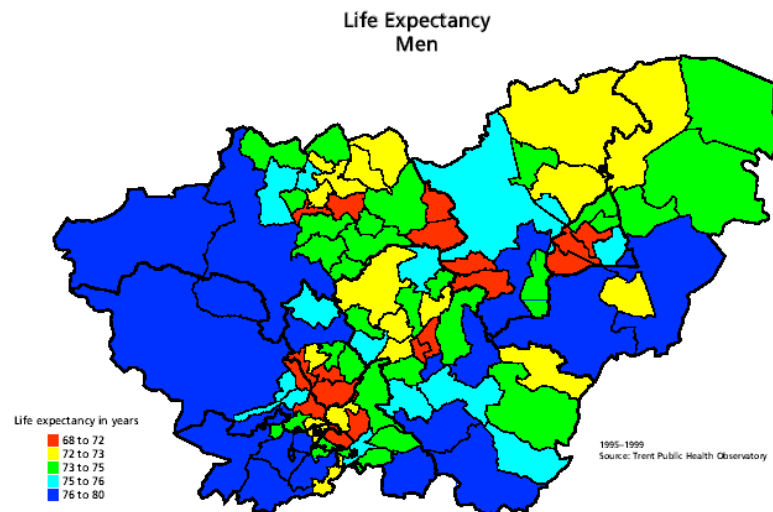


Business Models for Smart Applications and Systems in the Future Internet – Healthcare Services and Applications Intermediary

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- Motivation
 - Examine the practicability of exploiting purchasing power of UK Healthcare system for greater benefit of local communities and business.
 - Develop a business model for an **community based SME Services & Application Intermediary**
 - Healthcare delivery shift of focus:
 - Prevention rather than Treatment
 - Total system cost v Treatment cost
 - Wealth creation drives Wellbeing – reduce overall healthcare demand



- Challenges

- Increasing Number of Systems and Applications; diversity driving complexity within the ecosystem(s)
- Typical ecosystem SME mix of low to high technology adopters
- Healthcare Procurement aggregation driving new levels of supplier integration both horizontal (scale) and vertical (complexity)
- Average UK - NHS contract value has increased, the ratio compared to the average SME turnover (static) is widening.
- SME solutions developed for local markets are limited due to lack of globally accessible and cost effective interoperability standards.
- ‘New’ Healthcare markets developing outside the traditional providers:
 - Community Commissioning
 - ‘in the home personalised care’

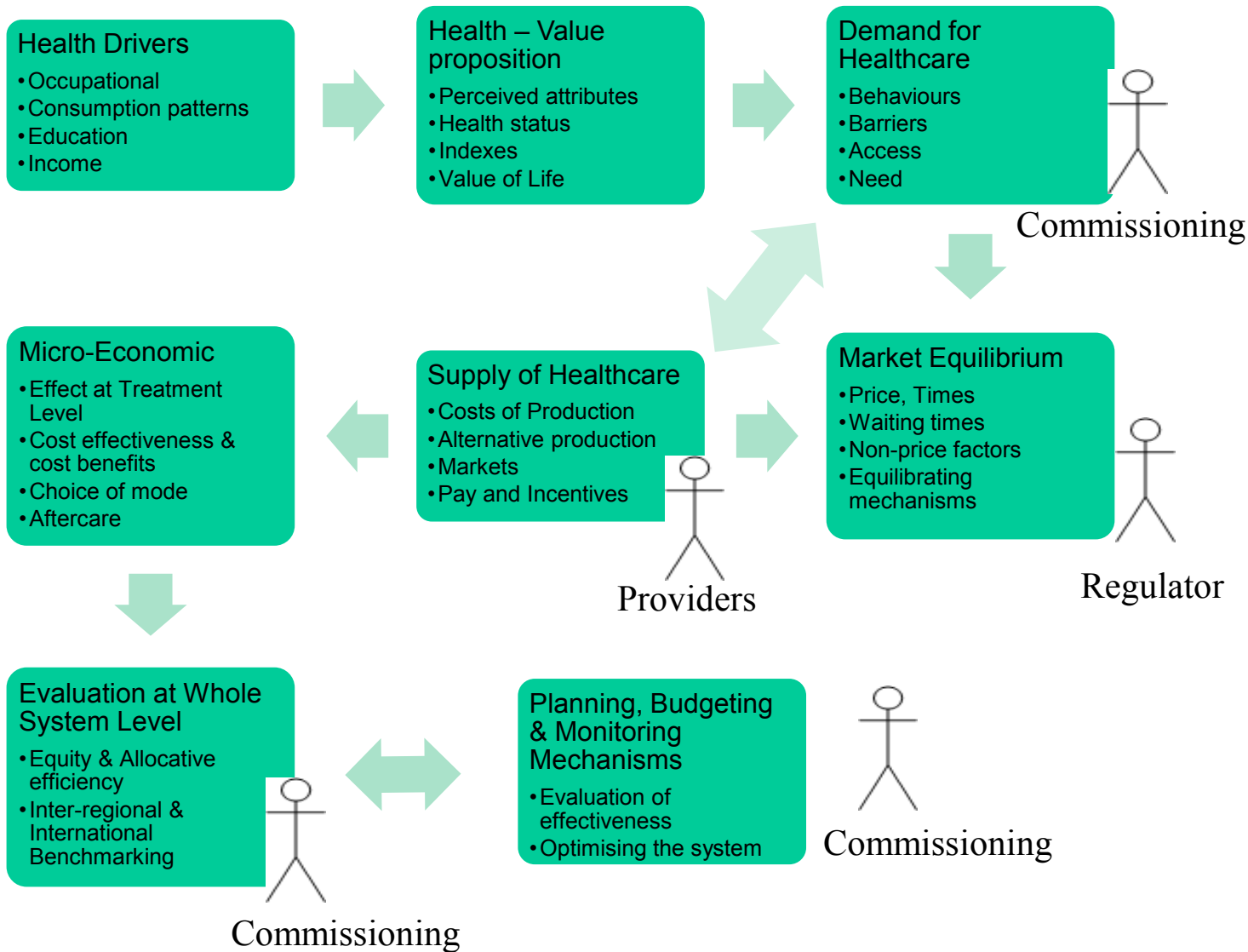


- Objectives
 - To propose a SaaS-U business model approach, for use by a SME service and application intermediary in a regional healthcare ecosystem.
 - Highlight the potential challenges involved with creating and sustaining the intermediary business model.
 - Review if the business model can be successfully deployed, shifting from traditional healthcare high cost 'centralised' care to patient led 'on-demand' customised services.
- Methodology
 - Market context
 - Definition of the business model construct and modelling process
 - Role of researcher in applying these steps within an ecosystem



- Construct the initial model
- Intermediary Value Proposition & draft Business Plan
- Identify: Collaborative Innovative and Baseline utility services
 - Generic Service Platform
 - Service discovery & negotiation
 - Human Interaction
 - Collaborative Product Development
 - Semantic Supporting services
 - Competency Development





- Costs

- Utility Investment Costs
- Generic Service Platform - Operator
- Healthcare Dividend
- Start-up Costs Intermediary
- Operating Costs

- Revenue

- Subscription
- Transaction
- Application
- Success & Incentive
- Dynamic Pricing
 - Inventory
 - Data
 - Game
 - Machine Learning
 - Simulation
 - Auction



- Output Variables
 - Financial: NPV/IRR
 - Commercial: P&L/Cash flow/Market Share
 - Economic: GVA
 - Social: Jobs/Wellbeing
 - Consumer: Self Directed Budgets
- Implementation
 - Economies of scale
 - Economies of scope
 - Vertical Enterprise Integration
 - Core Competence



		Centralised Buying Power	Distributed Buying Power
Large Organisations Dominate Market	<p>As IS - 'Corporate' Health</p> <ul style="list-style-type: none"> overhead costs increase high vertical integration of services fixed prices - treatment productivity key driver (lean health) standard products and services - one size fits all traditional large scale PPP - investment recovery key drivers requires above real term inflation investment year on year national health delivery strategy - defocus on 'local' conditions 	<p>Disruptive - Retail Health</p> <ul style="list-style-type: none"> politically seen as shift from public to private with additional payments large private providers, charities and insurance companies provision of healthcare marketing driven and technology sensitive high opportunity for cost reductions of service overheads and delivery threat to secondary care providers free market healthcare healthcare by consumer shopping virtual suppliers become the norm 	
SME Organisations Dominate Market	<p>Adoption by default - Health hubs</p> <ul style="list-style-type: none"> regional centre commissioning post code health horizontal integration of services - primary care integration and turf wars with secondary care providers Local Authorities retain control of large portions of spend Quick fix for budget cuts in healthcare Regional healthcare projects emerge piggyback national contracts for service delivery Duplication and complexity of managing funding is created Focus of healthcare issue upon league tables and regional 'hot topics' 	<p>Emerging - Big Society</p> <ul style="list-style-type: none"> National Care Service - federation of healthcare ecosystems Local authorities become stakeholders Cost and prices vary local focus of solutions - professional community of commissioners created patient centric - customer relationship management fundamental service league tables yardstick of performance health dividend key measure of impact of services upon future costs local providers have greater influence direct payments to patients the norm lack of access to core systems - data & systems gaps need closing competition fragmented and dependant upon clear set of delivery rules innovation thrives - standards under pressure to keep pace mass customisation of services 	



- diversity - addressed by innovative Search, Discovery & Ranking of services
- mix of low and high tech users - addressed by Service creation that caters for maturity of providers and their customers.
- investment and management burden in complex ICT infrastructures – addressed by provision and federation of ‘local’ intermediary service provider.
- New forms of co-operation – addressed by provision of Enterprise Collaboration Human Interaction & SaaS-U services.
- Procurement aggregation; horizontal (scale) and vertical (complexity) – addressed by innovative collaborative services: i.e. Trust, Legal and Commercial SaaS-U platform services.



- **Tax payer** – adoption of the Health Dividend using utility type services lowers the cost of healthcare delivery, increases local spend driving wealth creation and hence reducing local demand.
- **Patient** – Wellbeing is a key factor in health; Utility services offer the scope for greater patient '**customer**' control, supporting services and chiefly customised services.
- **SME** – Business gain greater market share and face reduced barriers to market entry.
- **Local Community** – particularly communities with poor health indicators can benefit from localised investment and secondary services creation.



- Co-incident factors at work
 - EU ICT and e-Health policy
 - UK Government Policy : growth strategy to offset the economic recession.
 - UK growth driven by UK public procurement directed to SMEs.
 - Greater awareness in a recession; the poor become poorer and exposed to greater hardship – increases service demand.
 - Growing use of Personalised Care Budgets for long term and end of life conditions – Expanding Primary Care market
 - Increasing need to manage complexity by integration of many to many relationships both supplier and customer.
- *Conclusion good possibilities for Intermediaries using utility SaaS services*



Please contact for further information and updates of
the business model for health

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