LESSONS LEARNED FROM PENTA-P

RTD FASTRACKS – A CASE STUDY

Brian Middleton

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Agenda

- Denver Regional Transportation District (RTD)
- RTD's FasTracks Program
- Case Study #1 - Denver Union Station –
- Case Study #2 - Eagle Project
- Penta-P
- Lessons Learned

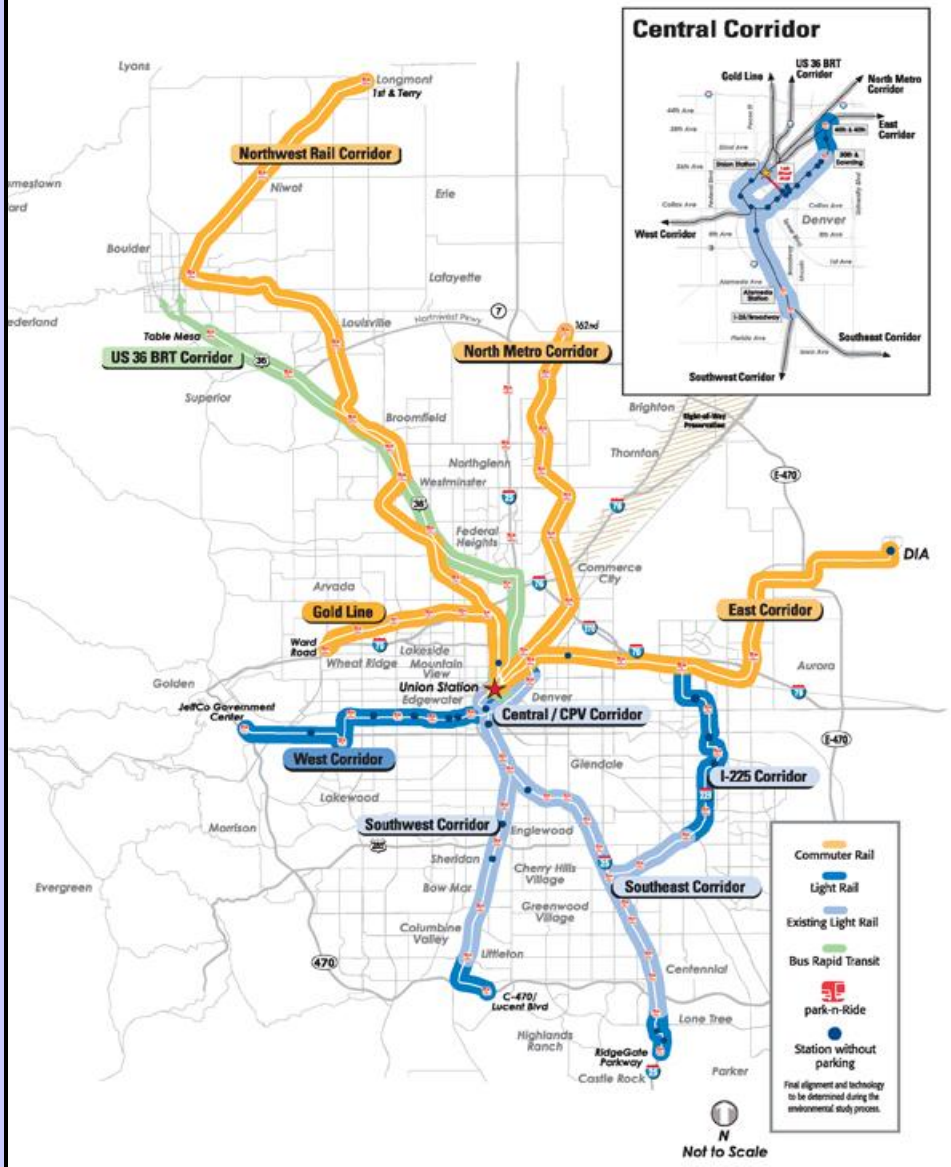
The Regional Transportation District

- Created in 1969
- Eight county service area
  - 37 municipalities
- Service area: 2,410 square miles
- 2.5 million population
- 1,071 buses
- 83 light rail vehicles
- 175 routes
- 66 park-n-rides
- 10,366 bus stops
- 2,510 employees
- 35 miles of light rail
- 36 light rail stations
- 99 million+ annual boarding
- 8 operating & admin. facilities
- Total 2008 Operating Budget: $458 million

RTD's FasTracks Program

RTD's FasTracks Plan

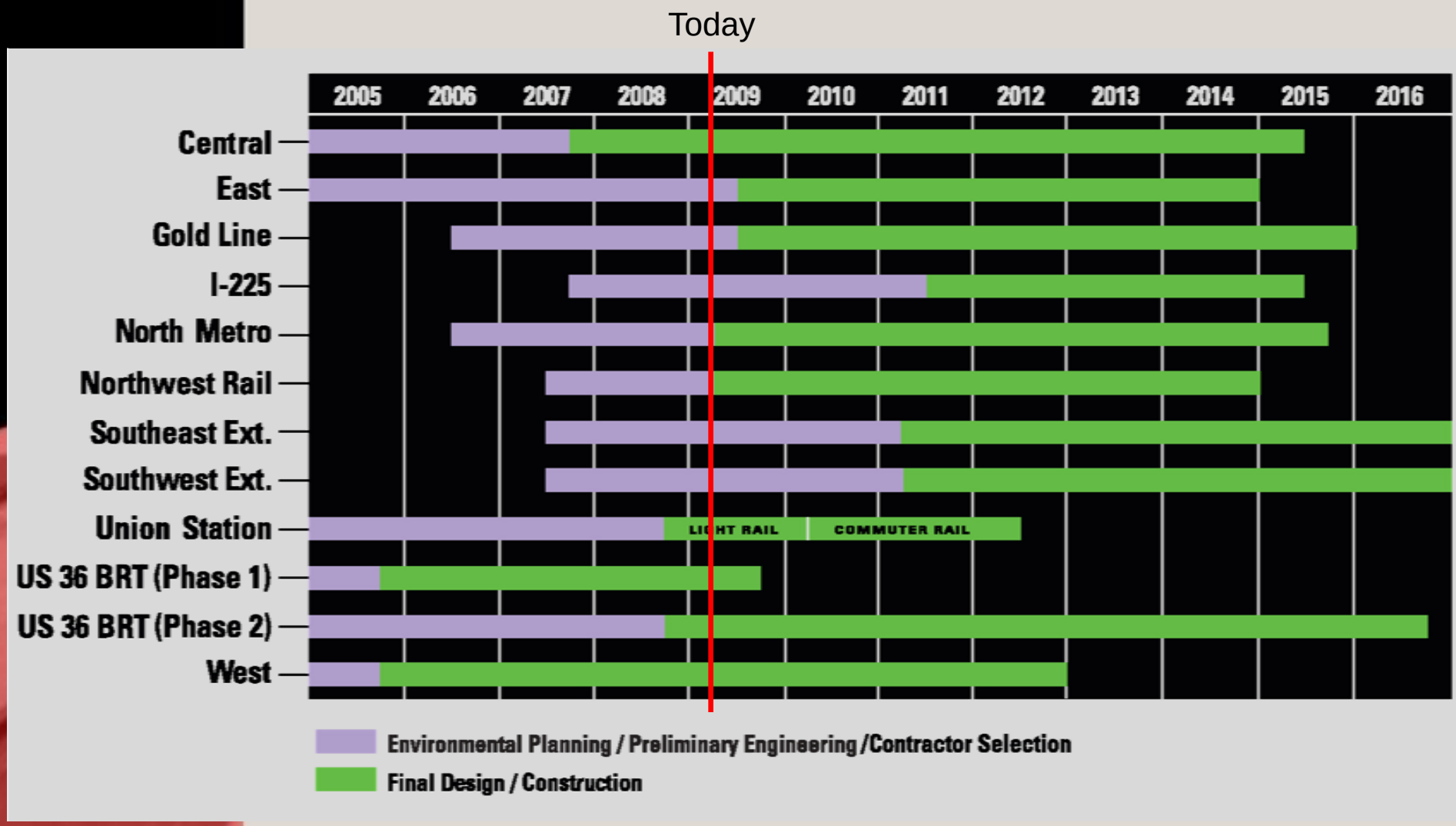
- 122 miles of new light rail and commuter rail
- 18 miles of Bus Rapid Transit (BRT)
- 31 new park-n-Rides with over 21,000 new spaces
- Enhanced Bus Network & Transit Hubs (FastConnects)
- Redevelopment of Denver Union Station



FasTracks History

- Ballot measure in 2004
  - Raised sales tax by 0.4%
  - Regional approach to transit expansion
  - Approved by voters 56% to 44%
- Supported by:
  - All 31 Mayors in District
  - Chamber, industry, and overall business community
- Built on proven success of $1.7billion T-REX project
  - Delivered 22 months ahead of schedule
  - Completed under budget

FasTracks schedule



Challenges

- Achieving political consensus
  - Largely in place as part of ballot initiative
  - Continuing strong support
- Schedule adherence
  - Many projects coming on line simultaneously
  - Integrated network requires close coordination
- Meeting budget
  - National pressures on commodity prices
  - “Normal” scope creep needs careful attention
- Resource availability
  - Labor – professional and unskilled
  - Materials

How P3s address the challenges

- Schedule adherence
  - PPPs are proven to deliver projects quickly
  - Single point of responsibility assures integration
- Meeting budget
  - Speed of delivery reduces overall costs
  - Performance specifications reduce likelihood of scope creep
- Resource availability
  - International interest in large projects increases resource pool for labor
  - Large consortia have greater “pull” to obtain materials

RTD is using a number of P3s

Construction Management/
General Contractor

Design-Build-Finance-
Operate-Maintain

Design-Build

Master Developer

Design-Build

Case study #1 – Denver Union Station

The HEART of Transit,

The SOUL of the CITY

– Powered by the Energy of People in MOTION

The Public-Private Partnership

- Regional Transportation District (RTD)
- City & County of Denver (CCD)
- Colorado Department of Transportation (CDOT)
- Denver Regional Council of Governments (DRCOG)
- **Union Station Neighborhood Company (USNC)**

Selection process

- 18 month process
- National significance and representation
- Developer RFQ in June of 2005
- Developer RFP Part I, February 2006
- Developer RFP Part II, July 2006
- Developer Interviews, August 2006
- Developer Public Presentations, September 2006
- Developer Selection, USNC November 2006

Integrated Transit Neighborhood

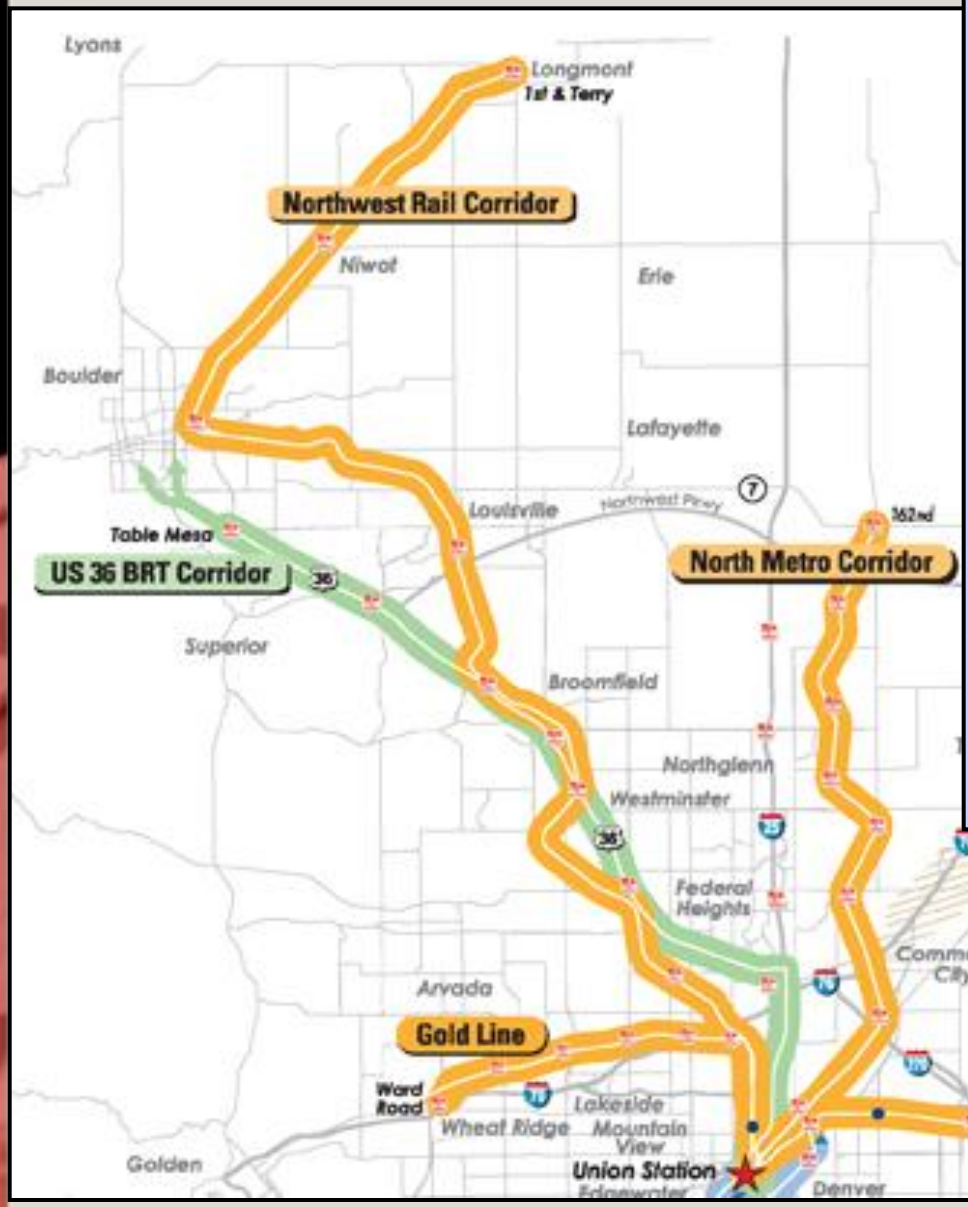
Master Developer approach

- Leverage Value of Real Estate to Help Fund Transit
- Ensure Efficient Integration of Transit, Development, and Public Space
- Simultaneously Address City Building and Transit Function Opportunities

Case study #2 – Eagle Project

eagle P3

Eagle Project



Design-Build
- East and Gold Line
- Maintenance Facility
- DUS systems
- North Metro systems
- Commuter rail cars

Operate & Maintain
- East, Gold Line and North Metro corridors
- All commuter rail cars
- Northwest Rail transit facilities

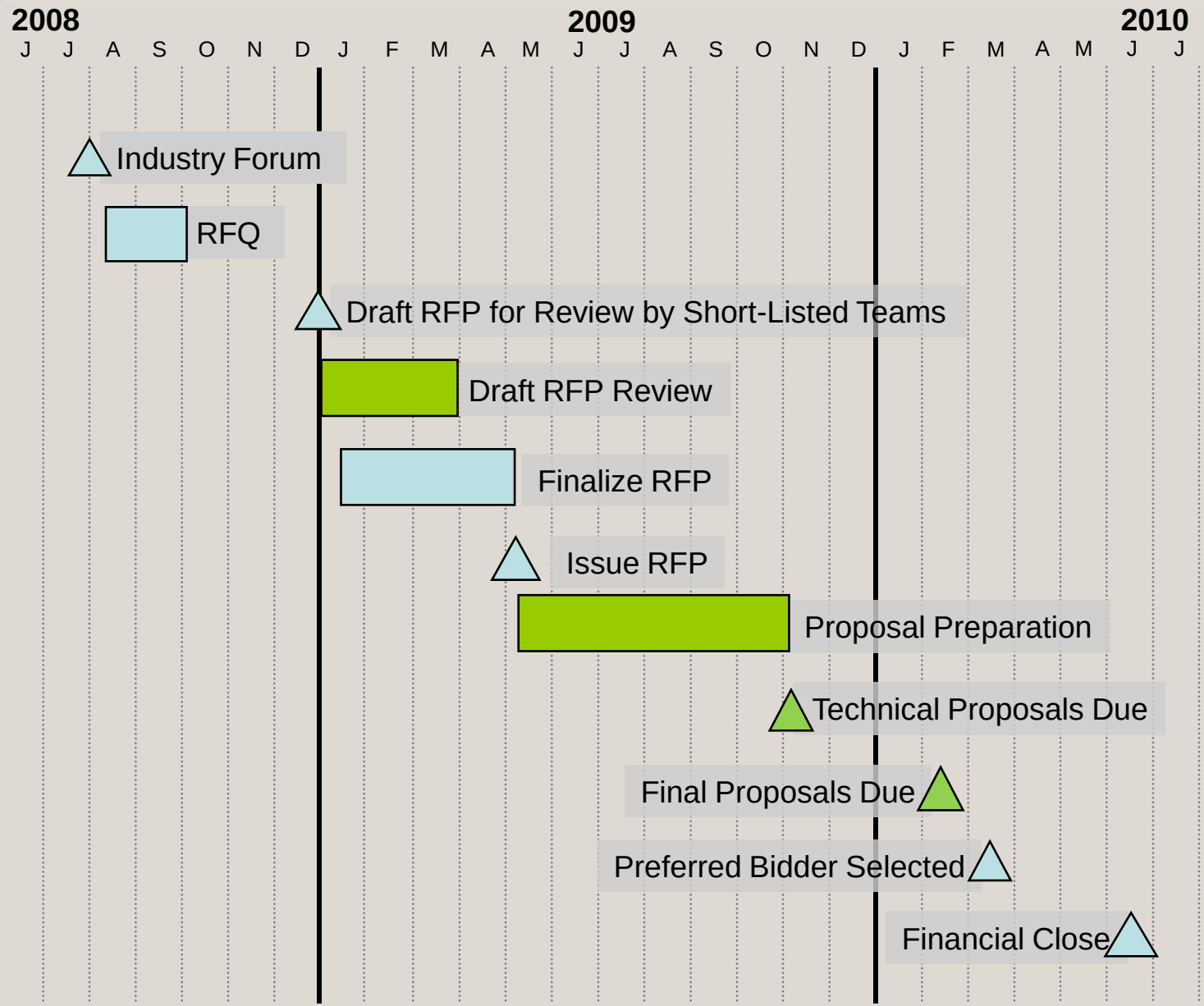
Finance
- All Design-Build elements

Eagle Project – Federal Project Elements

Scope elements agreed upon with FTA during Request to Enter PE:

- East (DUS throat to end-of-line)
- Gold Line (Pecos to end-of-line)
- Electrification and stations for Northwest Rail shared section (DUS - Pecos)
- Commuter Rail Maintenance Facility
- Commuter rail cars for East and Gold Line only

Eagle Project schedule



Status of Eagle Project

- **Procurement:**
  - Three teams prequalified in November, 2008 through RFQ process
  - Draft RFP for industry review released in December, 2008
  - Final RFP to be issued in May, 2009
  - Final proposals to be submitted with fixed price and committed finance in February, 2010
  - Financial close and notice to proceed in June, 2010
- **New Starts Process:**
  - Applied for Entry Into PE in September, 2008
  - Submitting Final Design/FFGA application in August, 2009 (early submittal of deliverables beginning in May, 2009)
  - Objective is to secure an FFGA in March, 2010

Concessionaire team

- Teams consist of:
  - Equity investors/ infrastructure funds
  - Financial firms
  - Operators and maintainers
  - Rolling stock manufacturers
  - Construction contractors
  - Engineering firms

Prequalified Concessionaire Teams

Denver Transit Partners

- Fluor Enterprises, Inc.
- Macquarie Capital Group Ltd
- Ames Construction
- Balfour Beatty Rail, Inc.
- Alternate Concepts, Inc.
- HDR Global Design Consultants
- Arup
- Gannett Fleming
- Orrick, Herrington & Sutcliffe LLP
- Interfleet Technology, Inc.
- Romero and Wilson

Mile High Transit

- John Laing
- HOCHTIEF PPP Solutions
- Bombardier
- Flatiron Corporation
- Archer-Western
- Aldridge Electric
- DMJM-Harris/ AECOM
- CH2M-HILL

Mountain-Air Transit Partners

- Babcock & Brown
- Siemens
- Veolia
- Kiewit
- Herzog
- Stacy and Witbeck
- HNTB Corporation
- Mass. Electric Construction Co.
- Millibank, Tweed, Hadley & McCoy
- Citi
- Merrill Lynch

Contract basics

- **Single Concession Agreement**
  - 50-year term including ~5 years design/build
  - Underlying lease of real property and improvements
    - RTD owns all assets at all times
  - “At-risk” financing from concessionaire
  - Proposers committing to a service payment adjusted over time including fixed cost of design-build and O&M
- **Powerful incentives for budget and schedule adherence**

Risk Allocation Identified in Draft RFP

RTD Risk	Concessionaire Risk
• Timeliness of third party design reviews • RTD requested changes to project requirements • Delay in gaining access to the site • Unforeseen archaeological risks • Errors/omissions in environmental reports • Unidentified and dry utilities • RTD permits • Discriminatory legislative changes • Ridership and fare evasion risk	• Design fails to meet the specified requirements • Design delays • Construction delays • Cost overruns • Additional land requirements • Compliance with environmental requirements • Geological obstructions • Safety and security • Accuracy of reference data • Concessionaire permits • Concessionaire or subcontractor default • Final completion delays • Third party claims • Security during the construction period • Repairs or maintenance work affecting availability • Failure to meet operating performance standards • Operation and maintenance costs • Condition of system at the end of concession period • Wet utilities • Compliance with railroad agreements
Shared Risk	
• Third party design reviews – disputes • Non-discriminatory legislative change • Force majeure	

Payment scheme

- RTD will make:
  - Construction payments during design/build phase
    - Capped amounts payable based on progress achieved
      - *Annual payments for "federal project"*
      - *Monthly payments for locally funded project components*
  - Service availability payments during O&M
    - Indexed over concession term
    - Adjustable based on performance

Adjustments to Service Payments

- **Payments made monthly and adjusted for availability and performance**
  - Provision of required service
  - On-time performance of trains
  - Station availability
  - Quality and timely maintenance
- **Payment adjustments are approximately:**
  - Increase of up to 0.5% for perfect delivery
  - Reduced by up to 50% for inferior delivery
- **RTD makes no payment to concessionaire in the event of default**

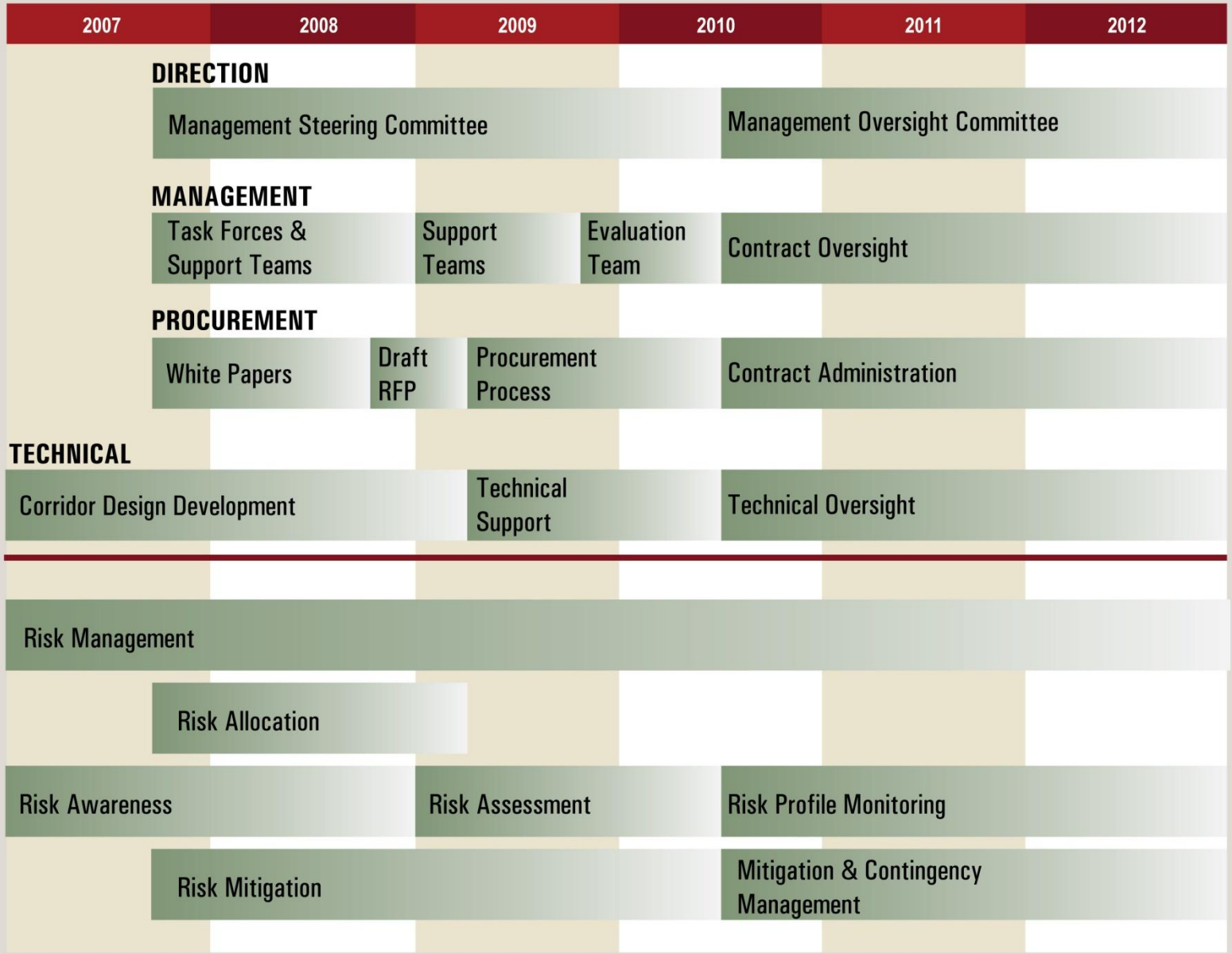
Eagle Project Risk Management Approach

- In a P3, awareness of risk has to start at the beginning of project development and continue through to the operating phase
- Risk assessment, of the type currently utilized by FTA, is only one component of the overall risk management approach needed throughout the delivery cycle of a P3 project
- RTD's risk management approach steps through the four phases of the project – Development, Procurement, Implementation and Operations
- FTA/PMOC will participate in RTD's risk management process to assist with allocation of risk closures, mitigations and contingencies

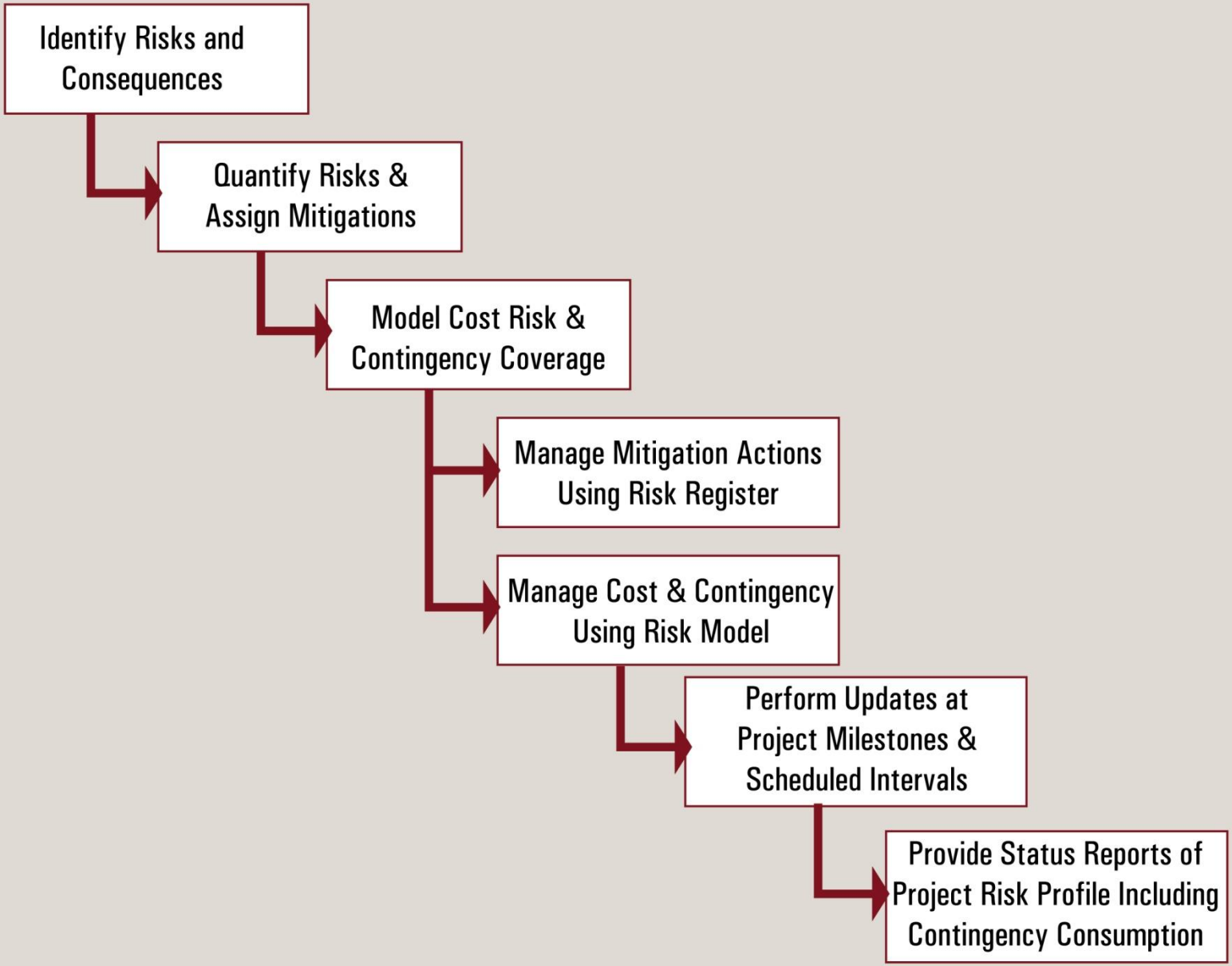
Eagle Project Risk Management Phases

- RTD has developed a risk management approach tailored to the unique characteristics of each phase of project delivery:
  - Development Phase: FasTracks Authorization through Issuance of Request for Proposals (RFP). Qualitative consideration of risk allocation and risk sharing (preliminary risk allocations are currently being reviewed in the draft RFP)
  - Procurement Phase: Development of baseline Risk Assessment to quantify the current risk profile, capture ongoing risks and mitigations, and establish assessment updates throughout the procurement phase
  - Implementation Phase: Monitoring of mitigation and contingency management
  - Operations Phase: Monitoring of concessionaire performance against contractual requirements

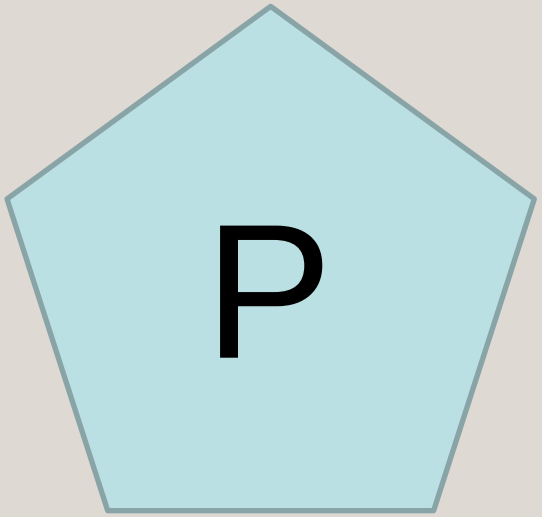
Risk Management Timeline



Steps In Risk Assessment Process



Penta-P



How Eagle Project Supports the Goals of the Penta-P Program

Penta-P Goals	Eagle Project Approach
Reduce risk by sharing responsibility among partners	Allocate to the party that can most cost-effectively manage the risk
Save time by using a non-traditional design-build approach and through a streamlined New Starts process	Maximize opportunities to streamline the New Starts process under the Penta-P program, including combining Final Design and FFGA submittals and negotiating with FTA on the limitation of certain risk assessments from the rating process. Limited payment using FTA funds until design-build efforts are completed, which provides powerful incentive to deliver on schedule
Save money through tighter integration of design, engineering, construction and operations	Incorporate feedback from industry review through draft RFP process, which allows early identification of major cost concerns. Assure life-cycle cost certainty through the 50-year term of agreement
Deliver high quality project by involving contractor early in project development and identifying opportunities for innovation early	Incorporate early industry feedback and provide performance specifications (not detailed technical specifications) to concessionaires. Include points for innovative ideas in RFP evaluation criteria

Challenges facing a P3 in the New Starts environment

- **Performance Certainty/ Scope Flexibility**
  - FFGA normally based on defined scope
  - P3 leverages performance criteria to facilitate innovation – scope may vary somewhat between proposals
- **Timing of FFGA award**
  - FFGA normally awarded after bids received
  - FFGA required to allow financial close but proposers ability to hold committed finance for extended period is limited

Challenges facing a P3 in the New Starts environment – cont'd

- **FFGA Payments**
  - FFGA normally a reimbursement program
  - In a privately financed P3 payments made after start of operations
  - Contractor expenditures need to be considered local match for grant payments
- **Bid Bonding Requirements**
  - FTA circular 4220 anticipates a bid bond of 5%
  - For large P3 this can equate to $100 million
  - Proposer costs high >$20 million
  - Powerful incentive to stay at the table with small bid bond to cover agency costs

Lessons Learned

Lessons learned on Eagle Project

- **Develop a plan and stick to it**
  - Define scope of work
  - Define approach – acquisition plan
  - Define schedule
- **Be prepared but flexible!**
  - Development and procurement process takes time, things will change
  - Make sure key objectives are not compromised without full disclosure, agreement and understanding

Lessons learned on Eagle Project

- **Risk transfer comes at a cost**
  - Allocating the risks to the right party is good for all
  - If a risk cannot be managed the agency should be responsible
  - Share when appropriate
- **Third P is critical**
  - Think of the project as a long term relationship
  - Success comes from working together

Lessons learned on Eagle Project

- **Communicate**
- **Communicate**
- **Communicate**
  - There is no single way to prepare and implement a P3
  - Learn from your organization and advisors
  - Learn from future partners

Lessons learned as part of Penta-P

- **FTA's New Starts assessment process did not anticipate P3 procurements**
  - Certain submittals need adjustment, e.g.
    - Project management plan
    - Fleet management plan
  - Sequential approval for PE, final design and FFGA inconsistent with P3 approach
  - Detailed definition of scope of work inconsistent with flexibility of P3 approach
  - Approval time for FFGA inconsistent with financing needs
  - Reimbursement nature of FFGA not ideal for privately financed P3

Lessons learned as part of Penta-P

- **Streamlining of approvals has been beneficial**
- **Combining stages (FD/FFGA) accelerates development phase … and saves money**
- **Discounting private at-risk equity protects public interest while facilitating more projects**

FTA approach

- **FTA staff has been thoughtful and proactive in examining new ways of doing business**
- **RTD looks forward to a successful partnership not only with the Eagle Concessionaire but with FTA**

For Additional Information Contact:

Brian Middleton

Senior Penta-P Manager

RTD-FasTracks

T: (303) 299-2173

E: brian.middleton@rtd-fastracks.com