal advice and public lectures. Abreu and Grinevich (2013a), in a survey of 20,000 UK academics, find that these non-commercial activities are more widely spread amongst academics than commercial activities. More than half their sample state that they provided informal advice and 38% state that they gave public lectures during the period 2005 to 2008. In a second paper based on the same data they show that interactions with the public (52%) and third sector (44%) are more widespread than interactions with the private sector (40.5%), especially in health sciences, education, humanities and the social sciences (Abreu and Grinevich, 2013b).

Table 1 gives an overview over the dimensions of engagement and regional development, following McLean et al. (2006), who provide a typology of engagement activities that are linked to the university's traditional missions, research and teaching. It also follows Tripple et al. (2012) who stress the regional developmental role of the university. In addition to research and teaching, universities can be seen as service providers. They have a history of providing facilities and other non-research or teaching related services which are often not considered in empirical analysis. These include medical services and expert advice. The three columns thus describe the two primary missions of the university, teaching and research, supplemented by a third element: service provision. The three rows describe three different regional publics: the professional sector, the education sector, and the voluntary and culture sector. We do not differ between private, public and third sector as all three overlap heavily in the types of services they use. For example, all three sectors are highly professionalised, commission research collaborations and attend training activities.

TABLE 1: REGIONAL ENGAGEMENT ACTIVITIES

Engagement	Teaching	Research	Service
Regional Business, Government and Charities	Executive education/ employee training Student placements and collaborative teaching programmes Start-up training	Contract research or research support Commercialisation of research Collaborative research and knowledge transfer Presentations and publications for professionals Secondments/ staff exchange	Consulting and policy advice New business development/start-up grants Providing facilities and conference space Clinical services
Local Schools and Colleges	Regionally focussed education Local recruitment School presentations, activities and competitions	Teacher advice and dialogue	
Local Voluntary Organisations and the Community	Continuing education Student placements	Community-based research Exhibitions and performances Research demonstrations / Public lectures Publications for general public	Expert testimony Contributing to external boards, commissions, and community-based organisations Maintaining and contributing to local libraries, museums, galleries and theatres Providing public space and facilities

3 METHODOLOGY

This study analyses public engagement at a university. It looks at the University of Nottingham, one of the top-10 research universities in the UK, which has been awarded sponsorship as one of six institutions to pilot public engagement within their organisation as part of the Public Engagement with Research Catalysts project of the Research Councils UK (RCUK). The initiative is directly aimed at creating a culture of public engagement for research. As a consequence, public engagement is currently being restructured in the university. Thus, the University of Nottingham can serve as an example for developing and integrating public engagement at the institutional level and the effectiveness of these activities can be evaluated.

Following the conceptual model we collect data on the different factors explaining public engagement. Information on national policy and regional factors is assembled from various government websites and reports; information on university internal factors including university culture, public engagement policy and organisation is taken from university websites and other publications. Additionally this study uses data from the Higher Education and Business Community Interaction (HE-BCI) surveys to highlight some of the recent developments at the university.

As a final step we evaluate whether and how national policy has been adapted at the University of Nottingham and how well the region and the university are aligned in their support of engagement activities.

4 PUBLIC ENGAGEMENT AT THE UNIVERSITY OF NOTTINGHAM

4.1 NATIONAL POLICY

The development of public engagement activities at the University of Nottingham corresponds primarily to national policy and funding incentives. Several White Papers and policy reports stressed the importance of societal impact and responsiveness to societal needs. These reports referred to a "third mission" of the university that included public engagement and commercialisation. The Dearing Report (NCIHE, 1997), incidentally led by the chancellor of the University of Nottingham, Sir Ronald Dearing, first stressed the importance of universities for "regional and local economic development", including their contributions to culture and citizenship. It further emphasised that "each institution should be clear about its mission in relation to local communities and regions" and should make its teaching available to businesses as well as foster entrepreneurship. An innovation agenda and drive for technological responsiveness was further stipulated in the White Papers 'Excellence and Opportunity' (DTI, 2000) and 'Enterprise Skills and Innovation' (DTI/DfEE, 2001). The role of universities in economic development was particularly stressed in the Lambert Review (HM Treasury, 2003), which offered a more comprehensive strategy for fostering knowledge exchange. At the same time the White Paper on 'The Future of Higher Education' (DfES, 2003) again emphasised the role of universities in regional, social and economic development and in reaching out to the regional economy and the wider community. These reports raised awareness of the importance of knowledge exchange and engagement amongst university managers and helped to establish them as a third mission of universities.

In addition, government backed its campaigns with financial resources, providing incentives to universities to move in its policy direction (Tapper, 2007). The Higher Education Funding Council for England (HEFCE), the governments Office for Science and Technology (OST) and the research councils made funding dedicated to such third stream activities available and stressed the importance of knowledge exchange and engagement for funding success. Table 2 gives an overview over the different government and HEFCE third stream initiatives in England since 1997.

In 1997 HEFCE introduced the Restructuring and Collaboration Fund (R&CF) to support structural change at universities in England. It was replaced by the Strategic Development Fund (SDF) in 2003 and the Catalyst Fund in 2012. Funds were made available for higher education development projects, including regional development and knowledge exchange activities, student and employer engagement and life-long learning. In 1999 the government further set-up the Higher Education Reach-Out to Business and the Community (HEROBC) Fund, the University Challenge Fund (UCF) and the Science Enterprise Challenge (SEC) to encourage knowledge exchange in the region. These were primarily aimed at innovation and technological responsiveness. To promote voluntary activity the government also launched an Active Community initiative in 2001. As part of this HEFCE announced its Higher Education Active Community Fund (HEACF) intended to enhance universities' role in their local communities through volunteering. This funding was also in line with their Widening Participation in Higher Education strategy (HEFCE, 2001).

Since 2001, HEFCE provides funding for knowledge exchange activities through the Higher Education Innovation Fund (HEIF). In first rounds funding was distributed based on competitive bidding for specific projects. These included the setting up of Centres for Knowledge Exchange (CKE) during HEIF2. However, the project-based nature of these grants

made a long-term engagement strategy difficult. As a consequence, the HEIF funding provision was gradually changed towards formula-based allocation for capacity building across all higher education institutions (HEI). Following the financial crisis in 2008-09 the pressure on the higher education sector for accountability further increased and resulted in funding council awards based on performance (HEFCE, 2008). The criteria for third mission funding (i.e. HEIF) were linked to the HE-BCI survey, an annual survey conducted since 2001, taking into account third stream income, university mission statements and non-commercial activities. The focus of HEIF moved from innovation in knowledge exchange to capacity building and finally successful delivery in HEIF5 (HEFCE, 2011a). In addition to existing innovation and structural change initiatives HEFCE launched the Economic Challenge Investment Fund (ECIF) in 2009 to boost links between universities and local industry after the economic crisis and to provide training.

In 2007 the government further set up the Technology Strategy Board (TSB) to coordinate knowledge exchange activities between university and industry (effectively replacing OST), through for example facilitating links between sectors and providing funding for university start-ups. It reports directly to the Department for Business, Innovation and Skills (BIS). It has developed several programmes, including the Collaborative Research and Development (CRD) projects. In addition it oversees the Knowledge Transfer Networks (KTN, previously Faraday Partnerships) and the Knowledge Transfer Partnership (KTP, previously Teaching Company Scheme (TCS)) which facilitate collaboration and graduate training.[1] KTP specifically focuses on small and medium sized enterprises (SMEs) which in 2006 were involved in 80% of the programmes (DTI 2003, TSB 2007). Through these it complements HEIF support for knowledge exchange. DfEE also sponsored a series of employer-led partnerships between SMEs and universities aimed at graduate students during the late 1990s (Potts, 2001). These schemes have continued to date but have mostly been moved to local or regional authority level.

Recently, the government has shifted its attention towards communities and public engagement. In the 2008 consultation paper 'A Vision for Science and Society', it calls for "high-quality science engagement with the public on all major science issues" (DIUS, 2008: 6). It recognises the public's need for early stage research information and stresses that it wants to provide "people of any age with access to scientific resources and information" (DIUS, 2008: 8). In 2008, the UK funding councils and RCUK launched a public engagement pilot scheme that awarded four year grants Beacons for Public Engagement to six regions in the UK. As part of the initiative the National Co-ordinating Centre for Public Engagement (NCCPE) was established in 2008. Universities can sign up to its manifesto and receive support to engage with the public. HEFCE further launched a Social Enterprise Award (SEA) in 2012 to support universities in developing a structure for social ventures. RCUK sponsored a second round of public engagement initiatives, Public Engagement with Research Catalysts, which started in 2013 supporting six UK universities for a two year period. Their focus is specifically on engagement with the wider community and voluntary sector in the region.

National policy and funding over the past 15 years have had an impact on how universities perceive their local role (PACEC, 2009). This was possible primarily due to the development of "a link between government funding and the pursuit of its desired policy goals" (Tapper, 2007: 157). Regional and economic impact assessment is further added to research evaluation which

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[1] Graduate training and internship schemes have been pursued by the Engineering and Physical Sciences Research Council (EPSRC) since well before the recent wave of engagement activities and government reports. They included the TCS, set up in 1975 (and replaced by KTP in 2003) providing student internships; the Post-graduate Training Partnership (PTP), set up in 1992 and aimed at PhD students; and Collaborative Awards in Science and Engineering (CASE) a PhD research training grant set-up in 1994.

forms the basis for quality related funding from the funding councils. Third mission activities are thus gradually included into the core funding of universities (HEFCE, 2011b).

TABLE 2: GOVERNMENT AND HEFCE HIGHER EDUCATION THIRD STREAM INITIATIVES

Year	Programme	Sponsor	Funding and number of projects	Allocation	Objective
1997-2003	R&CF	HEFCE	£85m; 96 projects	competitive	Economic Impact (EI) capacity building
2003-2012	SDF (prev. R&CF)	HEFCE	£40-50m annually	competitive	EI capacity building
2012-2013	Catalyst (prev. SDF)	HEFCE	£50m; 56 HEI	competitive	EI capacity building
1998-2004	UCF[1,2]	DTI/OST, Wellcome Trust, Gatsby Found.	£45m; 19 funds, 57 HEI	competitive	Knowledge exchange (KE) project
1999-2004	SEC[1,2]	DTI/OST	£44.5m; 12 centres, 55 HEI	competitive	KE project
1999-2004	HEROBC[3]	HEFCE, DTI, DfEE	£83m; 137 awards	competitive	KE capacity building
2000-2004	HEIF 1	DTI/OST, HEFCE, DfEE	£78m; 89 awards	competitive	KE project
2004-2006	HEIF 2	DTI/OST, HEFCE, DfEE	£187m; 124 awards (incl. 22 CKEs)	competitive	KE project
2006-2008	HEIF 3	HEFCE, OST	£164m; 133 HEI £53m; 11 projects £17m; CKEs	formula based competitive	KE capacity building
2008-2011	HEIF 4	HEFCE, DIUS	£396m; 129 HEI £8m; CKEs	formula based	KE capacity building
2011-2015	HEIF 5	HEFCE	£601m; 99 HEI	formula based	Successful KE delivery
1997-2004	Faraday Partnerships [1,4]	DTI/OST, RCUK	£15m; 24 partnerships	competitive	KE project
2003-2007	KTP[1]	DTI/TSB		competitive	KE project
2003-2007	KTN[1]	DTI/TSB, RCUK	15 partnerships		KE project
2007-2013	KTP[1] CRD[1] KTN[1]	TSB	£175m (to HEI) £184m (to HEI) 15 partnerships	competitive	KE project
2009-2010	ECIF	HEFCE	£28m, 78 proposals	competitive, formula based	KE, EI and Employer engagement delivery
2001-2006	HEACF	HEFCE, DfES	£37m, all HEI	formula based	KE volunteering projects
2008-2011	Beacons PE[1]	HEFCE, SFC, HEFCW, RCUK, Wellcome Trust	£9m; 6 awards, 13 HEI	competitive	Public engagement (PE) capacity building
2012-2013	SEA	HEFCE	£2m; 56 HEI	competitive	Social enterprise (SE) capacity building

[1]UK wide programmes; [2]incorporated into HEIF2; [3]incorporated into HEIF1, [4]incorporated into KTN

Sources: http://www.hefce.ac.uk; www.dti.gov.uk; www.innovateuk.org; SQW (2005)

4.2 REGIONAL FACTORS

4.2.1 REGIONAL CAPACITY

University engagement in the region is not driven by national policy alone. Requirements and capacity for engagement in the region are also crucial to allow universities to take up their new role (Gunasekara, 2006, OECD, 2007). The University of Nottingham is a campus university in the city of Nottingham in the East Midlands. Nottingham is a small city with defined boundaries and a resulting small population of 300,000. However, the metropolitan area of Nottingham comprises a population of 730,000, and the East Midlands a population of more than 4.5 million and one of the lowest population densities amongst English regions (HEFCE, 2012). Nottingham is home to two universities, the University of Nottingham and Nottingham Trent University (NTU) with a further 7 universities in the East Midlands region. The two Nottingham universities are the largest universities in the region (HEFCE, 2012).

The region fares well economically but with a large internal disparity and a declining manufacturing sector. Labour productivity in the region has declined since 2006, more than in any other region in the UK (ONS, 2013a) and is particularly low in Nottingham. Also the gross disposable household income (GDHI) is much lower in Nottingham with a level well below the UK average and little increase since 1997, while South Nottinghamshire with a GDHI of £16,318 in 2011 is almost equal to the UK mean value (ONS, 2013b). The East Midlands region has a large student body but has the highest net graduate export rate amongst the English regions. Only 41% of graduates stay in the region (HEFCE, 2012). The proportion of the East Midlands' working population with a higher education degree was 26.5% in 2009 (up from 23.4% in 2002 (HEFCE, 2004)), below the UK average of 30% (HEFCE, 2012). The share of low-skill labour force is the highest in England with 12.8% in 2012, which primarily reflects the demands of the local manufacturing industry. Unemployment rates in the East Midlands are moderate but in Nottingham the rate was 13.5% in 2012, 5.7% above the England mean and much higher than the surrounding Nottinghamshire and Derby regions (ONS, 2013a). Nottingham also has the highest levels of deprivation within the East Midlands with 60% of its areas receiving the lowest rating (Beaumont, 2009). The relative disadvantage of Nottingham makes the University an important actor for regeneration and development but may also increase the hurdles for engagement between university staff and local population.

Economically, the East Midlands have historically been associated with manufacturing, which still contributes to 16% of economic output in 2010 (a decline by 7 percentage points since 2003). It is home to Rolls Royce and other engine and train manufacturers. Another large employer in the area is E.ON UK, the primary electricity generator and provider for the East Midlands. The region further has a rich mining history and UK Coal, the largest coal mining producer in the UK, and the British Geological Survey (BGS), the UKs public geoscience research centre, are located near Nottingham. Thus, the major research intensive industries in the area are in engineering, specifically manufacturing and mining engineering as well as aspects of energy engineering. Nottingham is moreover a centre for healthcare industries, being the site of Boots, a primary healthcare chain and former drug manufacturer, as well as major UK optician service companies. Though these companies are not themselves research active, there is a demand for healthcare research, especially since the establishment of the Queen's Medical Centre (QMC) in 1977, which is maintained jointly by the National Health Service (NHS) and the University of Nottingham and one of the largest hospitals in the UK. Through the engineering and health care sectors there is a strong need for university knowledge from within local industry and the public sector.

4.2.2 REGIONAL CONTROL, DEVELOPMENT AND IDENTITY

University engagement is further driven by the level of regional control and funding power, as well as regional identity (Boucher et al., 2003). The UK is a highly centralised country with the central government making most decisions and allocating most knowledge exchange funding. However, the Maastricht Treaty encouraged the creation of regional boundaries and in 1994 the UK government created Government Offices (GO) for its English regions, including the East Midlands.[2] As part of this devolution and a stronger focus on regional development, DfEE introduced the Higher Education Regional Development Fund (HERDF) in 1997 to support regional development projects involving universities (Irving et al., 1998). The funding was allocated to the respective GOs. In 1998 the Regional Development Agencies (RDA) Act established RDAs to support regional knowledge exchange and economic activities. HEI were represented on the RDAs and the HERDF was merged into RDA funding (Potts, 2002). To further strengthen its role at the regional level the Higher Education Regional Associations (HERA) were established in 2000 to promote the role of universities in the local area. The English regions are also considered NUTS 1 regions and the EU provides funding for knowledge exchange and innovation in the region through the European Regional Development Fund (ERDF).

Despite the establishment of an East Midlands region in 1994, initially less regional collaboration happened compared to other English regions as it does "not have a particular identity or coherence and … major EU Structural Fund or similar opportunities have not provided the catalyst for cohesion" (Brown, 1998). In addition, regional links are not backed up historically. Townsend (2006) investigated the historic East Midlands region and found that unlike other areas of the UK, industrialisation did not result in regional integration and identity. She concludes that the unusual dominance of three county towns hindered the development of a single region. Thus, an East Midland identity is none-existent as such. Instead, counties and cities in the East Midlands region think of themselves as separate local entities (THE, 1998). Still, funding changes led to some engagement between the different universities and with the region (THE, 1998).

The East Midlands Development Agency (emda) formed in 1999 and was situated in Nottingham. Emda sponsored various collaborative and knowledge transfer programmes within the region through, for example, its innovation network initiatives (iNet). University centred initiatives established through emda include the Lachesis Fund created in 2002, which provides seed funding for spin-offs by universities in the East Midlands. Further, with funding from emda and ERDF, BioCity Nottingham, the UKs largest bioscience park, based on the site of the former Boots research laboratories[3], was established in 2003 jointly by the University of Nottingham and NTU and is home to more than 80 companies. Emda was also involved in the financing of the Manufacturing Technology Centre, which was established in 2010 to bridge the gap between industry and science and works with the Universities of Nottingham, Loughborough and Birmingham and leading engine manufacturers, including Rolls-Royce. In addition emda provided sponsorship for various public events that aimed at engaging universities with local

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[2] Other public services that were re-organised to match these new regions included the NHS strategic health authorities established in 2002 and abolished in 2013. The five East Midlands local police forces have resisted reorganisation but have formed voluntary collaborations starting in 2002. The BBC created BBC East Midlands in 1991 to better represent the region.

[3] The laboratories had been run by BASF since the mid-1990s, which donated them to NTU in 2002.

schools and the general public and were initiated by public initiatives and charities (e.g. Ignite!, STEMNET and Engineering Development Trust).

With the abolition of GOs and RDAs in 2011 due to budget cuts, Local Economic Partnerships (LEPs) formed as collaborations between local authorities and local businesses, but without government funding. D2N2 is the LEP for the Nottingham and Derby region, thus comprising a partnership of just two of the historic county towns of the East Midlands region and corresponding to the NUTS 2 region UKF1. Though all three local universities (the two Nottingham universities and the University of Derby) are partners of the local LEP, it does not provide resources for knowledge exchange with universities.

Additionally, in 2005 Nottingham was assigned the status of Science City, along with five other cities in England. This initiative was aimed at encouraging regions to invest in the local infrastructure and space for fostering collaboration between universities, businesses and local authorities and was overlooked by the respective RDAs. Partners of Nottingham Science City include the two universities, Boots, the local council and local regeneration and education initiatives. Projects include MediPark, a science park near QMC commissioned in 2008 to support medical and healthcare research.

4.3 UNIVERSITY INTERNAL FACTORS

4.3.1 PUBLIC ENGAGEMENT CULTURE

Gunasekara (2006) found that a university's culture, expressed in its mission and history, is important for explaining its engagement with the region. Older, more traditional universities are less engaged than new institutions, perhaps because they are more concerned with university rankings (Boucher et al., 2003). The University of Nottingham's mission statement stresses its commitment to local communities: "we are committed to […] benefitting the communities around our campuses" (UoN, 2010). The regional commitment of the university is based in its foundation that was sponsored by an endowment from the people of Nottingham. The college opened in 1881 and its objectives, as set out in the Charter, were: "(1) To enable residents of Nottingham and the neighbourhood to qualify for degrees …, and (2) to provide such scientific, technical, and other instruction as may be of immediate service in professional and commercial life." (Dawson, 1914: 529). A special feature of the college was the provision of evening classes to enable working people to attend courses and the college's ability to attract working class students was well regarded (Wardle, 2010). From the beginning it offered an extensive range of engineering and mining degrees and the local collieries provided sponsorship towards the mining department (Dawson, 1914). It also had a strong chemistry department where F.S. Kipping undertook much of his work on silicones and later J.M. Gulland and D.O. Jordan their work on DNA structures. The college quickly outgrew itself and in 1928 moved to a new campus built on land granted by the founder of Boots, Jesse Boots. However, to become a full university, changes were necessary that broke with the local tradition and technical and adult education that were in the founding charter of the college (Piaggio, 1948). The college became a university in 1948 with a stronger focus on research, and a vision beyond the Nottingham area. In 2011/2012 the university had 35,000 students, only 25% of which were from the East Midlands region, and 25% from outside the UK.

Though the University of Nottingham has become a leading international university with campuses in Asia, it still maintains some links to the local community. It signed up to the 'Public Engagement Manifesto' initiated by the NCCPE and developed a specific 'Community Engagement Strategy' plan, in which it lays out its strategy for "active engagement with its local

communities […] in a constructive and mutually beneficial way in order to improve access to the university, its facilities and resources, to exchange knowledge and skills with others, as well as to engage in local issues and community agendas" (UoN, 2009a). Additionally, the University has a 'Schools and Colleges Engagement Framework' with the mission to widen participation and engage in research with and about schools (UoN, 2009b). At the same time the increased external impact from government and HEFCE that favours societal impact and relevance is also echoed in the language of the university's 'Strategic Plan' for 2010-2015. The aims and objectives primarily stress the importance of science-industry links as source of external funding. The university's vision statement further elaborates this, stating that it is the university's aim: "to be widely recognised as the first choice of […] businesses that want innovative partners who give them an edge on their competition" (UoN, 2010). It further aims to establish itself in the top-tier of universities world-wide. The focus is thus primarily on wealth creation and international rankings and not on local engagement.

The university's engagement culture is reflected in its ties with external partners. Already in the early 1990s industry was an important research sponsor, providing 20% of external research grant income. According to the HE-BCI 2005 survey, the University of Nottingham is one of the UK universities with the largest number of business research sponsors (top 5). This top position has been maintained in the HE-BCI 2013 survey. Also the share of research links to SMEs has stayed stable at 12% of total contracts, a share larger than that of most similar sized research universities in England. In 2003/04, 16% of firm sponsors (38% of SME sponsors) were in the East Midlands region. However, the university has historically far fewer research links to non-commercial organisations with just 59 such links in 2003/04. Recently this number increased and reached 216 in 2011/12, up three fold from 2010/11. In terms of consultancy contracts Nottingham has far fewer links than other universities, a situation which has not changed since 2003/04.

The HE-BCI survey further gives evidence of the university's strategy. According to the HE-BCI 2013 survey, the university believed that it made the greatest contribution to economic development through knowledge transfer, research collaborations with industry and by attracting non-local students. Civic engagement motives and especially regional links were not identified as one of the three highest priorities. Also, communities and social actors were ranked last in terms of third-stream priorities. Compared to other universities the University of Nottingham also provides fewer social outreach events and is involved in fewer partnerships with civic actors than other universities. According to the survey only 10% of Nottingham University's staff are involved in activities with community and civic partners, which represents a share in the bottom third of the university table, even after excluding specialised arts and music colleges. Engagement levels with other partners are also low with just 15% of staff engaged with businesses or public sector partners, again representing a share in the lower half of the university table. These shares have hardly changed since 2003/04, indicating either that no real cultural change happened in the university or that engagement activities are not sufficiently recorded by the university administration.

Overall we can conclude that while the university has a history strongly rooted in the local area and the mission statement that stresses the importance of local communities, funding partnerships with private businesses as specified in the vision statement are the preferred method of engagement and outreach. The commercial aspect of the modern university, in terms of technology transfer, contract research and international student enrolment, and international rankings, are more important than community pro-bono services.

4.3.2 PUBLIC ENGAGEMENT ORGANISATION

Additionally, university organisation and reorganisation in response to national policy are important intra-university factors driving successful engagement activity (Breznitz, 2011). Gunasekara (2006), for example, points at the importance of engagement champions or advocates in furthering the engaged university.

Responsibility for public engagement at the University of Nottingham is split across several offices and levels. The university created units dealing with business, research or community engagement. At the same time dedicated research centres set up their own engagement organisations and some university departments appointed outreach officers who are either administrators or academic staff. Several changes have been made to the organisation of engagement activities but it is far from being an integrated system as yet.

PUBLIC ENGAGEMENT MANAGED BY THE UNIVERSITY

According to the HE-BCI survey, the number of staff employed for managing third stream activities has increased from 21 in 2003/04 to 62 in 2011/12. The majority of these, more than 70%, are employed in business engagement roles, but also the number of dedicated staff for cultural and community partners (including schools) has increased from 1 to 8. However, overall civic engagement is given less weight than commercial engagement in the main university structure.

The university has separate providers for engagement support. Starting in 1990 the University established a Knowledge Transfer Unit that was primarily responsible for spin-off creation and invention licensing. This unit is currently called Business Engagement and Innovation Services and consists of three main units: knowledge transfer, corporate partnerships, and technology transfer and commercialisation. The office acts as the first point of contact for business partners and also works closely with externally funded initiatives. Other units in the university are also engaged in business support (see Figure 2). The Strategic Engagement unit in Career and Employment Services acts as a contact for firms looking for strategic partnerships with students or staff. Students are further supported in their search for internships and temporary work. Similarly, the Research and Graduate Services unit provides support to academics engaged in collaborative grants with external sponsors and gives advice on dissemination of research, including technology transfer opportunities. Moreover, the Graduate School, which supports postgraduate and early career research staff at the university, offers support for internships and start-up formation. These business and innovation services are also the point of contact for government partners and other sponsors.

A second focus at the university level is school engagement with a focus on widening participation. The widening participation team was established in 2000 with just one member of staff and has grown primarily thanks to HEFCE funding. The office acts as contact for secondary and primary schools in the Nottingham area. After its inauguration it first encountered resistance from local communities and had to build up trust with local schools (Day et al., 2010). As HEFCE funding has gradually been reduced the team had to find other external sources to support its activities. In 2012 with support from external donors it launched Nottingham Potential to connect the university with local schools. As of 2013 the team has 17 members of staff and most of its budget is spent on school activities, including summer schools and learning centres.
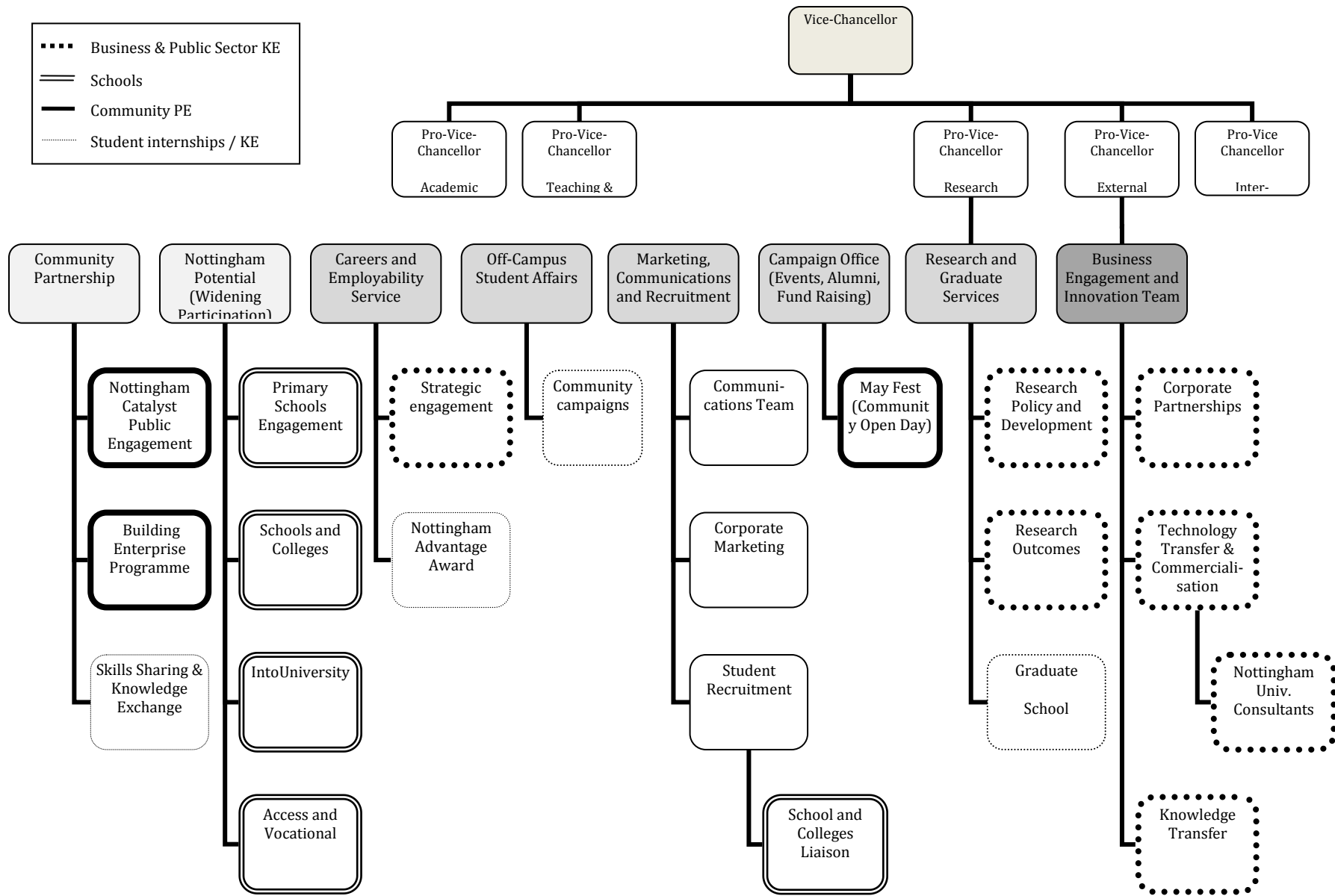
Legend:
- ▪▪▪▪ Business & Public Sector KE
- ═══ Schools
- ━━━ Community PE
- ······ Student internships / KE

Vice-Chancellor

- Pro-Vice-Chancellor — Academic
- Pro-Vice-Chancellor — Teaching &
- Pro-Vice-Chancellor — Research
- Pro-Vice-Chancellor — External
- Pro-Vice-Chancellor — Inter-

Community Partnership
- Nottingham Catalyst Public Engagement
- Building Enterprise Programme
- Skills Sharing & Knowledge Exchange

Nottingham Potential (Widening Participation)
- Primary Schools Engagement
- Schools and Colleges
- IntoUniversity
- Access and Vocational

Careers and Employability Service
- Strategic engagement
- Nottingham Advantage Award

Off-Campus Student Affairs
- Community campaigns

Marketing, Communications and Recruitment
- Communications Team
- Corporate Marketing
- Student Recruitment
  - School and Colleges Liaison

Campaign Office (Events, Alumni, Fund Raising)
- May Fest (Community Open Day)

Research and Graduate Services
- Research Policy and Development
- Research Outcomes
- Graduate School

Business Engagement and Innovation Team
- Corporate Partnerships
- Technology Transfer & Commercialisation
  - Nottingham Univ. Consultants
- Knowledge Transfer

FIGURE 2: ORGANISATIONAL STRUCTURE OF PE & KE AT THE UNIVERSITY OF NOTTINGHAM

Together with the Graduate School the Widening Participation team organises the Science Outreach Programme, which is open to postgraduate students and young researchers. The programme, which started in 2006, provides engagement training and school or community activities in science and engineering subjects. Additionally, the Student Recruitment team serves as contact for six-form colleges through their School and Colleges Liaison office with links to schools all across the UK.

A third strand of engagement activities is engagement with the voluntary and community sector. Engagement of academic staff is operated through the Community Partnership team which was set up as an Active Communities project in 2002 in response to the HEACF initiative sponsored through HEFCE. The project primarily aimed to promote volunteering and community links. The team has made an impression by initiating an open day for the community in 2009. In 2011 this event was moved to the marketing department of the university and is held annually in May. The community partnership office also built links to local primary schools starting in 2003, which involved volunteering and after school science clubs in collaboration with academic departments. However, it lost control over these activities in 2013 when the primary school engagement officer moved to the Widening Participation team. In addition to academic staff, students of the university can engage in voluntary and community activities and are supported by the Skills Sharing & Knowledge Exchange Manager of Community Partnerships as well as the Off-Campus Student Affairs manager. The Off-Campus Student Affairs manager was awarded an OBE in 2013 for her "services to higher education and community engagement" (DNCC, 2013).

Compared to business and school engagement, less importance is given to engagement with the voluntary and community sector, with only two full time positions in the Community Partnership team. Recent developments at the university hope to shift this focus. In 2012, two new positions were created thanks to two grants awarded to the university: the RCUK Public Engagement with Research Catalyst grant and the ERDF Building Enterprise programme grant. Through Catalyst the university appointed a new manager to link public engagement activities across the university. The project is running until 2015 and is primarily aimed at providing training to academic staff and organising public events. The Building Enterprise project attempts to create a culture of collaboration between the university and the region, specifically supporting social enterprises, third sector initiatives and micro-businesses and also concludes in 2015. Whether these initiatives can be continued beyond 2015 remains to be seen. Thus, while the Community Partnership team has been operating for more than 10 years it remains vulnerable to shifts in funding policy.

PUBLIC ENGAGEMENT MANAGED BY DEPARTMENTS

Several faculties and departments pursue independent engagement activities sometimes financed through research council or European Commission funding. Table 3 provides an overview over outreach centres and coordinators associated with Nottingham departments.

The analysis of university websites shows that most departments have a dedicated outreach coordinator or contact, some of which were established through RCUK grant initiatives. While some departments stress business and research partnerships, others are primarily promoting school outreach activities. Civic engagement activities are limited to public lecture or performance events (including science videos and media appearance) and dialogue is not a main priority of any department. Exceptions are the Learning Science Research Institute that works in dialogue with local teacher to discuss innovation in teaching, potentially leading to effective knowledge exchange, and the Mixed Reality Laboratory in the School of Computer Science that is applying a user-centred research approach. Nottingham staff is further involved in public engagement and knowledge exchange through the digital learning centre Horizon, and through the Lakeside Arts centre.

Many of the student engagement activities are in collaboration with the Nottingham Advantage Award that rewards extracurricular activities.

TABLE 3: ENGAGEMENT IN SCHOOLS AND DEPARTMENTS

School/Centre	Task/Scheme	Activities	Coordination / Sponsor
Business and Government Engagement			
Centre for advanced studies		Collaborative research and knowledge transfer	Research and Business Development team
Archaeology	Knowledge Transfer	Collaborative research	KE contact
Microanalysis Research Facility	Knowledge Transfer	Contract research or research support	KE contact
UARC	Knowledge Transfer	Contract research or research support Employee training	KE contact
Nottingham Business School	Executive Education	Executive education/ employee training	Director of Executive Education
Haydn Green Institute for Innovation and Entrepreneurship	Knowledge Transfer	Start-up grants; Consulting Executive education	KE contact sponsored by DTI & EMDA
Financial Services Research Forum	Knowledge Transfer	Consulting and policy advice	Sponsored by private businesses
Law			
Human Rights Law Centre	Executive Education	Executive education	
Engineering	Engineering Employability	Collaborative teaching	Employability Officer
Accelerating a Low Carbon Economy	Knowledge Transfer	Consulting; Presentations	KE contact Funded by EDRF
Environmental Technology Centre	Knowledge Transfer	Consulting; Research support	KE contact Funded by EDRF
Chemistry	Business Partnership	Collaborative research; Consulting	KE contact
Pharmacy	Knowledge Transfer	Collaborative research; Consulting	KE contact
Veterinary Medicine	Continuing Professional Development	Executive education/ employee training	CPD contact
	Pathology Services	Clinical services	Service contact
School and College Engagement			
Arts & Humanities	Widening Participation	School presentations	Engagement contact
Cultures, Languages and Area Studies	Widening Participation	School presentations	Widening Participation & Out Reach Officer
English	Outreach	School presentations/activities	Engagement contact
The Nottingham Confucius Institute	Outreach	School presentations/activities	Engagement contact
Education	School's Art Partnership	School activities	Engagement contact
Learning Science Research Institute	Engagement	Teacher dialogue	Engagement contact
Engineering	Outreach	School presentations	Engineering Outreach Champion
Physics	Outreach	School presentation	Engagement contact
Chemistry	School Outreach	School presentations	PE Champion Outreach coordinator
Bioscience	School Outreach	Teacher advice; School presentations	Engagement contact
Centre for Plant Integrative Biology	School Outreach	Teacher advice; School presentations	Outreach Officer
LACE (Bioenergy)	School Outreach	Teacher advice; School presentations	Outreach Officer
Pharmacy	Outreach	Student placements; School activities	Outreach Coordinator
Psychology	Outreach	School presentations	Engagement contact
Voluntary and Community Engagement			
Arts and Humanities	Widening Participation	Exhibition and performances	Engagement contact

		Public lectures	
Archaeology	Knowledge Transfer	Community-based research	Engagement contact
English	Outreach	Exhibition and performances Public lectures	Engagement contact
Music	Performance	Exhibition and performances	Engagement contact
Centre for Music on Stage and Screen	Outreach	Exhibition and performances Public lectures	Engagement contact
Learning Science Research Institute	Engagement	Public lectures	Engagement contact
Physics	Outreach	Research demonstrations/ Public lectures	Outreach officer
Chemistry	Outreach	Research demonstrations/ Public lectures	PE Champion
Student Engagement (Nottingham Advantage Award)			
Cultures, Languages and Area Studies	Internships Ambassador Opportunities	Student placements	Widening Participation & Out Reach Officer
Centre for integrative learning	Integrative learning	Exhibition and performances Public lectures	Engagement contact HEFCE funding
Nottingham Business School	Community Engagement Programme	Research demonstrations/ Public lectures	Engagement contact
Haydn Green Institute for Innovation and Entrepreneurship	Knowledge Transfer	Start-up grants and training	KE contact; sponsored by DTI & EMDA
Archaeology	Outreach and Impact	Exhibition, public lectures	Engagement contact
History	Community organising	Community-based research	Engagement contact
English	Language Support	School presentations and activities	Engagement contact
Sociology and Social Policy	Ambassador scheme	School presentations	Engagement contact
Psychology	PE Ambassador scheme	Research demonstrations/ Public lectures	Engagement contact
Computer Science	Ambassador scheme IT Consultancy Project	Student placements	KE contact
Engineering	Ambassador scheme	School presentations	Outreach Champion
Engineering	Engineering Employability	Student placements	Employability Officer
Physics	Taking Physics to the Public	School presentations	Outreach officer
Bioscience	Ambassador scheme Zoology Outreach	Student placements Research demonstrations/ Public lectures	Engagement contact

4.3.3 PUBLIC ENGAGEMENT POLICY

The Royal Society survey found that many researchers did not engage with the public as such activities were less well regarded by the university (Royal Society, 2006). Incentive and award schemes are important to change research staff's perception regarding external engagement. Studies on technology transfer have shown that the university's policy regarding royalty share, equity and licensing agreements affects the success and participation in commercial activities. Similarly, other engagement activities may be affected by such incentive schemes.

At the University of Nottingham several funds have been made available to support engagement activities. These include seed grants, knowledge transfer partnership grants and engagement funding. Most of these grants come from RCUK and government bodies but are mediated by the university and its engagement units. One such scheme is the HERMES Fellowship which supports outreach, innovation and business engagement using HEIF funding. Individual awards can range from £5k to £50k. The university further enables researchers to raise funds for specific projects through Impact, a fundraising campaign of the university that started in 2011. Impact, amongst other things, enabled the purchase of an inflatable planetarium that will be used for school visits and community events. The university further hands out the Nottingham

Advantage Award to students that engage with business and the community and gives public recognition to staff and students through university publications. However, there is little core-funding dedicated to supporting engagement activities.

The Royal Society's report also found that many researchers had too little time to dedicate to engagement activities (Royal Society, 2006). Flexible working arrangements and paid leave to engage with external partners are policies that could encourage collaborative activities. At the University of Nottingham staff is allowed to take up to 50 days per year to engage in external professional work (UoN, 2012). This includes media appearances, consulting and policy advice, and company formation. It also includes paid leave of up to 18 days per year for staff taking up public duties, e.g. public board or authority memberships (UoN, 2011). According to the HE-BCI 2013 survey, an allowance of 50 days a year for external work is the second highest of any UK higher education institution. In addition, in 2005 the university introduced a Staff Volunteering Scheme to support and encourage staff to engage with the local community. The scheme allows staff to request up to 20 hours of paid leave to undertake voluntary work which has to be matched by an equal number of unpaid hours. The scheme is a direct success of the Community Partnerships team. However, time is not granted automatically and will be weight against other university requirements (UoN, 2005). Thus, while the University of Nottingham is a forerunner in terms of external engagement allowance, professional engagement activities are higher regarded than voluntary engagement activities.

The appointment of engagement and widening participation officers in departments and faculties signals the increasing importance given to engagement activities across the university. However, more direct incentives in form of merit from engagement activities and revenue sharing from fee-for-service (commercial and consulting) activities could increase participation of academic staff. The reward and incentive system for public engagement is currently extended at the university as a response to the recent Research Excellence Framework (REF) requirement for impact. Still, promotion and REF primarily consider engagement resulting in direct financial returns for the university. According to a recent survey of the Community Partnership team[4] (Clancy, 2013), only 45% of university staff that undertake public engagement with schools and local communities outside their job role feel that they receive support and recognition for their activity. Only 16% say that it represents a specific aspect of their job role. Unless non-commercial forms of engagement enter promotion considerations and receive more financial support it will be difficult for academic staff to denote more time to such activities.

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[4] The survey was undertaken in 2012/2013 and involved academic as well as non-academic staff at the University of Nottingham. The survey returned 619 valid responses (response rate of 9%).

5 DISCUSSION & CONCLUSION

The case study allows for a number of conclusions regarding the emergence of the engaged university. As stressed above, the engaged university emphasises the university's role in the region and in regional development. Gunasekara (2006) noted that the "roles performed by universities was path-dependent" (p. 110). The University of Nottingham shed its local objectives in its bid to become a university in the 1940s. The gap left by this shift was filled by newly formed vocational colleges, which later became NTU. In efforts to regain its regional role the University of Nottingham now entered into competition with NTU that has traditionally performed key regional development roles. The lacking identity of the East Midlands region and the high number of students and staff from outside the region further augments the university's difficulties to accept its local role.

The focus of the literature has primarily been on knowledge exchange with professional partners (i.e. industry). This study confirms that the university and the region see business development and research partnerships with industry as the key regional roles of the university. University and regional authorities both provide support to foster such forms of engagement. The close alignment of research foci within the university and regional businesses supports this view. The university has a long history of research links with businesses that have been maintained to date. These developments are augmented by national policy which has focussed almost exclusively on knowledge exchange with industry and on measurable outcomes of such engagement activities.

Non-commercial forms of engagement receive much less attention and resources from both the university and the region. They are not supported through core budgets but have to rely on external sponsorship which is often short term. This development is also a result of national policy that has not been able to provide consistent funding and guidance for non-commercial forms of engagement. While institutional support is lacking, the level of engagement in non-commercial activities at the University of Nottingham is still very high. According to a recent survey of university staff undertaken by the Community Partnership team (Clancy, 2013), more than 50% of respondents engage with local schools, or the community and voluntary sector. The majority engage through public lectures or research demonstrations. Some of these activities are organised by their respective departments, but many are initiated by academics and managed through public initiatives. Such public initiatives include Café Scientifique and Ignite! that bring science to the pub and the high street respectively.

The survey further showed that public lectures are not the only from of engagement. 25% of academic respondents say that they involve the public in their research through consultation or direct participation. These more responsive forms of public engagement are initiated by individual academics or research groups, who, just as found by Wigren-Kristoferson et al. (2011), are driven by their goal to further research and to provide community service. These engagement activities are primarily sponsored through the research councils or other grants. One such programme is the "Writing our History and Digging our Past" research project undertaken by staff at the history department that helps local communities research their past. Thus, we can confirm findings by OECD (2007) that most engagement cases are small scale and initiated by individual researchers.

While there are a vast number of engagement activities ranging from public lectures to joint research, the university has problems in announcing and advertising these to the wider public. Many events are only announced on research group or department website and not sent to the relevant news or community groups. Further, a large number of staff is using social media to

communicate their research, but they often bypass the communities that are most affected. There is thus a requirement for a better communication of research and engagement events.

Moreover, while there is an increasing interest amongst academic staff to participate in community activities and to engage the community in their research, these are not sufficiently rewarded or supported by the university unless they involve commercial partners. Just as noted by Uyarra (2010) the university is not sincere about its third mission but considers is just another box to tick. In doing so it does little more but respond to requirements of the funding council that focuses on measurable engagement outcomes in terms of generated projects and income.

This paper has proposed a conceptual framework for analysing engaged universities. It stressed the importance of regional needs and university culture for successful interaction. These developments can be influenced by national policy and have increasingly be shaped by funding council requirements over the past 15 years. We have to acknowledge that policy changes had a profound impact on how universities see themselves and their regional role. The links between the University of Nottingham and its community have increased as a direct result of these. Local communities characterised by a high level of depravation and large immigrant population have been influenced by the university through its greater presence and its students in these areas.

The framework argued that university engagement is a responsive mechanism, responsive to national policy and regional needs. Just as Gunasekara (2006) observed, university managers have modified the university structure and policy, but it is not clear how much of this development is an adaptive response and how much is internally driven. For example we have not discussed the influence of the rapid growth in international students on regional development. Specifically the influx of students from Asia has transformed the local Asian community and made an important contribution to community development and integration. Public engagement with ethnic communities is an aspect partially driven by internal changes in the university. There is thus more requirements for discussion the multiple roles of the university and its drivers.

Finally, this study only looks at the case of one single university. It is necessary to compare the University of Nottingham to other similar institutions or institutions in the same area to draw stronger conclusions regarding the extent and success of its engagement activities.

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