Ideas and suggestions for getting broadband in your area

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Connecting Kent: Rural issues - broadband

Intercai Mondiale

- Reasons for stimulating broadband provision
- Examples of projects
  - Business parks
  - Village schemes
- Options for a community
- Implications
  - Effort required, advantages and disadvantages
- Project stages
- Getting support from suppliers, funders and local authorities
- Conclusions

Key reasons for stimulating broadband provision

- Economic
  - Enable businesses to exploit e-business applications
  - Maintain or increase representation of high technology industries in the locality
    - » Encourage provision of higher value knowledge and high technology jobs in rural are
  - Increase the capacity of a local community in information technologies
- Social
  - Improve social cohesion
  - Improve availability of services for disabled and economically disadvantaged
- Environmental
  - Reduce car journeys
- Educational
  - Ensure provision for schools and other public buildings in the area
  - Ensure availability of educational material at home
- Recreational
  - Keep the kids happy during the long winter evenings

Increasing or safeguarding the value of economic activity in a rural location

Problems with supply of broadband services

- No DSL or cable modem service
  - Community size is too small for BT or an ISP to justify provision
  - Latent demand not identified
  - No cable TV network

- No suitable backbone networks to carry traffic to the Internet
  - Historic demand has been insufficient to encourage 2nd tier network providers
  - Present state of telecommunications industry precludes speculative investment - immediate return is required

Intervention required to ensure broadband viability

- Business park
  - East Malling, Greenham Common
  - Combination of contended Internet and private circuits, low cost telephony
  - Shared backhaul
  - Provision by third party or by the owner / developer of the business park
- Villages and small towns
  - Contended Internet access
  - Registration schemes: Pembury, Paddock Wood
  - Community networks provided by third parties - Bredon Hill, Worcestershire, CARNET, Cambridge
  - Self provision of a community network - Kingsbridge, Devon

- **Small incubator centre on the site of Horticultural Research International**
  - **Intention to create a horticultural / life sciences cluster around the research centre**
- **Available space - 13 units with 8 laboratories**
- **Backhaul available**
- **Solution:**
  - **Satellite service from Aramiska shared between companies in the Enterprise Hub, minimising costs to all**
  - **Service shared over a local area network within the Enterprise Hub**
- **Cost**
  - **Capital costs - c £3000 for equipment and service start up**
  - **Annual costs: £2400 for the service**
- **Risk taken by the Enterprise Hub with SEEDA backing**

- 150 acres of land purchased by Greenham Common Trust - a community partnership to aid local community projects

- Large and small offices, properties for research, development, light industrial, nursery and starter units, heavy m/f, warehousing and distribution - 160 tenants

- Initial, broadband provided for two Enterprise Hub buildings - 512Kbit/s leased line onto the site plus radio link between buildings

- Requirement to open this up to the rest of the site - plans were for an initial 8Mbit/s with a fibre backbone linking buildings

- AL Digital leasing of the old command and control centre introduced new requirement - 34Mbit/s backbone to be provided via a microwave link

- Sharing of backhaul via fibre backbone and on-site radio network now possible

- Sharing backhaul with surrounding rural community by radio planned

- Local authority initiative with strong project champion

- Three villages around Bredon Hill in Worcestershire

    – population - 5000, jobs - 1000

- Maintain diverse rural economy and promote high technology and knowledge based industries

    – Main focus - rural SMEs

- Initial market research and justification done with Market Towns funding

- Subsequent project underwritten by Advantage West Midlands

- ADSL over unbundled local loop by a third party supplier Independent Networks

- Launched date - 4th August

- Private initiative with support of local Chamber of Commerce and other local businesses

- Kingsbridge is a small town in North Devon

- Wireless LAN solution with eight nodes, backhaul provided by local web design and hosting company, Saltstone Media

- Total cost of setting up the network - £1000

- Voluntary (ie unpaid) management and support
  - Difficulty in sustaining the service because of the effort required

Risk to the community

High

Community d-i-y solution
Kingsbridge, East Malliing
New Greenham Park

Third party solution
Bredon Hill

BT ADSL / Cable
Pembury, Paddock Wood,

Low

Community effort

Low

High

BT ADSL / Cable　　**Registration campaign against trigger levels**

Third party solution

Effort:

Market research and analysis

Identify funding sources

Obtain local authority support

Identify suppliers

Tender

Select suppliers

Project manage implementation

Community d-i-y solution

Market research and analysis

Identify funding sources

Obtain local authority support

Set up community organisation

Select technology

Design solution

Identify and select equipment and backhaul suppliers

Purchase equipment and backhaul

Implement network

Project manage implementation

Take on customers

Manage network and customer base

Advantages and disadvantages

BT ADSL / Cable

The benchmark

Advantages:

Good, reliable performance where available

Disadvantages / risks:

Delay in obtaining service

Community may be beyond the reach of ADSL

Third party solution

Advantages:

Community capacity building in IT

Social cohesion from the procurement exercise and continued development of community services

Innovative services

Community specific services

Symmetrical services for voice over IP

Disadvantages / risks:

Financial strength of third party leading to failure in the medium term

The Betamax problem - a technological or developmental back-water

Community d-i-y solution

Advantages:

Community capacity building in IT

Social cohesion from the procurement exercise and continued development of community services

Innovative services

Community specific services

Symmetrical services

Control by the community

Disadvantages / risks:

Insufficient skill / resources to implement, run and develop

Financial strength of community organisation

The Betamax problem

Risk to the community

High

Community d-i-y solution

Insufficient demand for third party
Necessary expertise available

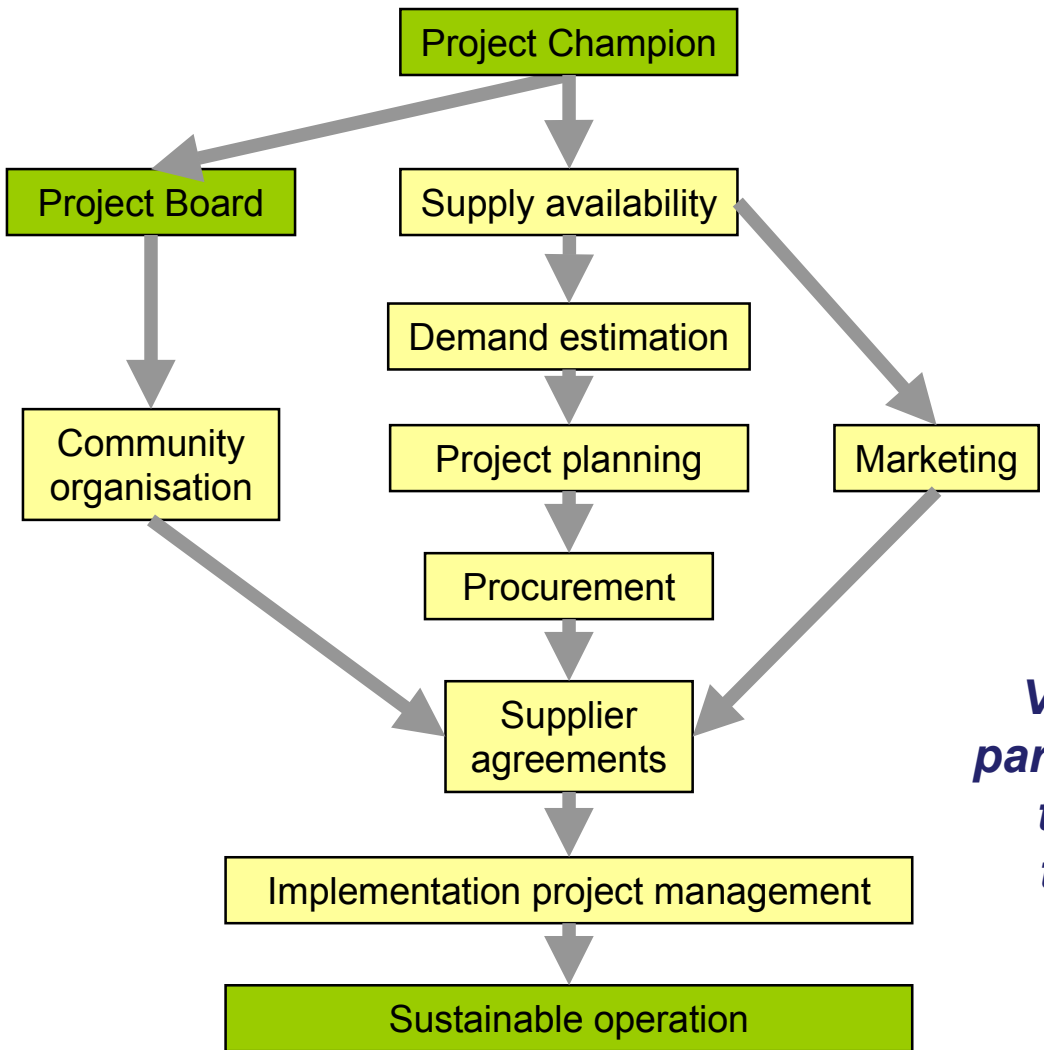Third party solution

No trigger level
Special requirements

BT ADSL / Cable

Low

Low

High

Community effort

Community broadband provision

Project Champion

Project Board

Supply availability

Demand estimation

Community organisation

Project planning

Marketing

Procurement

Supplier agreements

Implementation project management

Sustainable operation

Villages and business parks often need support to obtain advanced telecommunications services

Supplier and funding requirements

	Supplier	Funding body	Local authority
Size of scheme	✓	✓	
Registered demand	✓	✓	
Longer term demand estimate	✓	✓	✓
An active community champion	✓	✓	✓
Demonstrable community support	✓	✓	✓
Support from the local authority	✓	✓	
Support from local business	✓	✓	✓
External source of funding	✓		
Meets funding or LA objectives		✓	✓
Credible supplier		✓	✓
Within local authority boundaries			✓

Needs of support organisations should be met

Community projects - conclusions

- Gap in broadband provision will be in smaller villages, the rural hinterland the 10% - 20% that BT will not cover, and rural business parks

- Options for coverage include variously funded community schemes

- Community Broadband schemes require:

  – A project champion

  – A community organisation - generally a social enterprise - a company limited by guarantee with community development objectives

  – Documented demand

  – Funding or underwriting of the project

  – A willing service provider for backhaul

  – Either equipment or service for distribution in the community

  – Contracts

  – A continuing customer support and sales organisation

Established 1987

ICT industries
Manufacturing

**Economic analysis associated
with telecommunications**

Business strategy

Performance improvement

System design and integration

Operations management

Government

Employee owned

20 consultants

Specialist associates
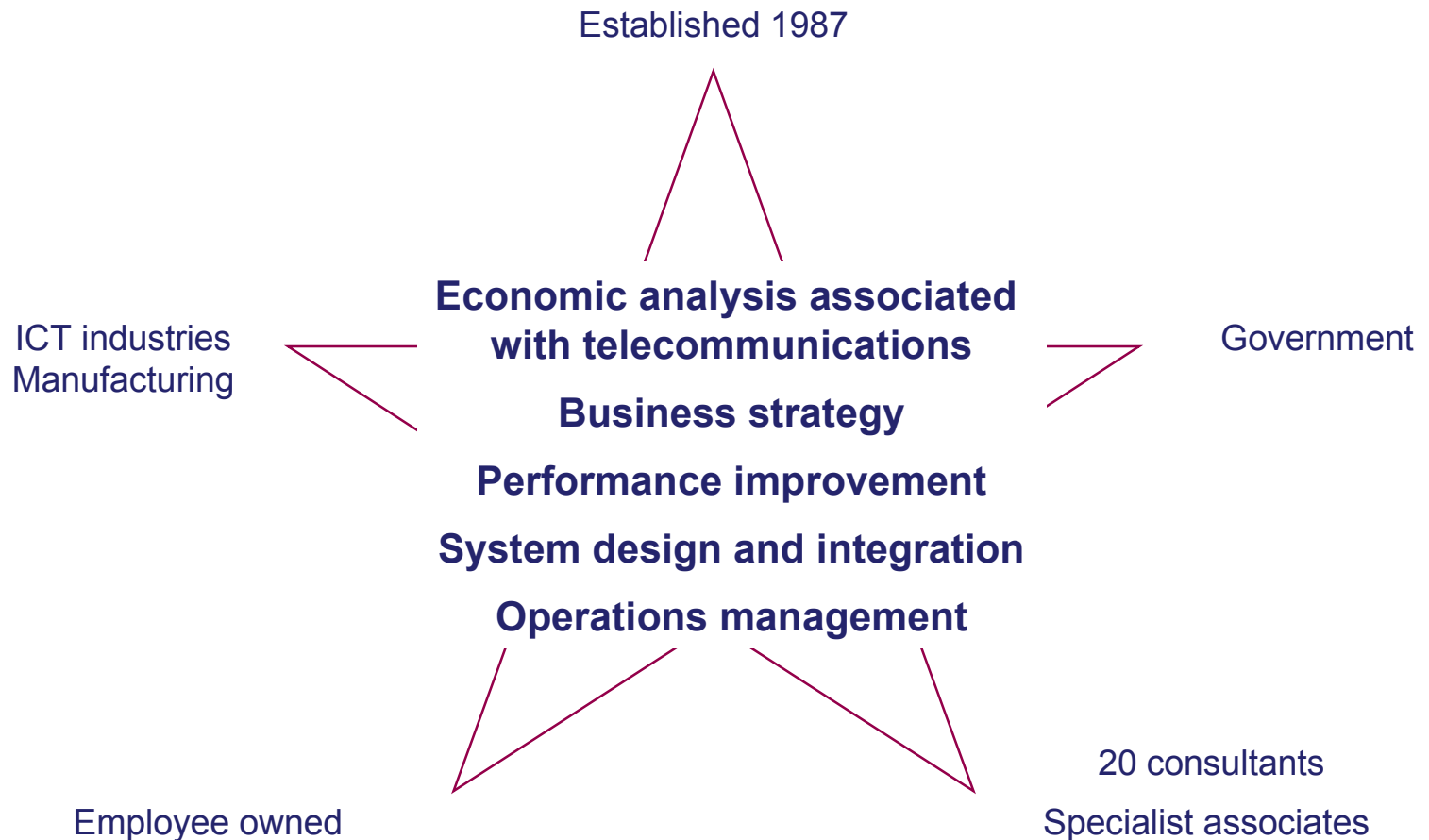
*Maximising the value of a client's enterprise by improving its strategic
approach to the market and its organisational effectiveness*