Calling eHealth companies

Why UK should, once again, be part of your internationalisation plan

September 2012

ad-hoc and retained information and representation services to potential and early-stage UK inward investors and exporters

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Why UK for Health ICT?

UK is, once again, the most attractive market for Health ICT

The UK health ICT market is very large yet is subject to massive disruption, creating opportunity

- UK citizens believe in healthcare that is free at the point of use
- NHS has a great reputation for acute / heroic interventions but is not so good at chronic / long-term care; blurring of social and health care services
- NHS is under cost and quality pressure due to evolving demographics moving demand from acute to chronic care challenging traditional budget allocations
- Technology and localisation are key to process change and improved efficiency

- UK citizens are adept social networkers and user of e-commerce
- UK is the leading broadband adopter among the major EU countries
- The UK is the fastest European adopter of cloud-sourced services and most open to outsourced business IT services
- UK is one of the most-attacked and invests heavily in cyber-security

UK ICT Business

STATE OF PLAY

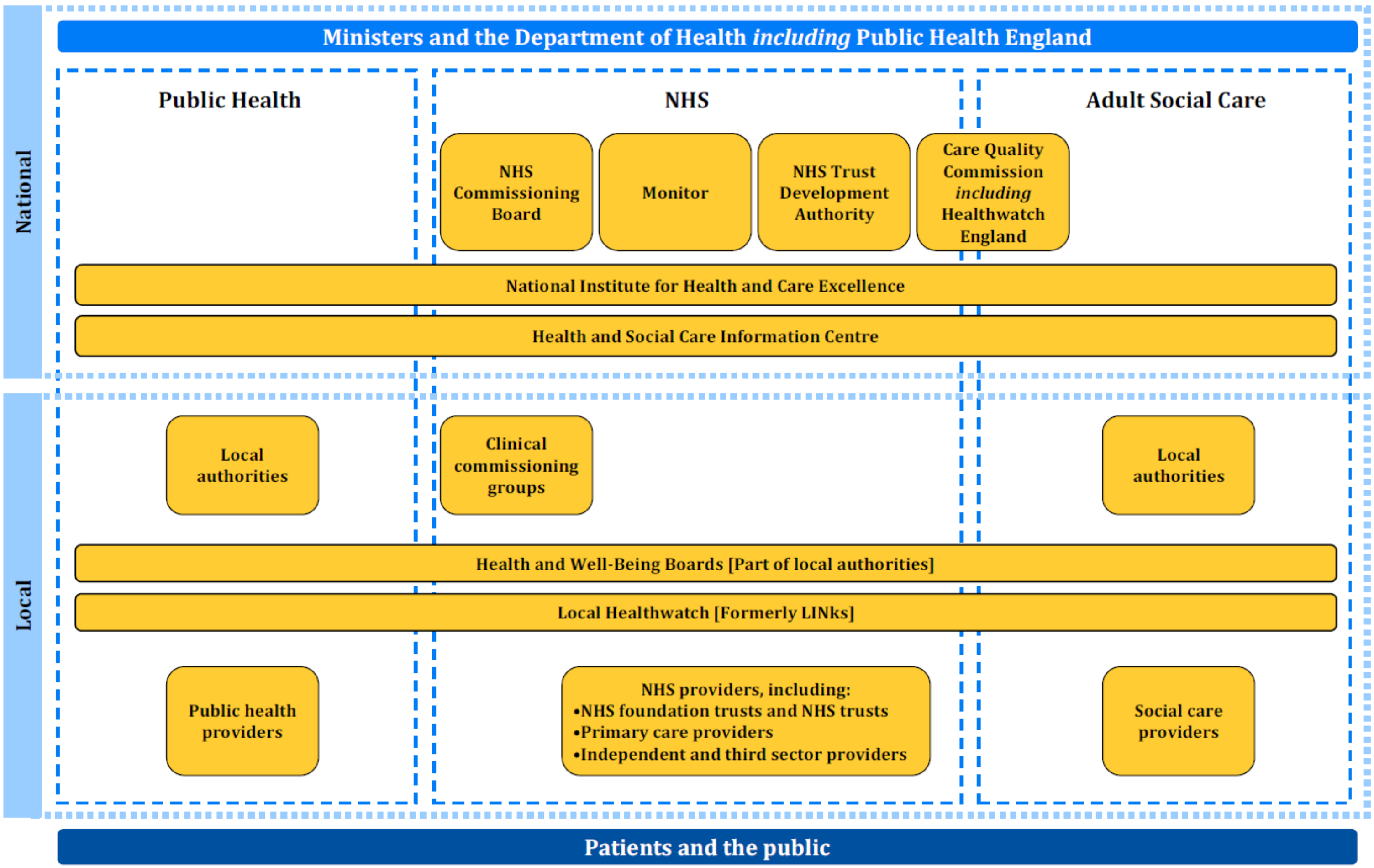
UK Health ICT – Disruption

- Political
  - Adopting private sector lessons, increased localism/individualism
- Economic
  - Deficit reduction, rebalancing pressures, restricted budgets
- Sociological
  - High debt levels and high healthcare expectations
- Technology
  - Moore's Law, Cloud, Connectedness, Social Networks
- Legal & Regulatory
  - Regulate, green, post-modern, open data approach
- Environmental
  - To green now or to green later

UK Health ICT – New Order

- ICT expenditure power now very decentralised:
  - NHS Foundation Trusts and NHS Trusts
  - Primary Care Providers
  - Independent and Third Sector Providers
- Substantial investment will also be made by:
  - NHS Commissioning Board, commission primary care
  - Clinical Commissioning Groups, commission sec'y care
  - Commissioning Support Units, procure services for CCGs
  - National Institute for Health & Care Excellence
  - Health & Social Care Information Centre , big data

UK Health ICT – New Order



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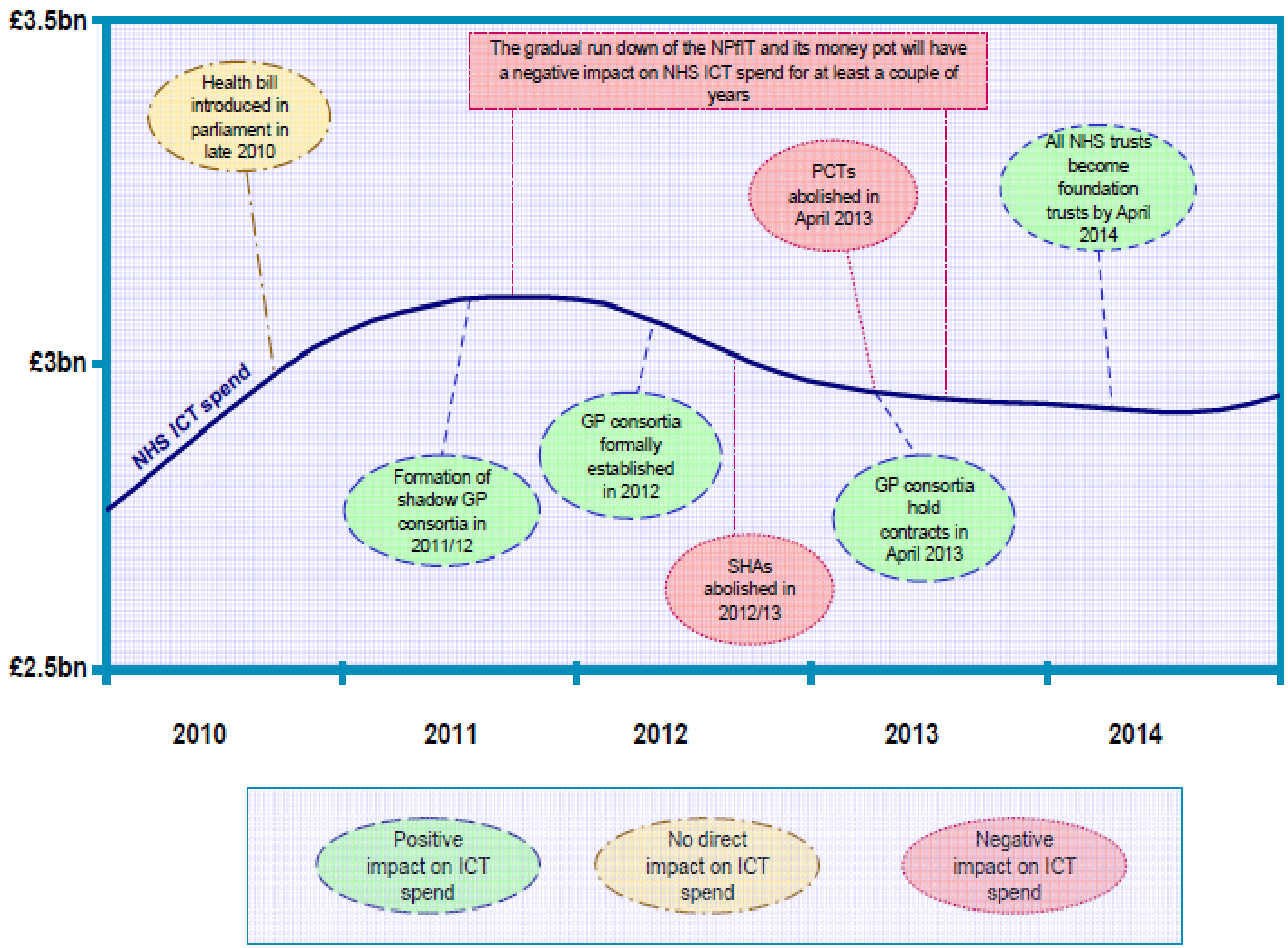
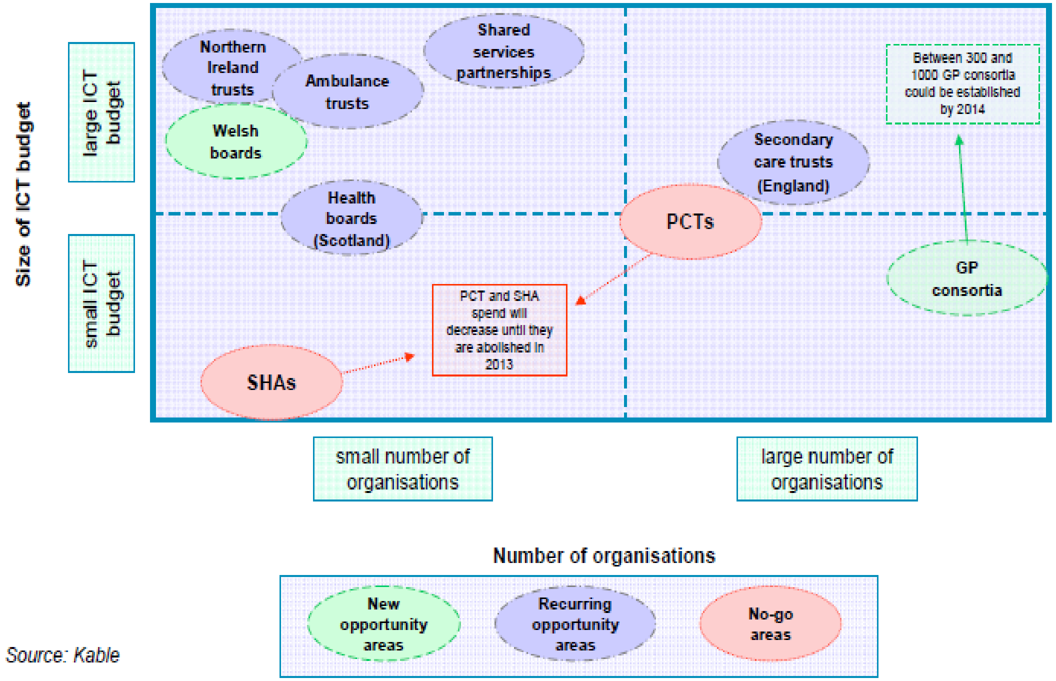
UK Health ICT – Transition



Source: Kable

UK Health ICT – Buyers

- More buying power to Foundation Trusts and GP-led Clinical Commissioning Groups, less to “NHS”



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UK ICT Business

MARKET OPPORTUNITIES

UK Health ICT - Proposition

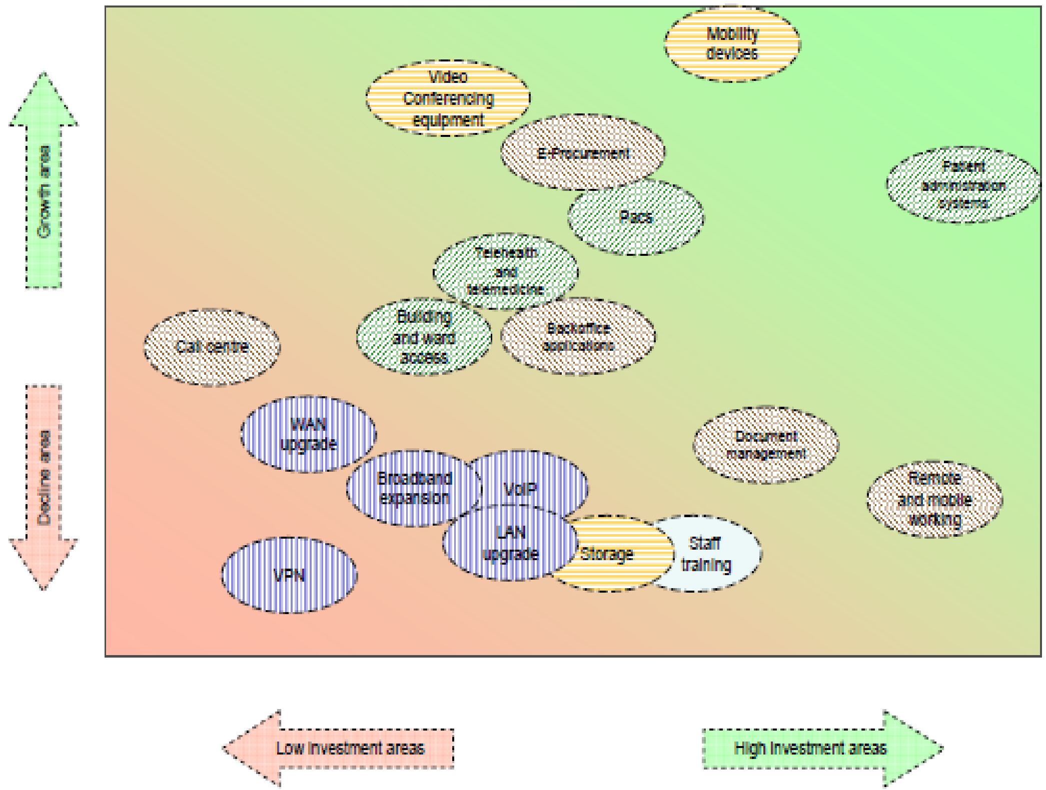
- UK is the place for health technology companies to succeed internationally
  - Market opportunity for health ICT is large, more accessible and more concentrated than elsewhere
  - Citizens are open to greater use of technology
  - Business and technology talent is readily accessible
  - Business operation and management is easier in a country that is open for business and encourages international competition
- Vecta Consulting Limited accelerates international business growth by refining strategy and finding transatlantic partners, investors and/or key clients

UK Health ICT – Opportunities

- Goal is to improve the patient's healthcare experience while reducing cost
- Key Growth Areas
  - Care Records, especially alternatives to discredited Lorenzo and Millenium
  - Patient Administration Systems
  - Asset/Contract Management, Business Intelligence, Risk Assessment etc
  - Home Health: telecare, telehealth and telemedicine to reduce hospital interventions
  - Mobility enablers such as mPhones, Mobile Clinical Assistants, RFIDs
  - Increased outsourcing, shared services
  - Information Governance and Security in a rapidly evolving IA environment
  - Infrastructure for new Primary Care ecosystem
  - Experience and capital to facilitate process change
- Key Drivers
  - Increased procurement autonomy for NHS Trusts
  - Increased information sharing within patient groups

UK Health ICT – Priorities

- ICT Investment Priorities



Source: Kable

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Technology for Health Services

- Market Trends
  - Ageing population, increasingly affected by co-morbidity
  - Increased participation by private suppliers, especially in treatment centres and out-of-hours healthcare
  - Efficiency targets are in some cases increasing ICT investment to support business process change
  - Outsourcing of ICT is gathering pace with NHS now outsourcing ICT worth nearly £1 Billion pa
  - Shared Services are also increasingly popular initiatives
  - Minimal progress as yet on green IT
  - Web 2.0, data sharing, patient pathway enhancement, telecare and telemedicine are all making progress

Technology for Health Services

- Market trends
  - Strong impact / short-term:
    - Shared services
  - Strong impact / long-term:
    - Ageing population
    - Surge in chronic disease
    - Combined health and social care
    - Data sharing
    - Declining treasury allocation
  - Medium impact / short/medium-term
    - Purchasing autonomy
    - Outsourcing
    - Offshoring
    - Web2.0

UK Health ICT – Opportunities

- Telemedicine
  - Robotics
  - Telehealth
  - Teleconsultation
- Advanced Radiology
  - Image Analysis
  - Pattern Detection
  - Decision Support
- Mobile Computing
  - Wireless Devices
  - Bedside Terminals
  - Roving Access
- Identity Management
  - Identity Cards
  - Biometrics
  - RFID Applications

- Medical Devices
  - Home Monitoring
  - Near Patient Testing
  - Implants
- System Integration
  - Legacy Systems
  - Multimedia Records
  - Community/Social Services
- Transcription
  - Document Scanning
  - Speech recognition
  - Electronic Paper
- Business Applications
  - Casemix Management
  - Billing & Costing
  - Supply Chain Management

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Technology for Health Services

Ageing population

- Average age increasing
- Increasing % over-65
    - Higher illness rates
    - Lower financial contributions

Surge in chronic disease

- Already 17.5 million UK citizens suffer from a chronic disease
- People with chronic disease place higher demand on GPs, hospitals
- 75% of 75+yo suffer in this way

Combined health and social care

– NI has joined up health and social care; others moving slowly same way

– Telemedicine/telehealth moving care from hospital/clinic to home; 3M Lives campaign

Information Governance

- Rapidly increasing quantity
- Must get right data to right people quickly
- Confidentiality challenge
- Access “limited” by 100,000+ smart cards

Green IT

- ICT is fastest growing % of NHS carbon impact
- Focus on ICT waste reduction
- Also patient/staff travel
- And energy use

Technology for Health Services

Shared Services

- Often known in NHS as Health Informatics Services
- At least 30 significant initiatives
- Steria / Xansa operates Shared Business Services for over 100 English Trusts

Business Intelligence

- NHS is getting better at using Business Intelligence, partly because of technological advances
- Managers in Clinical Commissioning Groups and Trusts will use BI to provide evidence for process change

Declining treasury allocation

- Some catch-up over recent years to move ahead of OECD 8.9% of GDP average
- Likely to stabilise, possibly fall, over coming years

High Home Health potential:

- Ageing Population, high proportion living alone
- Low hospital bed availability and cost pressures
- World-class experience in telecare /health trials
- Three Million Lives adoption target
- 1.75 million telecare subscribers

Technology for Health Services

Outsourcing

- Many large long-term outsourcing contracts in place
- Largest current contract between Atos Origin and NHS Scotland (£300M/11years)
- 15-20 more between £10M and £100M over the next few years

Web2.0

- Usage increasing as services become more patient-centric
- Collaborative portals help spread best practice
- Health2.0 has SecondLife, YouTube examples
- NHSChoices has UGC elements

Offshoring

- Substantial, but hidden, offshoring by prime contractors
- Recession slowing this down as UK staff availability improves and costs fall

Source: Kable – Healthcare Market Profile

UK ICT Business

BUYING POWER

Technology for Health Services

- NHS loosely integrates services delivered by over 500 public health organisations, including Primary Care providers and NHS Trusts
  - NHS in England, reports to the Department of Health (DH)
  - NHS in Scotland reports to the Scottish Government's Health Directorate (SGHD)
  - NHS in Wales reports to the Welsh Assembly Government's Health & Social Care Department (HSCD)
  - NHS in Northern Ireland reports to the NI Executive's Department of Health, Social Services & Public Safety (DHSSPS)
- There is also a substantial and growing private healthcare service providing services both directly to patients and, on contract, to NHS

Technology for Health Services

Buying units	England	Scotland	Wales	N. Ireland
Commissioning local heath services	Clinical Commissioning Groups / Commissioning Support Units	14 health boards	22 health boards, consolidating into six in 2009	One health and social care board
Delivery of hospital services	173 acute trusts	14 Health boards	Eight hospital trusts, of which six are merging with health boards in 2009 – the other two remain as national services	Five health and social services trusts
Community nursing services	Clinical Commissioning Groups / Commissioning Support Units	14 health boards	22 health boards, consolidating into six in 2009	Five health and social services trusts
Ambulance services	13 ambulance trusts	One ambulance service	One ambulance service	One ambulance service
Other services	10 care trusts (joint working with social services) 57 mental health trusts	Mix of health board and national services	Mix of health board and national services	
General practitioners etc	8,451 GP practices, 9,872 community pharmacies, 21,000 dentists of which 6,700 are under contract	1,040 GP practices, 1,193 community pharmacies, 2,919 dentists under different contractual arrangements	497 GP practices, 708 community pharmacies, 1,293 dentists in 471 practices	364 GP practices

Source: Kable

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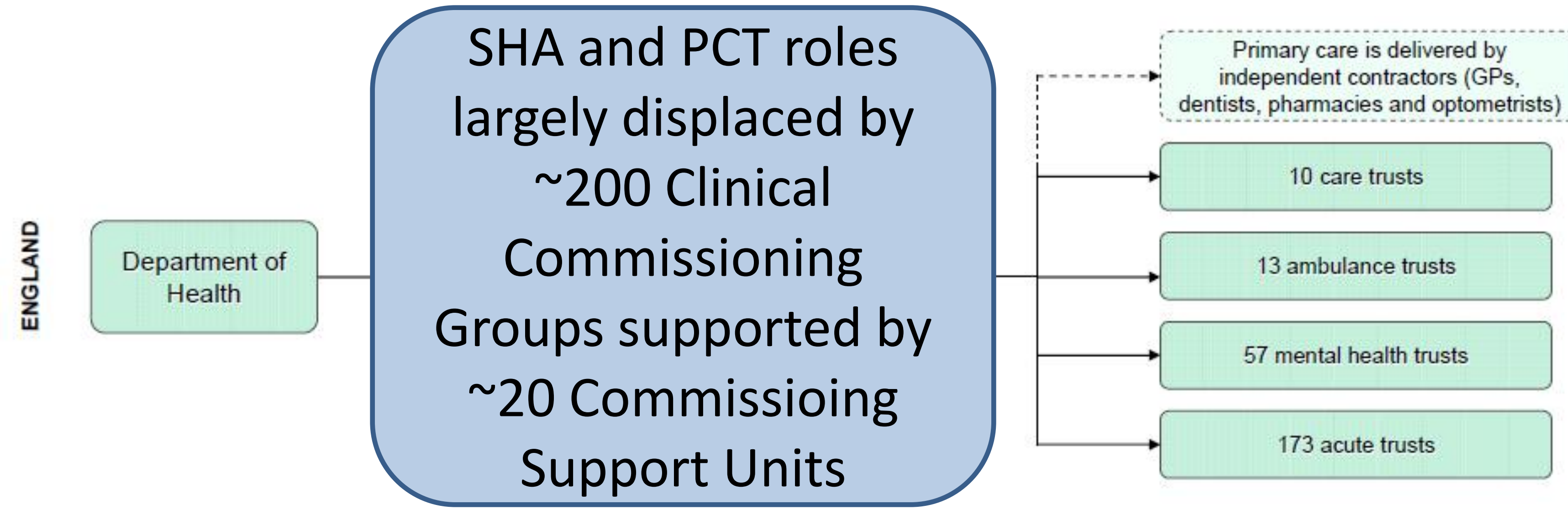
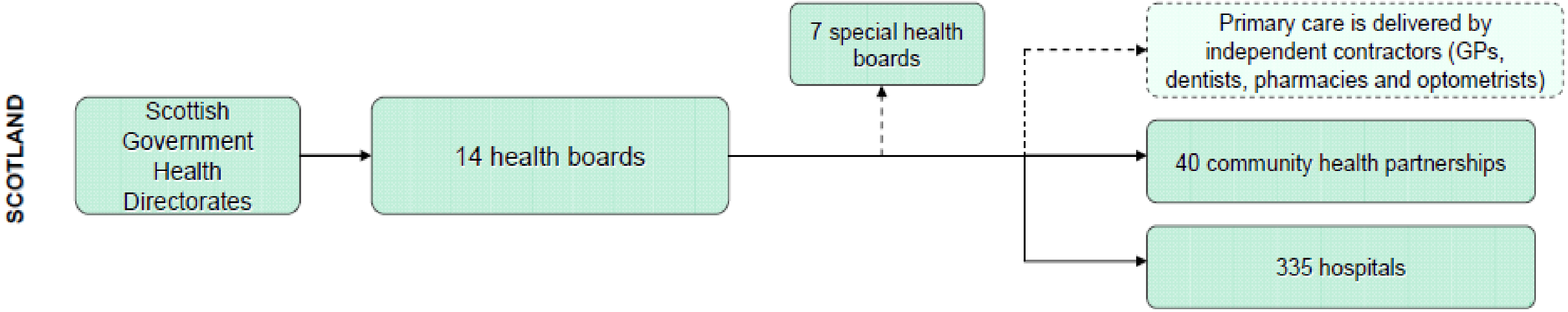
Technology for Health Services

- NHS England, reports to Department of Health (DH)



Technology for Health Services

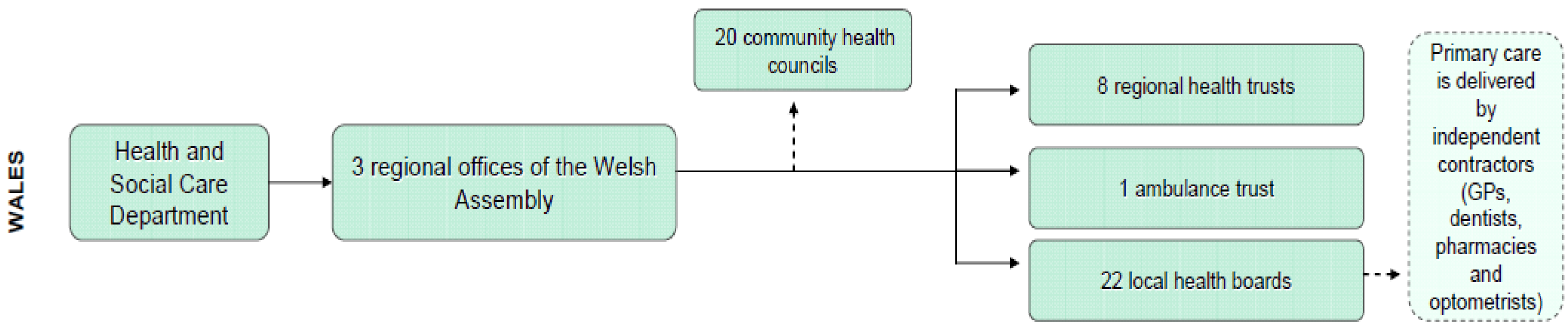
- NHS in Scotland reports to the Scottish Government's Health Directorate (SGHD)



Source: Kable – Healthcare Market Profile

Technology for Health Services

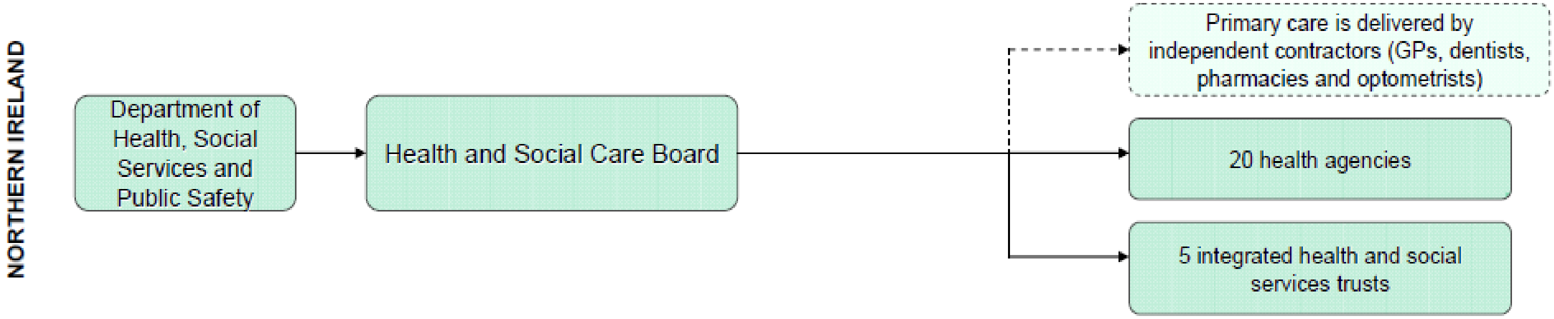
- NHS in Wales reports to the Welsh Assembly Government's Health & Social Care Department (HSCD)



Source: Kable – Healthcare Market Profile

Technology for Health Services

- NHS in Northern Ireland reports to the Northern Ireland Executive's Department of Health, Social Services & Public Safety (DHSSPS)



Source: Kable – Healthcare Market Profile

UK Private Healthcare

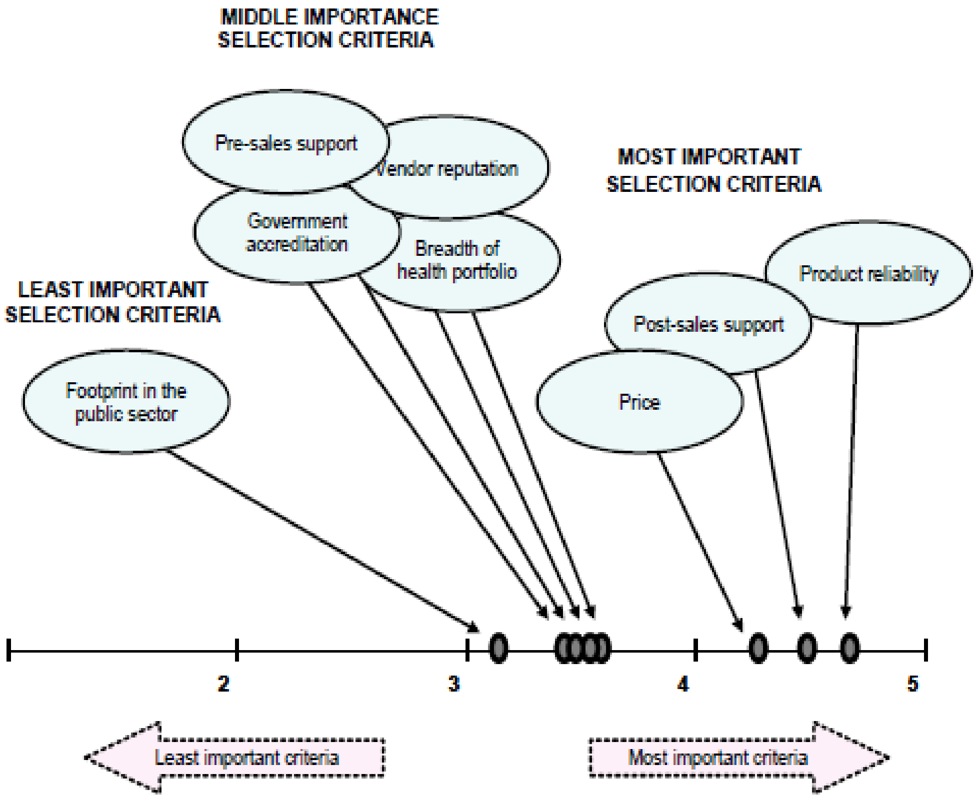
- The private sector is playing an increasing role in healthcare service delivery:
  - GPs are private businesses with NHS service contracts
  - Independent Sector Treatment Centres
    - BUPA treat 15,000 English NHS-funded patients annually
    - Scotland JV between NHS Forth Valley and Alliance Medical
    - In Wales out-of-hours healthcare is delivered privately
    - Also in Wales, patients waiting more than 18 months are referred to the private sector for NHS-funded treatment
  - Many UK hospitals are built using Private Finance, including Pension Funds and leased by NHS;
  - Circle operates Hinchingbrooke hospital for NHS
  - Almost all UK optometry and dentistry practices and pharmacies are independent

UK Private Healthcare

- There are many private hospital companies, often operating groups of hospitals, including:
  - Abbey Hospitals Abbey Hospitals, 22 Wimpole Street, W1M 8LD
  - Aspen Healthcare Ltd Aspen Healthcare is the owner and operator of three highly regarded private hospitals and one outpatient Oncology Clinic.
  - BMI Healthcare BMI Healthcare is the acute private hospital division of General Healthcare Group and is the largest independent provider of private health care in the UK.
  - HCA International Ltd HCA International Ltd, Registered No. 3020522 England. Registered Office 242 Marylebone Road, London NW1 6JL
  - Nuffield Health Nuffield Health has 40 hospitals nationwide and is committed to providing healthcare excellence that is accessible and affordable to as many people as possible.
  - Ramsay Health Care UK Ramsay Health Care (formerly Capio Healthcare UK) was established in 1964 and has grown to become a global hospital group operating over 100 hospitals and day surgery facilities.
  - Spire Healthcare Spire Healthcare (previously known as Bupa Hospitals) provide the highest standards of care for patients, from the time they are first referred to them until after their treatment is completed.
  - The Hospital Management Trust The Hospital Management Trust 14 Queen Anne's Gate London SW1H 9AA

UK Health ICT – Selection Criteria

- Vendor Selection criteria



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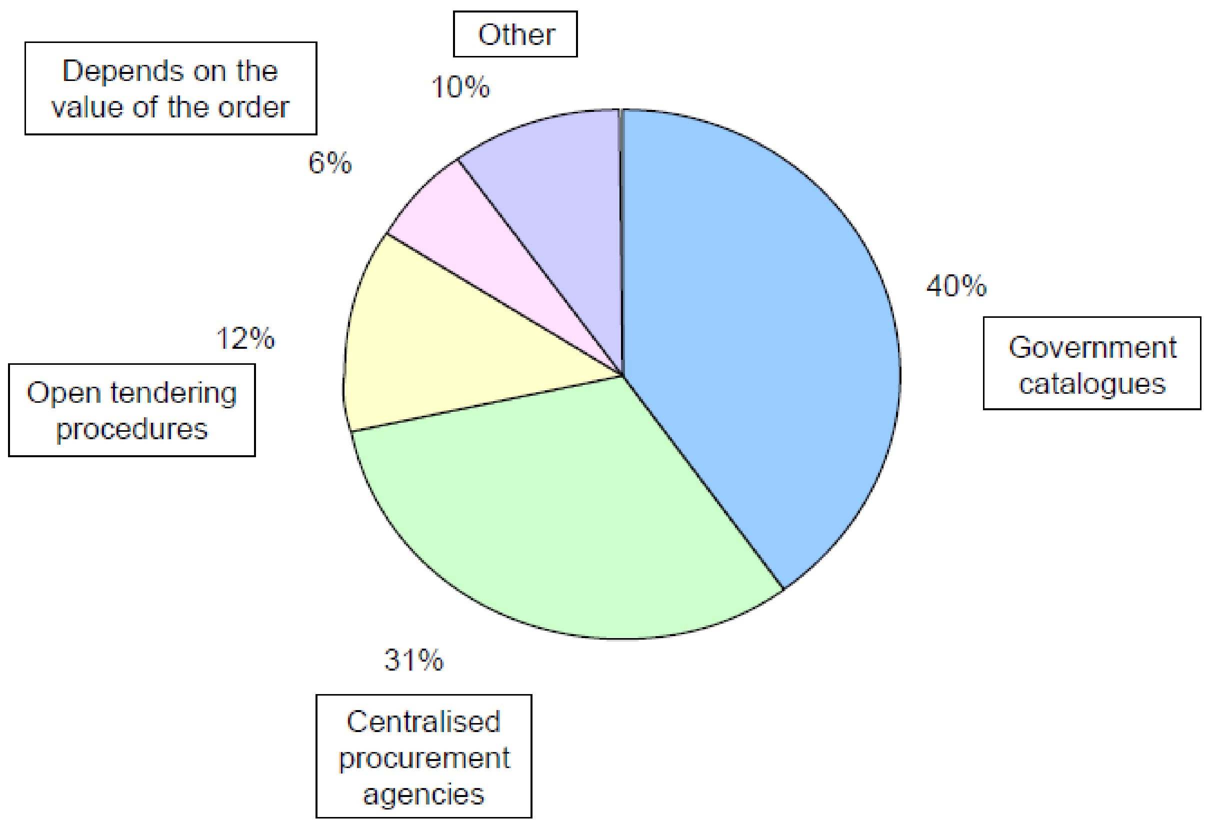
UK Health ICT – Procurement Route

Figure 4: Preferred procurement avenues



Source: Kable – Procurement & Information Sourcing

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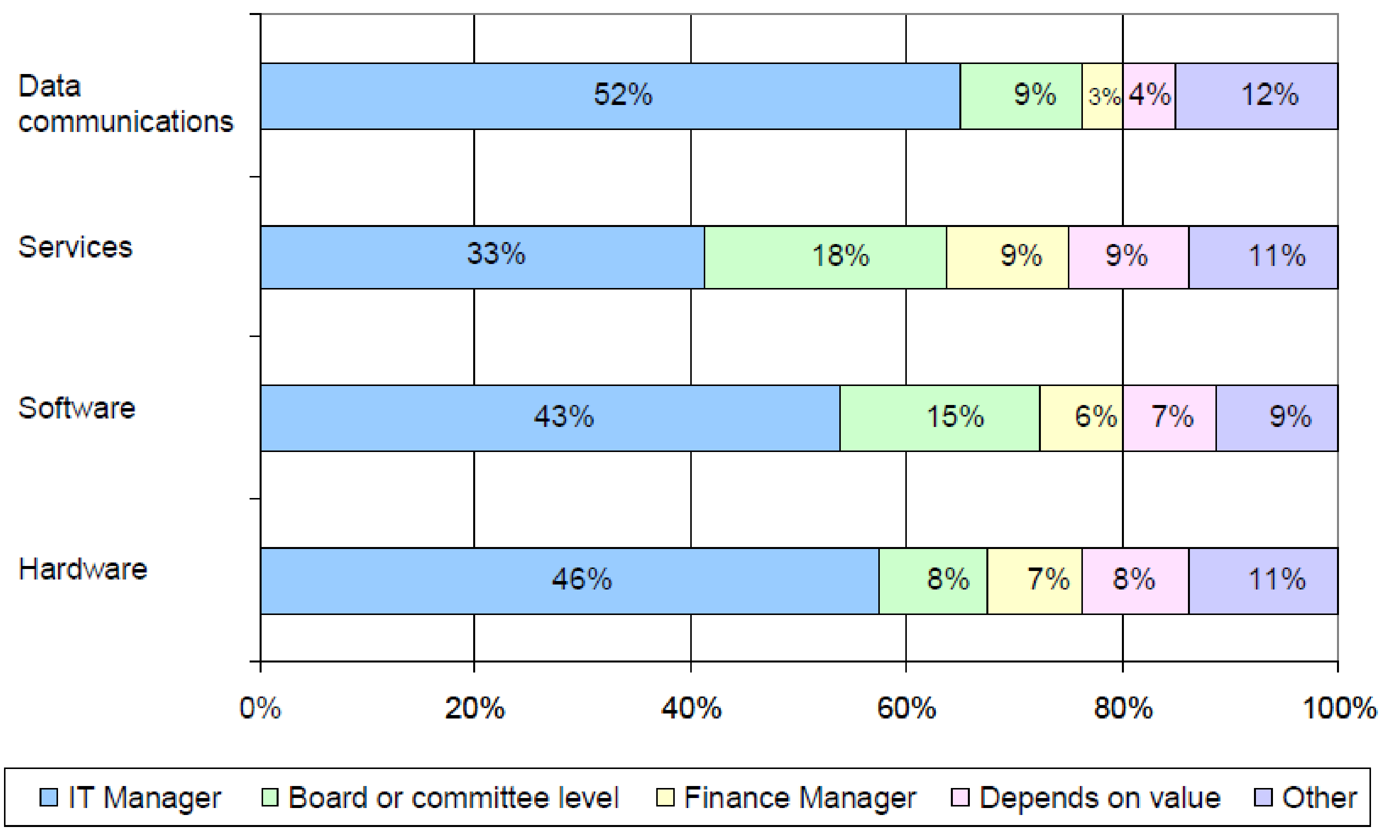
UK Health ICT – Decision Makers

Figure 5: Final decision-maker for IT products and services



Source: Kable – Procurement & Information Sourcing

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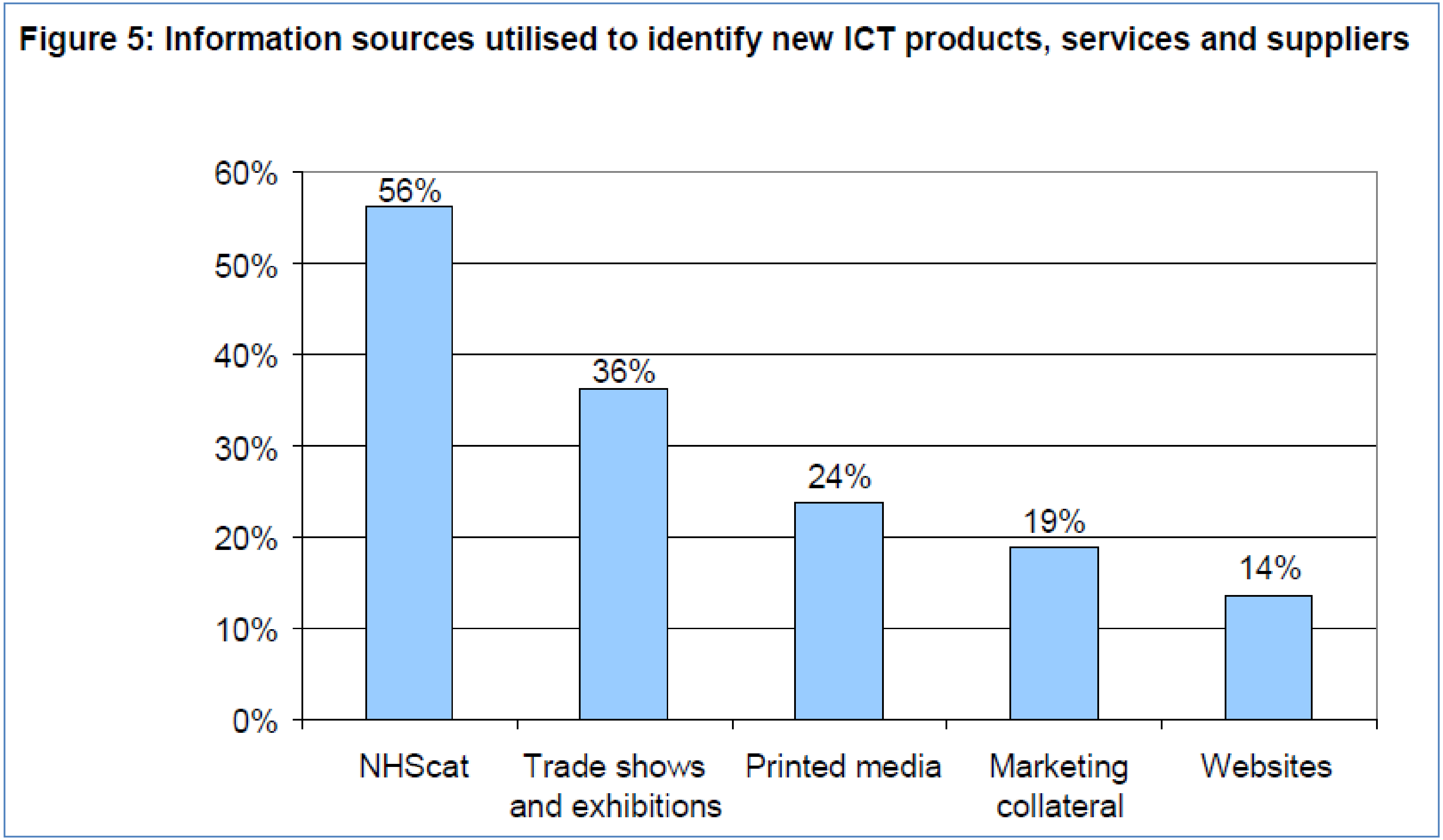
UK Health ICT – Info Sources



Source: Kable – Procurement & Information Sourcing

UK ICT Business

ESTABLISHED ICT SUPPLIERS

Technology for Health Services

- Key hardware suppliers to NHS include:
  - **CISCO**(San Jose, CA) supplying mobility solutions and most of the NPfIT infrastructure
  - **Dell** (TX) supplies over 60% of NHS fixed and portable computers, and many servers, PDAs etc
  - **EMC** (MA) is a strong supplier of storage solutions to NHS
  - **HP** (Palo Alto, CA) supplies enterprise systems, hardware and peripherals

Technology for Health Services

- Key software suppliers to NHS include:
  - **Cerner** supplied Millenium software to several Trusts and runs e-booking with **Atos Origin**
  - **Emis** supplies most GP systems
  - **iSoft**, now owned by **CSC**, developed the Lorenzo care record system and also supplies electronic patient record systems, patient admin systems and lab systems.
  - **Microsoft** supplies nearly 1 million copies of XP/Vista to NHS staff.

Technology for Health Services

- Example ICT suppliers to NHS
  - **Atos Origin** runs two commuter walk-in clinics for NHS and, with **BT**, **IBM** and **Sopra Newell & Budge** has a major IM&T contract in Scotland
  - **IBM** has a strong presence in Northern Ireland; is part of the **Atos Origin Alliance** in Scotland and has several smaller contracts with NHS in England
  - **Logica** has an integrated care record contract with NHS, IT and systems support contracts with various Trusts, and helps **BT** with the design of the Spine
  - **McKesson** has developed an electronic staff record system for the NHS – the world's largest single HR/Payroll IT system; it also provides clinical software, finance and HR systems
  - **Xansa**, through a JV with DH, delivers finance, accounting and payroll services to many NHS organisations

Source: Kable – Healthcare Market Profile

UK ICT Business

TALENT & TECHNOLOGY

Access to Talent & Technology

- Around 200,000 (0.5%) Science PhDs of working age, increasing by more than 10,000 pa
- Over 2 million (6%) Science graduates in the working age population, increasing by around 100,000 pa
  - 5th highest proportion of science-qualified 25 to 34 year olds (behind Ireland and France in EU)
  - 2nd highest proportion of science-qualified 20 to 29 year olds (just behind France)
- Low rate of skill shortage vacancies in DT

"Our culture in UK is quite inventive. The education system tends to turn out people with a wide range of understandings …

UK engineers are very good …, because making a technology applicable to a wide range of products requires creativity."

Warren East, CEO – ARM plc

Access to Talent & Technology

- UK has 3 of Europe's top 5 Technology Universities ..
- .. and has many world-class Research Universities
- UK-based businesses invest around £5 billion pa in R&D
- Government invest in UK R&D

"The potential talent pool is larger in Beijing or Bangalore.
But in the creative, more high end stuff, we still have the edge.
Cambridge is a global brand – scientists around the word have heard about and feel it is a cool place to be."

Andrew Herbert, Head of Microsoft's Research Centre in Cambridge

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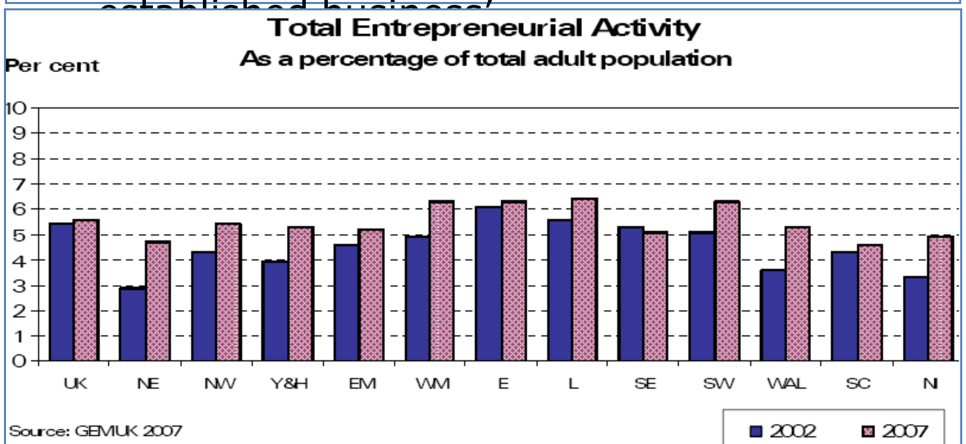
Access to Talent & Technology

Entrepreneurship is widespread

- Total Entrepreneurial Activity is an indicator of the enterprise in a region.
- The % of entrepreneurial activity has risen in almost every region in the last 5 year period.
- “Entrepreneurship” includes ‘any attempt at new business or new venture creation, such as self-employment, a new business organisation or the expansion of business by an individual, teams of individuals, or established business’



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Access to UK Networks

- Professional Bodies
  - The British Computer Society and HC2012
  - The Institution of Engineering & Technology
    - Healthcare Technologies Network
- Trade Associations
  - Intellect's Healthcare Programme
  - Telecare Services Association and Conference
- Business & Technology Networks etc
  - Cambridge Wireless and Wireless Healthcare SIG
  - eHealth Insider
  - Institute of Directors
  - SE Healthcare Technology Alliance SEHTA
  - Guardian Healthcare

Networks matter

UK ICT Business

FINANCING TECHNOLOGY

Financing Technology

- Proof of Principle Financing
  - Business Angels
  - Regional Venture Capital
  - Contract R&D Venture Partner
- Financing Revenue Growth
  - Small Firms Loan Guarantee
  - Venture Capital
- Financing International Expansion
  - Mezzanine (debt) Finance from Investment Banks
  - Public Equity Finance
- All underpinned by generous R&D Tax Credits

Financing Technology

- UK private equity accounts for 40% of the entire European market.
- London is the focal point and is the largest in Europe, accounting for over 25% of the world's private equity investment, second only to the USA
- R&D Tax Credits offer a significant additional enabler to profitable firms investing in R&D
- Imminent "Patent Box" legislation will help further reduce effective corporate tax liabilities

Financing Technology

- The UK government invests over £3 billions pa on scientific research, including ICT
- The Technology Strategy Board, part of the Department for Business, Industry & Skills, supports collaborative thematic research
  - EPSRC (Engineering & Physical Sciences Research Council), encourages academic – industrial collaborative ICT projects.
  - Knowledge Transfer Networks foster collaborative R&D between UK academia and UK-based companies.
  - Catapult Centres are being set up to facilitate focused collaboration further.

UK ICT Business

DO BUSINESS IN UK

UK: Best Place to do Business

- 7th largest global economy by GDP
- Easiest large EU country in which to do business
- UK spends more / head on ICT than others in EU
- Second highest proportion of qualified workers
- Many firms say that UK staff are most productive

Why the UK?

- Most UK purchasers are open to a differentiated value proposition. Focus, positioning and timing are often key to success
- Most UK businesses are open to value-adding partnerships, based on a mutual respect for what each brings, whether customers, experience, finance, people, reputation or technology
- Clarity of responsibility and reward is critical with escalation lines in the event of challenges
- "Only do yourself what no one else will do for you" is often the starting point

UK: Strong Infrastructure

- UK has 6 of top 10 busiest international air routes.
- UK is an ideal location for accessing Europe.
  - Almost all of Europe's leading IT markets can be reached in under two hours from any UK international airport
  - London's Heathrow, Gatwick, City, Luton and Stansted offer low cost and /or frequent connections to Europe
  - The UK's privatised rail network serves the country and, via the Eurostar connection, key locations in Europe.
  - There is also an advanced and comprehensive road system that links all locations throughout the UK.
- Travelling to work is relatively easy, with the average commuting time being just 26 minutes.

Why not the UK?

- UK buyers are impatient and know exactly what they want, creating clear opportunities for suppliers to focus on the expressed needs;
- Marketeers can leverage the power of social networks to create needs and influence purchase choice or timing
- In uncertain times, people will be cautious and avoid risks yet want to keep up; knowing what friends are buying or have already can drive behaviour

Where in the UK?

- Choice of location requires a balance between the most stressed communications lines
- Clients, financiers, HQ, key partners, and research partners all need communication but between what levels, how frequently and in what mode?
- The most and highest spending social commerce customers and intermediaries are likely to be in and around London
- Many logistics service providers and suppliers seek lower costs areas elsewhere in UK

UK ICT Business

DO BUSINESS IN UK

The UK's Big ICT Segments

- **Communications #**
- Carrier services – about £37Bpa
  - Mobile consolidation, future impact of SmartPhones and video
  - Fixed voice – around £10Bpa
  - Business data – around £3Bpa
  - Internet access – over £3Bpa
  - Mobile voice – over £11Bpa
  - Mobile data – around £5Bpa
  - PayTV – around £5Bpa
- Telecomms equipment – about £10Bpa, inc. over £4Bpa on handsets
  - Core network equipment – around £1Bpa
  - Access equipment – less than £1Bpa, 60% wireless
  - Handsets – 36Mpa, including 13Mpa smartPhones!

Mobility, SmartPhones, SocialMedia, Apps & HDVideo are drivers

The UK's Big ICT Segments

IT Services: a £35Bpa UK market

- Emerging from recession
- Project services were hardest hit, especially smaller suppliers
- Outsourcing increasing, more "best of breed" multi-sourcing & offshoring
- BPO focused on single functions – HR, Payroll etc;
- BPO increasingly popular in CG, LG, Banking and insurance

- Public Sector - ~£8Bpa
- Financial Services - £7Bpa
- Health Servies - ~£3Bpa
- Telecom Services - £1.5Bpa

Cloud delivery changing everything

Mobility & Social Commerce interesting

Table: Leading suppliers of IT Services* in the UK 2009

Rank	Company	Natio-nality	FY End	Revenue 2009 € million	Market share
1	HP (incl. EDS as of Sep 08)	US	31.10.09	3,074	8%
2	IBM	US	31.12.09	2,584	7%
3	Capita (incl. Carillion IT Services as of Jun 09)	UK	31.12.09	1,896	5%
4	Fujitsu (incl. FSC as of Apr 09)	JP	31.03.10	1,664	4%
5	Capgemini	FR	31.12.09	1,620	4%
6	Accenture	US	31.08.09	1,348	3%
7	CSC	US	31.03.10	1,326	3%
8	BT Global Services	UK	31.03.10	1,037	3%
9	Atos Origin	FR	31.12.09	867	2%
10	Logica	UK	31.12.09	779	2%

* comprising Hardware Maintenance, Project Services and non-captive Outsourcing, excluding captive Outsourcing and Management Consulting

The UK's Big ICT Segments

Software – still a £9Bpa market in UK

- Private sector recession replaced by public sector crisis
- Infrastructure software spend focusing on virtualisation, cloud, SOA
  - Enterprises:
    - BI and performance management software resilient as value emerges
    - Recovery in ERP upgrades expected
    - SCM increasing as retailers strive for efficiency in-store and on-line
  - SMEs focus on improved:
    - Collaboration
    - Information sharing
- Financial Services – around £2.5Bpa
- Public Sector – around £1.7Bpa
- Telecom Services – around £1.4Bpa

SaaS cannibalising licence revenues

Table: Leading suppliers of Software* in the UK 2009

Rank	Company	Natio-nality	FY End**	Revenue 2009 € million	Market share
1	Microsoft	US	30.06.09	1,211	12%
2	Oracle (incl. BEA as of Apr 08)	US	31.05.09	931	9%
3	IBM	US	31.12.09	561	5%
4	SAP	DE	31.12.09	471	5%
5	Sage	UK	30.09.09	219	2%
6	Symantec (incl. MessageLabs as of Nov 08)	US	31.03.10	213	2%
7	EMC (incl. VMware & RSA)	US	31.12.09	195	2%
8	HP (incl. EDS as of Sep 08)	US	31.10.09	159	2%
9	BMC Software	US	31.03.10	123	1%
10	CA	US	31.03.10	118	1%

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Why Vecta5 Export-Invest?

UK is the most attractive market for most ICT and Security firms

At near $200 billion pa, it is larger, more concentrated, and more accessible than anywhere else

BUT investment and partnering have risks

Real or perceived risks may increase costs or reduce profitability

- lack of visibility of the market opportunity for a specific service offering
- lack of clarity on the optimum market entry strategy
- difficulty finding business and technology partners or key UK-based staff

V5EI addresses these key risks in four ways:

- Free availability of mini-briefings on key market segments or issues
- Free and confidential outline reviews of internationalisation strategy
- Fixed price deeper reviews of draft internationalisation plans
- Flexibly priced ad-hoc and/or retained services to support business-led internationalisation

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