

NEW INITIATIVES/SIGNIFICANT ENHANCEMENT DETAILS

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DEPARTMENT: Department of Business, Industry and Regional Development

PRIORITY NO:

TITLE/DESCRIPTION: QUESTnet Future Development

PROGRAM NO and TITLE:

[Description: Describe the initiative, who are the clients, how will the service be delivered?]

This is a proposal by the QUESTnet Management Committee to accelerate the introduction of advanced information technologies based on Internet services to stimulate development in the education, private and Government sectors in Queensland.

QUESTnet has been instrumental in bringing advanced information technology services to Queensland which are of benefit to a wide sector of the community including education, government, commerce and industry. It is unlikely that such services would have been introduced into the State at this time if the decision was made purely on a commercial basis. QUESTnet sees its role as one of stimulating advance technology in the future to the economic advantage of Queensland.

The Further Development of QUESTnet [1] has identified fast growing demand for services in some sectors, particularly in education. However, access to the Internet and the low penetration of technology into much of private sector are inhibiting factors. One of the major objectives of this proposal is to provide infrastructure and selective initiatives to accelerate the uptake of information technology in all sectors of the Queensland community.

QUESTnet Operation

It is proposed that QUESTnet be set up as an independent unit but under the auspices of The University of Queensland. It is likely that some staff would be located in other institutions so that QUESTnet is more responsive to local needs? The unit will report to the QUESTnet Board of Management throughout the Chairman.

The unit would be supported by government of \$600,000 pa funding for at least five years. The participating institutions have already provided considerable value to QUESTnet for the Queensland community and will continue to do so. The estimated value of this contribution is similar to the government contribution.

Major Objectives

QUESTnet is seen as providing infrastructure and enabling technologies to identified market segments for the intellectual and economic advantage of Queensland.

QUESTnet would develop a series of programs aimed at an identified market segment or infrastructure project. Such programs would become self funded, or alternatively funded within a designated time period, usually 1 to 3 years, depending on the program. These programs are aimed at seeding new services and technology.

Such initiatives may be too expensive for all but the largest of organisations to implement in a timely manner. Further, QUESTnet is in a unique position to introduce programs and services pro-actively.

A range of suggested programs and flagship projects are given in Appendix A.

QUESTnet Management Committee

The membership of the committee comprises the Directors of Information Technology Centres of all Queensland Universities, A representative of the Department of Business, Industry and Regional Development and the General manager of AARNet. Observers also attend from the University of New England, Armidale and Southern Cross University, Lismore.

Contact Person:

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[Purpose: What corporate/program goals does the initiative relate to, and how will they contribute to their achievement?]

In support of its goal of assisting business development throughout Queensland, the Department has a strategy of promoting and encouraging the adoption of new technologies and innovative products and practices. This involves the Department facilitating the provision of infrastructure to disseminate and promote adoption of new technologies and innovation.

This QUESTnet initiative forms the next phase in the development and provision of information technology infrastructure and the promotion of adoption of information technology within the Queensland business, education and government community.

The Department has assisted in previous development of QUESTnet infrastructure with funding in excess of \$1M and continues to support the activities of QUESTnet by participation on the QUESTnet Board of Management, the annual QUESTnet Network Conference and other seminars and demonstrations.

The benefits of increasing the capabilities and effectiveness in the access to information, people and other resources, will flow on directly to Queensland business enterprises that employ them. Particular benefits are seen as:

- The enhancement of innovation and technological development capabilities available to business,
- The availability of these services to a wide range of the community whether they are located in metropolitan, provincial or rural areas of Queensland,
- The development of underlying infrastructure to enable Queensland businesses, government, education and other sectors of the community to provide services to clients nationally and internationally,
- Providing equitable and cost effective access to QUESTnet and the Internet. (The Internet is an international network providing access to in excess of \$30M people (mainly in the commercial, research and educational community) situated in over 80 countries.)
- Stimulation of advanced information technologies early into Queensland. Enabling other research and university based resources to be made available to external organisations, Technology Quadrangle, supercomputing.
- Potential to enhance research and development in Queensland. The report [1] has identified that many small businesses do not use or exploit computers in particular and information technology in general to a large degree. This proposal aims to provide the means for access to information (eg delivery of educational services) for anywhere in Queensland equitably.

- Further enhances the degree of cooperation between Queensland teaching and research institutions and the State Government.
- The Internet is a convenient and sometimes necessary method of communications.

[Source of the Proposal: Eg, Policy decision of Government. Change in clients status, economic climate, other environmental changes. Result of internal or external evaluation.]

The Department in conjunction with the QUESTnet Board of Management has supported two previous initiatives in the development of QUESTnet and the Internet in Queensland. The Department commissioned a study of The Further Development of QUESTnet [1] in June 1994 and completed in November 1994. This report identified a number of key areas and markets which could further enhance the cultural and economic development of Queensland. As a result of the report QUESTnet has produced a Strategic Statement [2] and business plan which has resulted in this recommendation to continue support for the QUESTnet initiative.

[Justification for the Proposal: Include details/discussion regarding the following:]
[How were the needs assessed?]

Information data networks are becoming increasingly recognised as essential infrastructure in industrial and service-based economies. It is becoming equally important to be able to provide information services to primary and secondary industry and to provide access where these industries are located. But like many technologies which are of benefit to a wide range of the community, this infrastructure requires initial support by the whole community to ensure its timely introduction

Programs such as that proposed here are already underway in many other regions of Australia. QUESTnet has already given Queensland technological advantages over other States with its expertise and high degree of cooperation between the tertiary teaching and research institutions. This is a proposal to maintain and increase the intellectual and economic competitive edge of Queensland.

The Internet was introduced into Australia in 1990 as AARNet, owned by the Australian Vice-Chancellor's Committee. AARNet and its Queensland region QUESTnet have been growing in use steadily at about 30% per annum. A recent market survey [1] indicates that QUESTnet has not, as yet, penetrated many possible market segments very deeply, and that there remains a large potential for growth.

Particular segments in which demand exists and use is growing are in the Library community as well as primary and secondary schools. Recently the Information Industries Board has initiated programs to provide QUESTnet connectivity for technology based businesses in Queensland.

[Cost/Benefit analysis]

The financial responsibility for provision of such services needs to be shared over the whole community in order to progress advanced services in a timely manner.

To achieve the growth in and provide service access to a wider community QUESTnet requires additional resources and needs to operate wide a wider client base and mission than individual institutions.

Log established relationship with Government through DBIRD. Emphasis on regional development and equity of access for all including rural and regional communities.

[How do the services proposed relate to identified needs?]

[What alternative proposals were considered to meet the needs; why were they rejected?]

There is very little alternative.

QUESTnet has the track record to promote the continued development of advanced information technology services into Queensland.

Commercial providers are now entering the market but they will not be able to provide.

[Why does it have to be done now? Can implementation be delayed or phased in?]

This proposal requests funding over five years to provide a phased approach which is responsive to and supportive of the needs of various identified groups. The services proposed need to be supported over a period of time to gain full acceptance; like many high technologies the uptake by business, gaining improved productivity and the development of new initiatives using this technology occurs over a number of years.

It is important that QUESTnet be operated with an agreed level of funding for a period of say five years. Small one off projects do not focus sufficient resources. Clients need to believe that the service will exist into the future in order to invest their resources into that service.

[Performance Criteria: How will the initiative be assessed for effectiveness, efficiency, etc? Key performance measures. Targets over a three years period.

growth in use compared to other states/regions of .au

That the initiatives become self or alternately funded

Extent to which existence of new businesses/exports etc are attracted to the state market survey each two years to identify growth, acceptance and new markets.

RESOURCES

'In principle' proposal ?????

Unit Manager and three staff \$240 Kpa (includes 23% on costs and 15% administrative overhead for power, space, etc). Plus \$10 Kpa consumables. Total \$250 Kpa.

Estimated equivalent funding from universities (count 1 full time person from big and 1/2 from little say 5 people @ \$300 Kpa).

Project Funding: It is suggested that a number of projects be set up and run concurrently. An amount of \$300 Kpa should be allowed. The unit will operate by implementing targeted projects as approved by the BoM. Projects will aim for self or alternate funding within a nominated period. Projects might require \$50 K to \$100 Kpa of project funding. (An amount will need to be allowed for QUESTnet operating equipment.)

There are positive indications that, if approved, major vendors of computing and network equipment, software vendors and other commercial and industrial organisations will contribute resources to this initiative or to specific programs.

APPENDIX A

It is proposed that a number of Flagship Projects be developed and undertaken. The aim of the flagship projects is to achieve major outcomes quickly for Queensland which will be recognised as significant achievements. Such projects will be important to leverage the private sector into a much quicker uptake of information technology.

Promote the development of links between the private sector and the teaching and research organisations to promote education within the private sector, make available research and other information resources, promote export and generally the development of the Queensland economy.

In addition there are a number of programs which have been identified which need to be undertaken to provide necessary infrastructure and services.

Flagship Projects

1. Queensland Specific Information Bases

This project is to get some initial data/information bases developed on the expanded QUESTnet which will produce recognised benefits for information suppliers such that others will be encouraged to establish information bases.

Strategy:

To target three Queensland specific industries which:

- are fairly high profile industries, seen as trend setters by others
- already have an extensive information bank albeit in a different form
- have information which will be of interest to other sectors in Qld
- have information which will be of interest/value outside of Qld, particularly in SE Asia and possible other overseas areas
- have the interest, expertise and resources to quickly capitalise on enquires resulting from the availability of their information on the net

2. Export to Asia

The aim of this project is to find ways of using QUESTnet and its information resources to create/attract business opportunities between SE Asian countries and Queensland.

Strategy:

Broad areas to be explored in the pursuit of improved trade with SE Asia include:

- establishing an extensive range of information sources on QUESTnet of particular interest in SE Asia to attract business to Qld
- using the QUESTnet to export information and information based services such as education to SE Asia
- exporting our developing expertise in establishing and running information service networks to SE Asia

The strategy must be to identify the best that can be offered in each of these areas and then mount a marketing campaign in SE Asia to encourage business to see Queensland as a source of quality information services.

General Projects

3. Connectivity

The current problem is for clients located anywhere in Queensland (and perhaps Northern NSW) to obtain access or connectivity to QUESTnet/Internet. The delivery of some services depends very much on the speed of access. Therefore this issue is to do with connectivity at the required speed.

Major Goal:

Provide adequate connectivity to *ALL* QUESTnet (targeted market) clients by end 1997 (3 years).

Strategy:

Investigate and implement various 'delivery channels' to meet these requirements.

While technology is a limiting factor in some cases, QUESTnet has not yet adequately exploited current technology. In many cases the cost of technology is more limiting than the state of the technology.

4. Distance Independent Cost of Service

The current problem is for clients located anywhere in Queensland to obtain service at the same cost as clients located in university cities. This arises because of the distance dependent tariffs for using common carrier facilities.

Major Goal:

Provide equitable cost of service to •ALL• QUESTnet (targeted market) clients by end 1997 (3 years).

The cost may vary between different services but should be distance independent. Lack of services from carrier and/or cost of provision of private services may mean that some QUESTnet services (eg, video at 2 Mbps) may not be deliverable to all geographical locations in Queensland.

Strategy:

Investigate and implement various mechanisms to meet these requirements.

5. Schools

There is a high demand to extend access to QUESTnet to all primary and secondary school students.

Major Goals:

Establish a schools QUESTnet service which will provide adequate and equitable access for all Queensland school students.

Strategy:

This program relies on improved connectivity and cost of access (see programs 3 and 4 above). The cost of sharing a service between all Queensland schools is quite viable. The main problem is one of providing organising and providing the initial service.

4. Information Presentation Consulting Services

One of the difficulties for any individual person, business or market segment in becoming an information provider is acquiring the skills and expertise to present and make accessible an information source on the network.

Major Goal:

Establish a consulting service to provide information access and presentation services on the network.

Strategy:

Implement a consulting service which will become self funding within one year

5. Information Mirrors and Caches

The cost of providing service will depend more and more on the cost of international communications.

Major Goal:

To provide the lowest cost possible for effective service.

Strategy:

Implement information mirrors and caches to lower the cost of access to information services outside of the Queensland region.

Bibliography

[1] The Further Development of QUESTnet, Report prepared for the Queensland Government, Department of Business, Industry and Regional Development, by Tactix (M Pender).

[2] QUESTnet Strategic Statement