Factors Affecting the Success of Urban Rail Projects

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Outline

- Introduction
- Complexity of Rail Infrastructure Development
- Project Planning, Financial and Political Factors
- Review of Recent New Rail Works in Urban Areas
- Results and Implications
- Conclusion

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Introduction
Ghana's Rail Transport System
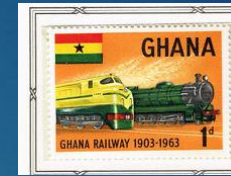
- Over 935 km intercity network; Intracity network relatively absent

- Current network limited to Southern Ghana

- 3ft 6in narrow gauge mostly single track

- 3 basic lines – Eastern, Western, Central lines as shown

- GHC 12.9 billion (US $6 billion) loan from China in 2010.

- Proposals also include rail extension projects and Boankra Inland Port
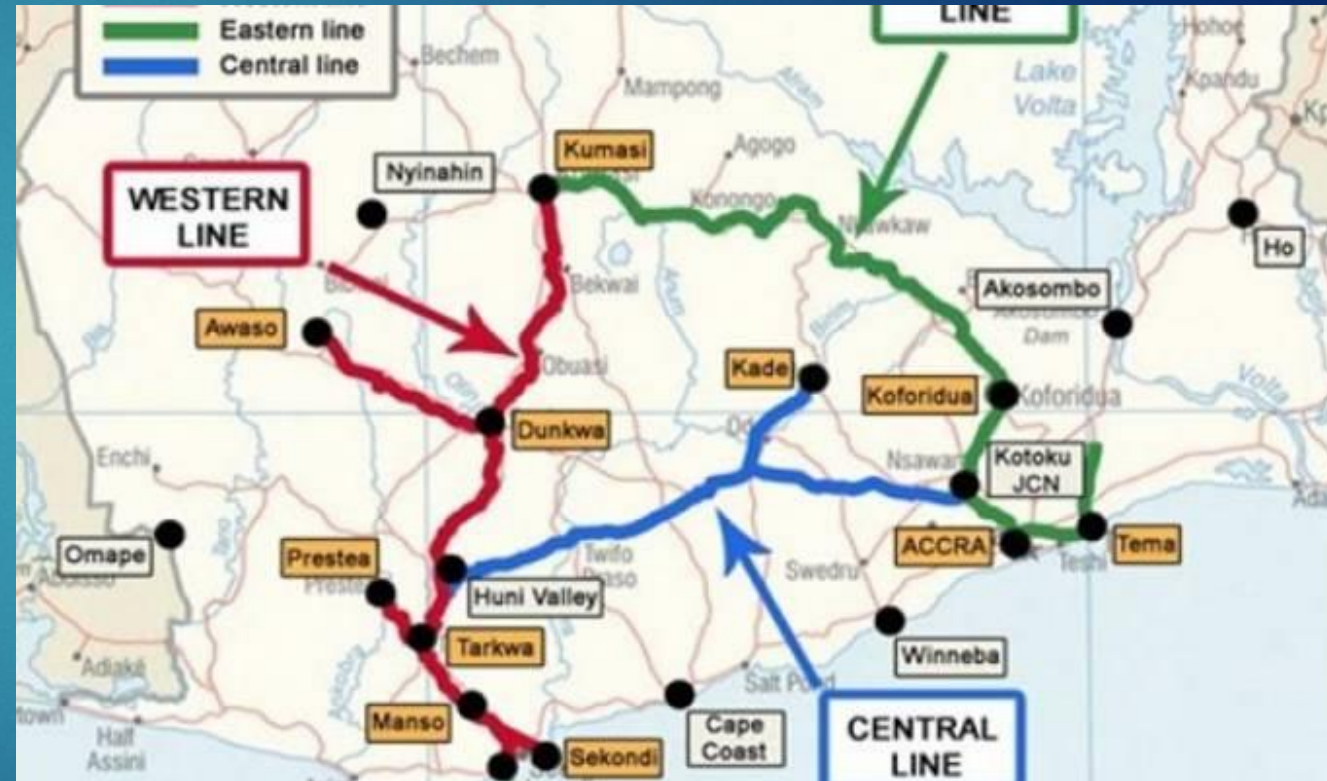
Complexity of Rail Infrastructure Development

Rail infrastructure development requires an interplay of factors to accomplish its objective:

- Long term comprehensive planning

- Massive and reliable funding

- Presence of large, bulk export and import goods and services (i.e. freight), and passenger demand

- Heavy/dense urban population

- Strong and consistent central government/ political support

- Large and strong (unionized) workforce

- Policy reforms and institutional restructuring

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Project Planning, Financial and Political Factors

- Planning Factors
  - Brief of objectives, vision, purpose, values, priorities
  - Development Strategy – Team, partnership approach
  - Scope development, systems planning, feasibility analysis
  - Role of Evaluator/Advisor

- Financial Factors
  - Innovative Financing
  - Sound Forecasting
  - Dedicated/Predictable Source
  - Return On Investment (ROI) Analysis
  - Role of Evaluator/Advisor

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Project Planning, Financial and Political Factors (Cont'd)

- Political Factors
  - Strong Political Will
  - Central Government/Donor Support
  - Stakeholder/Community Support
  - Anti-Corruption Policy
  - Role of Evaluator/Advisor

Project Planning, Financial and Political Factors

Political Guidance and Control

Planning

Construction

Operation

Financial Environment

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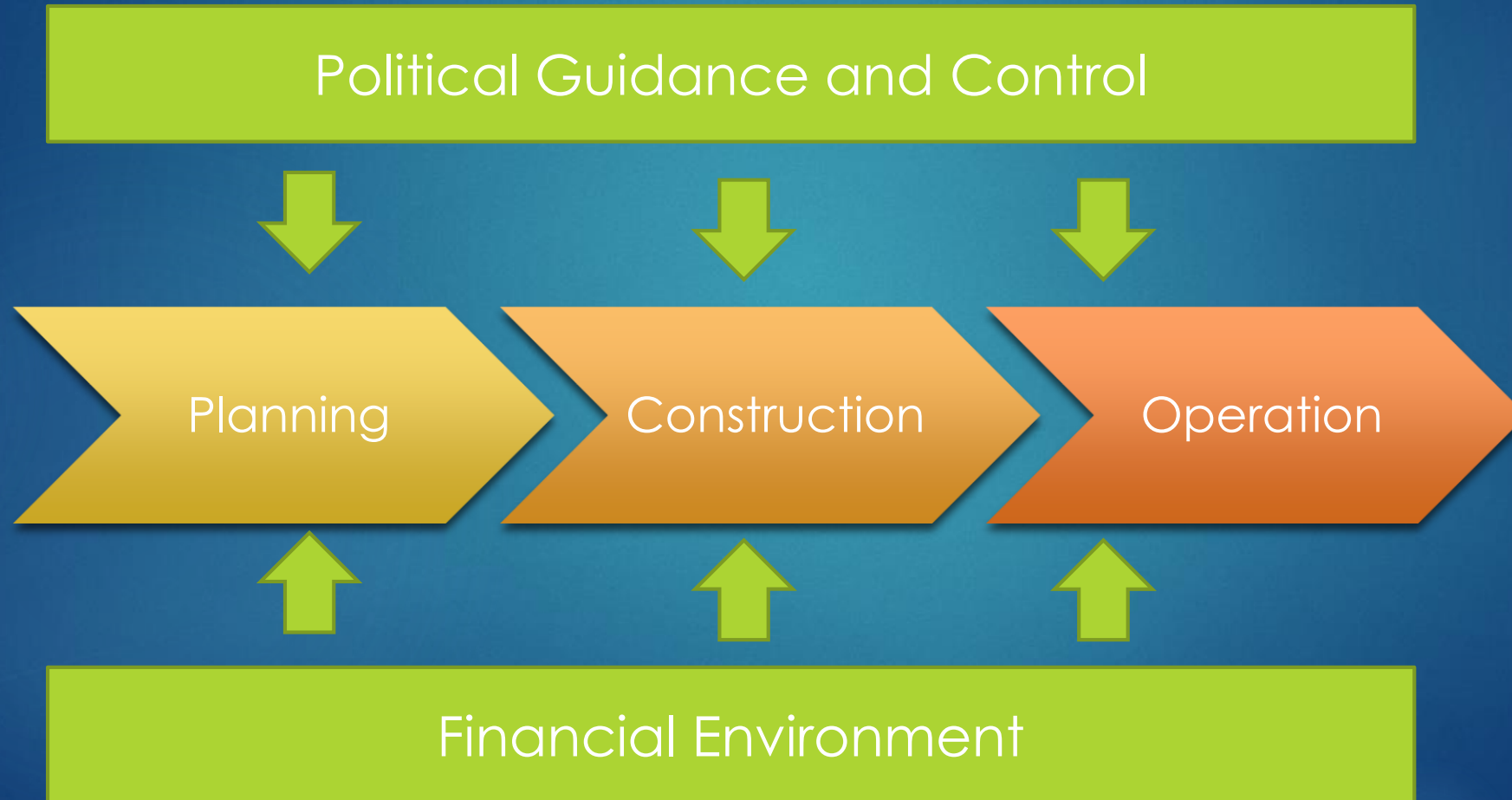
Project Planning, Financial and Political Factors (cont'd)

Key Issues

- Project Planning:
  - Role of developer(s) and/or champion(s) - Use RACI chart (responsible, accountable, consulted, informed) to define roles.
  - Project Feasibility - good planning and analysis required

Project Planning, Financial and Political Factors (cont'd)

Key Issues

▶ Financial:

- ▶ Delivery Strategy and Funding Sources – implementation approaches to include direct sourcing and delivery, PPP, and funding sources throughout project lifecycle

- ▶ Procurement Controls – adhere to best practices in contracts, standards, ethics, oversight, and avoid cost over runs

Project Planning, Financial and Political Factors (cont'd)

Key Issues

- Political:
  - Will to succeed; Commitment to proceed; Accountability to not mislead
  - Sustainable process to minimize environmental impacts

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Project Planning, Financial and Political Factors (summary)

Project Planning

Role of developer

Project Feasibility

Financial

Funding Sources

Procurement Controls

Political

Will to succeed

Sustainability

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Review of Recent New Rail Works in Urban Areas

Three (3) Environments* based on Central and Local Government guidance and political control

1. **Average Central Government, Strong Local Control –**
   Manila MRT 2/3,
   Bangkok (BTS/Blue Line)

2. **Average Central Government, Average Local Control –**
   New York Subway,
   Paris RATP,
   London JLE

3. **Strong Central Government, Strong Local Control –**
   Hong Kong MTR,
   Singapore NEL

*Adapted from a KPMG commissioned report, "**Success and failure in urban transport infrastructure projects**", Roger Allport, et. al. May 2008

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Environments of selected projects

Central Government control	Strong	Ethiopia-Djibouti*		Hong Kong MTR, Singapore NEL
	Average		New York Subway, Paris RATP, London JLE	Manila MRT 2/3, Bangkok (BTS/Blue Line)
	Weak			
		Weak	Average	Strong
	Local Government control			

* New African case study: Ethiopia-Djibouti electric railway line information used but not included in assessment

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Review of Recent New Rail Works in Urban Areas

- Characteristics of Case Studies
  - Manila MRT 2/3 – 17 km metro; opened 2000
  - Bangkok (BTS) – 23 km metro; opened 1999
  - Bangkok (Blue Line) – 20 km underground metro; opened in 2004
  - New York Subway* – 13.7 km underground metro; opened in 2017
  - Paris RATP – 4.3 km, 8 stations; opened in 2002
  - London JLE – 16 km, 6 new stations; opened 1999
  - Hong Kong MTR – 5.6 km; opened 2005
  - Singapore NEL – 20 km; metro opened 2003
  - Ethiopia-Djibouti** -750km; opened 2016
  - *new data
  - ** not included in assessment

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Review of Recent New Rail Works in Urban Areas : Success Assessment

	Success Factors						Success criteria		.
	Prj. Env.	Planning	Leaders hip	Implement. strategy	Proc. Controls	Op. Mgt. & Oversight	Financial	Policy	Durability
PROJECT ENVIRONMENT 'A'									
Bangkok BTS	5	3	5	3.5	2	2	1	1	2
Bangkok Blue Line	5	4	5	4.5	4	4	2	3	4
Manila MRT2	5	5	4	5	5	5	5	2.5	5
Manila MRT3	5	2	3	2.5	2	3.5	2.5	1.5	2.5
PROJECT ENVIRONMENT 'B'									
New York subway	3	2	2	2	1	3	2	1	3
Paris RATP	2	1	2	2	2	3	2	1	2
London JLE	3	2	2	3	3	4	5	3	4
PROJECT ENVIRONMENT 'C'									
Hong Kong MTR	3	1	1	1	1	1	2	1	1.5
Singapore NEL	1	1	1	2	2	2	1.5	1	2

Assessment: The qualitative assessment has been converted to a score on a scale of 1 (favorable to success) to 5 (unfavorable). Table above summarizes author's judgements about degrees of success.

Source: adapted from a KPMG commissioned report, "**Success and failure in urban transport infrastructure projects**", Roger Allport, et. al. May 2008

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Results and Implications: Success Factors

- Project Development Environments
  - Politics / Leadership/Style
  - Role of Gov't and Private Sector
  - Structure and Coordination of Government
  - Experience of Infrastructure Project System Planning and Management
  - Transport Strategy
  - Resources (Human and Financial)
  - Physical Characteristics and alignment

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Results and Implications(cont'd)

- Project Development Process
  - Planning
  - Development Process
  - Procurement
  - Financing
  - Implementation
  - Operations
- Project Accountability & Integrity
  - Public/Gov't Anti-corruption Stance/Policy
 - Poverty Reduction & GDP Growth Impacts
  - Statistical / Data Integrity
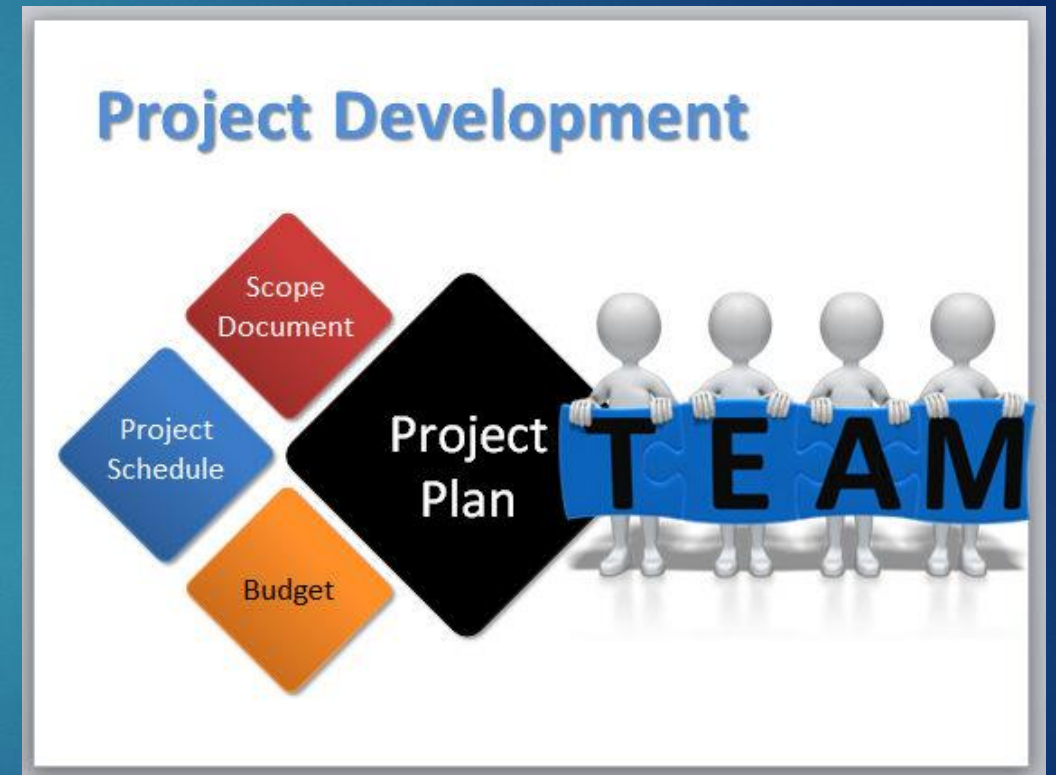
Conclusions

Urban Rail network development in Ghana can benefit from the following success drivers:

▶ Critical understanding and interplay of planning, financial and political factors

▶ Strong political will and ethical leadership

▶ Effective project planning

▶ A team/integrated approach

▶ Public-private partnerships and forms of concessions

▶ Innovative financing methods

▶ Sustainable operations and maintenance strategy

▶ Procurement controls and ethics

▶ Incorporation of new technologies

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Summary

Good public policy is for the best interest of all people.
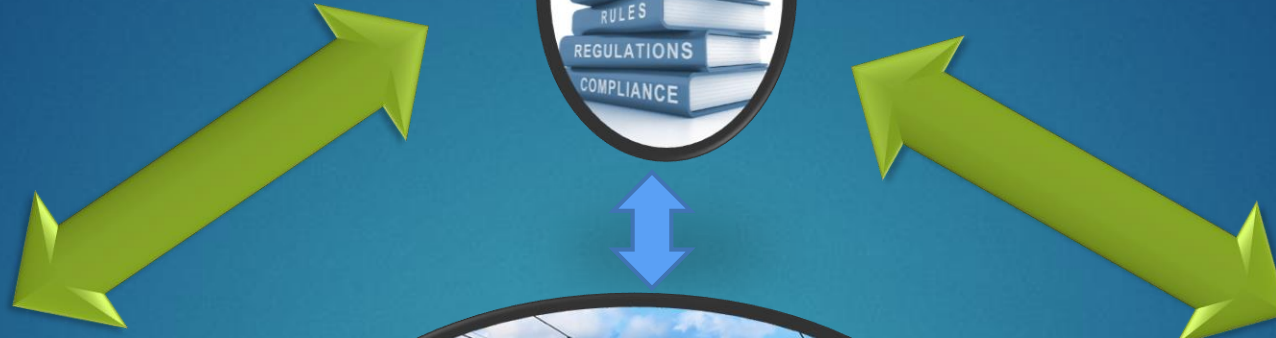
To err is human. To blame someone else is politics

On the right track

Technology is the new asphalt

Railways move people, reduce congestion, ensure economic development, save environment

Money is usually attracted, not pursued

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Thank you
Questions & Answers