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WORLD BANK RAIL RESTRUCTURING SEMINAR

**Worldwide Experience in Railway Restructuring**

## Contents:

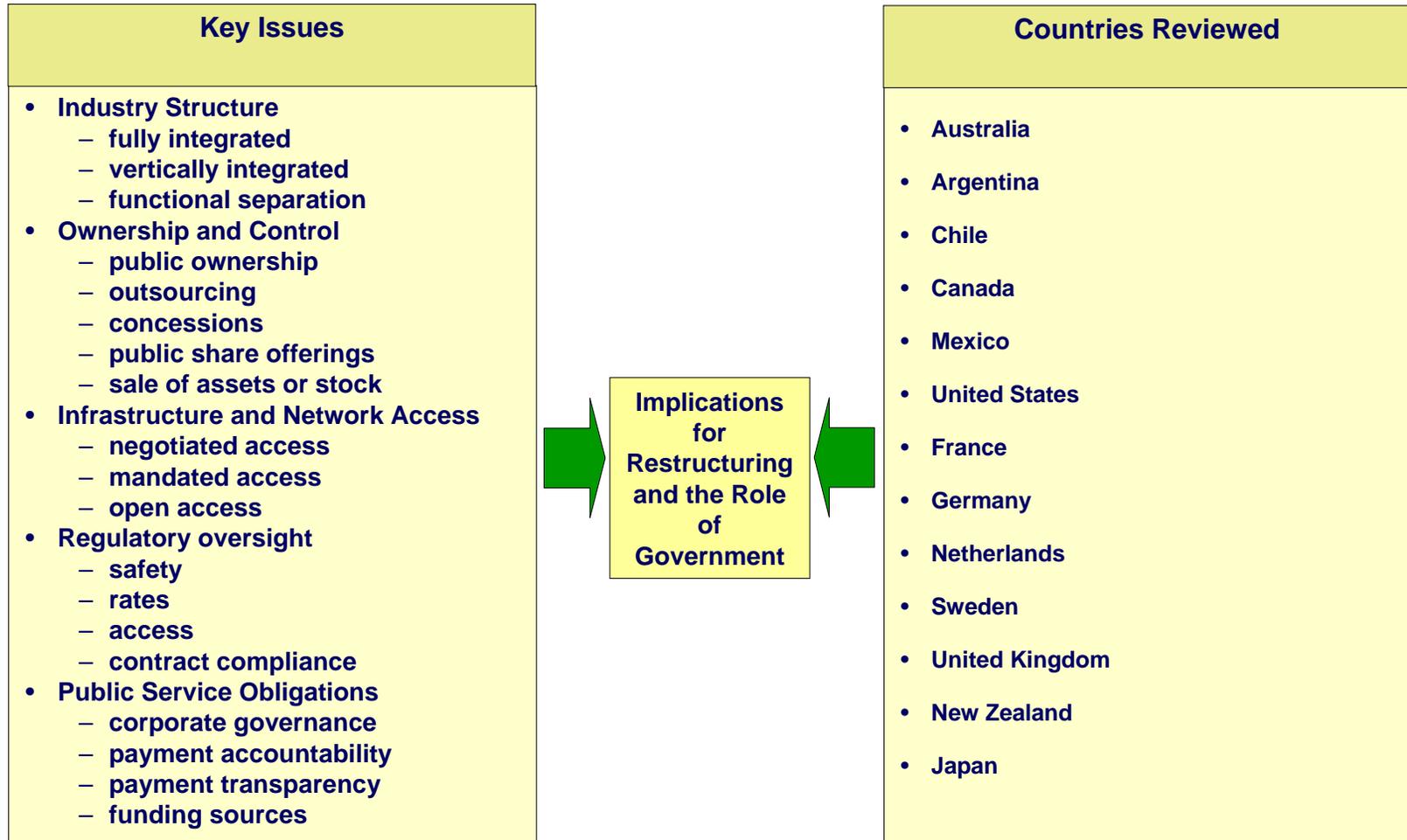
- Review worldwide experience for a range of issues important to railways and governments during restructuring
  - Ownership and control
  - Network access
  - Separation of infrastructure management and railway operations
  - Regulatory oversight in a restructured environment
  - Community or public service obligations
- Post restructuring role of government

### **In market economies, minimum government intervention in transport markets is preferred**

- Market economies work best when buyers and sellers freely enter into transactions for mutual benefit
- Government provides the framework for economic activity:
  - Protection for private property--the basis for most transactions is the transfer of some private property
  - A legal structure for the enforcement of contracts and commercial agreements and the resolution of disputes
  - Ensure a fair market place
- Greater government interventions tend to distort the marketplace, changing the basis of “freely enter into transactions for mutual benefit”
- From this framework flows some regulatory responsibilities--ensuring safety, protection from monopolies, ensuring fair prices where there is no market.
- Governments often provide services that are not normally produced in a market economy:
  - National defense
  - Police and internal security
  - Education services
  - Roads, highways, urban transport, other transportation infrastructure
- Government can also be buyers in market economies

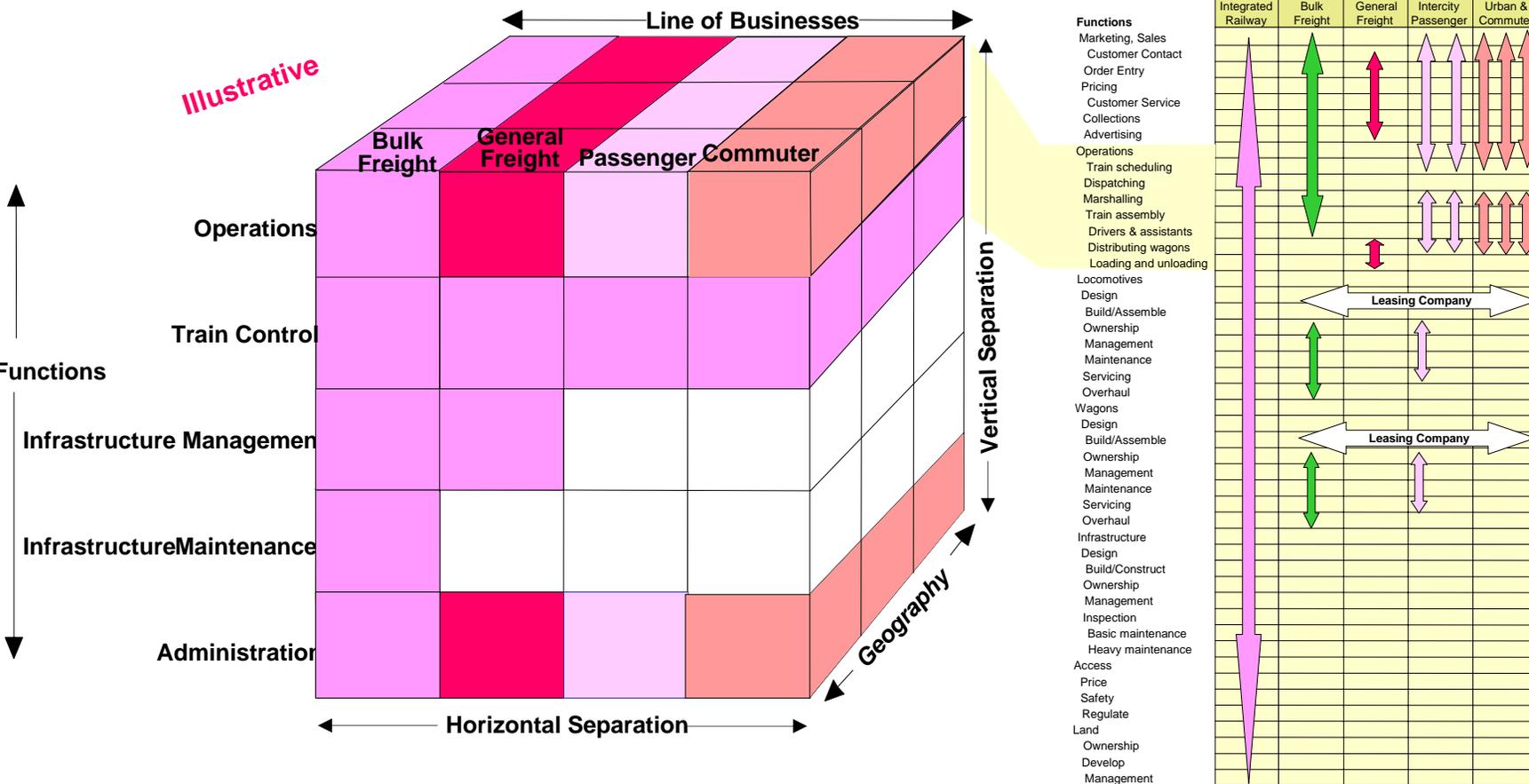
**“Minimum intervention” is very far from Government owned and operated railways. Thus, the need for restructuring and reform.**

**Countries have handled restructuring and the role of government in many different ways.**



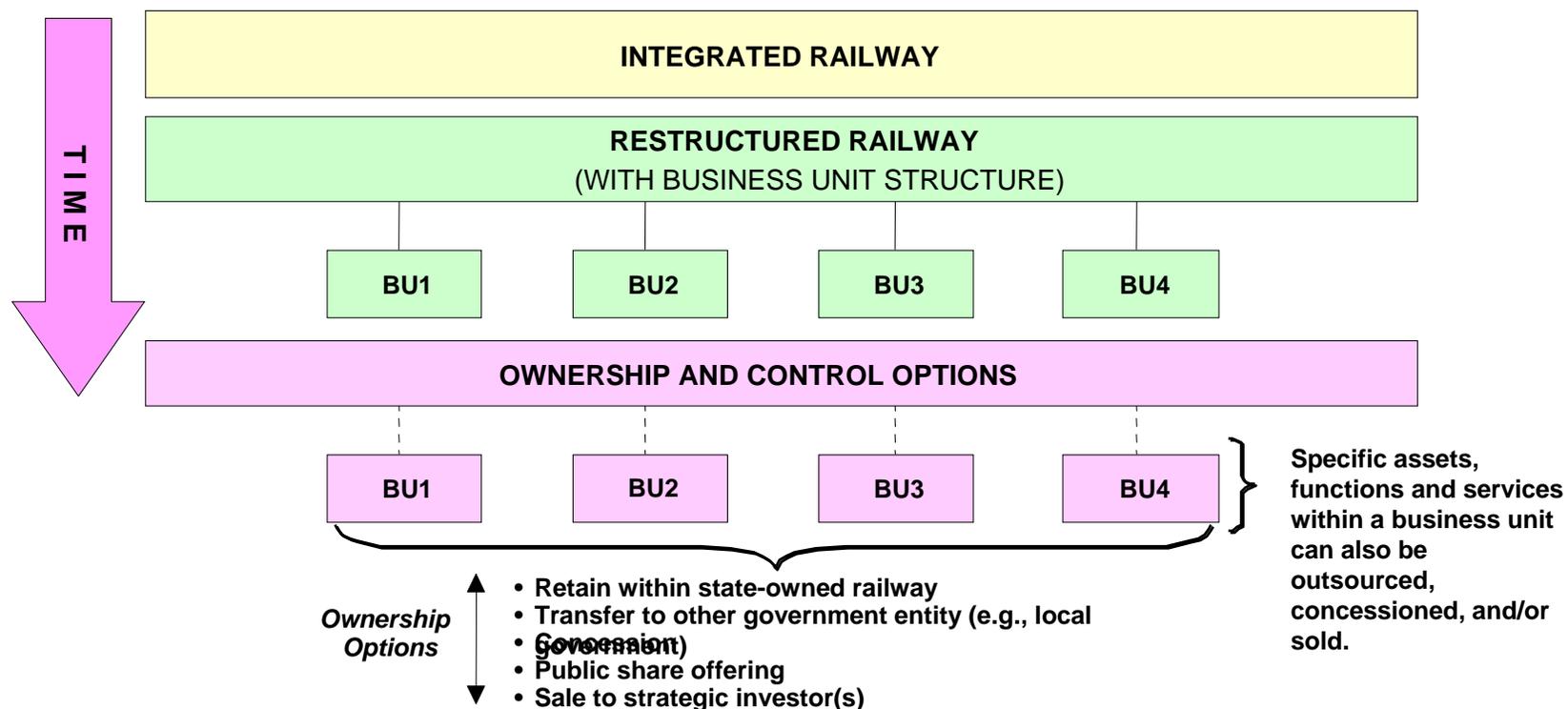
## Government must first consider industry structures

*Illustrative*

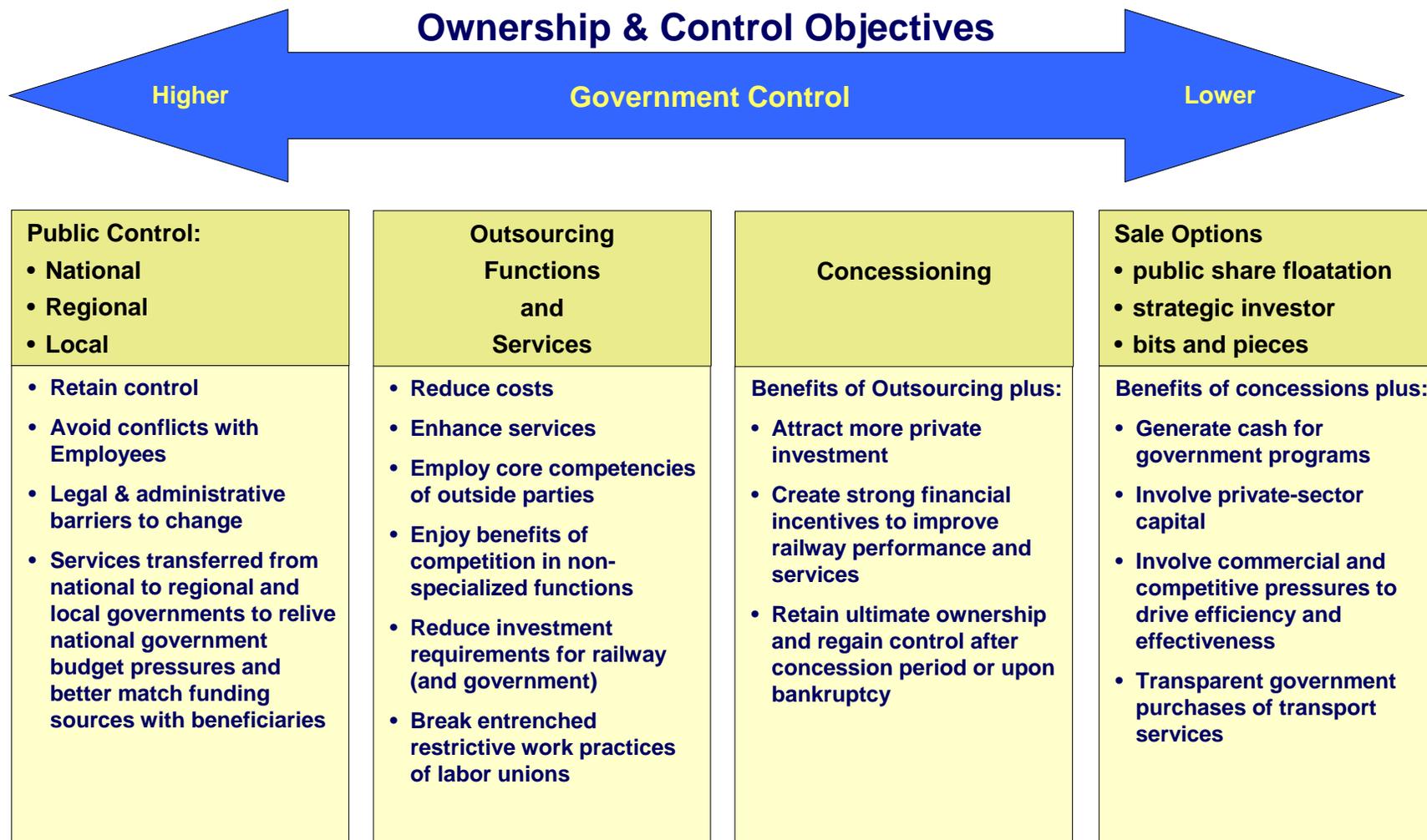


- Restructuring for more participants increases competitive pressures, encourages innovation and private investment, and increases efficiency.
- However, it also increases the complexity of the transport marketplace.

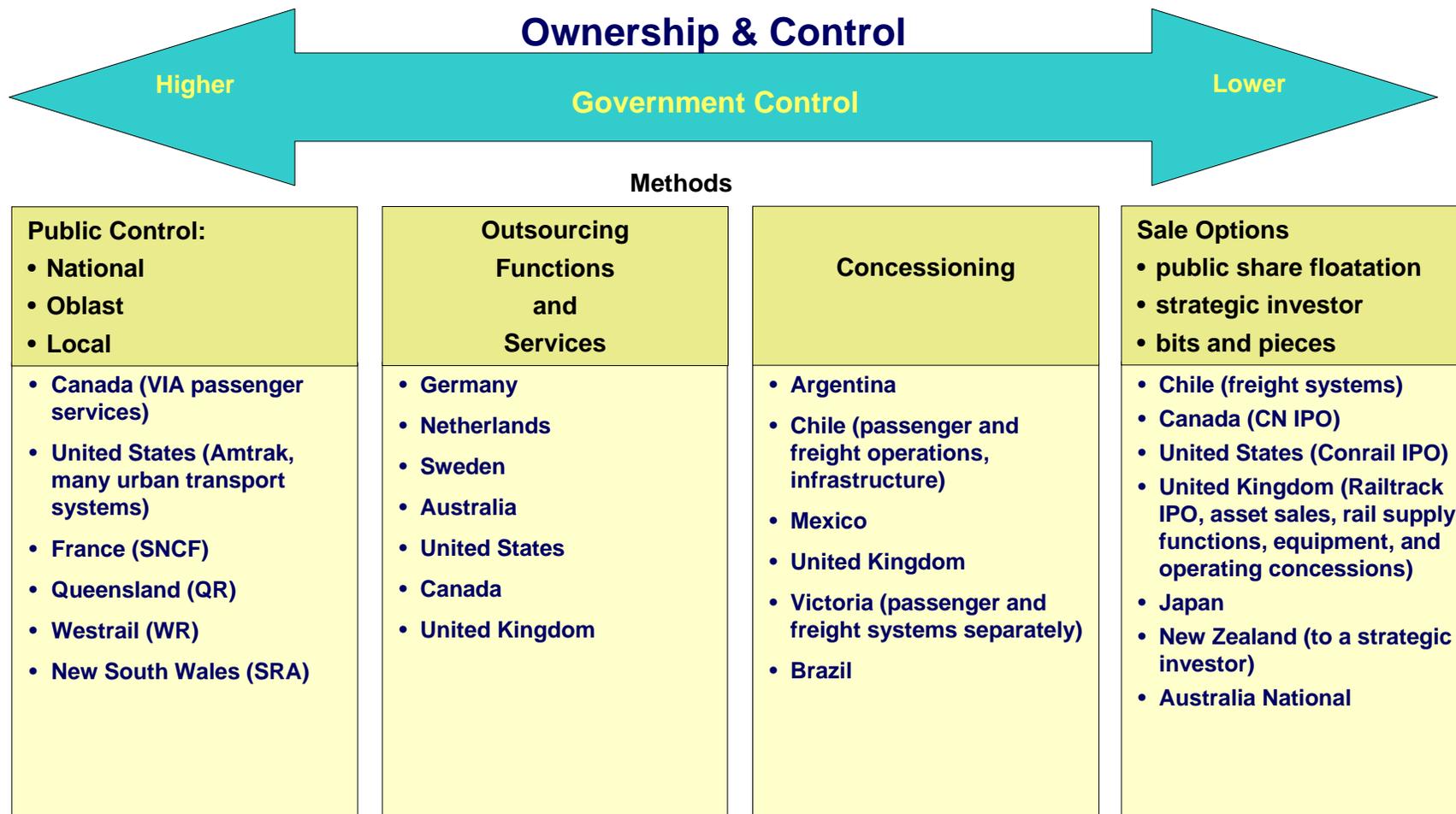
Governments have a range of options for involving the private sector in the railway industry...



## The options have different objectives



Many countries are using concessions and sales to private investors, especially where no public policy objective is served by continuing government ownership.



## Ownership and Control Options

### CONCLUSIONS

- Outsourcing is an effective means of using the core competencies of outside parties without reducing Government control over service delivery
- Privatizing non-core functions can be successful in developing a competitive rail supply industry, care must be taken not to create new smaller monopolies.
- Concessioning and sale can be effective in attracting private capital and rapidly improving performance, but a commercial culture, transparent regulation, and a well developed legal system is a prerequisite.
- Privatization most directly impacts commercial behavior and can raise large sums for Government, depending upon industry structure and the competitive environment.
  - A transparent price regulation system, and
  - well developed legal structure for recourse are prerequisites



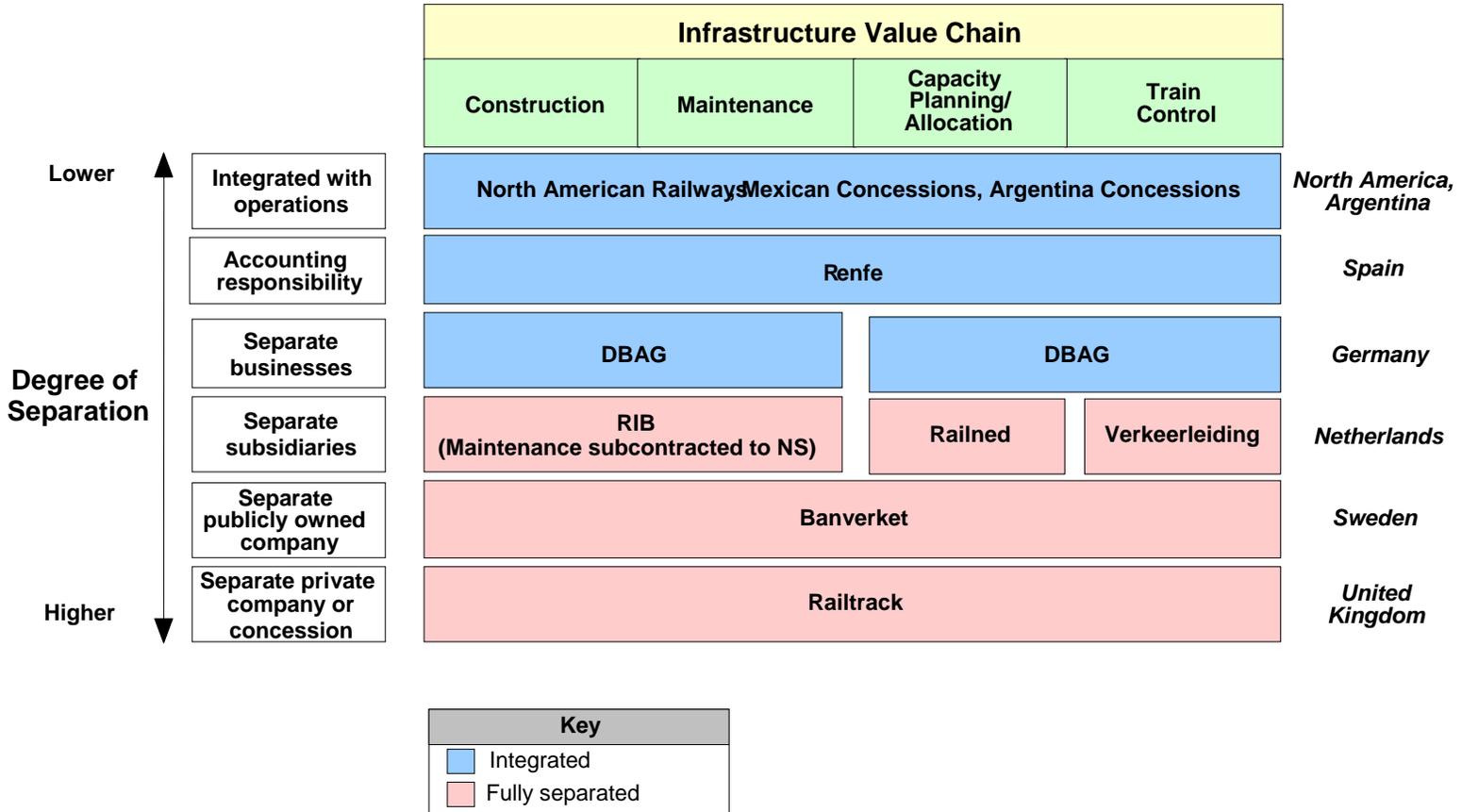
### IMPLICATIONS FOR RESTRUCTURING

- Competitive realities dictate that national rail systems must maximize efficiency with freedom to outsource services--rollingstock and infrastructure maintenance, for example.
- Competitive concessioning of Government supported services is a means to introduce competition and increase efficiency
  - services provided on many branch lines could initially be concessioned
  - passenger services could also be concessioned
- Privatization of commercially viable portions of the national rail system presents a significant opportunity for Government to generate income, attract private investment, and promote innovation
  - however, existing price regulation mechanisms must be modified
  - the legal structure defining monopoly and competitive sectors will need to be clarified



**A wide range of infrastructure control options has been developed to support competitive access arrangements.**

## EXAMPLES OF INFRASTRUCTURE CONTROL OPTIONS



**Determining infrastructure access charges is a critical component of an open access regime. There is no theoretically correct method and little apparent consensus in practice.**

	FRANCE	GERMANY	UNITED KINGDOM	ITALY	SWEDEN
<b>Level</b>	~30% cost recovery	100% cost recovery	100% cost plus profit	~30% cost recovery	~15% cost recovery
<b>Basis</b>	Ability-to-pay by business unit	Cost-based with some variation by train type	Ability-to-pay with minimum equivalent to marginal cost	Cost-based	Cost-based
<b>Mechanism</b> – Tariff or Negotiated – Disaggregation	Tariff Five networks	Tariff 1,200 sections	Negotiated Thousands of line sections, hundreds of flows	Tariff Main vs. secondary lines	Tariff By vehicle type and facilities used
<b>Scarcity Pricing</b>	None	Auction to resolve conflicts	By negotiation	None	None
<b>Penalties/Incentives</b>	None	None	Punctuality, environment (intermodal)	None	None

- A wide variety of systems - little convergence on any main elements
- It is too early to say empirically which systems will work best
- The EU and UIC want to harmonize access rates in Europe - similar issues are being raised in Australia

**Inappropriate access pricing can adversely affect railway financial performance and reduce the amount of rail network that is economically viable, or increase the cost to government.**

### Railway Economic Issues

- Railways are high fixed-cost businesses - long-run average costs significantly exceed their long-run marginal costs.
- Because of these high fixed costs, railways have substantial economies of scope and density
- Many railway fixed costs are not caused by any specific traffic, but are “common” or “joint” costs to all traffic, and hence are unattributable to any specific traffic.
- To fund unattributable costs, railways can employ Ramsey Pricing (differential pricing, or pricing to customer value) to allocate unattributable network costs based upon the price sensitivity of individual shippers, commodities and routes
- Ramsey pricing is not transparent and requires some kind of oversight function
- Railways are complex operations - the cost of coordination among multiple operators can be high



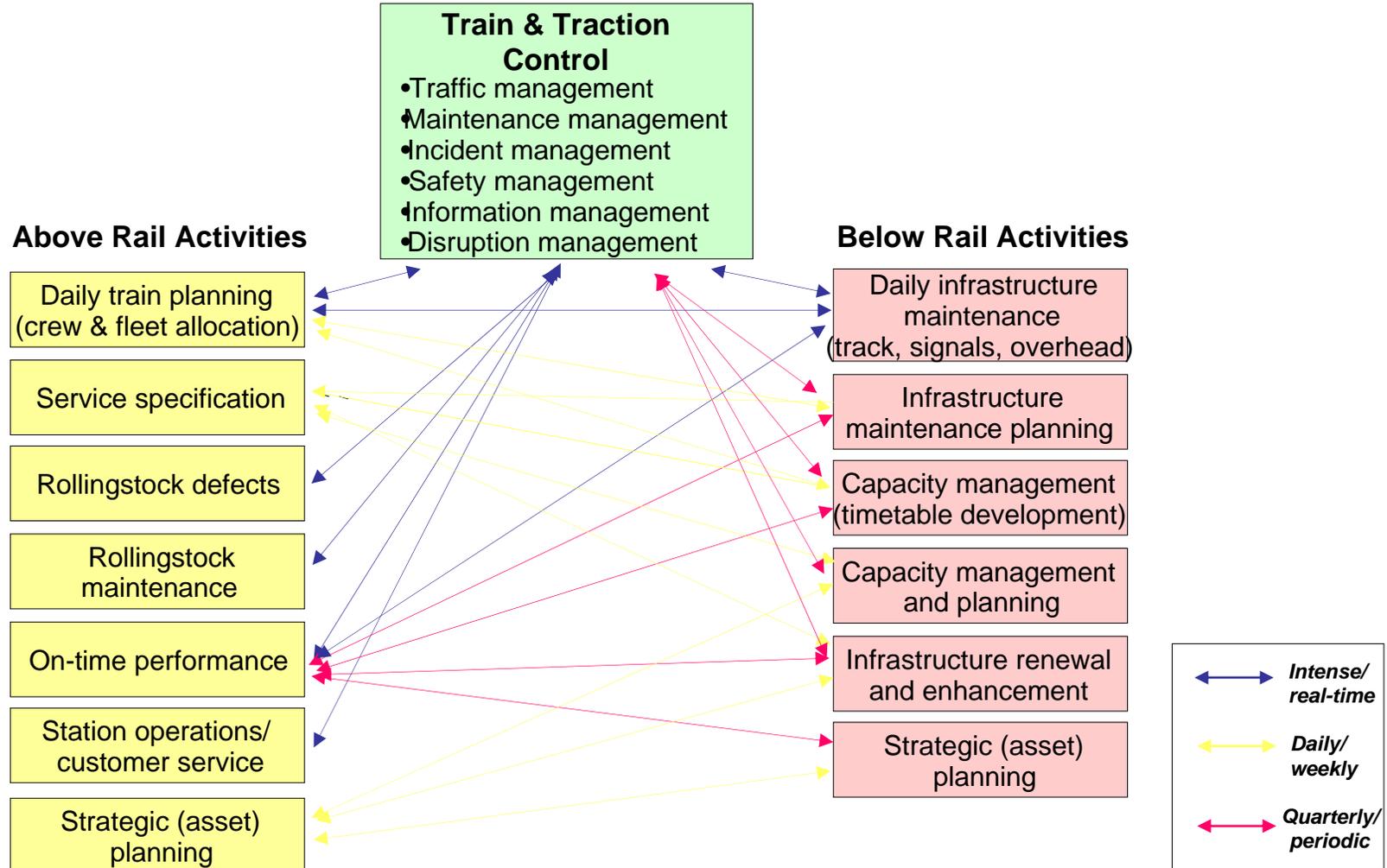
### Impacts of Access Arrangements on Railway Financial Performance

- Average pricing discourages traffic from low volume routes where there is spare capacity, while encouraging traffic on dense routes potentially creating a need to add capacity
- Increased transparency discourages discriminatory pricing which can lead to low-contribution traffic being forced off the network while reducing the yield from high-contribution traffic
- Competition reduces margins on high-contribution businesses; rate reductions from competition can exceed the ability to reduce costs
- New entrants can “cherry pick” the most lucrative traffic, reducing margins and the ability for the railway to retain low margin segments
- There is a potential for the loss of the economies of scope and density as a result of multiple operators servicing individual lines
- There is a risk that increased transaction and coordination costs will exceed the innovation benefits of competitors
- In the absence of outside funding, track condition and network size may decline

**Greater contestability through infrastructure separation and open access has produced many of the competitive outcomes sought, although this has seldom meant increased competition on the track.**

COUNTRY	EXPERIENCE
Sweden	<ul style="list-style-type: none"> <li>• Little rail-to-rail competition has evolved for SJ freight traffic due to lack of attractive market opportunities and barriers to entry such as financing for rolling stock</li> <li>• Competition for exclusive operating franchises has occurred                             <ul style="list-style-type: none"> <li>– BK Tag, a private bus operator, operated three regional franchise services</li> <li>– Some customers operate own or subcontract train operations to other private companies</li> </ul> </li> <li>• Financial improvement at SJ has reduced government interest in increased competition</li> <li>• Significant reduction in freight tariffs because of competitive threats</li> <li>• Infrastructure investments increased substantially because Government wanted to upgrade rail system on a comparable basis to road transport</li> </ul>
United Kingdom	<ul style="list-style-type: none"> <li>• Restructuring has resulted in limited direct on-rail competition, competition is for franchises</li> <li>• Freight business has one operator, but ability of customers to operate own trains results in 30% tariff drop</li> <li>• Concessioning process has resulted in substantial reductions in operating subsidies</li> <li>• Competition in rolling stock and infrastructure maintenance results in 30% - 40% reductions in cost.</li> <li>• Privatization of Infrastructure company to RailTrack initially very successful but RailTrack recently bankrupt</li> <li>• RailTrack financial failure does not mean restructuring was unsuccessful                             <ul style="list-style-type: none"> <li>– Pricing structure increased trains by 200+%, increasing capital costs for capacity increases</li> <li>– Safety standards increased (even though RailTrack had better safety record than old BR)</li> </ul> </li> </ul>
Netherlands	<ul style="list-style-type: none"> <li>• Limited rail-to-rail competition as yet due to barriers to entry such as financing for rolling stock</li> <li>• Some competition is emerging, several operators beginning to operate short services &amp; want to do longer</li> <li>• There has been a reduction in rail tariffs on some bulk services</li> <li>• Government actively promotes growth of competition--infrastructure was free till 2001</li> <li>• Capacity management and train control functions separate from NS passenger operations</li> </ul>

**Infrastructure separation involves replacing internal command relationships with contractual relationships at a number of important interfaces.**

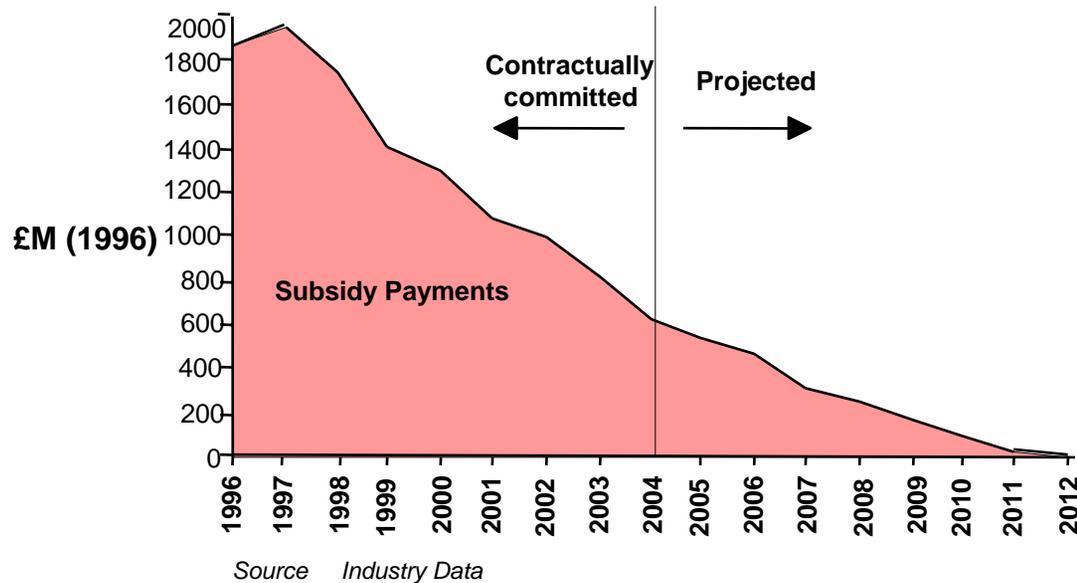


**For any set of complex interfaces, developing an appropriate contractual framework involves trading off risk against flexibility and responsiveness.**

- For complex railway operations/infrastructure interfaces it is difficult to write a contract which adequately protects the interests of both the above rail operator and the infrastructure provider without building in some inflexibility
- For intensive commuter rail services, a fully responsive system is critical to maintaining on-time performance, especially at times of break-down and component failure
- In the UK, a complex contractual interface has been created between operations and infrastructure and the trains still manage to run on time.
- However, significant costs are incurred in monitoring failure and attributing blame so that contractual penalties can be imposed and defended.
- Any system can be made to work, but Governments should guard against introducing unnecessarily complex and costly contractual interfaces unless the benefits are clearly significant.

## Competition for passenger franchises in the UK has led to substantial reductions in annual subsidies

TOTAL SUBSIDY PAYMENTS – 25 UK PASSENGER TOCS



- Projected subsidies are based on a continuation of the trends established under the initial round of tenders
- A realignment of the trend may occur depending upon the actual performance of train operating companies

## Network Access

### CONCLUSIONS

- The primary reason for access to infrastructure is to increase or rail competition.
- In some cases, the threat of competition, real inter-modal, product, or geographic competition can provide similar constraints and competitive pressures
- Market entry is dependent on network architecture and the number of point-to-point flows that might be captured by competitors - low densities and highly disaggregated flows probably cannot sustain more than one operator economically
- Infrastructure access arrangements require complex regulatory mechanisms and performance agreements. The transparency necessary can reduce the opportunities for railways to price in a discriminatory manor, leading to a reduced network or increased requirement for subsidy.
- Where PSOs are required, there is a reluctance for new operators to provide on-rail competition due to the potential risk of deficits



### IMPLICATIONS FOR RESTRUCTURING

- The highest density network segments (e.g., those serving coal fields) are likely to attract independent operators in a competitive market with infrastructure access environment
- Many general freight flows are light density and disbursed. These may not attract many independent operators.
- Introduction of open access will end the national railway's ability to cross-subsidize light density lines and provide nationwide services without direct subsidies.
- The threat of competition may be sufficient in the highest density portions of the network to produce close to the competitive outcomes expected from open access
- Transparency of the access regime, pricing freedoms and other features of access regulation are important determinants of the success of infrastructure enterprises.

## Separation of Infrastructure and Operations

### CONCLUSIONS

- There is a wide range of structural options available for railway restructuring
- Mandated access arrangements used in many countries demonstrate that effective low-cost access can be achieved without separation of infrastructure and operations.
- Full infrastructure separation has not yet been demonstrated to have a significant impact on the level of on-rail competition. The level and viability of on-rail competition is driven by traffic flows and commercial opportunities, although residual barriers to entry might also be a constraint.
- Open access with vertical separation exacerbates pricing constraints and reduces the responsiveness of infrastructure maintenance and investment.
- Efficient, competitive rail systems around the world are vertically integrated and often functionally separated.
- Vertically integrated rail operations have a long history of attracting private sector capital and being sensitive to changing competitive and customer market demands.
- Vertical separation has allowed the development of competitive passenger railway operators in the UK in a relatively short period.



### IMPLICATIONS FOR RESTRUCTURING

- The Government should identify and address its underlying objectives.
- Before separating railway infrastructure from operations, the Government must carefully analyze market and competitive implications to avoid constraining the development of competition for the market (as in passenger services)
- Vertical separation is not necessarily essential to achieve the desired competitive outcomes
- Partial separation, first through accounting separation, then through business unit separation and then holding company structures may be more effective in introducing competitive threats in the rail industry and sustaining a viable railway
- Decisions relative to the structure of the rail industry and forcing vertical separation should only be taken based upon a careful analysis of market conditions, and competitive benefits beyond those that might be achieved through open access.

## Price Regulation

### CONCLUSIONS

- In recent years there has been a tendency in many countries to de-regulate tariff setting for railways, relying on competition, either *for* the market (from other modes) or *within* the market (from other railways).
- Greater pricing freedom has been accompanied by greater flexibility, innovation, and responsiveness.
- Railway profits can increase where there is greater ability to discriminate among clients.
- In all cases, some governmental oversight capacity over tariffs has been retained. Those countries with the most efficient railway industries limit governmental intervention in tariff matters to cases where there is market failure, specifically only where there is a complaint initiated by shippers or carriers.
- Countries with well developed regulatory systems have established juridical or quasi-judicial procedures and rules of evidence. The outcome of the regulatory system is seen as reasonably predictable, equitable and timely for all parties.



### IMPLICATIONS FOR RESTRUCTURING

- The prospects for intermodal competition are limited in some markets and countries. Either the opportunity for competition within the rail sector must be created and encouraged, or there will be a need for continued regulatory controls on rail tariffs.
- Allowing and facilitating competitive access by large industrial enterprises to run their own trains (crews, locomotives, and wagons) for their own cargo creates significant competitive potential for bulk cargo, permitting deregulation of tariffs for that important market sector.
- Allowing third party carriers to offer general transport services can support more general tariffs deregulation. Deregulated road transport can often provide adequate competition.
- Railway and shippers should be permitted and encouraged to negotiate contract rates rather than have a tariff established by regulatory processes.
- Remaining necessary regulatory processes should be as simple as possible.
- It is essential that the regulatory process be seen as equitable and predictable if private investors are to be attracted to either the railway industry or those industries that rely heavily on rail transport.

### **As state-owned railways restructure, new governance and regulatory oversight roles must evolve.**

- In the past, most state-owned railways were self governing
  - Internal safety inspectorate
  - Engineering and design groups were responsible for developing internal standards, practices, and customs
  - Prices were set by precedent (past practice), statute, or as a function of cost
  - Often, the Transportation Minister, Director General, or other government officials were involved in dispute resolution
- As railways are restructured and more commercial relationships begin to apply, new forms of performance oversight are often required
  - Safety
  - Transport pricing oversight
  - Infrastructure access and pricing
  - Contractual compliance
- Only critical, rail-specific issues that have a significant impact on public safety or the competitive marketplace need receive new or specific regulatory attention

### Most regulatory oversight deals with four specific areas.

TYPE OF REGULATION	OBJECTIVE	CIRCUMSTANCES NEEDED	APPROACHES
<b>Safety</b>	<ul style="list-style-type: none"> <li>• Ensure safety of workers, passengers, and public</li> </ul>	<ul style="list-style-type: none"> <li>• In all cases</li> <li>• For operator certification</li> </ul>	<ul style="list-style-type: none"> <li>• Generally regulated by government agency</li> <li>• Approved safety plan (subject to audit)</li> </ul>
<b>Transport Prices</b>	<ul style="list-style-type: none"> <li>• Protect customers from non-competitive pricing</li> <li>• Achieve Government mandated social objectives</li> </ul>	<ul style="list-style-type: none"> <li>• When competition is limited (intermodal, intramodal, product, geographic)</li> </ul>	<ul style="list-style-type: none"> <li>• Set rate ceiling based on formula costs</li> <li>• Set minimum prices to avoid cross subsidies</li> <li>• Provide PSOs</li> <li>• Set rate ceiling at stand-alone cost to allow “Ramsey” pricing</li> </ul>
<b>Access Rights and Charges</b>	<ul style="list-style-type: none"> <li>• Protect customers from non-competitive pricing and service provision</li> <li>• Protect operators from non-competitive charges for infrastructure access</li> <li>• Provide a non-discriminatory access regime</li> </ul>	<ul style="list-style-type: none"> <li>• Where there is a dominant or single service provider but multiple operators/users</li> </ul>	<ul style="list-style-type: none"> <li>• Mandate access to specific competing operators on selected routes</li> <li>• Require open access to qualified operators</li> <li>• Set price ceiling based on formula costs, set minimum prices</li> <li>• Encourage efficient pricing to attract marginal traffic (i.e., ability of traffic to pay above SRMC)</li> </ul>
<b>Contractual Compliance</b>	<ul style="list-style-type: none"> <li>• Ensure compliance with concession agreements and other contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Where there are concessions or other public-private contracts (contract law can suffice)</li> </ul>	<ul style="list-style-type: none"> <li>• Establish a compliance department within department of transportation or in an appropriate independent regulator</li> </ul>

## Countries have employed a wide variety of regulatory approaches.

COUNTRY	SAFETY	TRANSPORT PRICES					ACCESS RIGHTS	ACCESS CHARGES		CONTRACTUAL COMPLIANCE
		PRICE CAP	COST-BASED	RETURN ON CAP-BASED	GOVERNMENT-APPROVED	PRICE-BASED (CPI-X)		FORMULA-BASED	NEGOTIATED	
Argentina	√									C
Chile	√						C			C
Canada	√		S	S			√ <sup>1</sup>			
Mexico	√						C	√		C
United States	√		S					√		
France	√				√		√			
Germany	√				√		√			
Netherlands	√				√		√	None		
Sweden	√				√		√	√		
United Kingdom	√	√		S		√	√	√	√ <sup>2</sup>	√
New South Wales	√		√	√			√		√	
Queensland	√									
Australia National	√						√			
New Zealand	√									
Japan	√			S						C

### KEY

**N = No rail-specific regulation**    **C = Specified in contract**    **S = Complaint must be raised by party to the transaction**

<sup>1</sup> 30 kilometer open access provided by statute

<sup>2</sup> Freight access prices are negotiated with Railtrack

### **Every country reviewed specifically regulates railway safety practices.**

- Several aspects of safety are usually covered:
  - Operating practices (e.g., hours of service for operating employees)
  - Equipment and rail specific infrastructure (e.g., braking systems, signal systems)
  - Matters of public safety and convenience
- New structures to “license” operators are required as access to the network is expanded
- In addition, railways must implement new internal practices and procedures and often upgrade the technology involved in train control to manage multiple operators on the network
- Some rail systems (UK, NSW, Netherlands) are finding the amount of effort that must go into safety regulation (both governmental and by the “dispatching” enterprise) increases with the number of operators

**Historically, national railways defined safety and technical standards internally. With competition and new operators, these tasks must be placed in another body. Often a new government agency must be assigned these tasks, sometimes an industry association can be responsible.**

### **Regulation of access rights and charges has a significant impact on successful restructuring**

- In many countries, open access is already a reality.
- How access is regulated and priced will have a lasting and significant impact on the railway sector and on Government as the ultimate owner of railway infrastructure.
- Debates over efficient pricing for access quickly become complex, as do the governing regulations
  - The need for Ramsey or differential pricing in railway markets makes access pricing complex
  - Equity and fairness of Ramsey pricing; usually the groups seeking open access are those with high Ramsey prices
- There are risks in not carefully designing an access regime
  - To National Railways: potential erosion in earnings, reduced ability to tap private markets, increased redundancy provisions
  - To shippers: potential shrinking network, loss of service quality, choice of operator etc.
  - To Government: potential deterioration of plant, impact on safety, increased demands for CSOs

**Regulation may be implemented through an independent regulator, the transport ministry, OR a rail operator association**

**REGULATORY ENTITIES**

<b>ENTITY</b>	<b>REGULATORYROLE</b>
<b>Independent Regulator</b>	<ul style="list-style-type: none"> <li>• Regulator jurisdiction often includes                             <ul style="list-style-type: none"> <li>– disputes over infrastructure cost allocations between railways</li> <li>– Disputes over the adequacy of PSOs</li> <li>– Operator or railway conflicts and disputes with customers about rates, service</li> </ul> </li> <li>• Regulator usually acts as a mediator to resolve these disputes through an adjudication process and, when necessary, promulgates regulations to govern railway operator and customer conduct</li> <li>• The existence of an independent regulator often increases the interest of third-parties in bidding for services, outsourced functions, or operations</li> </ul>
<b>Ministry of Transport</b>	<ul style="list-style-type: none"> <li>• The government requires an agency responsive to political mandates to ensure that railways achieve Government objectives</li> <li>• Transport railway ministries are usually responsible for:                             <ul style="list-style-type: none"> <li>– Rail safety</li> <li>– Policy, research, and planning</li> <li>– Co-ordination with other units of Government for public funding and competitive oversight</li> </ul> </li> <li>• Government usually divests or separates shareholder and regulatory departments                             <ul style="list-style-type: none"> <li>– Difficult if it is an ownership position with one of several competitors</li> </ul> </li> </ul>
<b>Railway association</b>	<ul style="list-style-type: none"> <li>• Self-regulatory organization for multiple private operators</li> <li>• Provides a private sector alternative for setting technical, operating, and safety standards</li> <li>• Proposes carrier-to-carrier arbitration procedures for conflict resolution involving competing operators</li> <li>• Where possible, acts as a single, unified voice for private railway interests in communications with regulatory agencies, public</li> </ul>

## Institutional arrangement relative to access charges

### Conclusions

- . Safety regulation becomes more complex as the number of operators with access to the network increases.
- . Infrastructure access and pricing regulations can be complex and have significant impacts on railway financial viability, network size, and service quality
- . Regulation is typically undertaken by the government transport department in conjunction with an independent regulator to resolve disputes and prevent anti-competitive practices



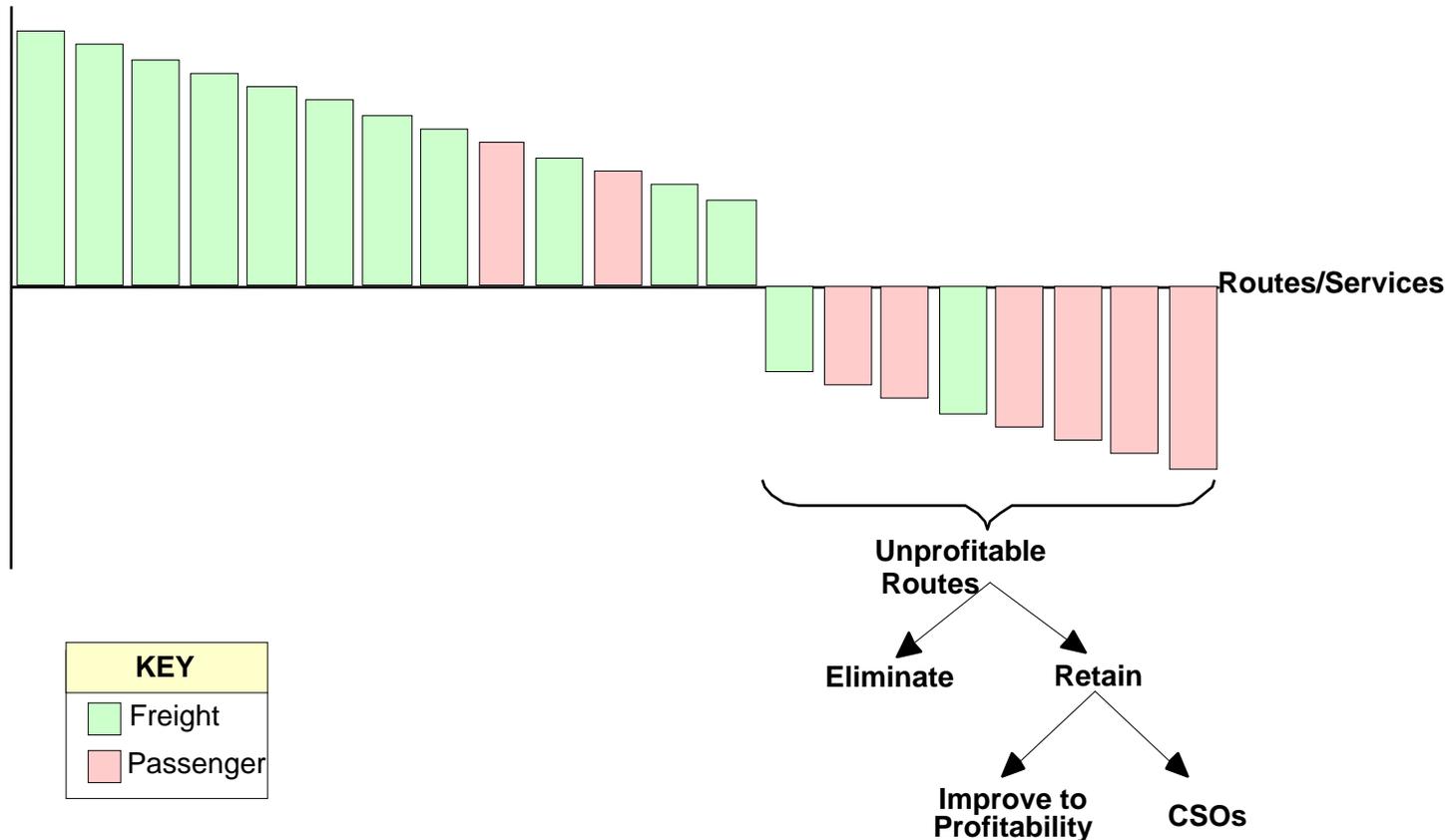
### Implications For Restructuring

- . A governmental agency must be established as an independent regulator. Sometimes this agency can regulate across a wide range of sectors, including rail.
- . Railway and transport law must be modified to authorize the regulatory agency and establish the conditions of regulation.
- . Properly structured, a new unit can provide appropriate regulation/oversight to address both safety and open access issues (for example, prices, access rights and charges, contractual compliance) without the costs of establishing a separate government entity.
- . This will require significant changes in law, and particularly in how the natural monopoly law is applied to railways.

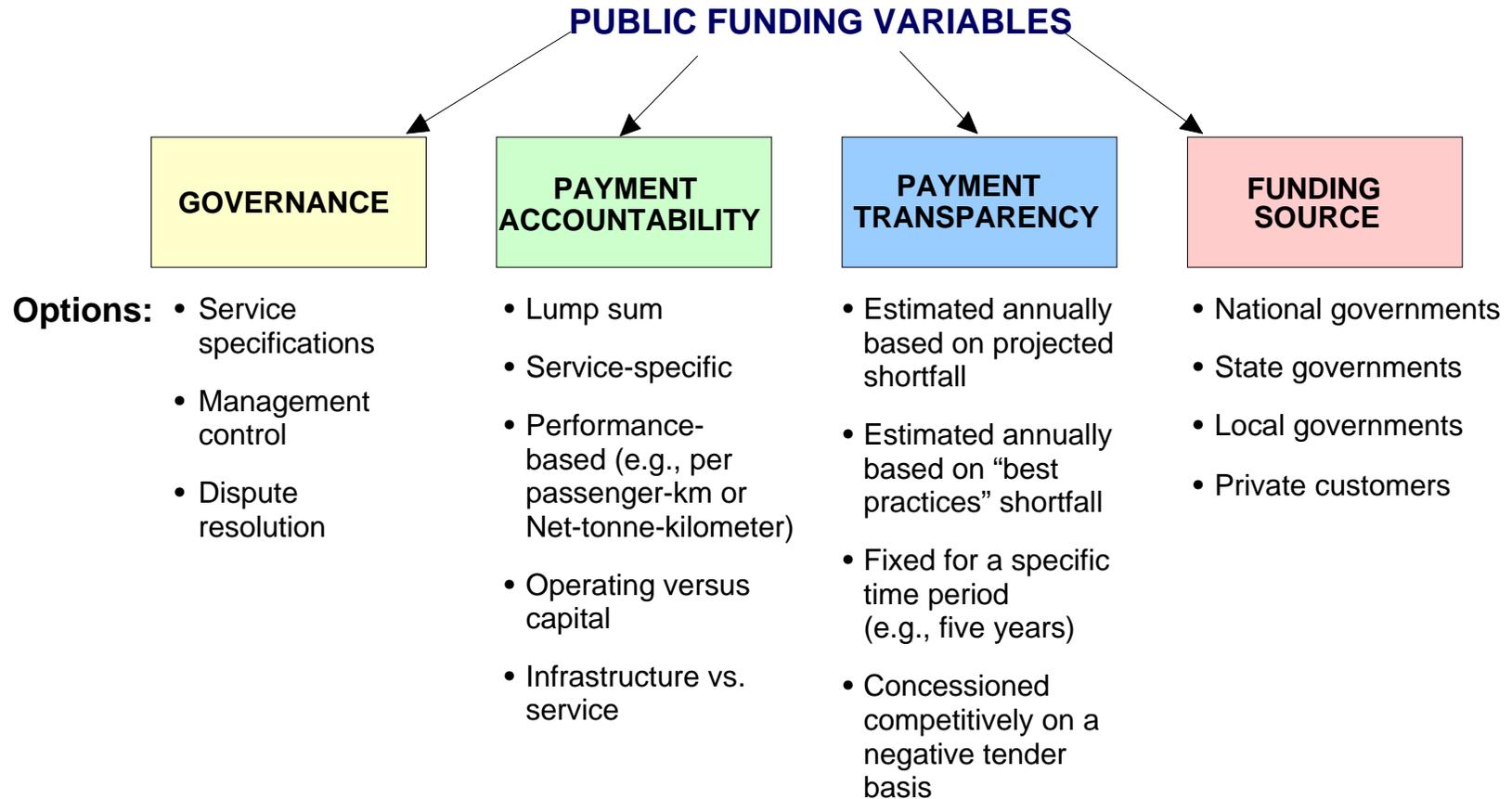
**Governments may want a railway to retain selected unprofitable routes and services due to social or political considerations.**

Contribution to Network Profitability

Illustrative



**Options for structuring subsidies for non-commercial services must address four key variables.**



## Countries have taken a variety of approaches to funding community service obligations.

COUNTRY	GOVERNANCE		PAYMENT ACCOUNTABILITY						PAYMENT TRANSPARENCY				FUNDING SOURCE		
	SERVICE SPECS.	MGMT. CONTROL	LUMP SUM	SERVICE SPECIFIC	PERFORMANCE-BASED	SEPARATE OPER./ CAPITAL	INFRA-STRUCTURE	SERVICE	PROJECTED SHORTFALL	"BEST PRACTICES" SHORTFALL	FIXED	TENDERED COMPETITIVELY	STATE/NATIONAL	LOCAL	PRIVATE
Argentina	X			X		X	X	X				X	X		
Chile	X		X			X	X	X				X	X		
Canada (VIA)		X	X					X	X				X		
Mexico	X			X	X			X			X		X		
United States (Amtrak)		X	X			X		X	X				X	X	
Germany	X	X	X				X	X	X			X <sup>1</sup>	X <sup>2</sup>	X	
Netherlands		X	X				X	X	X			X <sup>1</sup>	X		
Sweden	X		X				X	X				X	X <sup>2</sup>	X	
United Kingdom	X			X				X				X	X		
New South Wales		X	X	X				X		X			X		
Victoria	X			X	X					X			X		
New Zealand	X			X	X	X		X	X <sup>3</sup>				X	X	
Japan		X		X		X	X				X		X	X	X

<sup>1</sup> Tendered regional services

<sup>2</sup> State provides funds to local governments who have discretion to allocate funds to bus or rail

<sup>3</sup> Negotiated payment

**There are many options for determining how PSO or public service obligation payments can be made.**

OPTIONS	KEY CONSIDERATIONS
<b>Governance</b> <ul style="list-style-type: none"> <li>• Service specifications</li> <li>• Management and control</li> </ul>	<ul style="list-style-type: none"> <li>• Service specifications should be closely related to accountability and transparency provisions of PSO contracts so that any bonus/penalty can be easily related to performance against the specifications</li> <li>• More precision (e.g., by rate, type of service, time of day) requires more detailed accounting and performance measurement systems</li> </ul>
<b>Payment accountability</b> <ul style="list-style-type: none"> <li>• Lump sum</li> <li>• Service-specific</li> <li>• Performance-based</li> <li>• Operating Vs capital</li> <li>• Infrastructure Vs service</li> </ul>	<ul style="list-style-type: none"> <li>• Lump sum easy to administer but not very transparent and may incent undesired revenue/cost tradeoffs</li> <li>• Service-specific PSOs can be highly transparent but calculating subsidy on a network can be complex</li> <li>• Performance-based payments recognize that the operator is often best placed to determine the most appropriate services. Requires agreed-upon measurement systems. When more than one operator is involved, separating PSO payments between operators and capital charges (for both infrastructure and equipment) is more complex but permits greater flexibility in operator selection</li> </ul>
<b>Payment transparency</b> <ul style="list-style-type: none"> <li>• Projected shortfall</li> <li>• “Best Practices” shortfall</li> <li>• Fixed payment</li> <li>• Competitive tendering</li> </ul>	<ul style="list-style-type: none"> <li>• as well as in capital program financing</li> <li>• Projected shortfall is flexible but service provider has low accountability</li> <li>• Fixed price creates strong financial incentive to keep costs low, service quality can suffer</li> <li>• Tendered services creates competition to minimize subsidies</li> </ul>
<b>Funding sources</b> <ul style="list-style-type: none"> <li>• National government</li> <li>• Regional governments</li> <li>• Local governments/communities</li> <li>• Private</li> </ul>	<ul style="list-style-type: none"> <li>• National and state governments may seek to reduce fiscal burden of PSOs by providing a backbone network of services and shifting responsibility to local communities, closer to the ultimate beneficiaries of the services</li> <li>• Service levels may decline if local communities are unable to fully fund previous service levels</li> <li>• Local funding may also inhibit coordination with national transportation networks</li> </ul>

### **Important principles governing railway restructuring.**

- Preserve and protect rail transport capabilities -- especially those critical to economic growth and development
  - Change industry structure deliberately and systematically to maintain rail services
  - Concentrate on building a commercial enterprise structure
- Focus on creating efficient and low cost transport sector
- Build a competitive rail sector environment
  - For rail industry supply functions -- initially non-core activities (Avoid creating monopoly spin-offs!)
  - Subsequently, for core transport functions
- Open environment to private sector finance and investment
- Encourage commercial and competitive behavior through a transition to market-based pricing
  - Permit voluntary contract price determination between railroad and its customers
  - Move toward complaint-based regulation, based on transparent standards for government intervention/dispute resolution
- Create institutional framework for a more commercial industry
  - Develop structure for safety regulation, licensing, certification of fitness
  - Adapt structures for economic regulation and dispute resolution

### **While outsourcing of railroad supply functions is essential for restructuring, it alone is not sufficient**

- Separation of “competitive sector” units may create competition in railway supply industries, but --
  - Separated units must be sustainable to achieve competitive supply and mitigate adverse social impacts
  - Without additional reform measures, separated units may be subject to abuse by the core railroad’s position as a monopoly buyer of services
  - Unless a framework is explicitly designed to achieve competition by separated units with the core railroad, that outcome will not be attained
- To create competition in core railroad transport services
  - Some separated units must compete, or have the potential to compete, to serve the railroad’s core customers
  - Or -- shippers or third parties must be permitted to engage in transportation services over the rail network
- A strategy to increase competition in railroad transport may thus be based on:
  - Transforming outsourced entities into actual or potential competitors to the core railroad
  - Permitting shippers or third parties to become competitors to the core railroad, or
  - Some combination of the above
- Beyond outsourcing, development of a commercial, competitive rail industry requires
  - Independent access to shippers requires access to the rail network
  - A governmental/regulatory process that permits a transition to commercialization

### **Creating competition by providing independent operator access to the rail infrastructure does not require vertical separation of infrastructure and operations**

- The European experience with vertical separation is new and relatively untested
  - Less than 10 year's experience, most countries only now moving from simple accounting separation to organizational separation
  - More vertical integration retained than commonly believed
  - European vertical separation experimentation is largely seeking solutions to complex operating conditions in an intensely competitive intermodal environment dominated by highway transport
  - The European transport environment is far removed from that in Kazakhstan
- Access to rail infrastructure in combination with retention of vertically integrated core railways has been successfully applied in Australia and in North and South America
  - Mandated access in Australia has had dramatic effects in lowering prices, while efficiencies of common operating-infrastructure decision making has been retained for integrated carriers
  - Passenger service throughout North America is largely based on access over integrated freight carriers
  - A wide range of voluntary and selected governmentally required access provisions have been successfully applied
- For some countries, especially those whose economies are critically dependent on rail transport, retaining a vertically integrated railway while also providing access to the rail network by independent operators may be the best solution, capturing benefits of competition while minimizing risks.

### **Implementing this approach usually requires institutional development.**

- Development of policies that provide access to infrastructure on reasonable financial and operational terms
- Development of government capability for licensing competing operators and equipment
- Development of procedures to settle access disputes and ensure fairness in dispatching and operating practices.
- Development of limited tariff oversight regime, applied to situations where:
  - Customer has no competitive alternative
  - Rail operator and customer cannot agree on contract terms
- Development of equipment leasing enterprises to provide wagons and locomotives and equipment maintenance services to new operators.
  - Structured to provide maintenance and repair services
  - Structured also to purchase and finance new equipment.

### **Whatever the new market structure, key tenants of anti-monopoly regulation are outdated and require adjustment to support transition to a market-based economy.**

- Rigid separation of price-controlled monopolies from competitive sector enterprises is now rejected throughout developed economies
  - Electric utilities, telephone companies, railroads and other regulated public utilities are all increasingly allowed to own and operate competitive enterprises in any industry
  - Feared abuses of co-ownership of monopoly and competitive enterprises have not materialized
  - A combination of targeted regulatory controls and market forces can eliminate abuses without doctrinaire separation of monopoly and competitive entities
- Regulation by government established price lists, for railroads as well as public utilities, has essentially disappeared in market economies
  - Bureaucratically prepared price lists place a barrier between the railroad and its customers -- both go to the government, rather than jointly confront logistics issues
  - Price lists are too rigid to meet the changing demands for transport in a modern economy
  - Price lists remove responsibility from commercial managers and inhibit entrepreneurial behavior
  - Uncertainty in government price controls discourages investment

### **There are several important elements of railroad regulatory reform.**

- Processes within existing regulation agencies should shift from setting of price lists to regulatory review and oversight
  - A transitional process should be defined to curtail governmental preparation of railroad price lists, beginning with tariffs not subject to international agreements
  - The railroad (and any third party operators) should be required to publish tariffs, subject to regulatory review, as government publication is phased out
  - Review should occur only through specified transparent procedures for rule makings and adjudication of rate or service complaints
- Railroads and shippers should be permitted to agree to transport contracts without government intervention or approval, subject to the continuing availability of a published tariff covering the traffic at issue.
  - Placing the railway in a direct commercial relationship with its clients
  - Encouraging all dimensions of the contract (speed, frequency, dependability, other service characteristics) to be determined simultaneously with the price,
  - Promoting greater flexibility and innovation in meeting users' needs.
- As access to the core railroad is granted to other operating entities, regulation of end-prices of those entities to the customer should be eliminated. Government should not regulate both access terms and end prices of third-party operators
- Access regulation should be accomplished through an oversight process rather than through bureaucratic determination of access prices
- Anti-monopoly regulation should not mandate divestiture of entities designated as competitive from a designated monopoly entity, but should rather promote and encourage the designated monopoly to transform itself into a commercial enterprise.

### **Corporatization of the national railway is a key step toward adapting it to the emerging market economy. This should encourage private investment in railway activities.**

- Corporatization of the national railway is usually the first step to provide managerial freedom, accountability, and market incentives for efficient operations.
  - Performance contract between government and railway management
  - Management autonomy in day-to-day operations
  - Non-politicized process for setting prices
  - Railway free to purchase and dispose of assets as needed for efficient railway operations
- This will eventually lead to commercialization of the national railway.
  - Line of business organization and focus on client relationships
  - Cost reduction, improved operation, financially sensible investments
  - Separation and sale of non-core activities
- Once this is accomplished, private capital could be attracted to the railway industry, especially in the railway supply industry--investments are now often limited by:
  - Internal barter or trading systems that favor internal suppliers
  - Unfavorable and opaque regulatory regimes

### **Careful structuring of privatization is needed to insure development of a competitive rail supply industry.**

- Select and privatized non-core functions where at least 3 potentially viable companies can be formed to compete for railway & other business
- Design privatization to give each enterprise a roughly equal chance for success
  - Comparable facilities, equipment, management resources, potential markets
- Provide assistance with initial training of management, financial systems and management systems
- Provide bridge contract for each enterprise
  - Railway contracts to buy a proportion of the output of the enterprise (e.g., 60%)
  - The proportion reduces in subsequent years
  - Eventually (3 or 4 years) most railway requirements should be publicly tendered
- Residual capacity could be retained within the railway until competitive market established.

**In conclusion...Governments should restructure their rail industry to retain the advantages of vertical integration and permit access to the network. The competition that will provide will be sufficient to control prices in most markets. A new price regulatory regime should be developed for other markets.**

- Allowing the national railway to remain a vertically integrated operator with competitive contracting of non-core functions will retain operational efficiencies
- Allowing competing operators access to the railway infrastructure on reasonable financial and operating terms will provide competition and eliminate the need for regulation for major movements
  - Price regulation for some transport can be limited to access charges--and commercial arbitration procedures might be employed for access charge disputes
  - Rail tariff price regulation may be required for movements too small to attract competitive transport offers
  - But even this regulation should be based on a new model where the railway entities publish tariffs and shippers have the right to contest them.
- Most exiting regulatory regimes are not compatible with efficient market solutions.
  - Continued reliance on tariffs established and published by the state will discourage development of the sector.
  - It is not responsive to market conditions and market forces and
  - It will discourage private investment for modernizing the railway sector.