

**World Bank PPIAF GRANT
NO. #A090100/M/TCI/RF/KH
Cambodia - Final Report**

David Butcher & Associates

with

Guinness Gallagher Consultants

Technical Assistance

World Bank project to strengthening the Cambodian Telecommunications regulatory framework with rules for:

- **fair competition**
- **interconnection regime**
- **rate-rebalancing**

Aims At

- **cost effective communications**
- **maintain and enhance the revenue to government**

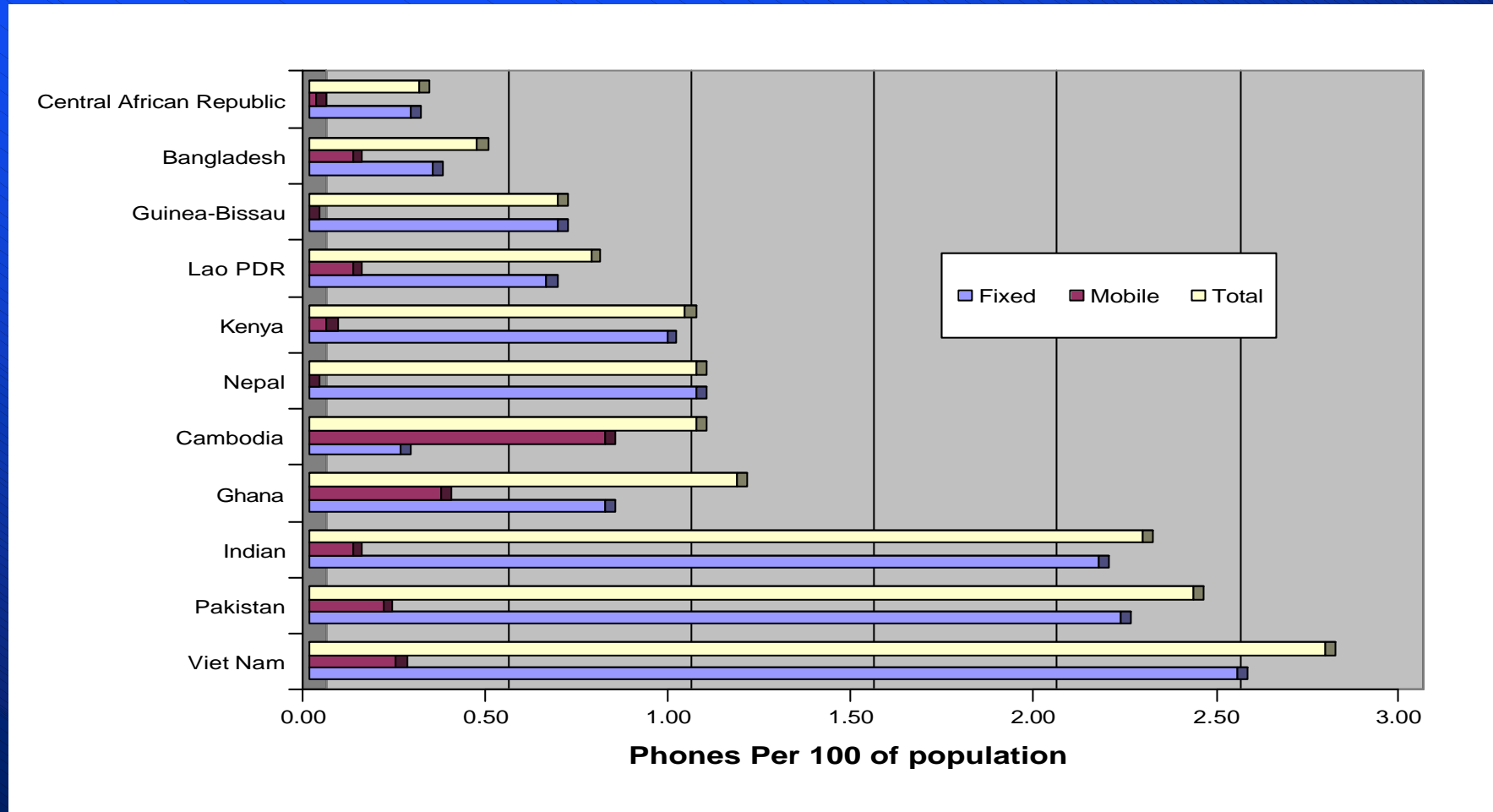
Key Conclusions

There are two telecommunications policy outcomes that should be the focus of Cambodia government policy,

- **extending the country wide coverage of access to telecommunications as a development tool**
- **keeping the real cost of telecommunications as low as possible to facilitate the development of businesses to increase wealth and employ Cambodians**

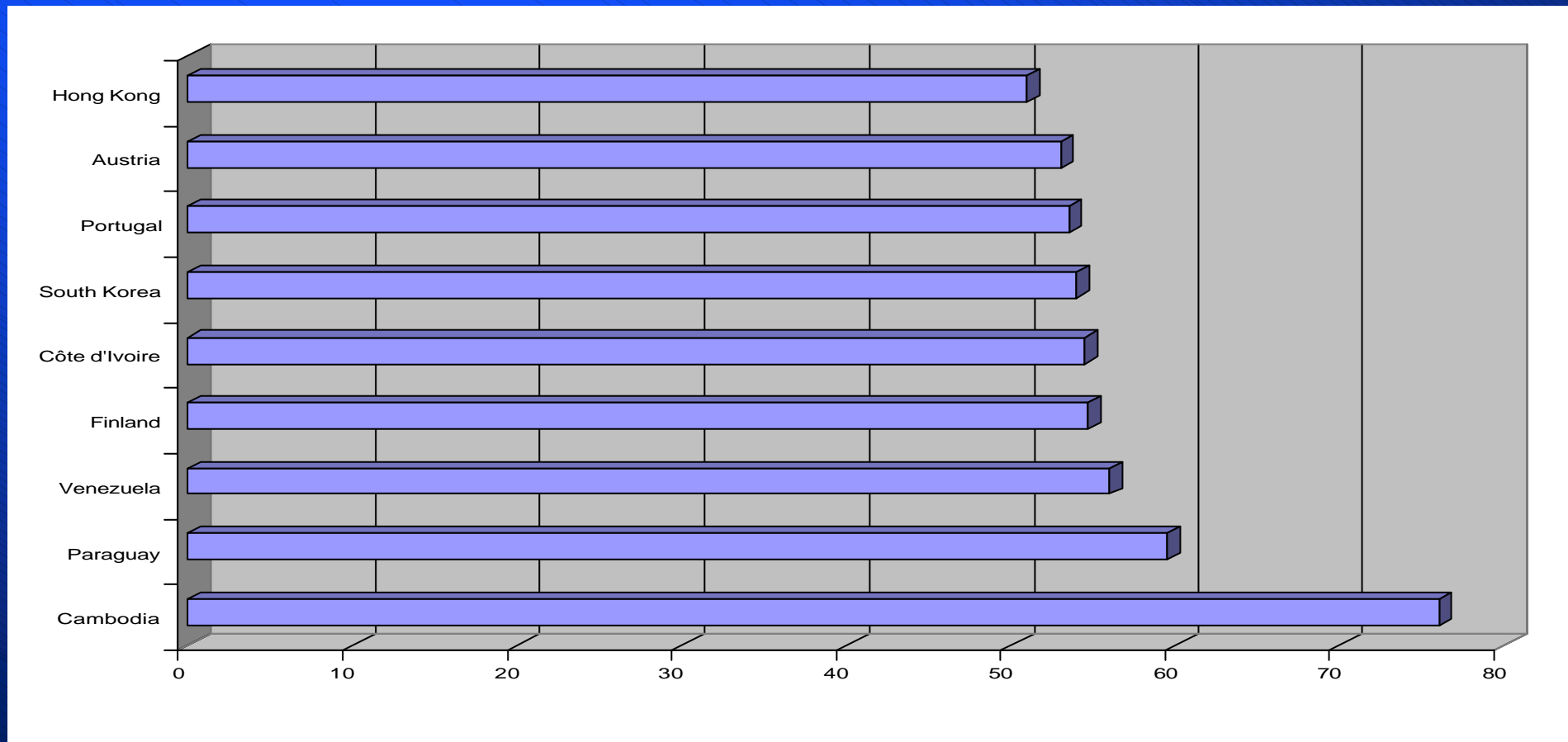
All other issues are less important than these two policy outcomes

Cambodia: Average-Total Phones High Proportion-Mobiles



Source: ITU Mission in Cambodia

World's Highest Mobile Share



Source: ITU Mission in Cambodia

Cambodia is Different

Cambodia	Most other countries
The main effort is to strengthen the fixed services to compete with the strong mobile services	The main effort is to strengthen the mobile services to compete with strong fixed services
The main effort is to strengthen the previous incumbent to be able to compete with strong entrants	The main effort is to strengthen the entrants to be able to compete with the strong incumbent

Source: ITU Mission to Cambodia

Example: Mobile vs. Fixed Phones

- **THE BIG DIFFERENCE:**
 - fixed: state sector, no money, no autonomy, slow progress
 - mobile: private money, growing fast, light handed regulation
- **SUGGESTS**
 - competition in mobiles has produced, good services
 - state management has produced poor service, stagnation and lost opportunities
- **CONCLUSION**
 - corporatisation of fixed lines, encouraging competition will result in improved services and coverage

Achievements of the Telecommunications Sector

Cambodia has achieved:

- **a mobile phone system that is:**
 - close to world class
 - competitive
 - privately provided
- **a relatively modern fixed line system since 1990**
- **a high quality, backbone fibre optic cable system**
- **private sector investment in mobiles, wireless networks, internet and gateways**

Problems to be Addressed

- **fixed line**
 - has limited penetration and high unit costs
 - too few connections to cover fixed network costs
 - frequent downtime is unacceptable by any standards
- **mobile**
 - has congestion in Phnom Penh, limited rural access,
 - prices are relatively expensive,
 - danger of a dominant player emerging
- **interconnection regime**
 - needs to be consistent and fair, based on payment for service

Principal Institutional Problem

MPTC is an integrated, policy, regulatory, operational and asset management agency,

Expert advice is unanimous that this leads to

- **conflicts of interest**
- **poor asset management**
- **business decisions suffer from political intervention**
- **political priorities suffer from a preoccupation with business issues**

Example: Gateway One Problem



- gateway one owned by MPTC
- currently facing strong competition from Two, VOI and illegal gateways
- a US\$ 12 million problem in a sector worth over US\$ 100 million
- Finance and MPTC thinking is focused on Gateway One revenue

Owning Gateway One is distorting MPTC's priorities:

Policy effort should focus on the priorities: broadening service and reducing the cost of use

All Advisers Recommend

MPTC should have its current functions located in separate agencies:

- **policy - the correct function for MPTC**
- **regulation - an independent function**
- **business operations: Telecom Cambodia a commercial entity with operational autonomy, eventually private**
- **ownership interests, Ministry of Finance**

This will address conflicts of interest and give fixed line business the chance to develop

Telecoms a Network Industry

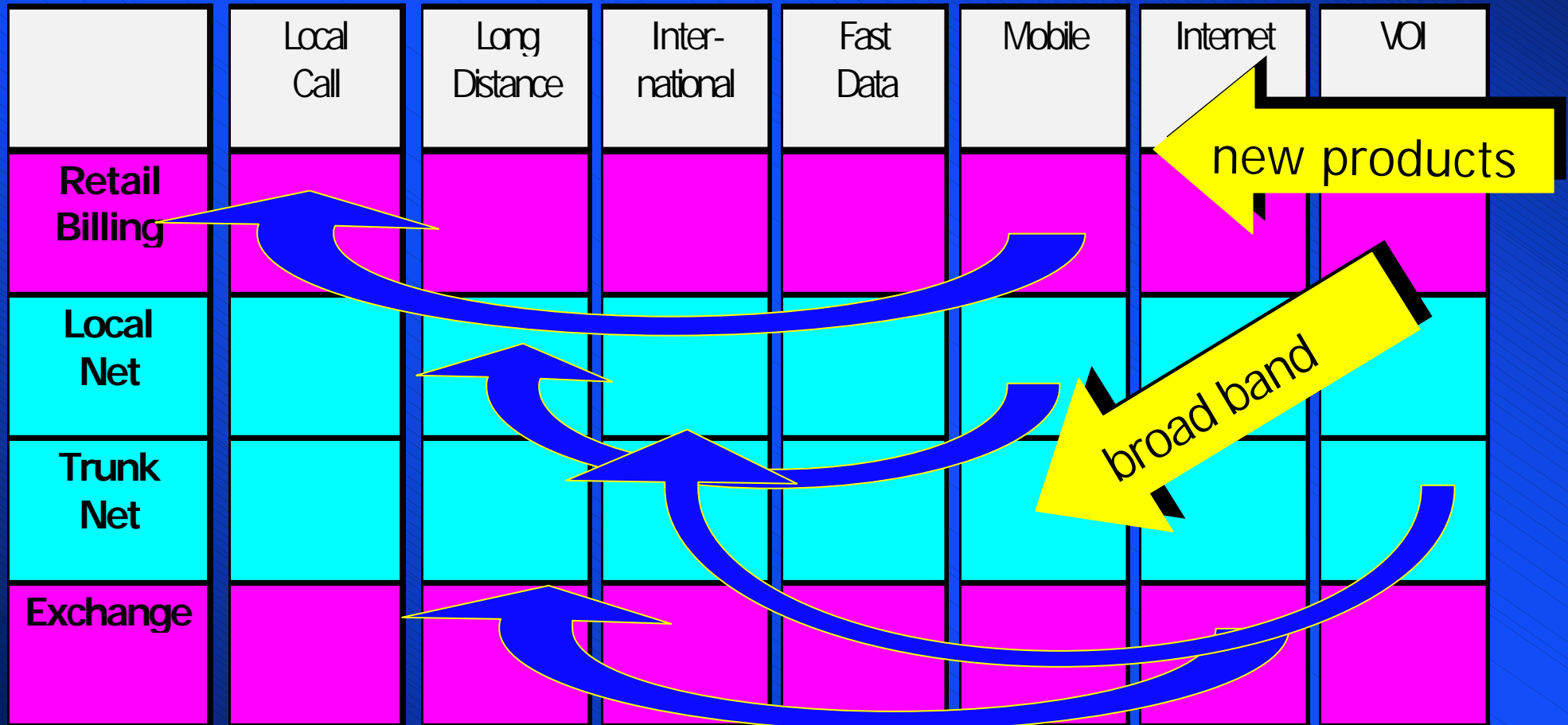
Traditionally telephone companies were regarded as a “natural monopoly” i.e. the network is expensive to reproduce a big **COST BARRIER TO new SERVICES**

- electricity, banking, roads, railways and airlines, are also networks,
- in each type of network industry the **NETWORK** is seen as a barrier to new **SERVICES**,
- Every country in the world is trying to increase the competition in for network based **SERVICES**
- usually by various ways of separating the **COMPETITIVE** and **NETWORK** elements from each other.

Historically: Networks a Barrier to Competition

Retail Billing	Competitive (retail and billing)								
Local Net	Monopoly (network companies)								
Trunk Net									
Exchange	Competitive (exchanges)								

Telecommunications Unstable Matrix



Open Access Networks

- **our team believes that ALL network owners should be obliged to operate them on an open access basis:**
 - **mandatory roaming**
 - **shared facilities**
 - **non-discriminatory access**
 - **separate accounting for SERVICES and NETWORK**
- **this will reduce the danger of network profits being used to unfairly promote particular customer services**
 - **encourages competition in customer service businesses**
 - **simplifies regulation as it is confined to the network**
- **separation of networks and services is happening around the world**

Evidence for This Development

Our Project Study Tour provided evidence of this trend:

Malaysia:

- Two forms of license, network and services, to promote CONVERGENCE, eventually phase out regulation

Hong Kong

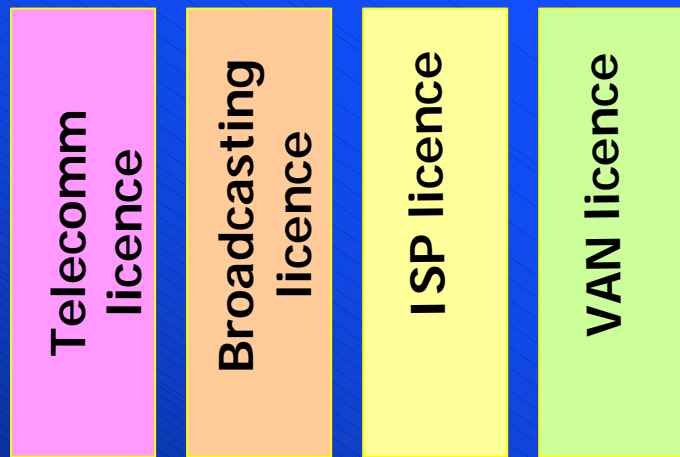
- Internal Separation of the incumbent into network and service businesses - Chinese Walls - promote use of network among competitors to maximise its cash flow

Both countries focus on maximising NEW SERVICES

MALAYSIA

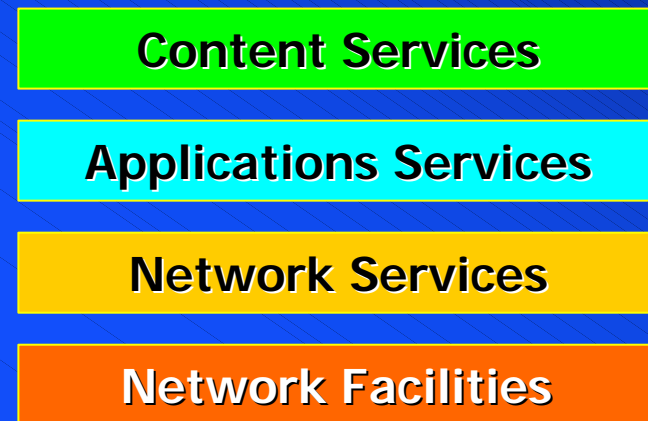
Licensing for CONVERGENCE

The old licenses that were issued were based on specific technologies, and specific services



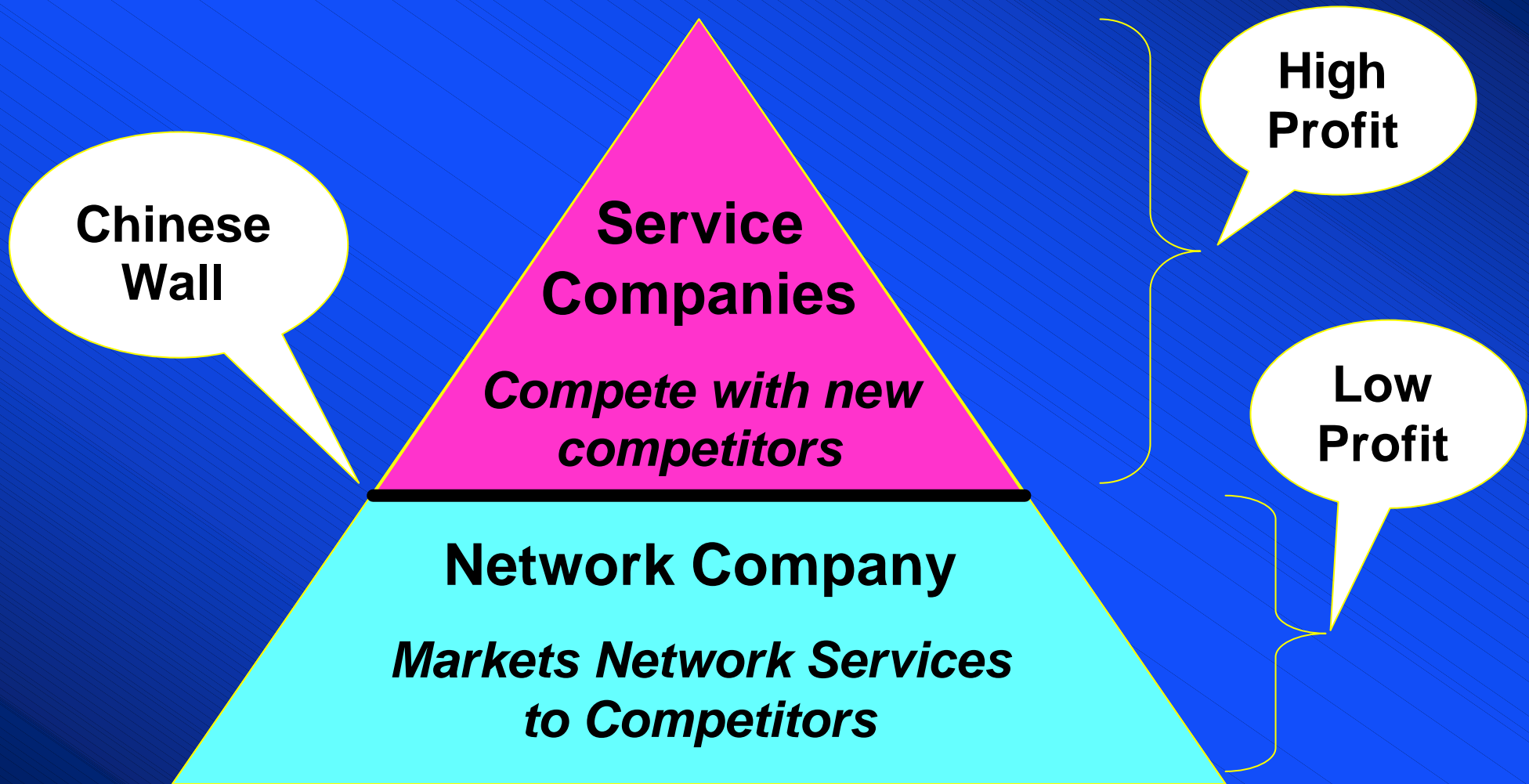
Under the old licensing framework all activities related to the provision of a particular service are vertically integrated for the provision of that service

Licenses issued under CMA 98 are technology-neutral and service-neutral



The new licensing framework promotes vertical separation between facilities, network, applications, and content

PCCW HK - “Chinese Wall”



FAIR COMPETITION - Regulation

Two Forms of Regulation

- **BEHAVIORAL REGULATION:**
 - law restrains the exploiting of anti-competitive opportunities, (price regulation and anti-merger provisions are forms of behavioral regulation) - EX-POST - After the event
- **Structural Regulation**
 - Law used to structure industry so that incentives faced are consistent with the interests of the country and government policy, - (Malaysian licensing system is an example of structural regulation, i.e. licensing designed to maximize opportunities for competition) - EX ANTE - Before the event

Which Type for Cambodia?

- **Regulation should be within Cambodia's capabilities**
 - personnel
 - legal system
 - administrative processes
- **The aim is to prevent a network owner, from making excessive monopoly profits and using these to beat competition in a competitive SERVICES market.**
- **We recommend**
 - **STRUCTURAL REGULATION, to clarify the network / services distinction as in Malaysia and Hong Kong, and**
 - **BEHAVIOURAL REGULATION - Open Networks Policy, to make regulation simpler and easier to implement.**

Mix of Both Forms of Regulation

We recommend internal **STRUCTURAL** separation of TC and mandatory accounting separation of mobile companies,

BEHAVIOURAL regulation to oblige roaming and sharing, and other rules provided in draft law

We believe that even with these rules, new networks will be constructed if they offer technological advances on an open access network already in place

Open Access Tools

All your consultants recommend mandatory ROAMING and SHARED FACILITIES:

- a fair regime to require operators to share facilities, e.g.
 - every tower accept calls from all compatible companies,
 - site owners collect a fee for the service provided,
 - a fair process of dispute resolution
- this will speed the introduction of service to new areas,
- the only new networks will be technologically superior,
- networks will no longer be a barrier to competition

Open Access removes the COST BARRIER to New SERVICES. Access to services is the OBJECTIVE.

Benefits to All Parties

Largest Incumbent Company:

- gains revenue from every call made through its own tower or exchange by competitors' customers,

New Entrant:

- gains lower cost, earlier entry to the market,

Public:

- gain the benefit of SERVICES competition, lower costs; fewer towers in major cities; some will move into rural areas,

Rural Community:

- gains the benefit of a quicker access to services in rural areas.

INTERCONNECTION

Consultant's Analysis

- zero payment for interconnection is only fair where all parties are of a similar size
- you only get what you pay for; since interconnection abolished, “congestion” and “blocking” endemic;

The Real Problems

- MPTC's network is too small relative to Mobitel,
- 35 percent of MPTC's customers do not pay their bills,
- ministries spend their money on mobile phones not MPTC

Therefore, MPTC does not get enough revenue;

Increasing MPTC's Revenue

You get What You Pay for

- to get more money MPTC needs money to develop,
- will not get it as a ministry, therefore setting up Telecom Cambodia is URGENT

When TC set Up

- Invest in new fixed lines, efficient billing and collection,
- ZERO charge for new fixed connections (+3months rent in advance): rebalance tariffs to get more revenue from calls,
- increase connections, reduce fixed line unit costs and get better balance in interconnections

Government's Revenue Needs

A plan to address government revenue needs:

- **focus on revenue not on ownership, take a declining share of a rapidly growing market**
- **find innovative ways to boost fixed line connections**
- **have negotiated interconnection agreements to reduce the cost to the government (e.g. Camintel cap)**
- **put standard levies on ALL gateways (legal and currently illegal) and VOIPs. This expands revenue as use expands**
- **greater reliance on use sensitive charges**

REVENUE REBALANCING

PTN charges based on old technology - switches more expensive than pairs. Now switches cheaper.

- **prices of services are moving closer to costs of service,**
- **Unbalanced prices open door to competition (e.g. VOIP),**
- **technological developments have been decreasing costs.**

Rebalancing in OECD countries has resulted in:

- **cost related fixed charges, decreased user charges**
- **increased local call prices and decreased long distance charges**

Cambodia Cost Per Minute (\$)

Type of Service	1999	2000	2001
Domestic calls - book value	0.13	0.08	0.07
-local calls	0.11	0.06	0.06
-Long distance calls	0.91	0.95	0.91
Domestic calls – market value	0.08	0.05	0.04
-local calls	0.07	0.04	0.04
-Long distance calls	0.84	0.88	0.84
International calls - book value			
- w/o accounting rate	0.21	0.17	0.26
- with accounting rate	0.91	0.87	0.93
International calls – market value			
- w/o accounting rate	0.16	0.14	0.21
- with accounting rate	0.86	0.84	0.88

MPTC Tariff vs. Costs

Comparison:	Tariff / Minute	Cost / Minute	Tariff / Minute	Cost / Minute
	(\$)	(\$)	(\$)	(\$)
	Domestic call		International Call	
	Local call	Long dist.	w/ TAR	w/o TAR
1999				
Tariff/Minute (\$)	0.01	0.15	2.4 - 2.9	2.4 - 2.9
Cost/Minute (\$)	0.11	0.91	0.91	0.21
2000				
Tariff/Minute (\$)	0.02	0.15	1.7 - 2.0	1.7 - 2.0
Cost/Minute (\$)	0.06	0.95	0.87	0.17
2001				
Tariff/Minute (\$)	0.01	0.15	1.5 - 1.8	1.5 - 1.8
Cost/Minute (\$)	0.06	0.91	0.93	0.26

Analysis of MPTC Tariffs

	2001
Local Calls	1/6 of Cost
Long Distance	1/6 of Cost
International + A/C	Tariff X2 Cost
International	Tariff X5 Cost

The huge disparity is making opportunities for illegal and competitive entrepreneurs

- **Local and LD costs are too high because of small network,**
- **regulation will be undermined by economic forces that overcome high international prices, and by technology**

FUTURE

Problem

- unless tariffs are brought closer to costs other legal or illegal methods will be found to offer exploit the gap,
- main threats are VOIP and Illegal gateways. Gateway 2 is a problem but big problem is VOIP and illegal gateways.

Solution

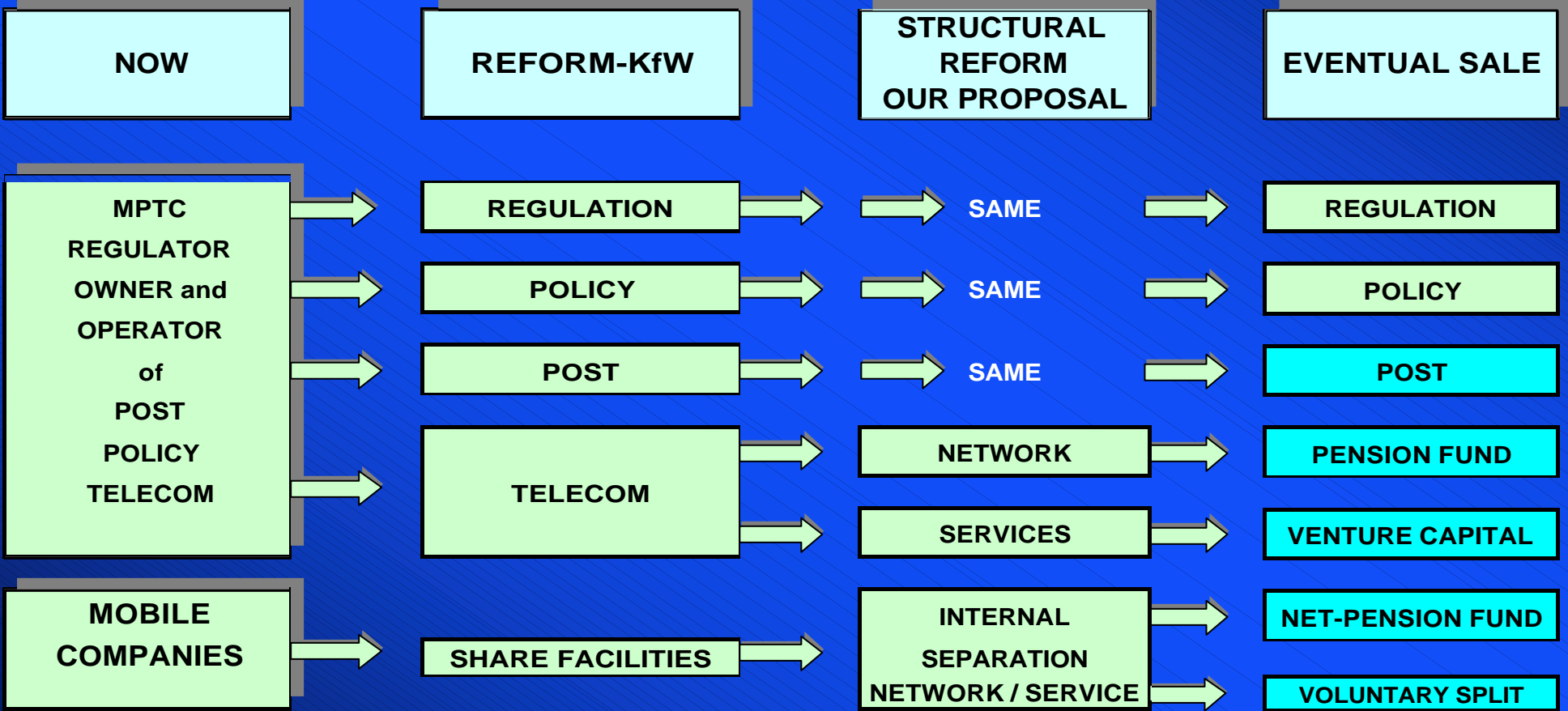
- Bring tariffs closer to costs,
- Adopt a more realistic accounting rate,
- Legalise and tax the alternatives (fee or revenue share),
- Commercialise (and privatise?) the operations of MPTC and Gateway One.

Pathway Forward

Telecommunications reform is good for Cambodia:

- **announce**
 - a postal and telecommunications law (i.e. a good policy is embodied in the draft you already have)
- **separate:**
 - policy
 - regulation
 - ownership / operations (also networks / services MPTC)
 - postal (see earlier presentation)
- **corporatise (we suggest network + service split)**
- **privatise (no cross ownership, networks/services)**

Cambodia's Reform Pathway



Cambodia's Capabilities

- **Cambodia is already at the leading edge**
 - it has made big advances in mobile services but fixed is stalled,
 - high proportion of mobiles, but must ensure continuing competition,
 - has a World Class draft Telecommunications Law
- **Some people will say that that these ideas are too advanced for Cambodia, not relevant to Cambodia**
 - this argument says Cambodian people are not capable of making good decisions. We believe this is **WRONG!**
- **Doing nothing is not an option, MPTC as it is cannot long survive**

Cambodia's Telecommunications

Future

- Fair Competition provisions should be the minimum necessary ,
 - Draft Law covers every necessary point
 - Open Access Networks avoids detailed regulation
- Interconnection regime must be fair, you get what you pay for.
- Rate Rebalancing urgent to protect revenues

Unbundling of MPTC and forming TC are the keys to the pathway forward.

DAVID BUTCHER and ASSOCIATES

**Has appreciated the opportunity to participate
in an exciting challenge in a wonderful country
with a great future**

**On behalf of our team I thank you for
your hospitality and many kindnesses:**

**David Butcher,
John Third,
Shaan Stevens,
Marguerite Loth and
Corazon Posadas**

GOOD LUCK!!