

# Enterprise COllaboration & INteroperability



ICE 2011

COIN: Healthcare case; results and benefits

Track 1 Session 2,

June 22<sup>nd</sup> - Aachen, Germany



# Contents

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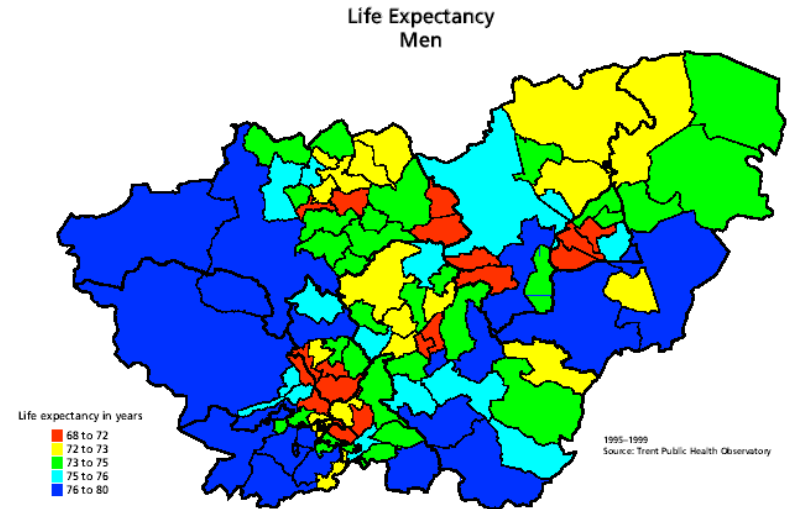
- Motivation
  - Ecosystem
  - Problem area
- Building the Service Model
  - Healthcare and ICT market
  - Healthcare high level model
  - Market Scenarios
- COIN
  - Ecosystems, Innovation & Utility
  - Service Development
  - Major results
  - Use of COIN
  - Benefits



# Motivation, problem area

- 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





# Motivation, problem area

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- Challenges

- Increasing Number of Systems and Applications; diversity driving complexity within the ecosystem(s)
- Typical ecosystem, mix SME of very 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’



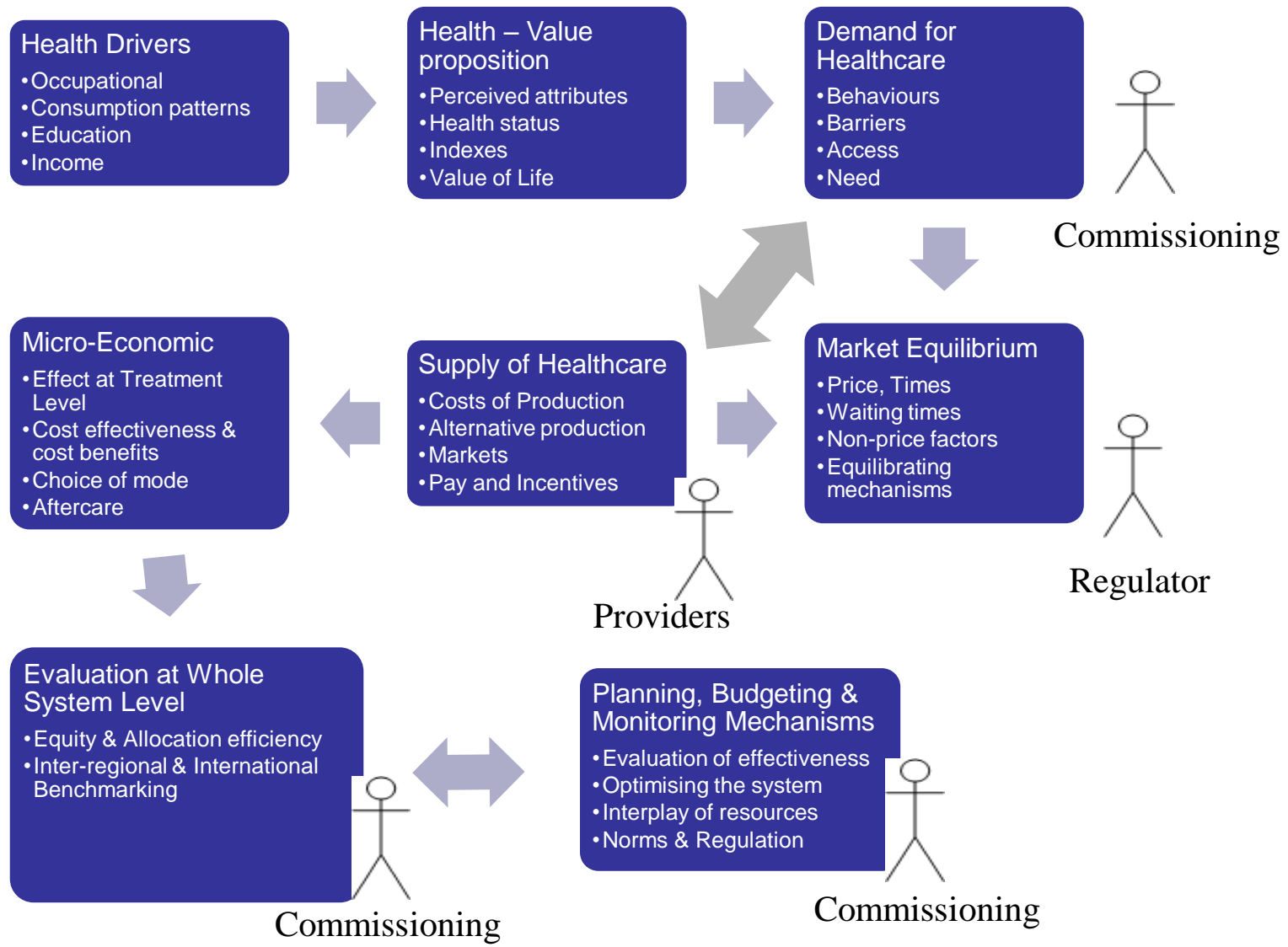
# Typical Viewpoints – ICT & Health market

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- Access to knowledge economy
  - Coverage approaching 100% of population
  - Penetration for healthcare circa 5%
- Attitude, shift from digital divide to economic opportunity
  - Aging population – labour saving solutions
  - Digital divide remains a usability & take-up issue
- ICT maturity
  - Potential customer access Mobile v Fixed web
  - Usability challenges Mobile v Web
- Motivational factors
  - Established habits, procedures
  - Status quo,
  - Present social, business networks are effective lobbyists
  - Economic opportunity



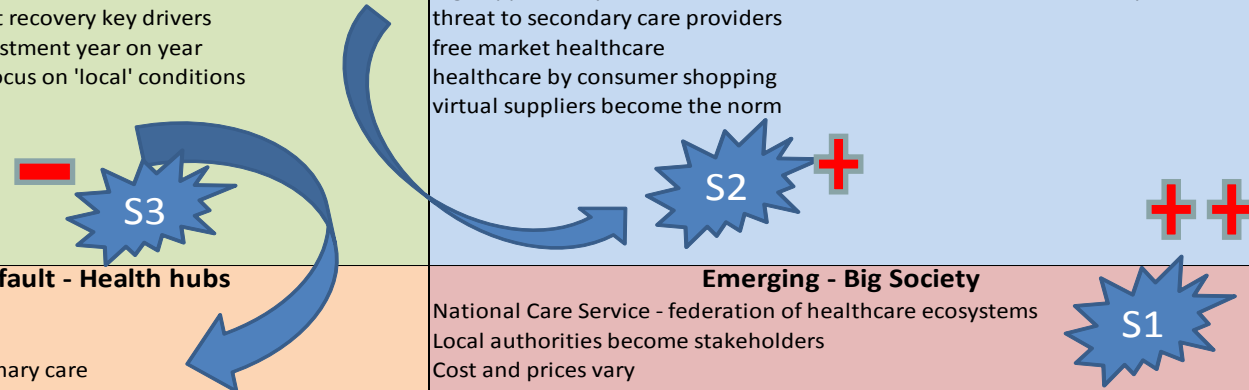
# High Level Model





# Scenarios - Healthcare

		Centralised Buying Power	Distributed Buying Power
<b>Large Organisations</b> Dominate Market	<b>As IS - 'Corporate' Health</b> 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	<b>Disruptive - Retail Health</b> 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	
<b>SME Organisations</b> Dominate Market	<b>Adoption by default - Health hubs</b> 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'	<b>Emerging - Big Society</b> 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	





# COIN – Ecosystems, Utility & Innovation

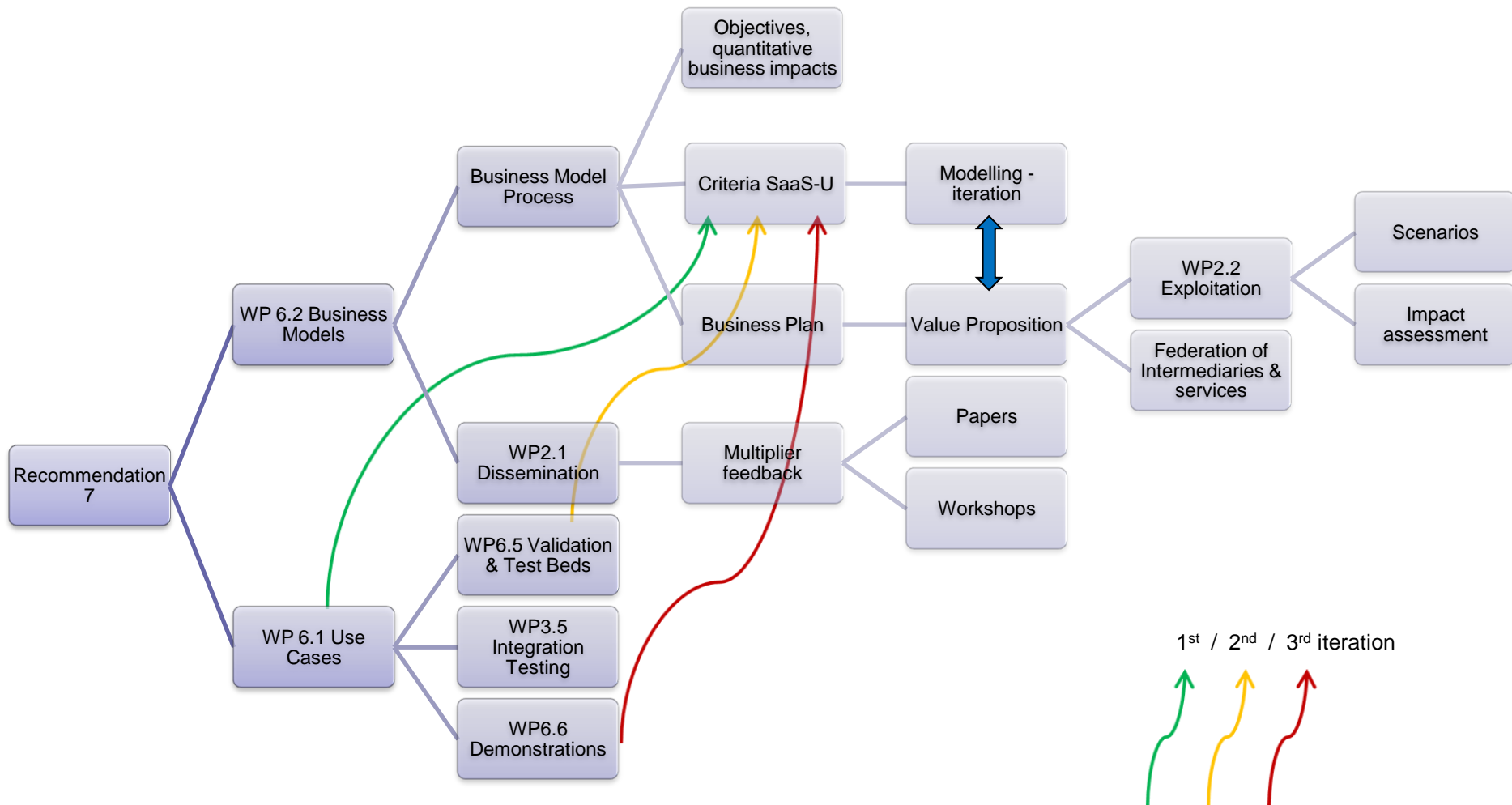
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- Ecosystem supports two requirements for Utility services:
  - Market Coverage and Penetration.
- Healthcare Market Innovation
  - Self directed care budgets
  - 'Personalised' health & social care
- SaaS-U can increase 'ownership' and selection opportunities, creating:
  - Increase of economies of scope & competence.
  - Disruptive Innovation
  - Co-creation
- The healthcare **value proposition** (and business model) research in COIN relate to the supply side of the ICT market for the purpose of ascertaining whether there is a business case for COIN ISU /SaaS-U.
- Challenges:
  - Economic foundations
  - Future enterprises & innovation
  - Scope creep





# Healthcare – Service Development





# Major Outcomes/Results

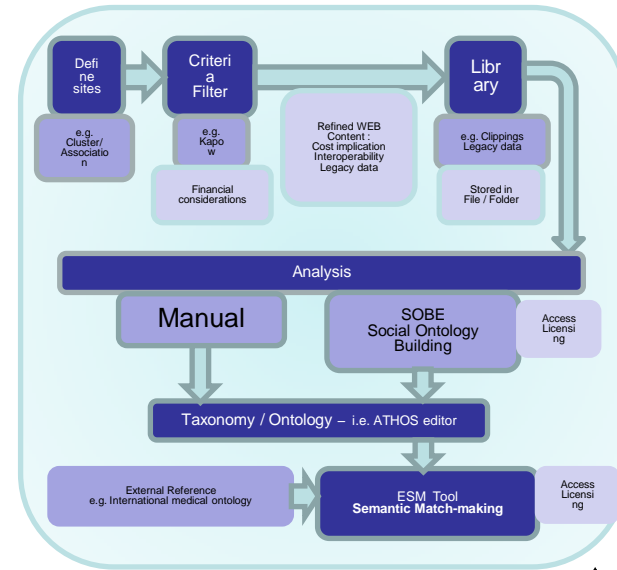
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- Construct the initial Healthcare Use Case service model
- Service Intermediary Value Proposition & draft Business Plan
- Identify: Collaborative Innovative and Baseline utility services
  - Generic Service Platform
  - Service discovery & negotiation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



# Use of COIN Services

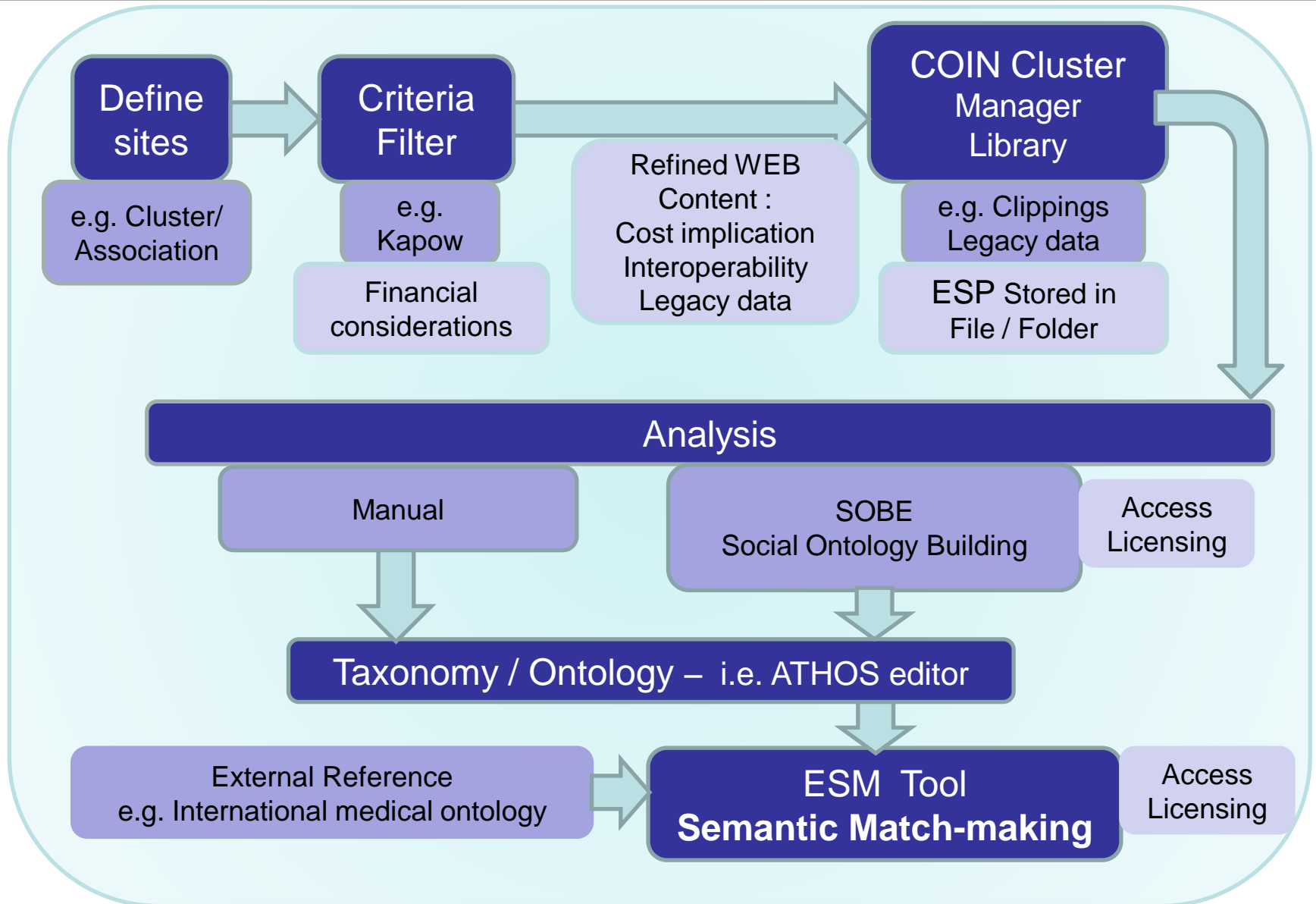
- **Eight Primary Use Cases**
- Semantic Services
- Human Interaction Services
- C-PD Services
- Interoperability Services







# Healthcare – Example Taxonomy/Ontology Build process





# Competitive Advantage: COIN goals

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- **Diversity of supply** - address by innovative Search, Discovery & Ranking of services
- **mix of low and high tech users** - address 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** – address by provision of Enterprise Collaboration Human Interaction services.
- **Procurement aggregation**; horizontal (scale) and vertical (complexity) – address by innovative collaborative services: i.e. Trust, Legal and Commercial platform services.



# Potential Beneficiaries

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- **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.



# Business Benefits – VEN Healthcare Use Case

Use Case	Process Parameters	Improvements	Expected Benefits
Member Recruitment	<ul style="list-style-type: none"> <li>•Subscribed Systems</li> <li>•Knowledge transfer</li> <li>•Target audience</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase local involvement</li> <li>•Increase membership numbers and mix.</li> <li>•Increase member activity</li> </ul>
Events & Communications	<ul style="list-style-type: none"> <li>•Subscribed Systems</li> <li>•Knowledge transfer</li> <li>•Target audience</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase local involvement</li> <li>•Increase membership numbers and mix.</li> <li>•Increase member activity</li> </ul>
Form Interest Groups	<ul style="list-style-type: none"> <li>•Target levels of social interaction</li> <li>•Co-ordinator productivity</li> <li>•Decision making</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase membership numbers and mix.</li> <li>•Increase member activity</li> <li>•Demographic decision making</li> </ul>
Improve Service Levels	<ul style="list-style-type: none"> <li>•Target levels of social interaction</li> <li>•Categorisation of Customer / Supplier roles / activities</li> <li>•Cater for quantitative and qualitative improvements</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase member response rates</li> <li>•Increase member response rates by demographic group</li> <li>•Increase in minority specific services</li> </ul>
Training	<ul style="list-style-type: none"> <li>•Self manage competency development</li> <li>•Online interactive content</li> <li>•Manage negotiation and selection of training content and provision</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase accreditation levels</li> <li>•Increase competency and skills</li> <li>•Reduce cost to acquire new skills and knowledge</li> </ul>





# Business Benefits – VEN Healthcare Use Case

Use Case	Process Parameters	Improvements	Expected Benefits
Manage budget	<ul style="list-style-type: none"> <li>•Market availability of services and products</li> <li>•Collaborative and innovative end-to-end services</li> <li>•Mix and Volume of competition</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> <li>•C-PD services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase in quality of service</li> <li>•Improvement in competitive pricing</li> <li>•Increase in innovative services</li> <li>•Increase of well-being</li> </ul>
Schedule Order	<ul style="list-style-type: none"> <li>•Subscribed Systems</li> <li>•Collaborative and innovative end-to-end services</li> <li>•Mix and Volume of competition</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> <li>•C-PD services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase in quality of service</li> <li>•Improvement in competitive pricing</li> <li>•Increase in innovative services</li> <li>•Increase of well-being</li> </ul>
Order Payment	<ul style="list-style-type: none"> <li>•Procurement and supply</li> <li>•Trust management</li> <li>•Safeguarding and dispute management</li> </ul>	<ul style="list-style-type: none"> <li>•Interoperability</li> <li>•Semantic services</li> <li>•HI Services</li> <li>•C-PD services</li> </ul>	<ul style="list-style-type: none"> <li>•Increase in quality of service</li> <li>•Reduction in Customer complaints and/or non-conformance</li> <li>•Increase in use of end-to-end services</li> </ul>



# COIN - Broader Ecosystem Benefits

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- **Deliver** alternative Patient choice
- **Demonstrating** innovation and leadership
- Single-minded focus on **benefits realisation**
- Appreciating the **EC/EI “glue”**
- **Extend** marketing reach.
  - Ability to provide **total capacity** offering
  - Ability to **gain approvals** as part of a larger entity
- Full **transparency** of the process and the opportunities within it
- **Qualified** bid partners, not just ‘eager participants’
- Integration with a **mixed community** of talent
  - Opportunity to share ideas and thinking
  - Access to best practice in other industries, sectors or clusters

# Enterprise COllaboration & INteroperability



**Thank-you for your attention**

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