An Assessment of Options for a Pacific Regional Telecommunications and ICT Resource Centre

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Glossary of abbreviations

ACCC means the Australian Consumer and Competition Commission

ACMA means the Australian Communications and Media Authority

APEC TEL means the Asia-Pacific Economic Cooperation Telecommunications and Information Working Group

APT means the Asia-Pacific Telecommunity

EAPIRF means the East Asia and Pacific Regulatory Forum

ECOWAS means the Economic Community of West African States

ECTEL means the Eastern Caribbean Telecommunications Authority

ERG means the European Regulators Group

Forum means the Pacific Islands Forum

Forum island countries means the following member countries of the Forum: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu

ITU means the International Telecommunication Union

NZCC means the New Zealand Commerce Commission

Pacific Regional Digital Strategy means the action plan for the Forum Secretariat in pursuing ICT development in the Pacific. The strategy was endorsed at the 2006 Forum ICT Ministers meeting.

PASO means the Pacific Aviation Safety Office

PFTAC means the Pacific Financial Technical Assistance Center

PIFS means the Pacific Islands Forum Secretariat

PITA means the Pacific Islands Telecommunication Association

Regulatel means Foro Latinoamericano de Entes Reguladores de Telecomunicaciones/Latín American Regulatory Agencies Forum

SPC means the Secretariat of the Pacific Community
Executive Summary

Pacific island countries\(^1\) are experiencing a wave of liberalization and development of their telecommunications markets. Though these developments are not uniform across the region, and in some instances monopoly service provision remains in place, a number of countries have either terminated exclusive franchise or licensing arrangements or issued universal licenses to new operators. In parallel with these market-opening measures, independent telecommunications and ICT regulators have been established or are under consideration.

Newly established regulators face a number of challenges in establishing their credibility and autonomy. In some cases, the necessary legal framework is incomplete or sector policy remains under development. Pre-existing institutional structures were usually embedded within government ministries and were concerned primarily with technical aspects of regulation such as spectrum management and standardization of user apparatus. Monopoly operators, often state-owned, were allowed to exercise quasi-regulatory powers, such as control of the national numbering plan.

The transition from these institutions and practices to an independent regulatory body requires clear political commitment, the adoption of appropriate sector policy, and supporting legislation. Independence also implies that the regulatory body will have financial autonomy and clear decision-making authority, with any appeal rights tailored to the needs to provide regulatory certainty and to minimize frivolous or unnecessary litigation.

At the same time, regulators are required to develop secondary rules and regulatory processes that provide transparency and predictability around regulatory decisions.

Beyond these structural challenges, regulatory bodies need to develop expertise and capacity that will allow them to meet their regulatory responsibilities and build credibility with governments, operators and the public. These skills are often unavailable or will take time to develop.

Pacific island countries have recognized that there is a need for regional pooling of resources to leverage emerging national policy and regulatory expertise and to facilitate sharing of experiences and of international best practices for policy and regulatory development.

A regional telecommunications and ICT regulatory support facility with a range of functions to support sharing of information and industry data, improve awareness of sector performance across the region, and provide direct assistance to policymakers and regulators, would assist countries to build their policy and regulatory capacity and

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\(^1\) The nine Pacific island member countries of the World Bank are Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Palau, Samoa, Solomon Islands, Tonga and Vanuatu. Each of these countries is also a member of the Forum. Forum members that are not member countries of the World Bank are Cook Islands, Nauru, Niue, and Tuvalu. Papua New Guinea is both a member country of the World Bank and a member of the Forum. For the purposes of this report, Papua New Guinea is considered a Pacific island country.
to adopt best practice principles and supporting legislation consistent with international experience.

This report recommends the establishment of such a regional facility, with dedicated staff and resources sufficient to allow the facility to provide an independent and efficient source of advice and information to telecommunications and ICT regulators and government policymakers concerned with the sector and to strengthen the capacities of regulators and policymakers.
**Introduction**

This report commissioned by the Public-Private Infrastructure Advisory Service of the World Bank is the first of two reports that will consider the options and their implications for the development of a regional-level telecommunications and ICT resource centre or technical advisory facility to assist telecommunications and ICT policymakers and regulators in the Pacific in tackling current and emerging policy and regulatory challenges over the next 5-10 years.

The report examines a range of issues concerned with telecommunications and ICT policy development and regulation in Pacific island countries, the scope for harmonized legislation or regulatory practices to strengthen national frameworks, the potential for a regional support facility to assist policymakers and regulators, and the functions, scope of work and structure of such a facility.

A subsequent report will examine an action plan for the establishment of the facility, budgetary and funding issues, a possible multi year work program, and the scope of a possible technical assistance program to support implementation of the proposed approach.
Telecommunications and ICT policymaking and regulation

The Pacific island countries represent an extraordinarily diverse range of environments for the supply of telecommunications and ICT services to government, not-for-profit, business and household consumers. Telecommunications infrastructure cost and performance is sensitive to topography and population density, while demand is strongly correlated with income levels. The countries of the region span a broad spectrum on every relevant indicator.

Legacy infrastructure reflects historic patterns of investment and ownership as well as exogenous factors such as proximity to submarine cables serving Australia, New Zealand, Guam, Fiji and the United States. Fiji is the only Pacific island country with a cable landing station. Growing satellite-based transmission capacity will over time reduce reliance on fibre-optic backhaul.

Though competition has been introduced in some countries, others continue to be reliant on a monopoly provider, either state or privately owned. Monopoly rights may be de facto, in the absence of opportunities for entry, legislative or contractual. Fixed line providers face little direct landline competition, but increasingly are in competition with mobile providers that are capable of rapid rollouts especially in urban areas and are securing the majority of new connections.

Internet access remains at low levels, reflecting the limited availability of ADSL-capable fixed lines. WiFi hotspots are increasingly common in urban areas and tourist facilities and mobile broadband is in the early stages of inclusion in mobile service offerings.

This report does not discuss the current status of telecommunications markets in the region in any depth, as market conditions have been discussed comprehensively elsewhere, most recently in the Pacific Economic Survey 2008.

Policies for telecommunications market liberalization have been adopted in Papua New Guinea, Vanuatu, Tonga, Fiji, and Samoa. In others, policy settings are under review and new entry is imminent.

Telecommunications and ICT regulators have been established in countries with multiple operators. Countries with monopoly service provision are in some cases considering market liberalization. In those circumstances, decisions are required

2 This report does not examine unique policy and regulatory issues that may relate to media/broadcasting. A forward-looking view of ICT markets is taken, based on the evidence of strong convergence of traditional calling and data services with the use of the Internet as the platform for IP calling and media products.

3 Available at: <www.pacificsurvey.org/site/>
on the appropriate policy framework, the implementing legislation, the form of
the regulatory function, and the regulatory framework that will guide the
regulator. In contrast, where monopoly service provision will remain the norm,
there is no role for independent regulation of the incumbent and monitoring and
policy functions remain within ministries.

Telecommunications regulatory systems in the region are, with limited
exceptions\(^4\), relatively new or otherwise immature. Fiji and Vanuatu, for
example, have negotiated an end to monopoly rights held by private operators
and have adopted policy settings supportive of new entry. However, policy and
regulatory rules are still under development and regulatory agencies are in the
early stages of establishment. Solomon Islands is commencing negotiations to
terminate monopoly rights and has not yet established an independent regulator.

Newly established regulators face several priority areas for attention. Non-
exclusive carrier licenses are either under development or require revision to
reflect a competitive environment. Spectrum management plans are required to
minimize the risk of interference to the traffic of competing mobile operators.
Interconnection of incumbent and new entrant networks and the adoption of
cost-based interconnection prices require regulatory oversight and regulatory
decisions.

Universal service schemes are required, as incumbent operators cease to be the
default provider and new entrants compete for higher-value customers.
Emerging challenges include the need to accelerate broadband deployment, to
address anticompetitive behaviour by carriers, and to establish robust dispute
resolution processes where competing carriers are in dispute with one another.

At the same time, regulators are required to develop their institutional
infrastructure, to recruit qualified staff, to secure sufficient funding from
government and the industry for establishment and operating costs, and to
establish robust and transparent decision-making processes. Progress on these
actions is vital to enhance the independence of the regulatory function and the
credibility of regulatory decisions.

The Pacific Regional Digital Strategy\(^5\) recognizes that this demanding agenda
coupled with limited technical capacity requires regional, sub-regional and
multi-country cooperation in addressing problems in the telecommunications
and ICT sectors. The Strategy notes that cooperation in the use of scarce

\(^4\) Papua New Guinea established telecommunications regulatory functions in
2002, shared by Pangtel (responsible for technical regulation) and ICCC
(responsible for economic regulation), though limited competition was only
introduced in 2007. Tonga was the first Pacific island country to introduce
mobile competition and established a regulatory function (though not an
independent regulator) in 2002. Samoa established an independent regulator in
2005 and issued new mobile licenses the following year.

\(^5\) Available at: <http://www.forumsec.org.fj/pages.cfm/economic-growth/ict/>
regulatory resources should be developed, along with harmonization of legislation and regulatory environments.

The challenges of scarce regulatory resources will be especially acute for the Smaller Island States\(^6\), should they choose to pursue market liberalization.

This report examines the forms which regional support for telecommunications and ICT policymakers and regulators could take, and recommends the establishment of a regional telecommunications and ICT support facility to provide a sustainable and effective platform for enhancing the capacity of policymakers and regulators.

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\(^6\) Kiribati, Palau, and the Republic of the Marshall Islands. The Forum also includes Cook Islands, Nauru, Niue and Tuvalu within its classification of Smaller Island States.
Harmonization of legislation and regulatory practices

Harmonization can take place in a variety of forms, across a spectrum from managed or unmanaged convergence, to mandated uniformity. This report refers to harmonization of legislation and regulatory practices in a specific sense: that there are well understood and internationally accepted principles for the design of policy and supporting legislation providing for competition in telecommunications and ICT markets and the establishment of independent regulatory agencies, and for the implementation of sound regulation.

Countries can therefore learn from the experiences of other countries that have already undertaken market liberalization and have successfully adopted policy frameworks and supporting legislation and established independent regulatory agencies.

It would be expected that there would be opportunities for Pacific island countries to learn from one another as well as from countries outside the region. It is for example apparent that legislative and regulatory models from Australia and New Zealand have already had considerable influence in the region. It is important though in considering models from developed countries that there is recognition of the existing institutional endowment and the resources both human and financial that are likely to be required to support those models.

If a regional facility were to be established with a mandate to support capacity building and to provide advisory services to officials and regulators, it is likely that this in itself would strengthen the existing tendency to converging policy frameworks and to consistent regulatory practices.

If the facility were to issue statements on best practice policies, laws, rules and regulatory instruments, even though non-binding, the convergence effect would potentially be significantly heightened. Conversely, the convergence impact would be more muted if the facility were to be an information channel only without an advisory role. These issues are discussed more fully in the next section.

In contrast to an approach to harmonization based on the voluntary sharing of international best practices and regional experiences as an indirect harmonizing influence, are the well-known examples of directed harmonization found in the European Union and the Organization of Eastern Caribbean States and the regional bodies established under them in order to promote telecommunications regulatory harmonization.

European Union

**ERG.** The European Regulators Group for electronic communications and services is a body established by the European Commission to ensure consistency of decision-making between telecommunications regulators in the European Union. While each EU member country has an independent

7 Australia and New Zealand are Forum member countries.
telecommunications regulator, national decisions are referred to the ERG for an opinion whether the proposed decision is consistent with the EEC Directives on the electronic communications and services regulatory framework.

The ERG itself is composed of the heads of national regulatory agencies and therefore is a peer group. It issues Common Positions on regulatory issues which national regulators are expected to take into account in implementing national regulatory rules. In this way, the ERG is a powerful force for harmonization within the European Union, while national regulators retain autonomy in decision-making within the constraints of the Directives.

Organization of Eastern Caribbean States

ECTEL. The Eastern Caribbean Telecommunications Authority was established by treaty between five Eastern Caribbean countries\(^8\). ECTEL is an instrument for the promotion, amongst other things, of open entry, market liberalization and competition in telecommunications in the treaty states, harmonized policies on a regional level, and an objective and harmonized telecommunications regulatory regime.

The treaty states agreed to adopt a single model telecommunications act, providing for the establishment of independent national telecommunications regulatory commissions. While the national commissions have full decision-making powers, they are required in some circumstances to refer matters to ECTEL for advice and otherwise have discretion to seek advice. Where advice is required to be given, the commission must consider the advice, and in practice will generally follow that advice.

ECTEL can recommend to the treaty states regional policies and monitor the implementation of those policies. It can also recommend the adoption of uniform instruments and regulations and license terms, reviews license applications and recommends license awards.

Both the ERG and ECTEL sit within wider regional cooperation arrangements: the European Union framework and Directives, in the case of the ERG, and the rules of the Organization of Eastern Caribbean States, in the case of ECTEL. They also operate alongside other supranational regional organizations with similar responsibilities to achieve consistency in national markets.

Neither can therefore be considered a model for Pacific island countries in isolation from the wider context of regional policies and institutions to which they relate. Nevertheless, there are lessons that can be drawn from the

\(^8\) Insights on the Telecommunications Regulatory Machinery of the OECS, Network Strategies, 11 September 2008

Case Study: Eastern Caribbean Telecommunications Authority – A Regional Approach to Regulation of the Telecommunications Sector, presented by PIFS at the Forum Economic Ministers’ meeting in July 2006.
experience of these institutions that may be relevant to a Pacific regulatory support facility. Those lessons are discussed later in this report.
The reasons for a regional support facility

Previous studies of the establishment and operation of independent regulators in Pacific island countries have repeatedly identified similar constraints to effective regulation and the potential for regional solutions. Notwithstanding the diversity in stages of sector development and considerable variation in infrastructure and institutional endowment and levels of competitive activity, there is significant commonality in the problems faced by Pacific island countries.

The Castalia Report for example classified the problems faced by regulatory systems in the region into three broad categories:

- **Problems with regulatory rules**
  - Adoption of rules that are too complex to be properly understood and enforced;
  - Adoption of rules that are not consistent with other legislation or policies;

- **Problems with regulatory organizations**
  - Lack of capacity among, and technical training for, regulatory staff;
  - Lack of financial and human resources for regulatory organizations;

- **Problems with regulatory processes and implementation**
  - Lack of consultation and consideration of economic implications when rules and organizations were developed;

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9 Economic Issues in Regional Integration, PIFS, June 2004

The Pacific Infrastructure Challenge: A Review of Obstacles and Opportunities for Improving Performance in the Pacific Islands, World Bank/ADB/JBIC, January 2006

Regulation and Regional Economic Integration: Regional Options for Economic Regulation, PIFS (07)FEMP.04, May 2007

The Pacific Economic Survey 2008

10 Annexed to Regulation and Regional Economic Integration: Regional Options for Economic Regulation, May 2007 (see footnote 9)

11 The Castalia Report reviewed options for improving regional cooperation in several regulatory areas in addition to access and pricing (competition, foreign investment, and consumer protection).
- Interference in regulatory processes and organizations by political actors;
- Lack of transparency and accountability in the way regulation is carried out;
- Lack of predictability in the way regulation is carried out;
- Lack of appropriate or sufficient sanctioning when rules are broken.

Some or all of these problems are likely to be faced by telecommunications regulators in Pacific island countries. Importantly, and in addition to the Castalia classification, some countries may require assistance with the development of an appropriate policy framework for competition and for the scope of regulatory functions and powers.

Policy frameworks should be developed having regard to economic principles and should adopt a guiding economic framework for regulation. The framework should also deal with social goals to be pursued through regulation, such as universal service provision. Frameworks should be reviewed periodically to take account of technological change, such as the introduction of advanced mobile network technology or the transition from switched to packet based networks, and convergence of telecommunications and media delivery.

There are widespread capacity constraints in the region in regard to telecommunications and ICT policy formulation and in some cases a lack of understanding of the importance of a clear and pro-competitive policy framework as a pre-condition to market liberalization.

These weaknesses in policy and legal frameworks and in regulatory capacity are likely to be traceable to a common set of constraints. It is beyond the scope of this report to address shortcomings in legislative and executive processes that may contribute to these outcomes. However it is likely that a combination of a lack of comprehensive problem definition and analysis, adequate information and supporting data, and technical and regulatory skills required to both develop suitable policy and regulatory frameworks and to implement the resulting regulatory scheme, are implicated.

Several countries are facing a specific challenge in dealing with exclusive franchise or licensing arrangements that inhibit or preclude new entry and the development of competition. These countries would benefit from advice on issues such as the policy shift from exclusive service provision to a multi-provider environment, strategies for modifying or terminating exclusive arrangements and replacing them with non-exclusive licenses for service provision, and the management of the transition. Countries such as Fiji and Vanuatu have recently worked through similar issues. There are therefore opportunities to distil valuable lessons from those regional experiences and to share those lessons with other countries facing similar issues.

There are many ways in which Pacific island countries could respond to these needs, both at a national and regional level. Nationally, governments could increase the level of resources available to regulators, either by increased
budgetary support or by levies on telecommunications and ICT providers, thereby allowing regulators greater scope to hire and retain skilled staff, to travel within and outside the region to exchange views with other regulators and to participate in training programs, and to engage expert advisers to leverage national capacity.

Regionally, an existing institution such as PIFS or SPC could become a repository for industry data and a clearing-house for information already available from non-regional countries or bodies such as the ITU, APT, and various regulators fora. Alternatively, national regulators could establish a regional regulators group (such as Regulatel – discussed below) with a supporting secretariat to allow regulators to meet regularly to discuss issues of common interest and to pool experiences.

While each of these options has merit, it is unlikely that any would of itself overcome the lack of economies of scale required to build capacity at a country level through resource increases, or provide sufficient regional focus and responsiveness to materially improve regulatory outcomes.

Previous studies\(^\text{12}\) of ways to increase regional cooperation in telecommunications and ICT policy and regulation have similarly concluded that pooling of capacity is required to overcome skill shortages and fragmentation of demand for assistance and advice. The form of that pooling of capacity in a regional support facility is the subject of the next section.

\(^{12}\text{Op.cit., footnote 9}\)
Functions of a regional support facility

The ICT task force established by the Forum ICT Ministerial meeting of 30 March 2006 has proposed that a regional support facility should have the following objectives:

- Operating as a centre of excellence, accumulating experience and pooling expertise and resources: (a) providing access to information about telecoms and ICT industry developments, technologies, products and services; (b) developing/adapting and disseminating telecoms/ICT regulatory models and templates; (c) collecting and collating examples of specific good regulatory practices developed by member countries;
- Serving as a learning hub for policy makers and regulators from Forum countries;
- Offering "on-demand" support for country-specific policy or regulatory issues;
- Facilitating dialogue between countries, international organizations and industry associations in relation to policy and regulatory issues;
- Offering ongoing capacity-building/training support for Forum countries.

These objectives suggest that a support facility could provide some or all of the following services:

a) Access to regularly updated data on key industry statistics, such as international connectivity, investment levels in comparison to industry revenues, standard license terms, spectrum management, broadband service levels, access prices, and retail prices and packages.

b) Access to information packages on priority regulatory topics, such as policy frameworks for competitive service provision, legislative templates for suitable legal frameworks for telecommunications regulation in Pacific states, shifting from exclusive service provision to competitive provision, resolving access disputes, and universal service provision.

c) Advisory services on specific issues encountered by regulators. These issues and the demand for advice on them will relate directly to the state of development of competitive markets, to the technological development of the sector, and to the level of capacity available to the regulator.

d) The issuance of statements on sector policy or on laws and regulatory rules and instruments.

e) Training and other capacity-building activities.

f) A roster of subject-matter expertise, with accompanying quality control measures.

The needs to be met through these services and the justification for their centralized delivery through a facility are discussed below.
Industry data

The availability of country-specific and current key industry data would assist policymakers to set sector strategies, to compare sector performance with other regional countries, and to monitor ongoing relative performance changes. Comparative retail price and service quality data would assist policymakers to judge whether consumers are achieving desired pricing and service outcomes.

Access pricing data would assist national regulators to benchmark prices in comparable countries in the region and to compare these benchmarks with comparable countries elsewhere in the world. Access prices are a major determinant of competitive outcomes in both wholesale and retail markets. The ERG, for example, issues 6 monthly summaries of average mobile termination rates in 30 European countries. Though price benchmarking presents some implementation challenges, it is much less demanding for regulators than the development of robust cost-based pricing models.

PIFS and PITA jointly undertook in 2002 a comprehensive data collection exercise on ICT developments in the region. The resulting data, though useful, is now well out-of-date. No follow-up survey work has been undertaken.

The ITU and World Bank publish performance indicators on teledensity\textsuperscript{13} and growth in landline, mobile and broadband penetration. Some comparative data is available on listed retail prices for telecommunications services. Though useful, a more comprehensive data set would help policymakers and regulators in the region to decide on policy priorities and aid in wholesale price setting.

The collection of key industry data should be a responsibility of national regulators or, in the absence of an autonomous regulator, of government. Publication of this data at least annually would materially assist government, industry and consumers to understand how the sector is evolving to meet user needs. It would also provide the basis for aggregated national data to be used for comparison purposes across Pacific island countries.

In the absence of effective national data collection, a regional facility with strong links to national policymakers and regulators could play a valuable role in setting data collection standards, monitoring that data is provided on a regular and consistent basis, and collating, evaluating and publishing an annual regional survey of telecommunications and ICT markets.

Policy and regulatory information

There are a number of regional and international organizations that provide extensive and high quality online information on telecommunications and ICT policy and regulatory issues. A description of several of the most important sources is provided later in this report.

\textsuperscript{13} Teledensity is the proportion per one hundred of the population that are subscribers to a landline, mobile or Internet service.
There is also an extensive range of online resources available to Pacific country officials and regulators through the web sites of major regulators such as Ofcom, ACCC, NZCC, research institutes, universities, and consulting firms.

There is therefore already available to Pacific officials and regulators considerable information sources on relevant policy and regulatory themes, in addition to online training tools and online facilitated dialogue opportunities.

It appears though that these resources are not being fully used in the region, possibly for several reasons. First, officials and regulators may be unaware of the existence of these online resources or unfamiliar with online searching techniques. Second, in some instances, there may be quality or timeliness concerns with the available information. Third, the available information may be fragmented and require compilation and analysis to be fully useful. Fourth, officials and regulators may be reluctant to use resources that do not appear to be tailored to the specific needs of small island states.

Several of these institutions also provide conferences, workshops, seminars and similar events that allow regional officials and regulators to meet to share experiences with one another and with counterparts from outside the region. Attendance by senior officials and regulators at these events, particularly those held outside the region, can be difficult both because of cost and the lack of depth to sustain lengthy periods of absence.

With most countries in the region passing through similar processes of market liberalization, albeit at different stages, there should be significant benefits in either structured or informal sharing of experiences. Some regulators consulted for this report appear to actively draw on advice and information from fellow regulators in the region. Others however report only occasional contact and a perceived difficulty in sharing information that may be considered to be commercially sensitive.

In order to deliver significant additional benefits, a regional support facility would need to do more than simply provide another online link to existing information resources. The facility could tailor information in response to specific requests or add its own research or analysis tailored to the needs of Pacific island countries. It could also seek out relevant regional policy or regulatory experiences and disseminate them to other countries.

**Advisory services**

Policymakers and regulators in Pacific island countries where market liberalization is planned or underway are undertaking a number of significant and complex tasks. A sound policy framework with desired outcomes both in the short and medium term, coupled with supporting legislation, needs to be put in place. At the next stage, an autonomous and, ideally, independent regulatory agency should be established. Thereafter, the agency will begin to deal with priority regulatory tasks while at the same time building its capacity and credibility.
In the light of this range of challenges, there is likely to be a high demand for advisory services to leverage national capacity. While advice is available from private experts, there is also demand for advice of the kind that can be provided by a regionally based facility. The provision of advice does not imply any cession of sovereignty by countries seeking advice. Instead, officials and regulatory bodies retain responsibility and full autonomy for any decision made by them.

Officials and regulators consulted for this report have affirmed the existence of this demand while emphasising that the extent of the demand would depend critically on the capacity of the facility to provide rapid and well-focused advice that responds to the specific country circumstances. This implies that regulators would identify specific short-term regulatory tasks that are critical either because of their impact on competition or because of their time demands, and would request the facility to provide direct assistance through sending a qualified individual to work with the regulator and its staff in-country for a period.

Advisory services provided by the facility would be a complement to consulting services provided by professional services firms or experts. Facility advisory services would focus on both a more flexible and rapid response and on advice linked to building national capacity. Through regular interactions, the facility would develop familiarity with country issues and country context. The facility would also build up a regional knowledge base on sector issues as advice is given. That advice and its outcomes in turn can cross-fertilize the impact of the pooling of regional experiences. In contrast, professional services firms and experts are generally reluctant to allow their advice to be shared with other countries, as they regard their expertise as proprietary.

This type of demand for facility advisory services responds directly to lack of expertise at the country level, and therefore substitutes for domestic capacity. There will though be limitations to the capacity of the facility to meet all potential demand. User fees for advisory services are a transparent and equitable way to allocate scarce advisory resources in response to excess demand. If demand grows beyond anticipated levels, fee revenue would allow the facility to engage short-term experts to match capacity with demand. Funding of the facility, including the scope for user fees, will be examined in the second report.

Advisory services would be provided either to governments or regulatory agencies. The facility would not provide advice to operators, who are capable of obtaining advice from private providers or industry sources.

Advice is likely to be sought from the facility on issues concerning the design and implementation of sector policy, the development of sound legislation and regulatory rules and instruments, and the development and operation of regulatory agencies.

Alternatively, where governments or regulatory agencies require advice on issues directly affecting commercial interests, the facility would be able to assist through providing information on suitable sources of expertise that can be engaged through normal contracting arrangements.
The facility should take a prudent approach to managing risk around potential liability for any advice provided by the facility. A risk management policy should be developed by the facility manager within the first six months of the operation of the facility and approved by the advisory board.

**Statements on regulatory policies, laws or instruments**

The work of the facility and the nature of the expertise it provides will be reflective of international best practice for telecommunications regulation and of the obligations undertaken by countries under the World Trade Organization Basic Agreement on Telecommunications.

The facility could therefore provide assistance to countries through issuing statements on best practice policy settings concerning areas such as universal licensing, network interconnection, access to essential facilities, and control of anticompetitive behaviour. The promulgation of policy advice in this way would be helpful to policymakers in providing a clear starting point for the development of national policies and a framework for identifying and explaining any divergence required by national circumstances. Similarly, the facility could issue a model telecommunications law appropriate to market liberalization and effective regulation, and recommendations as to subsidiary rules to be issued by regulatory bodies.

The facility could provide recommendations on technical standards for equipment and type approvals, reflecting sound international practices.

The facility could also issue models for key regulatory instruments such as a form of universal license and a reference interconnection offer reflecting best practice interconnection principles. The availability of recommended models would reduce the burden on national regulators of developing these instruments from scratch and may facilitate the entry of operators from one national market to another.

Policy statements or recommendations as to laws, rules and regulatory instruments would not have any legal or binding effect. To do so would require a wider regional acceptance of a delegation of powers to a supranational body and the creation of a regional enforcement mechanism.

**Training and capacity building**

Training and capacity building is a core function of any regulatory body. The skills required are dynamic, reflecting the rapid changes in the industry. Knowledge transference and skills development are an essential and ongoing task.

There are a number of organizations providing training programs for regulatory staff. EAPIRF provides training programs for telecommunications and other utility regulators. Within the region, PITA is reported to be an effective training source on aspects of technical regulation. The ACCC and NZCC have provided secondment opportunities for regulatory staff from the region and the ACCC and the ACMA run regular training and conference programs that are often accessible to regional regulatory staff.
The ITU provides technical support and funding for regional training programs through its Centre of Excellence and other programs for the Pacific in collaboration with PITA, APT and the Government of Australia. The ITU is starting a project in collaboration with the European Commission to support policy and regulatory capacity building and assistance in the Pacific.

It would be difficult for a small professional cluster, such as the facility is likely to be, to devote sufficient time and resources to the design and delivery of a reasonably comprehensive training program, particularly as the facility will face difficult trade-offs between its other priority areas of information management and delivery, and advisory services.

This report concludes that, though training and capacity building should be a function of the facility, such activities should be clearly incremental to those already available. There should also be regular monitoring of training outcomes and requirements for regulatory agencies to share the costs of training for their staff.

The facility could establish relationships with regulators in Australia, New Zealand and outside the region that would be willing to receive staff from regulatory agencies for secondments designed to increase skill levels.

Roster of expertise

As regional regulators will inevitably face internal skill gaps, they will from time to time wish to engage short-term experts to work with them. Domestic telecommunications consulting expertise in Pacific island countries is scarce and often non-existent. Some regulators have established relationships with clusters of consulting firms in Australia and New Zealand, and outside the region. There remains however an unmet need for assistance with the identification of expert services.

The facility could address this need by establishing rosters of experts with relevant skills, and preferably experience in the region. The facility could also provide ongoing quality control by reviewing the performance of experts.

The facility could identify regulatory agencies in Australia, New Zealand and elsewhere that may be willing to provide either short-term expertise or longer-term postings of qualified individuals to work with regulators and match available expertise with demand from regulators in the region.

Engagement of a specific expert would be the responsibility of the country concerned, as would the payment of professional fees.

A related area of need for Pacific island countries is the identification of suitably qualified individuals able to serve as arbitrators in circumstances where an arbitration panel is required to rule on a dispute between a regulator and an operator. Several countries have provided for a dispute resolution function in their telecommunications legislation. The facility could maintain a register of potential arbitrators. Engagement of an arbitrator would remain the responsibility of the country concerned.
Options Assessment

In assessing options for the establishment of the facility, the following factors should be taken into account:

- Minimization of duplication of services provided by other regional institutions or available from outside the region.
- The experiences with other regional institutions that provide similar services at a national level.
- The choice between a facility with a limited range of functions concerned with gathering and identifying information and data that may be useful to officials and regulators, and a facility with a wider role of providing advice to officials or regulators or issuing statements on policies, laws and regulatory rules and instruments.
- The potential for the facility to be an online service delivered remotely rather than a distinct entity with dedicated personnel and facilities.

Minimization of duplication

Several institutions or facilities already provide one or other of the proposed functions in the region.

Existing Resources

ITU. The ITU Development Sector (ITU-D) provides a range of tools covering policymaking and regulatory support, statistics on trends and developments in ICT, regulatory and technical assistance and capacity building. The ITU-D website and publications provide regional and country level information on an extensive range of key industry and regulatory issues, including links to legislation, licenses, interconnection resources, tariffs and universal service policies.


The ITU provides technical support on request to regulators in member countries, with support from partners such as the Government of Australia.

The ITU-D program is extensive. It supports the ITU Centre of Excellence program, including the Asia-Pacific Centre of Excellence. There are five Nodes presently in the Asia-Pacific region, which lead the design and implementation of regional training programs and offer face-to-face and online training seminars. Participation by regional regulators is stronger in the online courses rather than the face-to-face courses, where high travel costs can be a barrier. CoE training in the Pacific is developing, and will be further extended in partnership with PITA.

The ITU is starting a project in collaboration with the European Commission on capacity building and ICT policy, regulatory and legislative frameworks support.
The ICT Regulatory Decisions Clearinghouse\textsuperscript{14} is an online resource for the text of ICT decisions by regulatory bodies, industry ombudsmen and specialized dispute resolution tribunals. Though there are as yet no listings for Pacific regulatory decisions, the site is a potentially important source of information for Pacific regulators. For example, full text decisions are available from Eastern Caribbean regulators on certain interconnection pricing disputes.

\textbf{APT}. The APT is a joint venture between UNESCAP and the ITU. Membership is open to any state in the Asia-Pacific Region that is a member or associate member of ESCAP, or an industry body otherwise nominated by a member. It has a wide Pacific membership, though not full coverage of Pacific island countries. APT provides information and training programs, including funding for attendance, on telecommunications and ICT issues.

\textbf{EAPIRF}. EAPIRF promotes good regulatory practices in East Asia and the Pacific. It is supported by the World Bank and AusAID and provides an online platform. Its goal is to enhance regulatory decision-making in East Asia and the Pacific through information exchange in infrastructure regulation and the promotion of training programs on regulatory issues. Membership is open to regulators in telecommunications and other infrastructure sectors, with affiliated membership for NGOs, universities and donor organizations.

EAPIRF provides online access to technical papers of a good quality on an extensive range of topics relevant to telecommunications and ICT regulation. It also provides an online discussion board on regulatory topics that is facilitated by experts and demonstrates active participation by regulators.

\textbf{infoDev}. infoDev is a global development financing program supported by the World Bank and other international development agencies. It aims to maximize the impact of ICT through coordination of action among bilateral and multilateral donors. infoDev supports ICT research and analysis and disseminates knowledge through workshops, seminars and toolkits. It also supports the World Dialogue on Regulation (WDR). WDR is concerned with regulation and governance for network economies. It conducts research, publishes papers and hosts online dialogues amongst ICT experts.

\textbf{APEC TEL}. APEC TEL is a working group set up by APEC to improve the telecommunications and information infrastructure of APEC member countries, including strengthening regulatory capacity. Papua New Guinea is a member. Other Pacific island countries have observer status only.

\textbf{PITA}. PITA is an organization formed by telecommunications operators in the Pacific to promote telecommunications development in small island states of the region. It has relationships with a number of international organizations including ITU and APT. PITA has an active program of information and training events and also supports information exchange events for regulators.

\textsuperscript{14} Available at: \url{http://www.ictdec.org}
In order to minimize duplication of information sources provided by these institutions and other information providers, a regional support facility would need to manage and present information in a variety of ways.

**Data gathering and Information Exchange**

First, the facility could align its work program priorities with information packages tailored to the particular needs of regional officials and regulators. These packages would be likely to draw on existing information and would aim to provide both substantive knowledge and advice on the use of that information to carry out specific tasks. For example, an information package on universal service could include policy considerations, options for funding universal service provision, advice on the incentive effects of a default provider obligation, and benchmark data on access deficit contribution levels in small and geographically dispersed economies.

Second, a regional information exchange could be hosted with online exchanges of information on regional experiences and advice on useful information sources, facilitated by experts associated with the facility. Though similar forms of online information exchange are supported by other organizations such as EAPIRF and ITU, it is likely that there will be higher levels of participation in a regional exchange with active facilitation by facility staff working with Pacific regulatory bodies.

There is little risk of duplication if the facility were to provide regional industry data. There is virtually no useful data of this type currently available online. This data would however be complemented by data from other regions: for example, comparative mobile termination rates.

**Advisory Services**

Advisory services are available through ITU, and have been accessed by regional regulators. Online dialogue is likely to be of greatest value in refining regulatory issues rather than as a primary advisory tool.

The justification for the facility to provide advisory services is as follows. Officials and regulators in the region are significantly under-resourced and have only limited internal expertise available to them. At the same time, they are increasingly dealing with growing and complex work programs with significant time pressures arising from the launch of market liberalization policies. In these circumstances, their highest priority is generally to deal with immediate issues rather than to distill information from other sources. Direct advisory support will be seen as valuable provided it is timely and relevant.

Alternative sources of advice from international agencies are likely to be seen as difficult to access on short notice and often not sustainable or less effective where an issue requires advice over an extended period.

The role for professional advisers is distinct and complementary. Professional advisers are best suited to provide advice on commercial, rather than policy or regulatory implementation, issues. They will be of greatest value where issues have already been reasonably well defined and are understood at a conceptual
level. In this respect, the facility could maintain a roster of expertise and assist officials and regulators to decide on the tasks for which experts will be used and on the incorporation of their advice into the decision-making process.

Training

Face-to-face training programs are available from ITU, APT, EAPIRF and PITA. However many of these events are held outside the region and cost constraints are likely to limit their usefulness. The PITA training program appears to be widely supported by Forum country regulators, though largely limited to industry issues and technical regulation.

Online training programs provided by ITU-D, EAPIRF and WDR are a significant resource and could be used more widely by regional officials and regulators.

Avoiding Duplication

Having regard to the available resources discussed above, the risk of duplication is greatest in regard to formal training, both face-to-face and online. Accordingly:

- The facility should initially restrict its involvement with training to providing web site links to existing training resources, providing direct support if appropriate to regional training events, and conducting a training needs assessment within its first three year work program cycle. It should be recognized that other activities of the facility such as delivering information packages and providing advisory services also represent tools for capacity building and informal training.

- Though the risk of duplication in regard to access to online information sources is material, there remains a need for tailored information packages on specific policy and regulatory issues, to overcome the reluctance to use existing resources. The facility could also provide advice to regulators on techniques for making effective use of online information sources.

- The provision by the facility of industry data, advisory services, statements on best practice policies, laws, rules and instruments, and the provision of a roster of experts present little or no risk of duplication of existing services.

Lessons from other regional organizations

The experiences with a range of regional organizations providing support to national agencies have been examined for lessons that may be relevant to the proposed facility. Two are Pacific regional institutions – PASO and PFTAC, both of which pool scarce technical resources, in one case concerning civil aviation safety and the other, concerning financial and economic policy. ECOWAS is a treaty-based organization established to promote the regional integration of 15 West Africa states. ECTEL is a Caribbean supranational body with telecommunications regulatory functions in five island states. Regulatel is a forum for Latin American telecommunications regulatory agencies.
**PASO**

PASO is a regional international organization overseeing safety oversight in the Pacific Islands using guidelines provided by the International Civil Aviation Organization. PASO was formed by treaty between its member states. Most Pacific island countries are members of PASO. The organization has a permanent staff based in Port Vila, Vanuatu.

The objectives of PASO include promoting internationally recognized standards of aviation safety and security and providing advice to member states. It is headed by a general manager responsible for running the office and has several aviation technical inspectors and support staff.

PASO provides an advisory service to the national aviation authorities of member states. It also carries out audits and inspections of aviation safety and security and monitors compliance with recommendations for improvement. PASO advice is not binding and compliance with industry safety and security standards remains the responsibility of national authorities.

PASO is funded by annual membership fees and by cost-recovery charges for specific services provided.

It appears that PASO technical advice is well regarded by its member states and that it is an effective instrument for pooling scarce technical skills that could not easily be replicated in individual countries. The standards under which PASO operates and its audit function rely on international standards that are clearly defined obligations of those countries. Accordingly, there is clear commitment to harmonization and adoption of best practices, coupled with transparent monitoring.

Full details of the PASO funding model were not available. However, there are reports that the organization faces significant operating deficits and may need to restructure its core funding so that there is a better match between the extent of reliance on user charges and willingness to pay for those services.

**PFTAC**

PFTAC was established in 1993 to provide technical advice and capacity building on the technical aspects of financial and economic policy formulation and management to Forum island countries and Tokelau. The Centre is operated by the IMF in consultation with governments and the donors who provide the greater part of its funding.

The PFTAC coordinator is employed by the IMF and provides overall leadership of the Centre. The Centre employs four resident advisors to provide advisory services in response to country requests. It draws on the resources of the IMF, and is able to employ short-term consultants, where additional specialized expertise is required.

PFTAC organizes training events and conferences and provides online access to reports and technical papers. It hosts regional events to share experiences and best practices, and organizes short-term attachments for its member country
officials to associated agencies. PFTAC also prepares discussion papers on issues of regional interest.

PFTAC services are provided at no charge to participating countries.

There are likely to be several critical factors relating to the success of the PFTAC model. The Centre has a clear mission to be a centre of quality advice and capacity building. Its areas of focus are well defined. The Centre has built up strong relationships with its member countries and donors. The IMF is the executing agency for PFTAC, which provides high credibility and assurance of quality of outputs and overall sustainability.

The fact that the advisors are based in the region and visit member countries regularly creates confidence in the long-term commitment of the Centre and its staff and ensures consistent and sustained advice and support. This permanent presence also means that the provision of advice is not simply an occasional and isolated event, but rather is part of an ongoing relationship involving systematic follow-up and dialogue.

A review committee made up of the chair (a member country central bank governor), representatives of the major donors, the finance ministers of the member countries, and the IMF meets once every 18 months and approves the general direction of the work program for PFTAC. In this way, the member countries, the donors, and the IMF as the executing agency work together at the level of overall strategy and of assuring the effectiveness of the Centre.

**ECOWAS**

ECOWAS was established by treaty between the West African states in order to promote regional integration by establishing a common market, harmonizing laws and national policies, and defining common sectoral policies in telecommunications and other areas. In 1994, a Consultative Regulatory Committee for Telecommunications was established. The Committee is made up of the heads of national telecommunications regulatory bodies and has the objective of ensuring the consistent and coordinated regulation of telecommunications and ICT within the community.

Action to establish a regional telecommunications and ICT commission with jurisdiction and oversight responsibility for sector regulation has not yet been taken. One model under consideration is that when established, the commission would have responsibility for telecommunications policy in all member states, following consultation with governments. The commission would issue policy directives that would have the force of law at a national level and would be implemented by national regulatory bodies. If a country failed to implement a directive, the directive would be enforceable at the regional level through a regional judicial authority. This model has close similarities to that of the European Union and Commission.

An alternative model is that the commission would be responsible for telecommunication policies and regulations affecting telecommunications between member states and between the region and the rest of the world, while
national regulatory bodies would retain responsibility for policies and regulations within national borders.

Though the primary operating model has not been resolved, ECOWAS has established a West Africa Telecommunications Regulators’ Association (WATRA) as a collaborative forum for telecommunications regulatory bodies. The goal of the Association is the development of harmonized telecommunications regulation through the formulation of common policies and the making of recommendations to regulatory bodies about regulatory and technical issues.

A full assessment of the success or otherwise of the ECOWAS experience in relation to telecommunications regulation is not feasible due to an incomplete design and partial implementation. Some progress has been made towards harmonization of national laws, but the process is slow and incomplete. Subsidiary regulations required to support a detailed framework for the exercise of regulatory functions are in many cases absent. The independence of some regulatory bodies is questionable. Harmonization of regulatory policies is largely incomplete. There are potential conflicts between exclusivity rights granted to purchasers of some national operators and harmonization policies.

In summary, ECOWAS is a treaty-based instrument for the development of a common market between its member states. Its objectives in regard to telecommunications regulation are derived from this overarching goal and envisage harmonization of laws and regulatory policies. Whether or not there should be a supranational regulatory commission and with what powers are unresolved issues.

**ECTEL**

ECTEL was established in 2000 by a treaty entered into by five Eastern Caribbean countries. It is a supranational body comprising a Council of Ministers, a Board of Directors and a Directorate. The Council of Ministers consists of the Ministers of Telecommunications in the member countries and its primary function is to set policies and the general direction for telecommunications in the member countries. The Board of Directors comprises members nominated by the Ministers of Telecommunications and manages the work of the Directorate. The Directorate is headed by a managing director and carries out the administrative and technical responsibilities of the organization. ECTEL is funded from spectrum fees paid by national operators.

The ECTEL member countries have adopted a common set of policy goals for the sector and have agreed to adopt harmonized regional policies. Those goals include open entry, market liberalization and competition in telecommunications and a harmonized regulatory regime. Each country has passed a uniform telecommunications law that supports the policy goals and in particular provides for the creation of an independent national regulatory commission.

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15 Information on WATRA is available at: [http://98.130.227.12/](http://98.130.227.12/)
The regulatory commissions have responsibility for national implementation of telecommunications regulation. In some aspects of regulation, the legislation mandates that before taking a decision the commission must refer the matter to ECTEL for its advice. The commission is bound to consider that advice in making its decision. More generally, the commission may at any time decide to seek advice from ECTEL. ECTEL will issue statements from time to time for the guidance of regulators on key regulatory issues and on harmonization of regulatory policies.

ECTEL is considered to have brought a number of benefits to its member countries:

- The establishment of a single telecommunications space within the region, with common policies, procedures, tariffs and rates.
- Economies of scope and cost benefits derived from creating a single pool of engineering, economic, financial, legal and technical expertise that could not be replicated in the member countries.
- Increasing their negotiating leverage as a group of countries, especially when negotiating with large telecommunications companies.
- Fostering greater legitimacy and acceptance of telecommunications regulation in the member countries.
- Strengthening regional ties and ongoing regional integration.

At the same time, the sharing of responsibilities between ECTEL and the national commissions creates challenges in ensuring that advice provided by ECTEL is fully responsive and timely, and that issues are not referred back and forth for clarification or further advice.

ECTEL and the overall regulatory telecommunications framework of the Eastern Caribbean is a potentially important model for any initiative intended to compensate for institutional or policy weaknesses amongst a group of countries that are already committed to the development of harmonized regional policies and institutions.

Critical success factors for the ECTEL model include:

- Prior commitment to regional integration ensures that ECTEL is able to pursue harmonized sector policies and to provide consistent advice to countries;
- The establishment of supporting regional institutions including a regional court reinforces the independence of ECTEL and ensures the ability to achieve effective enforcement of regulatory decisions;
- The adoption of a single technology neutral telecommunications law in each country with a commitment to establish independent national regulatory commissions operating under a uniform policy and legal framework;
laison between ECTEL and national regulatory commissions is assured by the obligation for commissions to have regard to policy positions proposed by ECTEL and to obtain advice from ECTEL on key regulatory issues;

- ECTEL approval of individual licenses to be issued by member countries ensures that entrants face the same entry conditions in each country;

- stable funding from spectrum fees paid by operators;

- technical staff with sector expertise, largely drawn from the region.

Regulatel

Regulatel is an organization comprising 19 Latin American regulatory agencies from Central and South America and Mexico. The organization was created in 1997, at a meeting in Cancun, Mexico, of the respective heads of the regulatory authorities, “to promote cooperation and coordination of efforts, and to promote the development of telecommunications in Latin America.” This includes cooperation among regional organizations, with the ITU, and the strengthening of international cooperation. Its structure includes a Plenary, a President, the General Secretary and a Management Committee.

Regulatel operates as a forum for the exchange of information between regional regulatory agencies. It also gathers and provides to its members regional industry data, information on best practices in telecommunications regulation, and a database of regulations.

Its strengths lie in its comprehensive regional membership and links with other organizations such as the ITU. Through this facilitating power, it is able to foster information exchange and to analyze and comment on regional experiences.

Conclusions on regional experiences

Several lessons can be drawn from these experiences.

- **Leveraging National Capacity.** Pooling of scarce skills and the ability for national officials and regulators to access those skills can help to overcome or reduce domestic capacity constraints. However, the leveraging of domestic capacity will be most effective where there is a long-term relationship between national institutions and the central facility. Isolated interventions without regular follow-up and continuing support are of limited value in building domestic capacity.

- **Advisory Support Based on Local Knowledge.** The availability of advisory support that can combine technical and regulatory expertise with knowledge of country conditions will provide the greatest impact. The establishment of continuing relationships between central advisers and local counterparts can enhance effective integration of subject-matter knowledge with domestic legislation, rules and institutions.

- **Regional Harmonization.** The issuance of best practice statements on policies, laws, regulations and regulatory instruments has generally
occurred where countries have agreed to either adopt or move towards harmonized policies and regulatory practices. Without such a commitment, there is a risk that statements issued by a central body will either be ignored or regarded as an intrusion on sovereignty. Even with a commitment to common policies and practices, as with ECOWAS, national adoption of recommended standards is not assured, at least without an effective enforcement mechanism.

- **Local Governance.** Participation by domestic counterparts in the governance of the central facility is important to build commitment to the role of the facility and to ensure that the facility is responsive to the changing needs of its clients.

- **Financial Sustainability.** A sustainable funding model for the facility is essential. It is unlikely that domestic institutions will become fully self-sufficient in the near term. Their needs will also evolve as the telecommunications market matures and becomes more diverse. Countries are at different stages of regulatory evolution, and some have yet to start down the path of market liberalization. Confidence is needed that the facility will be able to sustain its operations over the long term.

License fees should be first and foremost used to meet the costs of the regulatory system. Where regulatory resources are pooled at the regional level, this reduces costs that would otherwise be borne by national regulatory bodies. Because of economies of scale, those pooled resources are provided at a lower effective cost than national provision. The case for countries that use a regional telecommunications regulatory facility to pay all or part of the costs of that facility is therefore stronger than in sectors or areas where there are no equivalent industry revenue streams. Budgetary and funding issues will be examined in detail in the second report.

Organizations such as ECTEL and ERG have been created with explicit functions and powers designed to lead to harmonization of telecommunications regulatory policies and consistency of regulatory principles in a group of countries that are operating within an established community of common economic interests and policies. Though national regulatory agencies have jurisdiction over national implementation of regulatory policies, that national autonomy is constrained by the reservation of powers to ECTEL and ERG where regional consistency is required.

A chart showing the various design options discussed in this report, mapped against the different functional attributes and resource requirements, is presented in the Annex.
The choice as to the functions of the facility

The analysis to this point indicates that the choice of functions of the facility will impact on purpose, design and implementation. The functions could be:

- The collation of industry data;
- Information packages on specific priority policy or regulatory issues;
- Advisory services;
- The issuance of best practice statements on policy, laws, implementing rules and regulatory instruments;
- A restricted clearinghouse function for formal or online training from other providers;
- Maintenance of a roster of expertise.

Within this group of functions, there is an important trade-off to be made. That trade-off lies in the fact that the provision of an advisory service and the issuance of best practice statements will have consequences not found or much reduced in regard to the remaining functions.

In order to provide an effective and timely advisory function, it will be necessary for the facility to either retain well-qualified advisers on staff or to have priority access to ad hoc advisers whose work is overseen by a senior individual with responsibility for the facility deliverables. It is this feature that distinguishes the facility from simply a referral point for independent advisers to be hired directly by a country.

Similarly, in order to develop, issue and monitor statements on policies, laws, rules and regulatory instruments, and to ensure that those statements remain current, the facility will require both in-house expertise and a capacity to independently develop a plan of activities and to manage consultation with officials and regulatory bodies as statements are developed.

In contrast, the collation of industry data, the preparation of information packages, a clearing house function for training, and the maintenance of a roster of expertise available for engagement by countries, will require excellent systems and processes, good research capability, and a more limited oversight and management role. Indeed, it is feasible that if the functions of the facility were to be restricted in this way, a regional presence would not be required and instead the services of the facility could be provided online from any location.

The establishment of such a facility would be considerably easier and less costly with lower operating costs than a facility that is in addition providing advisory services and issuing policy and regulatory statements.

There are several factors to be considered in evaluating whether the provision of advisory services should be a function of the facility. The exclusion of advisory services would simplify the establishment of the facility. It would avoid the need to secure one or more qualified advisers and thereby reduce set-up and ongoing costs. It would eliminate issues of potential legal liability for advice that may
have been negligently given. It would also avoid the need to create a physical presence in the region, since virtually all of the remaining functions are not location-specific.

However, without the advisory role, the facility runs the risk of becoming simply another online resource that may be under-used in a similar manner to existing online resources already available in the region. Officials and regulators interviewed for this report placed significant weight on the need for an advisory function. It may also be noted that the advisory functions provided by PFTAC are regarded as a major benefit by its member countries and as a primary reason for the continuing support enjoyed by that facility.

In the same way, the exclusion of both the advisory services function and the function of issuing policy and regulatory statements would mean that the facility would be able to be a fully online resource with a more restricted range of expertise. It would also require less in the way of budgetary support.

This report concludes that:

1) an advisory service should be provided by the facility; and

2) the facility should be encouraged to issue best practice policy and regulatory statements following consultation with Pacific island countries.

On balance, the potential benefits would outweigh the costs and risks of providing advisory services and best practice statements. The advisory role will be important to the credibility and sustainability of the facility and will also, through its linkages with the other services provided by the facility, strengthen the total service offering. Liability risks can be managed by a focus on providing advice on policy development and regulatory support, rather than direct advice on commercial matters, where private providers of advice will in any event be preferred. Consultation will minimize the risk of best practice statements being ignored or rejected.

**An online or physical facility**

The choice between an online or physical facility is largely dictated by the decision whether or not to include the advisory and standard setting roles. Without those roles, the remaining functions relating to data collection, information packages, training facilitation, and maintaining a roster of expertise can be provided online.

In the light of the conclusion that the advisory and standard setting roles should be functions of the facility, it is recommended that the facility should have a physical presence within the region. Some at least of the key individuals required to manage and operate the facility will be available at the location, along with the infrastructure required for its operations.

The facility should have a permanent presence and be accessible to regulators and officials on a continuous basis. If the facility were to be only intermittently accessible, as for example, if staff were available only on a part-time basis or in a
different time zone that overlapped materially outside normal working hours in the region, its impact would be markedly reduced. ‘Real time’ access will build confidence in the users of the facility that their needs can be met.

**Location of the facility**

Decisions as to the location of the facility should be guided by several considerations:

1) As much of the access to the facility will be online, with large file uploads and downloads, the facility will require sufficient dedicated or symmetrical moderately contested bandwidth for all active users. As intra-regional connectivity improves, the facility could establish videoconferencing and similar capabilities, which would offer significant benefits in the quality of information exchange and in minimization of travel costs, both for facility staff and for officials and regulators.

2) Frequency and scope of intra-regional air travel options. It will be important that facility staff can travel easily and economically to Pacific island countries and between countries.

3) Availability of suitable office premises and local support services at a reasonable cost.

A number of locations would potentially meet all or most of these criteria, though a full assessment would require significant additional consultation, data and analysis. Achieving regional consensus on a suitable location may also be time-consuming and therefore delay the early establishment of the facility.

It is therefore recommended that for an establishment period of up to three years, the facility be located in Sydney, Australia. Sydney meets all the criteria and with the likely availability of all or most of the required skill sets on the local market, will allow for the early establishment of the facility. While operating costs are likely to be higher than in other regional locations, these costs are offset by the benefits of a rapid establishment and commencement of operations and the early roll-out of services to Pacific island countries.

During the establishment period, the facility manager will carry out a review in consultation with the advisory board of the medium term location options, having regard to the factors outlined above.

**Staffing**

The senior staff position in the facility should be an experienced telecommunications regulatory specialist, who ideally would have familiarity with the special needs of smaller states in a newly liberalized environment. This will be a key appointment and will require a range of professional, managerial and personal skills. The period of the appointment should ideally be for 3 years or more, to ensure significant stability in the management of the facility.

At least one and potentially two additional professionals will be required to provide a critical mass of skills sufficient to ensure that the facility can respond
to assistance needs. Having regard to the current skill gaps in regulatory bodies in the region, the priority for these positions should be either or both of a regulatory economist and a telecommunications lawyer.

Most regulatory bodies in the region do not have economic expertise and rely on support from other government agencies. Economic regulation should be based on a sound policy framework that gives precedence to the promotion of competition and the preservation of incentives to invest and innovate.

A regulatory economist would be invaluable to advise policymakers and regulators on the design and implementation of an economically sound policy framework and to develop statements on regulatory policy. Economic advice is also crucial to regulators in considering access pricing issues, the design of universal service schemes, and balancing investment incentives with changes in consumer surplus.

There is also demand for legal advice on the design and implementation of legislation creating a legal framework for the establishment and operation of the regulatory function. Beyond the initial legislation, legal advice is required for the design of licences and for the development of regulatory decision-making processes that ensure adequate consultation with affected parties and result in well-reasoned and defensible regulatory decisions. These activities could be in part carried out through the preparation of model laws, rules and regulatory instruments, and in part through specific advice at the national level.

These legal tasks require familiarity with best practice principles for legal frameworks and rules, competition policy, the role of an independent regulator, and the importance of sound and transparent regulatory processes. Knowledge of the domestic legal system concerned would need to be integrated with any advice given through the facility.

There are several considerations in deciding on these professional positions. Both types of expertise are in demand worldwide and the facility would therefore be competing with regulators and with professional services firms wishing to acquire the same skills. Even if the facility is successful in obtaining these skills, there is a risk that the country-level demand will be mismatched. Demand may build slowly, leaving these individuals underused, or may be too intermittent.

It is therefore recommended that in the start-up phase for the facility, the priority should be the engagement of the facility manager. Once that individual is in place, it would be his or her responsibility to decide on the timing and form of further professional hires within the available budgetary envelope. An option would be to add additional skills on a short-term basis so that a longer-term commitment is made only once sustained demand is proven.

Beyond the core professional positions, it is recommended that, given the importance of the information access function, a research assistant be recruited as early as possible. This position will require sound research capabilities and writing skills. The position would probably be able to be filled by local recruitment.
Finally, an administrative assistant would be required to support the administration and service functions of the facility. This would be a local hire.

In summary, it is recommended that the facility should have start-up staffing of three persons, all of whom would be full-time. The facility manager would be a senior telecommunications regulatory specialist, and would be supported by a research assistant and an administrative assistant. During the establishment phase, the facility manager should decide on the timing and priority for up to two additional professional positions.

The facility manager would be expected to explore the scope for these additional professionals to be sourced from partner organizations on a secondment basis or for short-term hires to be used as demand is evaluated.

**Management of the facility**

The day-to-day management of the facility would be the responsibility of the senior professional, who would also be responsible for the preparation of an annual and multi-year business plan for the facility, based on demand experience and projections and available resources.

The final report will present estimates of set-up and operating costs and potential sources of funding, including the scope for user charges and donor funding requirements.

**Governance**

Regional participation in governance will be important to achieve commitment to the work program and to ensure accountability related to user charges if adopted. This report recommends the creation of an advisory board, comprised of a rotating panel of three to four members, with one member to be elected by the panel as chair. Panel members should serve at least a three-year term, with the possibility of reappointment. No fees would be paid but direct costs would be reimbursed by the facility.

The facility manager would be required to call for nominations from Pacific island countries and to arrange a ballot if there are more nominees than available positions. It is expected that countries may nominate a representative from the regulatory agency or a senior official from the relevant ministry, recognizing that an effective governance function is important to the success of the facility and to donor support.

The advisory board would meet twice a year to provide input to the annual work program, to review the performance of the facility, and to provide input to the business plan to be presented to donors.

In addition to formal governance mechanisms, the facility would maintain close working relationships with other institutions such as ITU, EAPIRF, APT, PIFS and PITA.
Establishment and operating costs

The establishment and operating costs of the facility will be dependant in part on decisions as to the location of the facility\textsuperscript{16}, and in part on the initial work program and therefore the timing of the build-up of staff within the facility. The second report will present a funding plan, including consideration of both donor financing and user charges, and an indicative budget.

The following preliminary estimates are presented for a Sydney office.

Establishment costs, covering one-off premises set-up, the purchase of office equipment and furnishings, possible relocation costs of professional staff, and contingencies, are estimated to be in the order of US$100,000.

Operating costs in year one, assuming the facility manager, one research assistant, one additional professional staff year (which could cover a part year cost contribution from more than one of the proposed advisory positions) and one administrative support person, are estimated to be in the order of US$550,000.

\textsuperscript{16} Establishment costs may be lower if the office is initially located in Sydney, though in the medium term there will be additional costs when the office is relocated to a Pacific island country. Operating costs will likely be higher in Sydney because of higher salary costs for local hires. In aggregate, total costs are expected to be higher during the establishment period with a Sydney location.
Summary of Recommendations

That:

1. A regional telecommunications and ICT support facility is established.

2. The functions of the facility be:
   - To collate key industry statistics and issue periodic reports on the state of telecommunications competition in Pacific island countries and the performance of the industry in regard to prices, service quality and innovation;
   - To develop information packages on priority regulatory topics;
   - To provide ‘on demand’ advisory services;
   - To issue best practice statements on telecommunications policies, laws, implementing rules and regulatory instruments;
   - To develop a roster of expertise and support quality control;
   - To act as a clearinghouse for formal face-to-face or online training programs.

3. The facility should have a physical location within the region, with some or all of the key staff present at that location. During an establishment period of up to three years, the facility should be located in Sydney, Australia.

4. The medium term location of the facility be decided having regard to the operational suitability of alternative sites, including available connectivity, convenience of intra-regional travel and the availability of suitable office and other support services.

5. The facility should have start-up staffing of three full time persons. The facility manager should be a senior telecommunications regulatory specialist, supported by a research assistant and an administrative assistant. During the establishment phase, the facility manager should decide on the timing and priority for up to two additional professional positions.

6. The facility manager should have responsibility for the day-to-day management of the facility, including the preparation of annual and multi-year business plans.

7. An advisory board of three to four nominees of Pacific island countries (elected if necessary) and chaired by one of its members be established with responsibility for approval of the annual budget, the business plan and the financing plan.
Appendix: Organizations and People Consulted

Fiji

Miliana Racule, Executive Director, Commerce Commission
Jale Curuki, Acting Director Telecommunications, Ministry of Information, Communications and Media Relations
Banuve Kaumaitotoya, Permanent Secretary, Ministry of Information, Communications and Media Relations

Tonga

Alfred Soaki, Senior Communications Counsel, Department of Communications
Timote Katoanga, Managing Director, Tonga Communications Corporation

Samoa

Michele Marius, Office of the Regulator
Tua’imalo Asamu Ah Sam, Chief Executive Officer, Ministry of Communications and Information Technology
Mike Johnstone, Chief Executive Officer, SamoaTel
Susan Huggett, General Manager Corporate Services, SamoaTel
Kolone Vaai, Managing Director, KVAConsult
Epa Tuioti, Co-Managing Director, KVAConsult
Ming Leung Wai, Attorney General
Rebecca Wendt, Assistant Attorney General
Justina Sau, Assistant Chief Executive Officer, State Owned Enterprises Monitoring Division, Ministry of Finance
Benjamin Pereira, Assistant Chief Executive Officer, Economic Policy & Planning Division, Ministry of Finance
Hinauri Petana, Chief Executive Officer, Ministry of Finance

Australia

Colin Oliver, Assistant Secretary, International Branch, Department of Broadband, Communications & the Digital Economy (DBCDE)
Richard Brown, Director Regional Cooperation, DBCDE

New Zealand

Reg Hammond, Manager ICT Regulatory Policy Group, Ministry of Economic Development
Vanuatu

John Crook and Jimmy Andeng, Office of the Interim Telecommunications Regulator
Wilson T. Vuti, Director General, Ministry of Infrastructure & Public Utilities
Chris Bleakley, AusAID
Tanya Menzies, General Manager, Digicel (Vanuatu) Ltd
Des Keary, Operations Manager, Digicel (Vanuatu) Ltd
Ian Kyle, Managing Director, Telecom Vanuatu Limited and Regional Director, Cable & Wireless, Pacific Islands

Solomon Islands

Shaun Anthony and Matt Hodge-Kopa, Economic Reform Unit, Ministry of Finance and Treasury
Robert Bokelema, Director Communications, Ministry of Communications & Aviation
Dr Kylie Coulson, Tony O’Brien, and Andrew Shepherd, Office of the Special Coordinator, Regional Assistance Mission to Solomon Islands
Ashley Wickham, Head – Policy Evaluation Unit, Office of the Prime Minister and Cabinet
Steven Woods, Deputy Solicitor-General

Papua New Guinea

Flieri Shongol, Department of Information and Communications
Matthew Wari, Acting Director-General, Pangtel
Kila Gulo-Vui, Director Regulatory & External Affairs Department, Pangtel
Samson Rowaro, Independent Consumer and Competition Commission
Peter Cusack, PNG Country Coordinator, IFC

Other

Sanjesh Naidu, Economic Adviser, PIFS
John Budden, Economic Infrastructure Adviser, PIFS
Stephanie Jones, PIFS
John Haydon, Telecommunications Regulation Adviser
Susan Adams, IMF/PFTAC Director
Fred Christopher, Maui Sanford, Stuart Davies, PITA
Rory Macmillan, Telecommunications Regulation Adviser
Cameron Whittfield, Freehills, Sydney, Australia
Ashish Narayan, ITU Regional Office for Asia and the Pacific
Laure Darcy, Asian Development Bank, Sydney, Australia
Annex

Range of Facility Options in the Pacific and related functional attributes:

- On-line
- Facility w/ physical presence
- Regional Regulator

Information sharing: Advisory, Decision-making

Resource/Institutional Requirements:
- Low
- High

International Examples:
- Regulatel
- ECOWAS
- PFTAC
- Ectel
- EU/ERG
- PASO

--- = Treaty-Based