



Developing the Long Island Rail Road Roadmap to Advance Asset Management Capability

TRB 11th National Conference on
Transportation Asset Management

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Presentation Overview



Gap Assessment Objectives

Long Island Rail Road (LIRR)'s Gap Assessment and Implementation Plan Project served to :

- Determine the maturity of LIRR's asset management capabilities
- Provide recommendations to LIRR to further develop its capabilities in line with current industry best practice, including ISO-55001:2014 and MAP-21
- Provide recommendations to LIRR to further develop its capabilities in line with the MTA's Asset Management Improvement Strategy

Asset Management Concept of Operations (ConOps)

- Describes the 2025 asset management **business model**:
 - Collection of asset management products and processes that must be undertaken in order for LIRR to manage its assets in the most efficient, effective and economical way to deliver service
- Aligned to best practices, MAP-21, ISO-55001:2014, and the MTA's Asset Management Improvement Strategy
- Executive visioning sessions held with:
 - President
 - EVP
 - SVP – Engineering
 - SVP – Operations
 - CFO
 - Chief Planning Officer

Future Target State

- ConOps describes the 2025 target state for asset management
- Enables the 'gap' against current practices to be assessed
- Designed around eight specific areas:
 - 1) Alignment to Goals
 - 2) Control of Assets
 - 3) Asset Management Planning
 - 4) Capital Planning and Delivery
 - 5) Maintenance Delivery
 - 6) Defect Management
 - 7) Informed Decisions
 - 8) Resource Capabilities

Asset Management Business Model

- Encourage cross-functional coordination of activities to achieve common business goals



Current State: Gap Assessment

- Workshops/meetings held with over 21 groups/areas within Maintenance of Equipment (MofE), Engineering, and corporate support functions
- Overall LIRR was found to be actively developing its asset management capabilities
- Asset management activities are repeatable, becoming more consistent, are being defined & documented



Strengths Identified

- **Demand analysis** – understanding of current and future forecast demand, including both seasonal and demographic, and is translated into service measures for asset classes
- **Incident management** – demonstrable good practice in incident management, business continuity planning and performance management
- **Maintenance Programming** - MofE's implementation of Reliability Centered Maintenance (RCM) principles to develop preventive maintenance programs for fleet

Improvement Opportunities

- Assessment resulted in **86** recommendations
- Risk Management – more formalized processes to capture, assess and monitor risks
- Preventive Maintenance – for some asset classes more could be done to introduce planned/preventive maintenance regimes
- Asset Management Plans – further work is needed to meet the requirements of ISO-55001:2014 and MAP-21
- Asset Information – some areas are not fully utilizing information systems to support business needs
- Management System – in some areas improvement opportunities for documentation of processes and procedures, and monitoring to ensure compliance

Roadmap to Move Towards Target State

→ Recommendations grouped into **38** projects

Delivery
Pathways

Delivery Pathways: Describe the logical sequence of projects to reach the eight themes described in the ConOps

Priority
Lanes

Priority Lanes: Describe the priority projects at both the enterprise and asset class-levels (routes forward that cut across the pathways)

Roadmap

Roadmap: Describes the overall improvement program for LIRR

Enterprise-level Priorities

→ Guided by ISO 55001:2014

**LIRR Asset
Management
Strategy**

**LIRR
Management
System for
Asset
Management**

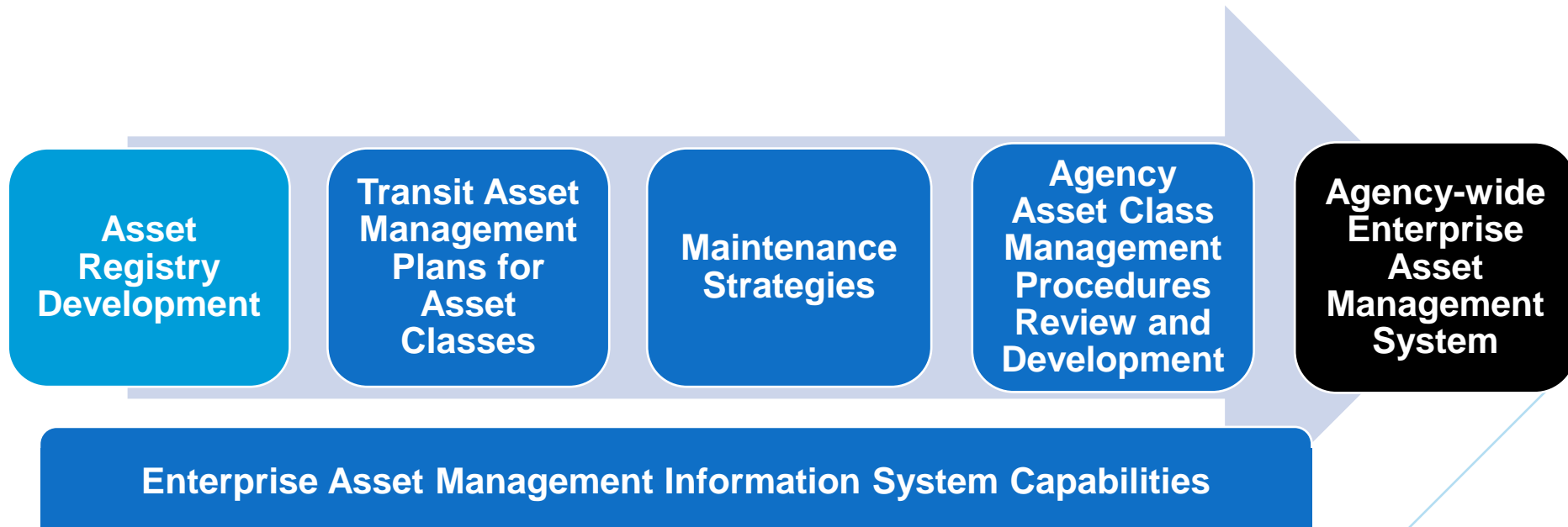
**Strategic
Risk
Management
Framework**

**Standard
Criticality
Assessment**

**Capital Needs
Assessment
Guideline and
Procedure
Documentation**

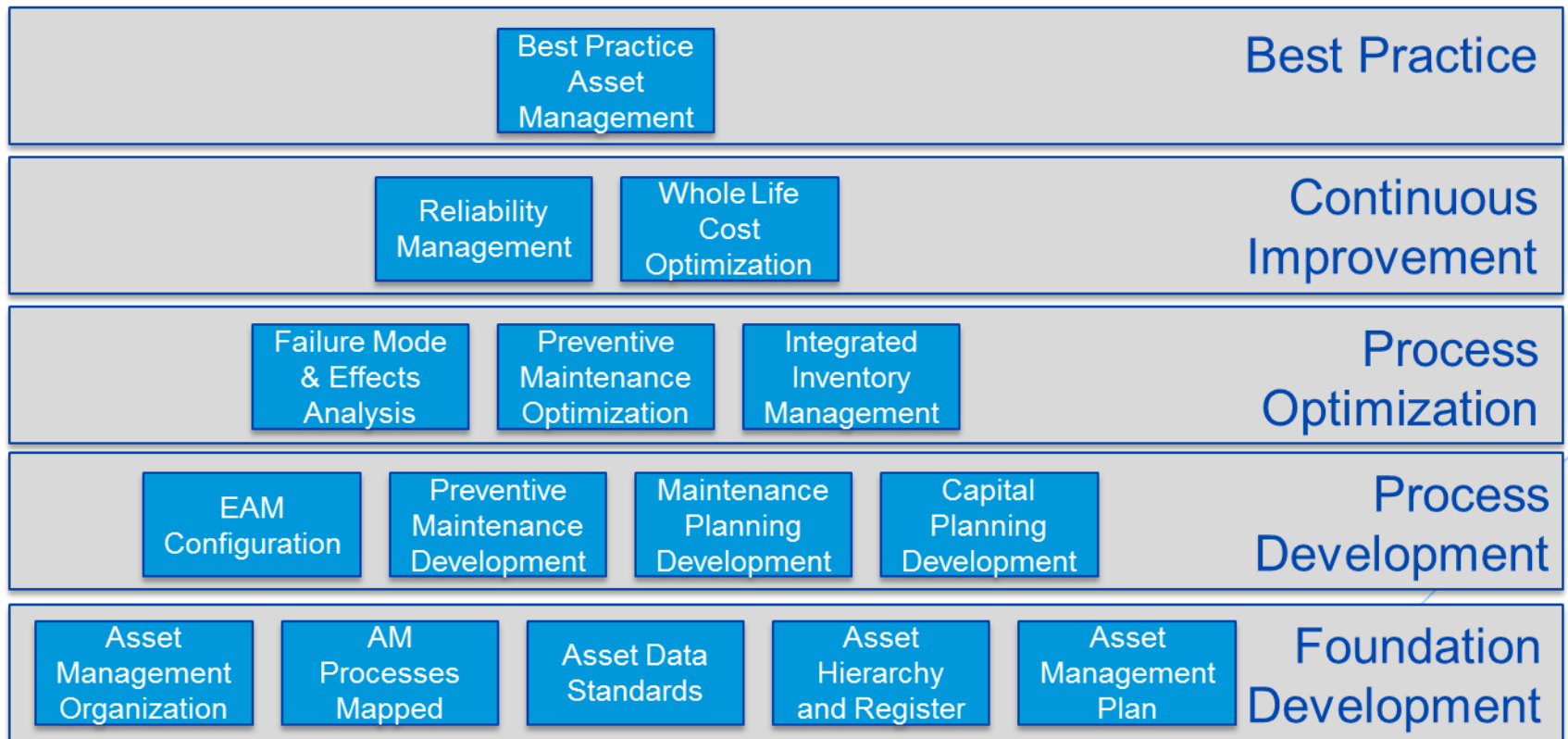
Asset Class-level Priorities

→ Based off the 'building blocks of best practice asset management'

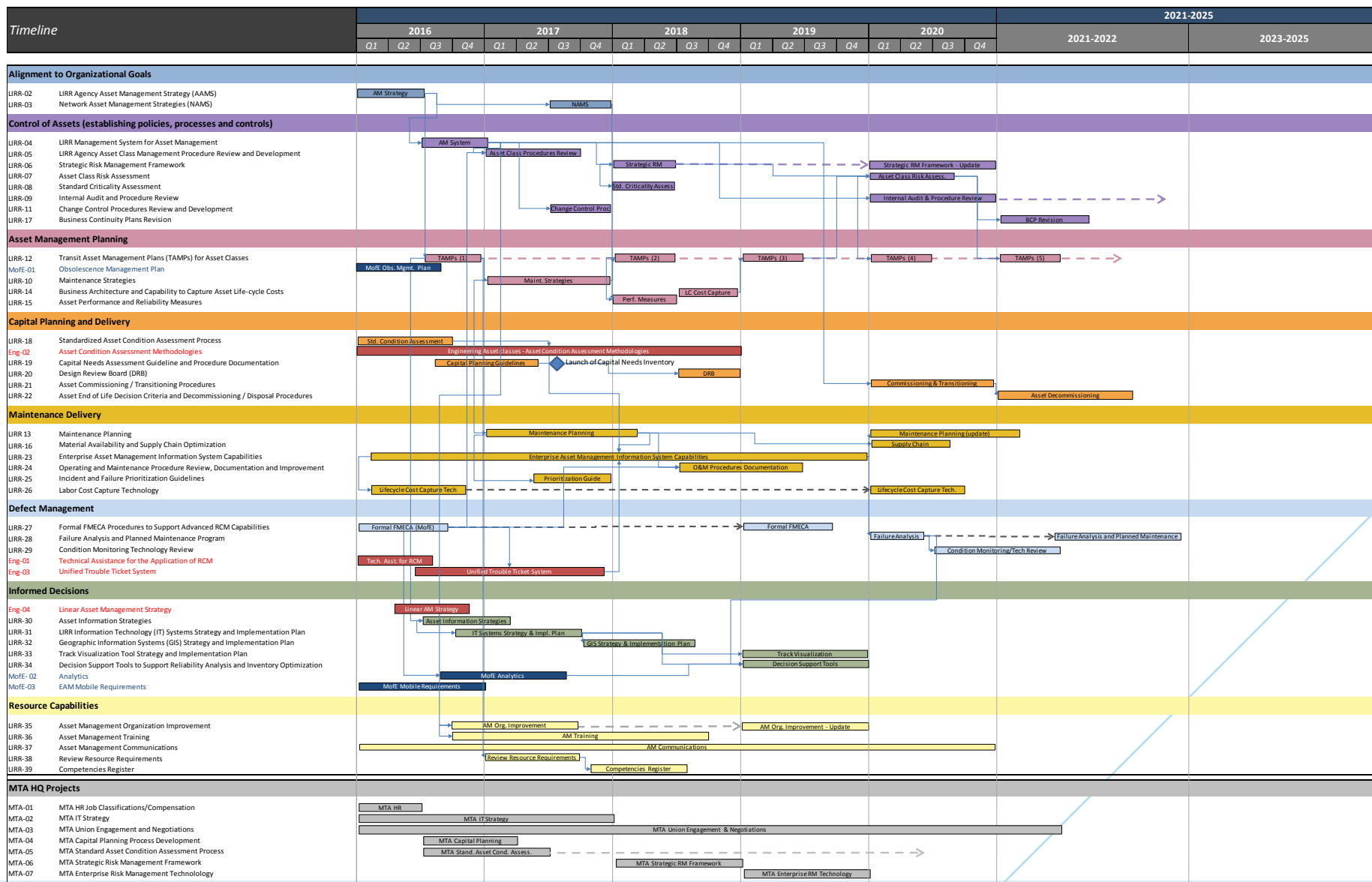


Asset Management Building Blocks Approach

→ Focus on the basics first



Roadmap



Evolution of EAM at LIRR

2013

- Centralized EAM Office initiated
- Director of EAM accountable to the Chief Planning Officer/Executive Sponsor

2015

- Parsons Brinckerhoff conducted EAM Gap Assessment – initial Roadmap
- Planning for and developing the LIRR EAM Improvement Program (EAMIP)

2016 and Onward

- Director of EAM accountable to Executive VP (who reports to the President)
- Implementing the LIRR EAMIP – 48 work streams over 10 years \$50 million (internal and external)
- EAM governance and controls

MTA and LIRR EAM Governance

MTA EAM Governance

- MTA EAM Program Management Office
- Asset Management Coordinating Committee

LIRR EAM Governance

- Executive Steering Committee
- EAM Governing Board

LIRR EAM Program Management

- LIRR EAM Office
- MofE
- Engineering
- Other Stakeholder Departments

Continuous Improvement

→ Responsibilities of the LIRR EAM Office include ongoing management and improvement of:

- EAM technology requirements, alignment and standards
- LIRR Asset Management Strategy
- LIRR EAM Strategic Plan
- Network Asset Management Plans
- Integrated Transit Asset Management Plans
- Strategic Risk Management Framework
- Asset Criticality Framework
- Asset Condition Standards
- EAM Management System & Governance
- EAM Budget & Financial Plans
- GIS Strategic Plan

Thank You

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