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# Capacity Building Workshop for Ministry of Electricity Sector Restructuring

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**USAID | Iraq Economic Governance II Project**

**Presented To: Ministry of Electricity**

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# Authors



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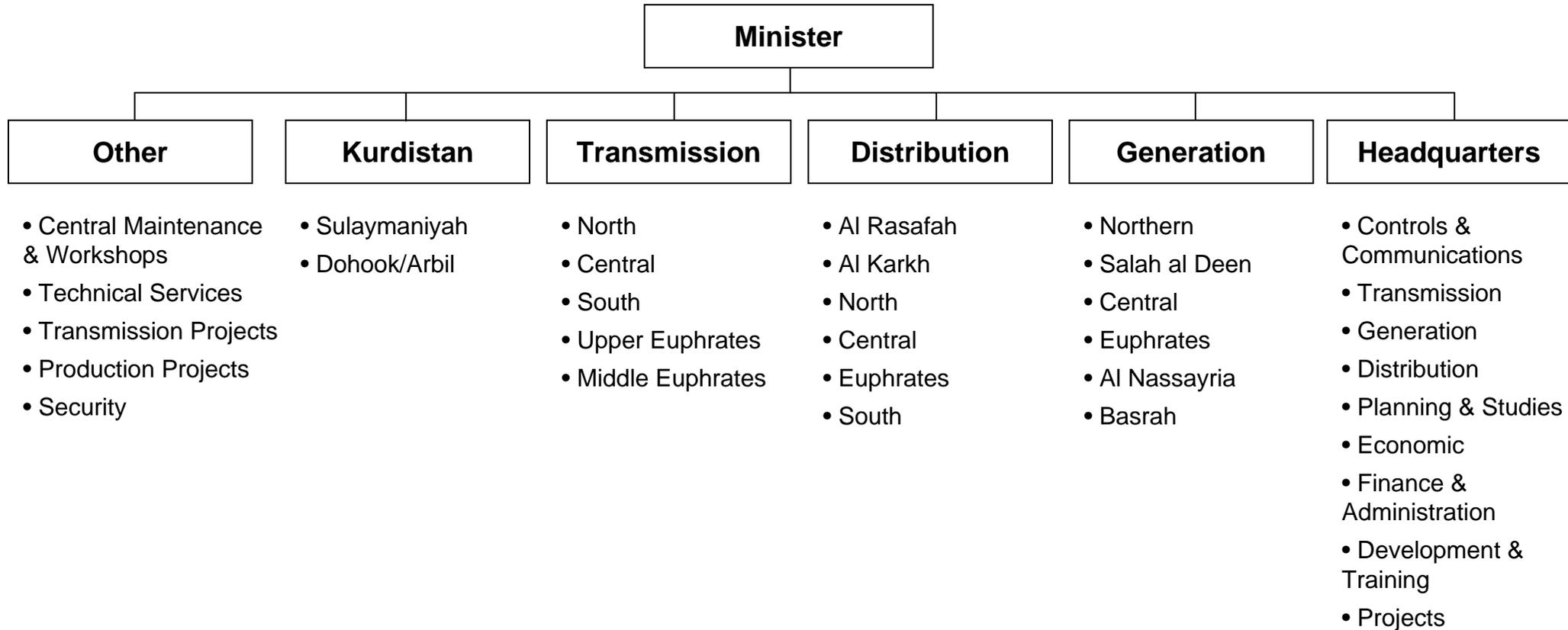
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# Current Sector Organisation



The Ministry and the Sector are currently the same thing



The structure was put in place in October 2003

# Current Sector Organisation

## The Current structure has many disadvantages

**Centralisation of Authority  
(32 DGs report to Minister)**

- Reluctance to take decisions
- Senior staff over-burdened
- Lack of checks and balances
- Poor cross-functional co-ordination (“silo” mentality)

**Vertically Integrated**

- One organisation for policy/operation/regulation
- Potential for conflicts of interest
- No commercial pressures to increase efficiency
- civil service mentality
- Engineer driven operations and investment
- Financial, commercial and economic functions very weak



# Current Sector Organisation

## Duplications and Gaps (Regulation, Projects...)

- Responsibilities/reporting lines unclear
- Confusion/conflicts
- Key functions missing

## Huge Organisation (40,000 staff)

- Overstaffing/inefficiency
- Difficult to change culture
- Inflexible

## Operations Part of Government Bureaucracy

- Political interference
- Used as social policy instrument (eg tariffs)
- Financial performance/efficiency has a low priority
- Overly bureaucratic, inflexible
- Career path determined by length of service
- Shortage of commercial management skills
- Central budget/subsidy – no price messages



# Current Sector Organisation



## EG I identified many additional problems

### Governance

- Lack of initiative
- No accountability to shareholders/regulator
- Challenges to authority (Dispatch)
- Lack of checks & balances for decision making

### Infrastructure

- Damaged or deteriorated (40% serviceable)
- Poor health & safety

### Human Resources

- Operators unable to run plants
- Training insufficient
- Complex salary/bonus
- Overstaffed, ageing
- Weak supervision, poor motivation
- No performance evaluation or career development

### Finance

- Lack of financial awareness
- No financial analysis of projects
- No financial managers
- Funding not linked to market or customers

### Efficiency

- Poor standards of management & performance
- Low priority to energy efficiency
- Unproductive managers

### Structural

- Excessive spans of control
- Lack of change management support
- Uncertainty over structure of Government

### Commercial

- Lack of support from customers
- Rapid growth in demand

### Systems

- Poor quality control
- Procedures not implemented
- Fuel purchasing weak



**The security situation makes these much worse**

# Why Restructure

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What is meant by “restructuring”?

- 1** Change Organisation
- 2** Change Market
- 3** Change Ownership



# Why Restructure



## 1. Change Organisation

Change the organisation chart for the sector:

- Reporting lines
- Governance
- Responsibilities/tasks

***The objective should be to create a more efficient structure, that facilitates the growth of the sector to meet the needs of the people and contributes to economic development***



# Why Restructure

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## 2. Change Market

Establishing commercial relationships between different parts of the sector will:

- Improve market discipline and efficiency
- Make it easier to identify good and bad performers
- Facilitate private investment



# Why Restructure

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## 3. Change Ownership

**Not** just privatisation - will be covered this afternoon



# Why Restructure

## The benefits of restructuring include:

### 1 Organisation

- Accountability/Transparency
- Better decisions
- Improved efficiency
- Fewer conflicts of interest

### 2 Market

- Economic incentives
- Improved resource use
- Transparency
- Customer focus
- Improved efficiency

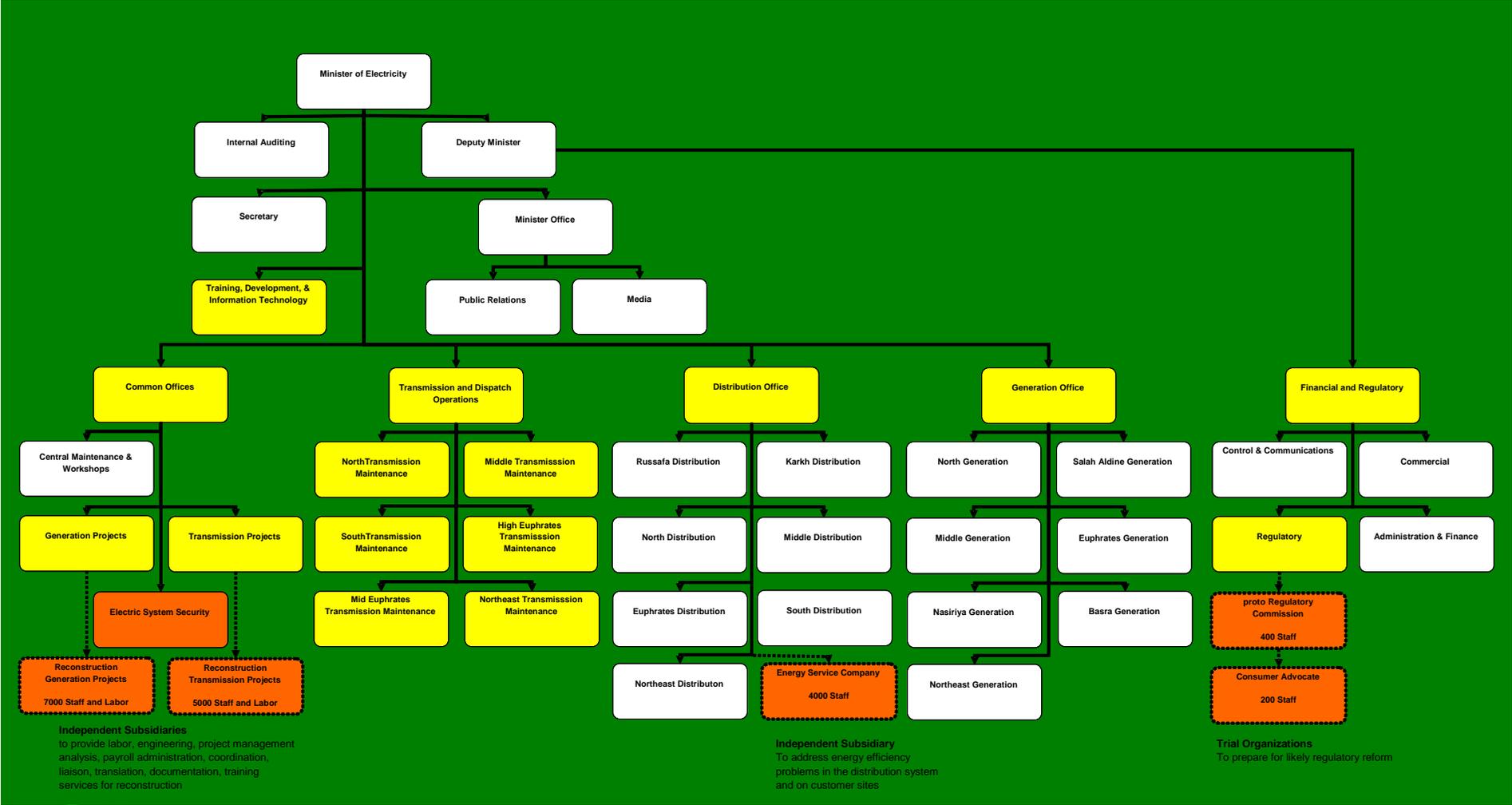
### 3 Ownership

- Access to capital
- Access to technology
- Modern management
- Improved efficiency
- Customer focus

**Electricity can take its place as a driver of economic development**



# EG I Recommendations



**Independent Subsidiaries**  
to provide labor, engineering, project management analysis, payroll administration, coordination, liaison, translation, documentation, training services for reconstruction

**Independent Subsidiary**  
To address energy efficiency problems in the distribution system and on customer sites

**Trial Organizations**  
To prepare for likely regulatory reform



This is complex and somewhat out of date

# EG I Recommendations



## Summary

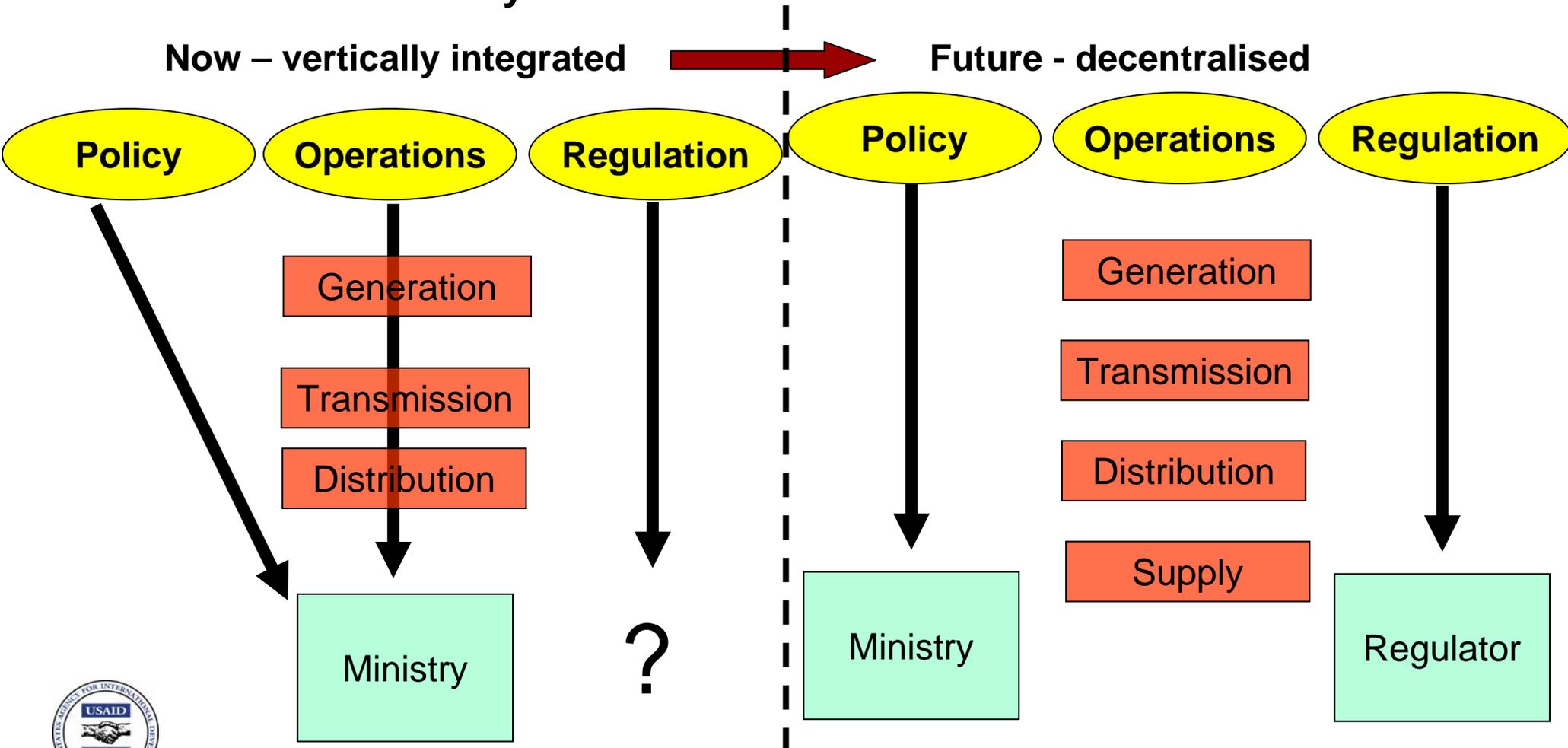
- 5 Workgroups to provide reasonable span of control
- Distribution: 7 regional companies
- Generation: 7 regional companies
- Transmission operations and dispatch group/ 6 regional maintenance
- Central Training, Development, and IT directorate
- Subsidiaries to provide 12,000 labor and supervision to reconstruction projects
- Strengthened financial management
- Planning adapted to support regulatory capital and tariff planning
- Establish proto-Regulatory Commission and Consumer Advocacy staffs
- Establish Energy Service Company as an Independent Subsidiary

**Does this meet sector needs? Does it separate policy from operations?**



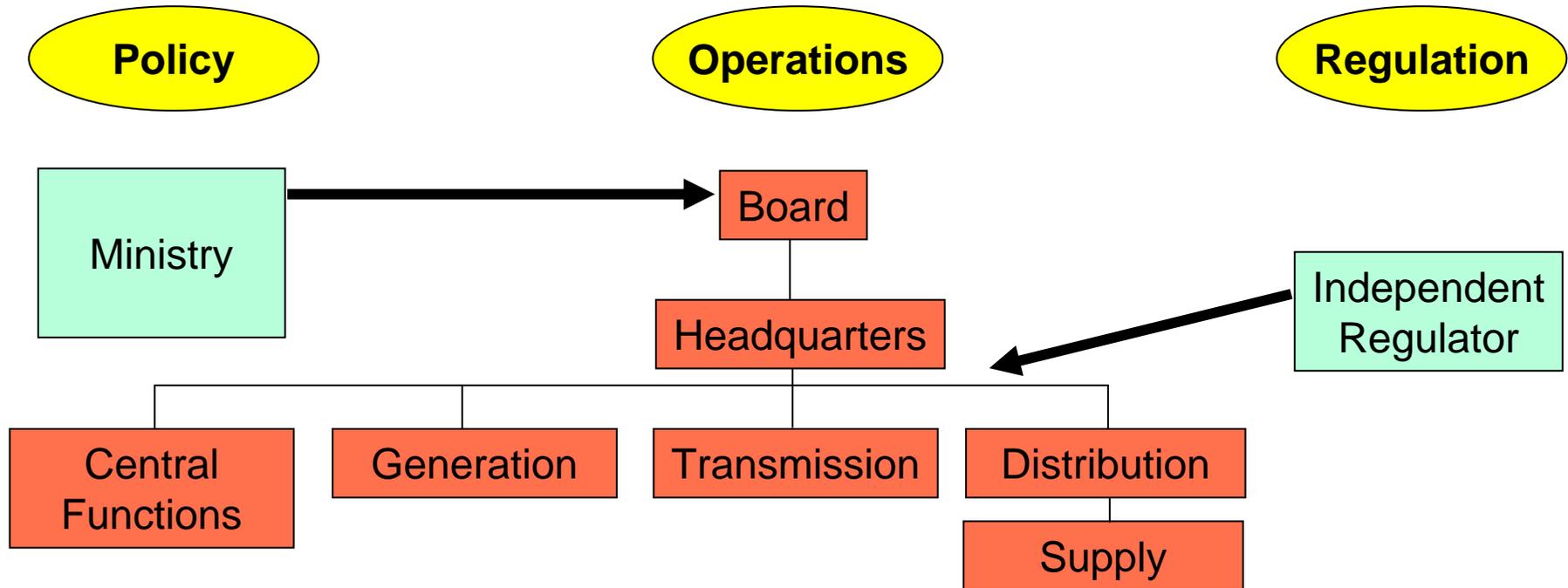
# Options for a New Structure

Need to consider market operations as well as organisation – this simplified structure shows the way ahead:



# Options for a New Structure

Start by separating policy from operations, introduce regulatory function



**Split:**

- By plant?
- By fuel type?
- By region?
- None?
- By region?
- By region?



**Also need to address the issue of Kurdistan**

# Options for a New Structure



Two market structures are commonly used in emerging markets

## Bilateral Contracts:

- Generator sell to Suppliers
- Based on long term PPAs
- Suppliers sell to customers
- Suppliers pay for Transmission
- Suppliers pay for Distribution
- Requires a short term balancing market

## Single Buyer:

- Generator sell to Single Buyer
- Based on long term PPAs
- Single Buyer sells to Suppliers at Bulk Supply Tariff (average cost)
- Suppliers sell to customers
- Single Buyer pays for Transmission
- Single Buyer pays for Distribution

Emerging Europe  
(Lithuania, Montenegro...)

Middle East  
(Abu Dhabi, Jordan, Egypt...)

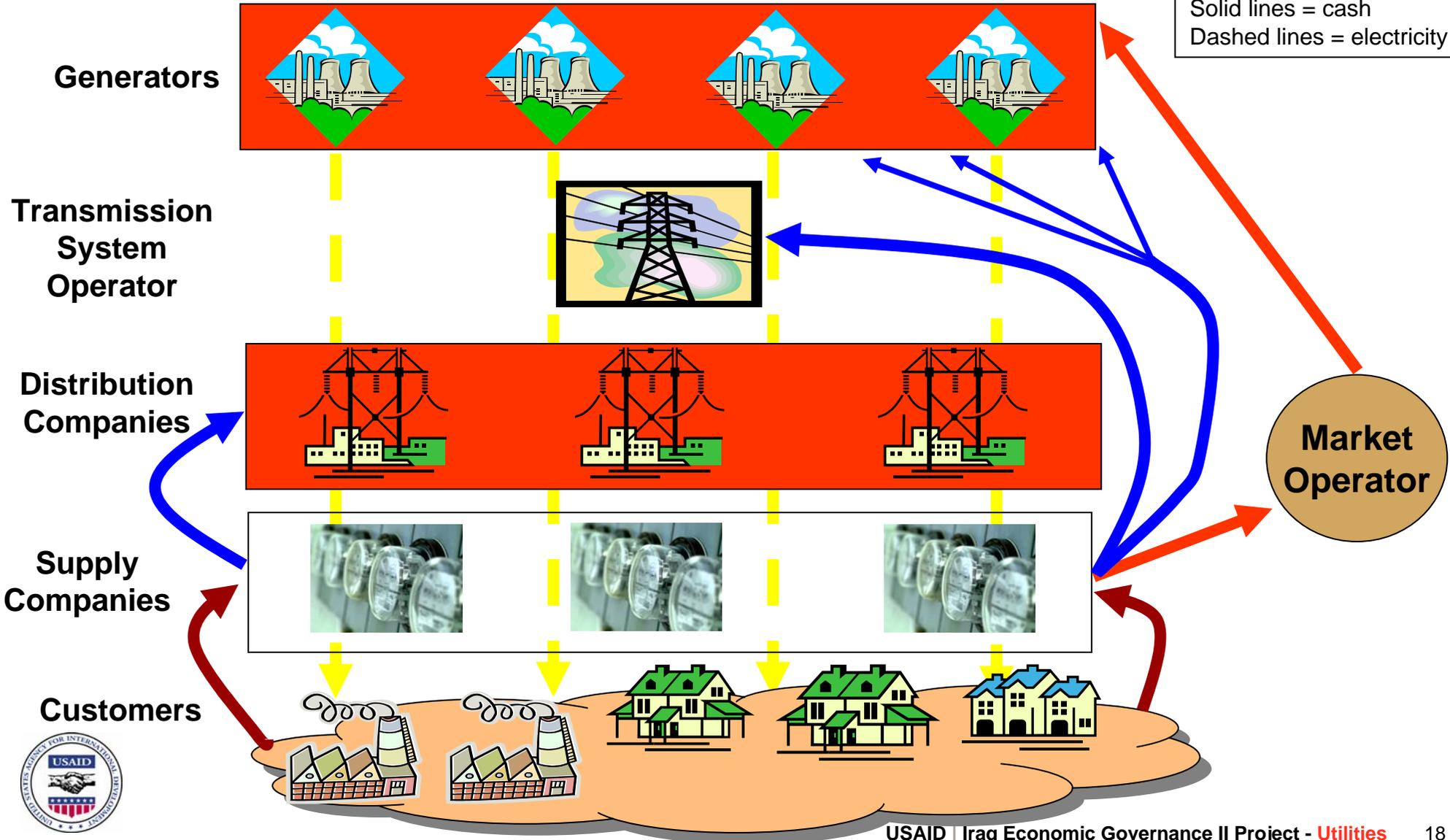


# Options for a New Structure

# Bilateral Contracts



Solid lines = cash  
Dashed lines = electricity



# Options for a New Structure



## The Bilateral Contracts model

### Advantages

- ✓ Competition in generation
- ✓ Competition in Supply
- ✓ Market Operator ensures short term supply
- ✓ Facilitates private investment in generation and supply

### Disadvantages

- × Needs (complex) short term market
- × Legacy generators at a disadvantage
- × May lead to reliance on a single fuel
- × Different suppliers may face different electricity costs

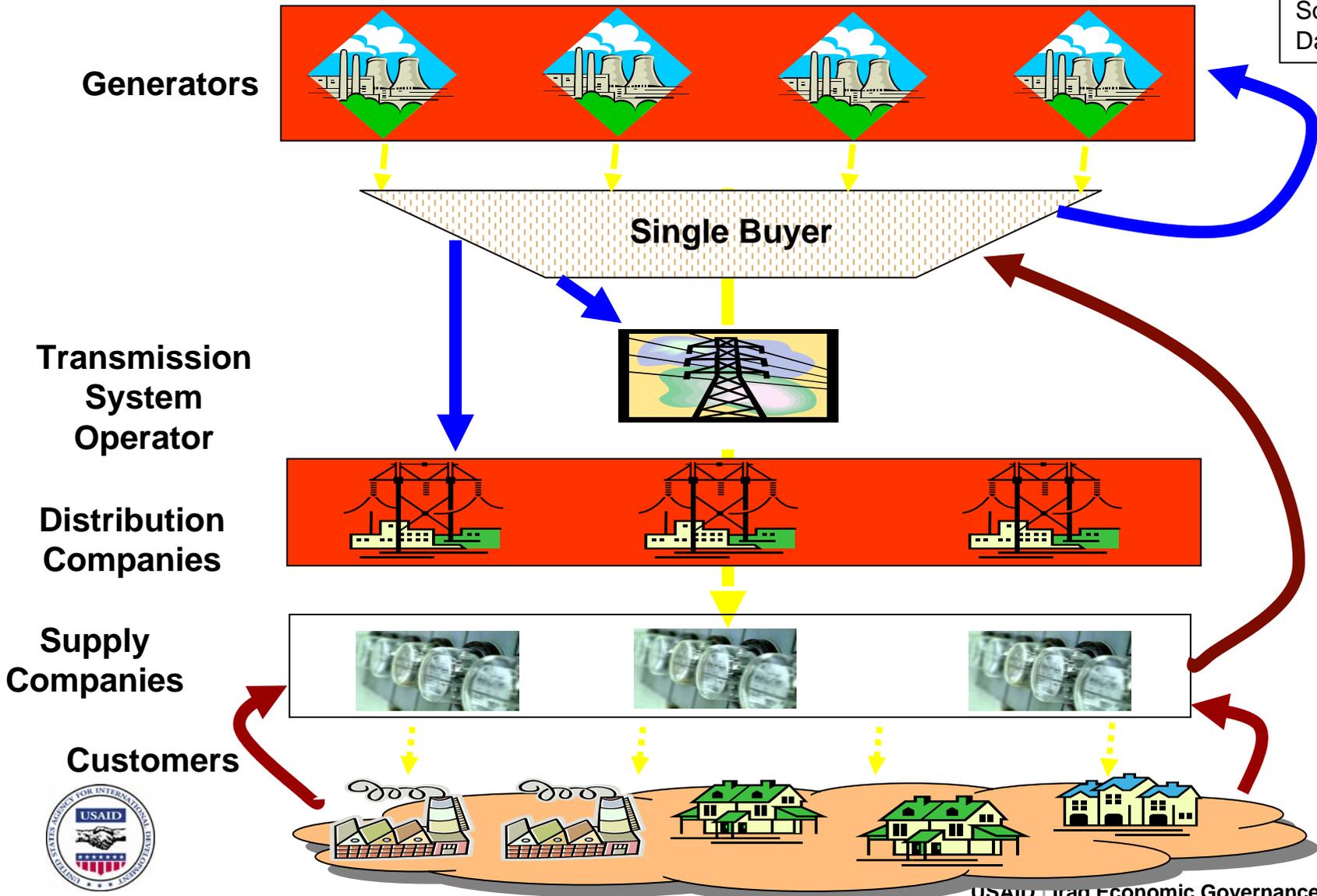


# Options for a New Structure

Single Buyer



Solid lines = cash  
Dashed lines = electricity



# Options for a New Structure



## The Single Buyer model

### Advantages

- ✓ Competition focuses on new generation plant
- ✓ Simple, transparent structure
- ✓ Suppliers pay one price for electricity
- ✓ Facilitates mix of fuel types
- ✓ Market stability

### Disadvantages

- ✗ Limited scope for competition
- ✗ Difficult to regulate the Single Buyer
- ✗ All market power concentrated in a single entity
- ✗ Hence **strong regulation is crucial**



# Future Role of the Ministry



**MoE will have a key role in the future development of the sector by setting electricity strategy and policy:**

- Overall direction of sectoral development
- Rural electrification
- Competition policy
- Private Sector Participation
- Ownership of assets (transitional)
- International connectivity, regional markets
- Renewable energy policy
- Investor incentives



**It will be a much more focused organisation**



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# Breakout Session 1

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# Key Questions



- Does the EG I proposal meet long term development objectives?
- What alternative structures might there be?
- How many Distribution/Supply companies?
- Do we need more than 1 Transmission Operator?
- What is the best way to deal with Kurdistan?
- Which market model is best for Iraq?
- What decisions are needed to get this moving? Who by?
- Who needs to be persuaded? How?
- What are the next steps? Who by?
- How can we best work together to approve and implement this?



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# Implementation

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# Implementation

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## The main tasks are:

- Legislation
- Physical unbundling
- Financial unbundling
- Legal unbundling/corporatisation
- Establish new entities



**These must be carried out in parallel**

# Implementation



## Legislation

**Why**

**Key Tasks**

**Who**

<b>New market structure</b>	<b>Agree policies</b>	<b>Ministry</b>
<b>Regulatory framework</b>	<b>Draft legislation</b>	<b>Ministry</b>
<b>Define responsibilities of players</b>	<b>New constitution/elected Government</b>	<b>Government</b>
<b>Facilitate private investment</b>	<b>Pass legislation</b>	<b>Government</b>



**Passing legislation is often the most time-consuming task**

# Implementation



## Physical Unbundling

**Why**

**Key Tasks**

**Who**

Allocate assets	Compile asset register	Ministry
Network cut off point (T/D)	Allocate assets to businesses	And
Allocate staff	Agree Headquarters functions	Companies
	Transfer staff	Ministry
	Agree T/D cut off point	And
	Separation of D/S	Companies



# Implementation



## Financial Unbundling

**Why**

**Key Tasks**

**Who**

Unbundled financial accounts	Prepare unbundled accounts	Companies
Ensure viability of operating companies	Establish new financial systems & reporting	Companies
Compliance with Company Law	Asset revaluation	Companies
Regulation (especially tariffs)	Establish financial controls, risk management	Companies
Necessary for corporatisation	Allocation of debt to companies	Ministry



# Implementation



## Legal Unbundling/Corporatisation

**Why**

**Key Tasks**

**Who**

Why	Key Tasks	Who
Establish governance	Prepare Memo & Arts	Ministry
Split policy from operation	Register new companies	Ministry
	Issue shares	Ministry
Transparency	Appoint Boards	Ministry
Prepare for liberalisation	Legal due diligence	Companies
Enable private investment	Intra-Company contracts	Companies
	Contracts with third parties	Companies
	Employment contracts	Companies
	Loan agreements	Companies
	Establish Title to land/assets	Companies
	Transfer licenses & patents	Companies



# Implementation



## Establish New Entities

**Why**

**Key Tasks**

**Who**

Market model	Independent Regulator	Government
Regulation	Issue licenses	Regulator
Transparency	Issue regulations	Regulator
	Transmission System Operator (TSO)	Ministry/ Transmission
	Grid Code, Transmission & Distribution Codes	Operators
	Market Operator/Single Buyer	Ministry
	Power Purchase Agreements	Operators
	Transmission use of system	TSO
	Distribution use of system	Discoms



# Indicative Timetable



To save time the main workstreams are undertaken in parallel

Workstreams	2005	2006	2007	2008	
<b>Legislation:</b>					
Draft Law	[Red bar from start of 2005 to mid-2005]				
Pass Law		[Blue dot in early 2006]			
New market structure begins			[Blue dot in early 2007]		
<b>Physical Unbundling:</b>					
Asset register	[Red bar from mid-2005 to end of 2005]				
Allocate assets, employees		[Red bar from mid-2006 to end of 2006]			
<b>Financial Unbundling:</b>					
Unbundled accounts		[Red bar from mid-2006 to end of 2006]			
New financial reporting systems	[Red bar from start of 2005 to mid-2006]				
Asset revaluation		[Red bar from mid-2006 to end of 2006]			
Debt allocation		[Red bar from mid-2006 to end of 2006]			
<b>Legal/Corporatisation:</b>					
Legal due diligence	[Red bar from mid-2005 to mid-2006]				
Establish new companies		[Red bar from mid-2006 to end of 2006]			
Intra-Company contracts		[Red bar from mid-2006 to end of 2006]			
Other contracts		[Red bar from mid-2006 to end of 2007]			
<b>New Entities:</b>					
Regulator	[Red bar from start of 2005 to end of 2006]				
Issue licenses		[Red bar from mid-2005 to end of 2006]			
TSO, Single Buyer/MO		[Red bar from mid-2006 to end of 2006]			



Typically this is at least a three year project

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# Breakout Session 2

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# Key Questions

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- What is the most effective way to implement the restructuring?
- What are the main obstacles?
- Is the indicative timetable realistic?
- What decisions are needed? By whom?
- How can we best work with the Ministry to achieve this?

