

# Challenges of Moving From Construction Project To Operational Railway Organization



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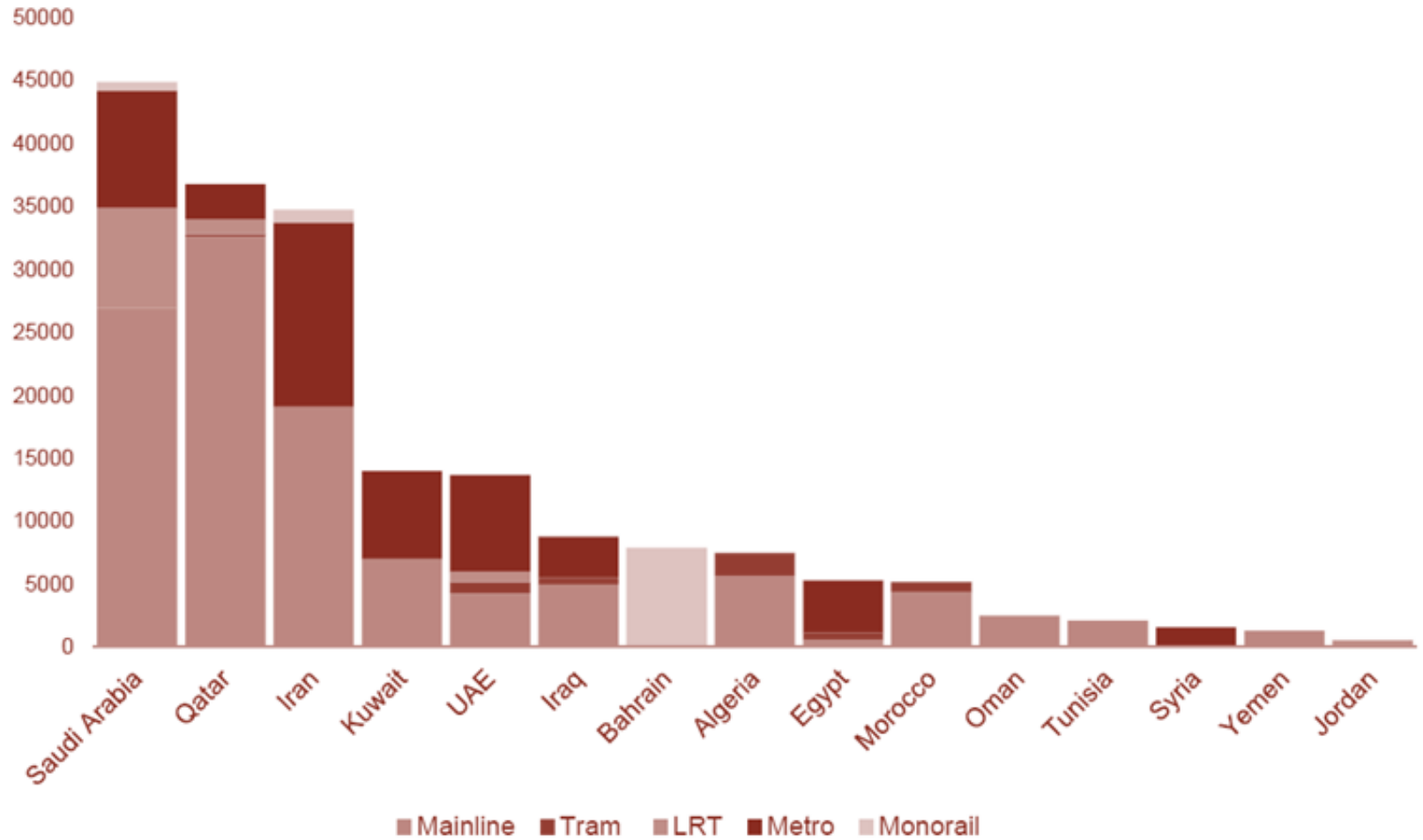
OPM/Development Consultant

PHD, MBA, OPM3, PMP, RMP, CMC, CEES, CSCE, CIArbA



- SME, OPM Assessor, PMI
- NTP Advisor, MOMRA
- RM Consultant, ARAMCO
- Instructor AUB, PM Diploma
- Infrastructure Professor, NRC

# MENA Rail projects planned



# Future Saudi Railways



# Haramain High Speed Railway

- Total project cost is US\$ 16bn for 440Km of line.



# Challenges of Moving

Construction Project



Operational Railway Organization



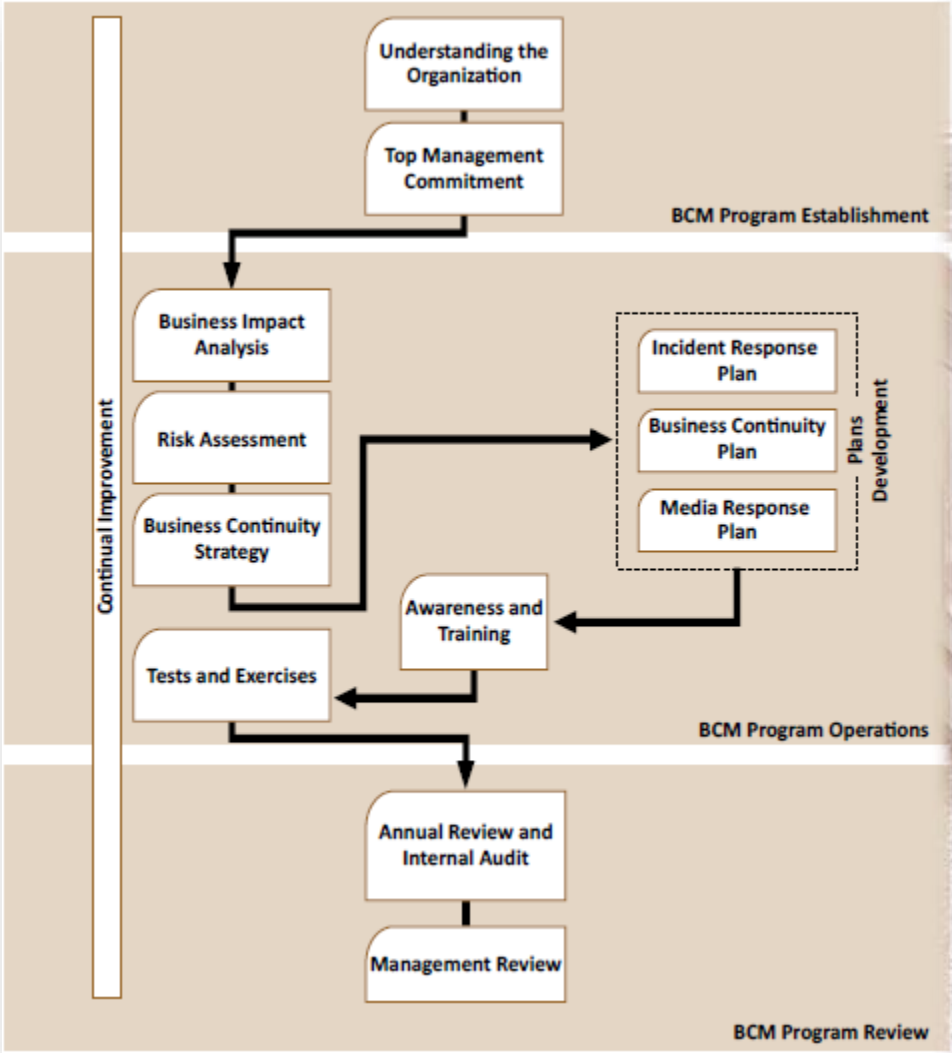
# Continuity with Construction

The International Standard BS ISO 22301: 2012.

“Business continuity management systems are Specifies requirements for setting up and managing an effective Business Continuity Management System (BCMS), based on the ‘Plan-Do-Check-Act’ model that seeks to improve continually the effectiveness of the organization through proficient planning, implementation, supervision, review and maintenance”.



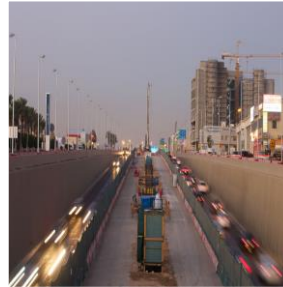
# Continuity with Construction





# Congratulation!

## We have overcome challenge No. 1



Business Continuity  
Management

Construction  
Project

Complexity  
Organization  
Structure

2



Operational  
Railway  
Organization



Competency Level

3

# Designing Operational Railway Org.

## Corporate Status

State-owned Enterprise

Example: MOE, China

State-owned Company

Example: SBB, Switzerland

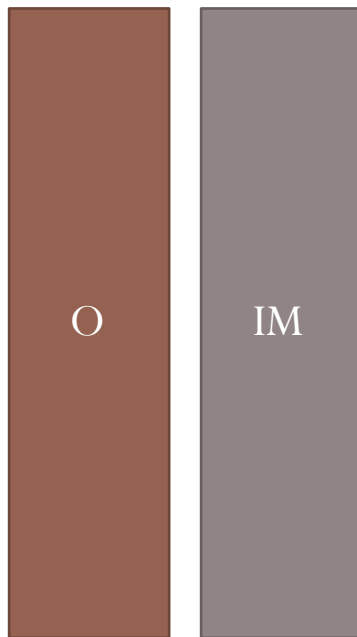
Privately-owned Company

Example: Mexican Railway

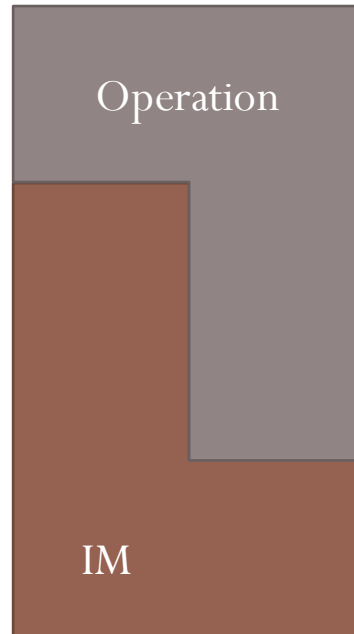


# Designing Operational Railway Org.

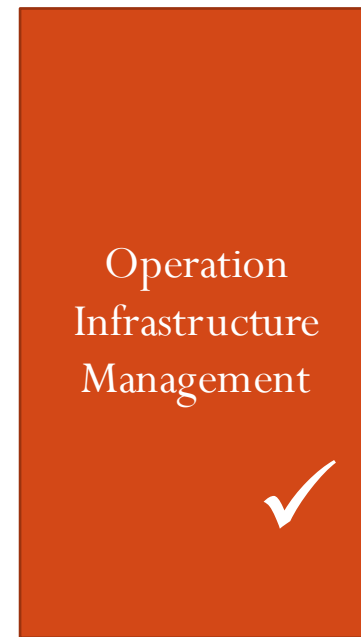
## Vertical Separation



**Vertical Separation**  
UK Railway



**Vertical Integration**  
Swiss Railway

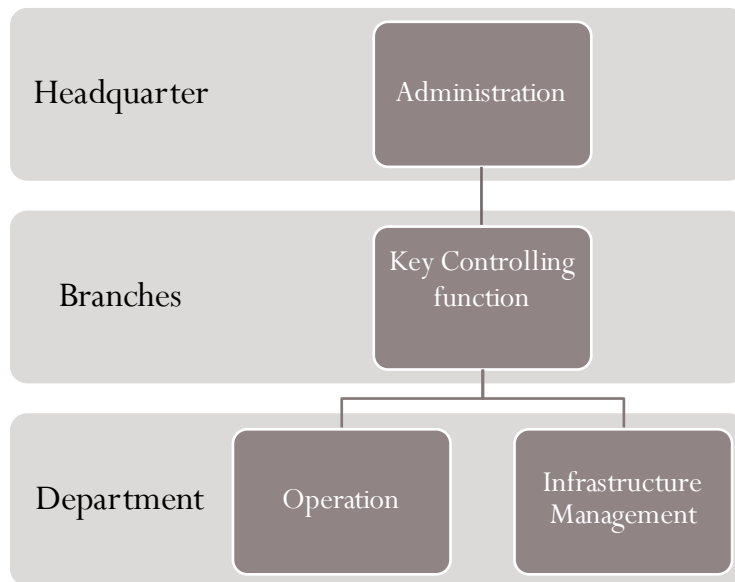


**Holding Structure**  
Fourth Railway Proposal

“Vertical separation in railways is not desirable as an end in itself, but can be a valuable part of a wider package of structural reforms.”

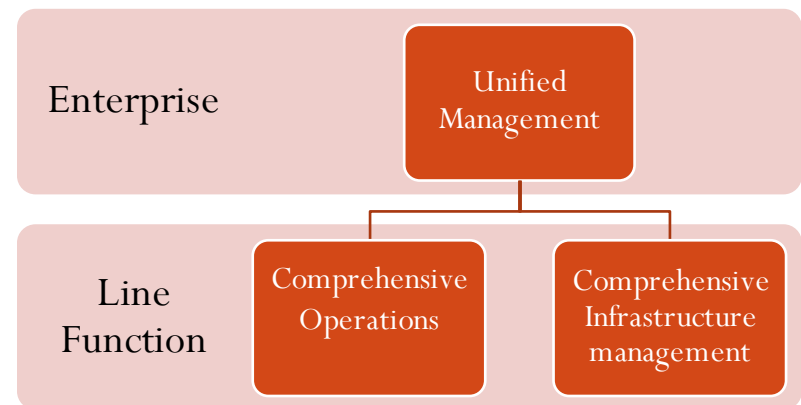
# Designing Operational Railway Org. Structure Model

- M-type (Hierarchical structure)
- Example: Shanghai and Beijing



- ✓ Into multiple, network operations using M-type structure is more suitable.

- U-type (Flat structure)
- Example: Shenzhen and Nanjing



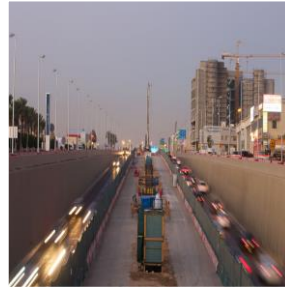
- ✓ In single line operation conditions the U-type is more suitable.
- ✓ But with high ability and quality, more business outsourcing, bigger scope of management at this time use U-type.

# Designing Operational Railway Org. Structure Model

Comparison	U-type (Flat structure) ✓	M-type (Hierarchical)
The resources use	Full use	Partial use
Organizational Flexibility	Flexible	bureaucratic processes
Management efficiency	High efficiency	Low efficiency
Communication	Effective communication	Lack of communication
Cost	Low	High

# Congratulation!

## We have overcome challenge No. 2



Business Continuity  
Management

Construction  
Project

Private/Holding/Flat  
organization



Operational  
Railway  
Organization



Competency Level 3



# Recruiting Operational Railway Org.

## Challenge

- Can we hire who are more productive and stay on the job longer (quality of hire)?
- Have we the Ability to meet peak demand of recruiting cycle or reduce costs and overhead during slower periods?
- Are Key recruiting metrics and reports readily available?

# Recruiting Operational Railway Org. **Challenge**



# Recruiting Operational Railway Org.

## Meeting the Needs

### Structural delivery

- In-source
- Outsource
- Hybrid ✓

### Recruiting organizational

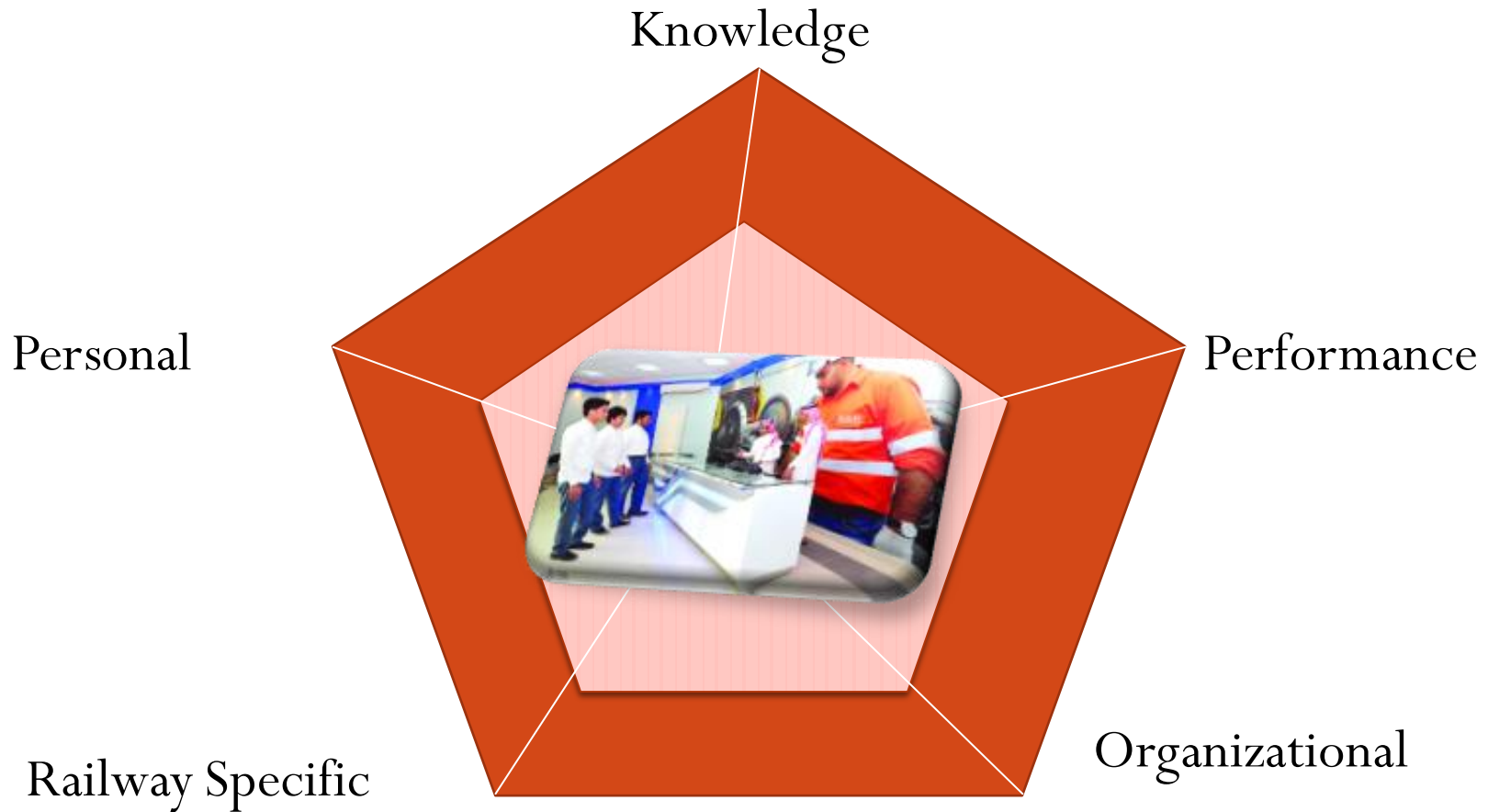
- Centralized ✓
- Decentralized
- Hybrid

# Recruiting Operational Railway Org.

## Meeting the Needs

- Domain Knowledge – Engineering
- Domain Knowledge – Engineering Sub-Discipline
  1. Track and Infrastructure Engineering
  2. Rolling Stock and Traction Engineering
  3. Communication and Rail Signal Engineering
  4. Engineering of Bridges and Structures
  5. Control Systems Engineering
- Commitment to Safety
- Project Management
- Personal Effectiveness
- Commitment to Standards
- Utilization of Engineering Tools and Support Systems

# Recruiting Operational Railway Org. Competency Development



# Recruiting Operational Railway Org. **Sustaining Rail Workforce**

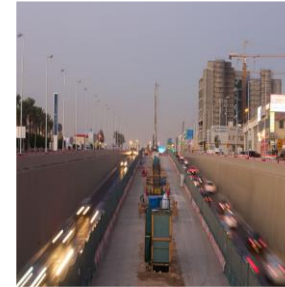




# Congratulation!

## We have overcome challenge No. 3

Business Continuity  
Management



Construction  
Project



Private / Holding / Flat  
organization

Operational  
Railway  
Organization

Sustaining Rail  
Workforce



# Now, we can move to The Operational Railway Organization



- To acquire the know-how of the new technology and develop an efficient, well-trained organization to operate the System and manage its day Challenges of Moving to day affairs and be responsible for all technical matters in the future.

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