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EVM**

# **CPIC Webinar Scalable Performance Management**

**Mr. Gordon Kranz  
PARCA Earned Value Management**

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## Framing the Webinar

▶ *Topics:*

- Evaluation of different types of programs/contracts
- Integrated Program Management for Traditional DoD Development vs. Agile Development
- Collection of progress independent of resources consumed
- Example to illustrate differences in progress measurement between Traditional DoD Development and Agile Development



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# Evaluation of Different Kinds of Programs/Contracts

- ▶ System or Hardware or Software Development
  - Design, build, test, deliver
  
- ▶ Services
  - Operational Support
  - Maintenance Support and Spares and Repairs
  - System Upgrades (P3I)
  - Software Updates
  - Help Desk
  
- ▶ Purchase Orders – Procurement of an off-the shelf item



## PARCA EVM

# System Development

- ▶ Statement of Work, capability descriptions, performance characteristics, interim deliverables, final deliverables, etc.
- ▶ Requires the most rigorous Integrated Program Management
  - Cost and Schedule Metrics
  - Technical Performance Metrics
  - Capability development – delivery status
  - Risk Management
- ▶ Variety of development methodologies available
  - Traditional DoD Development
  - Agile Development



## Services

- Operational Support
  - Contract for specific technical resources to help with analysis of operational data
- Maintenance Support and Spares and Repairs
  - Performance Based Logistics
  - Contract for specific technical and management resources to perform repairs and procurement of spares
- System Upgrades (P3I) or Software Updates
  - Can resemble a development program
- Help Desk
  - Contract for staff to work a help desk capability



## PARCA EVM

# Disciplined Collection of Progress

### ▶ Earned Value

- Progress is measured independent of resources expended

### ▶ Agile SW Development

- Progress is measured based on deployed capabilities independent of resources expended

### ▶ Services

- Progress is measured based on resources expended and general description of work done

### ▶ Purchase Orders

- Progress is measured when item is received and tested



## PARCA EVM

# Traditional DoD Development vs. Agile Development

- ▶ Common
  - Understand, resource, plan, and track progress of the work scope
  - Make program decisions accordingly
  - Measure progress independent of resources consumed
- ▶ Traditional Unique Elements
  - System design, build, test, and deliver against a pre-determined set of customer requirements
  - Event based development: SFR, PDR, CDR, TRR, PRR, IOC
- ▶ Agile Unique
  - System design, build, test and deliver incrementally against a customer set of requirements that get re-evaluated updated and prioritized between increments
  - Plateaus, Epics, Releases, Sprints



## PARCA EVM

# Measuring Progress Independent of Resources Consumed

- ▶ Progress is measured based on completion of discrete work based on a predetermined set of acceptance criteria
- ▶ Progress is measured objectively and is tangible to the program team
  - Important to know what done looks like
- ▶ The way progress is measured impacts project set-up, tracking, and performance management



## Example Scenario 1

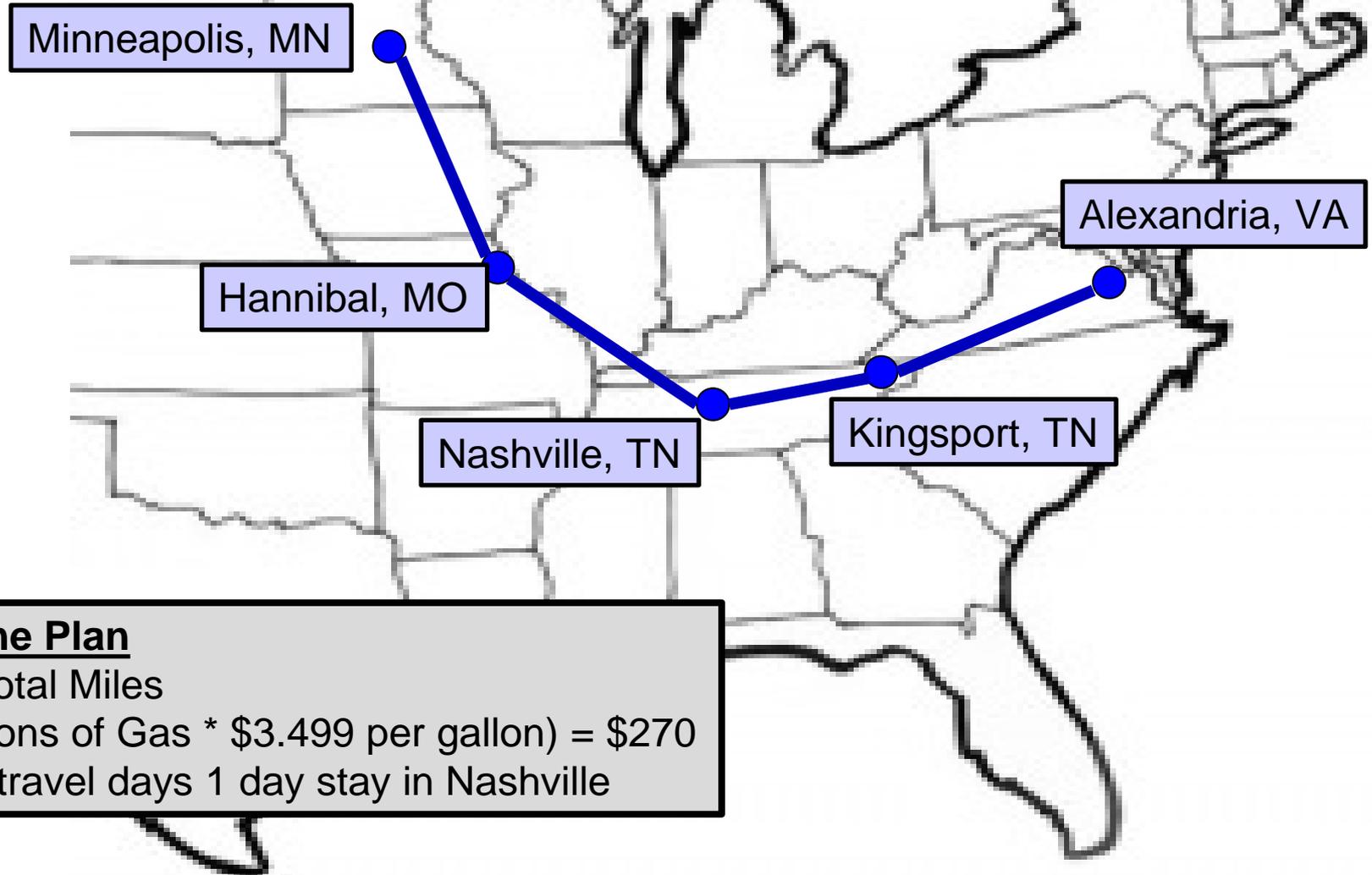
- ▶ **Customer Requirement:** Plan a trip to Minneapolis, MN to house hunt with one stop on the way in Nashville, TN to visit the Grand Ole Opry.
  
- ▶ Traditional Requirements and Implementation process
  - Develop a trip plan defining number of days, number of gallons of gas, cost for hotels, distance per day, etc.
  - Lay down plan start to finish before leaving initial location
  - Implement Plan



## Example Scenario 2

- ▶ **Customer Requirement:** Plan a trip to Minneapolis, MN to house hunt with one stop on the way in Nashville, TN to visit the Grand Ole Opry.
  
- ▶ Agile Requirements and Implementation process
  - Evaluate customer requirement and recognize that the customer may be as happy or happier if Minneapolis or Nashville or the Grand Ole Opry end up not being what actually happens
  - Develop notional plan to meet customer requirements knowing that they may change along the way
  - Revisit customer requirements based incremental progress

# Scenario 1 Traditional Development Approach



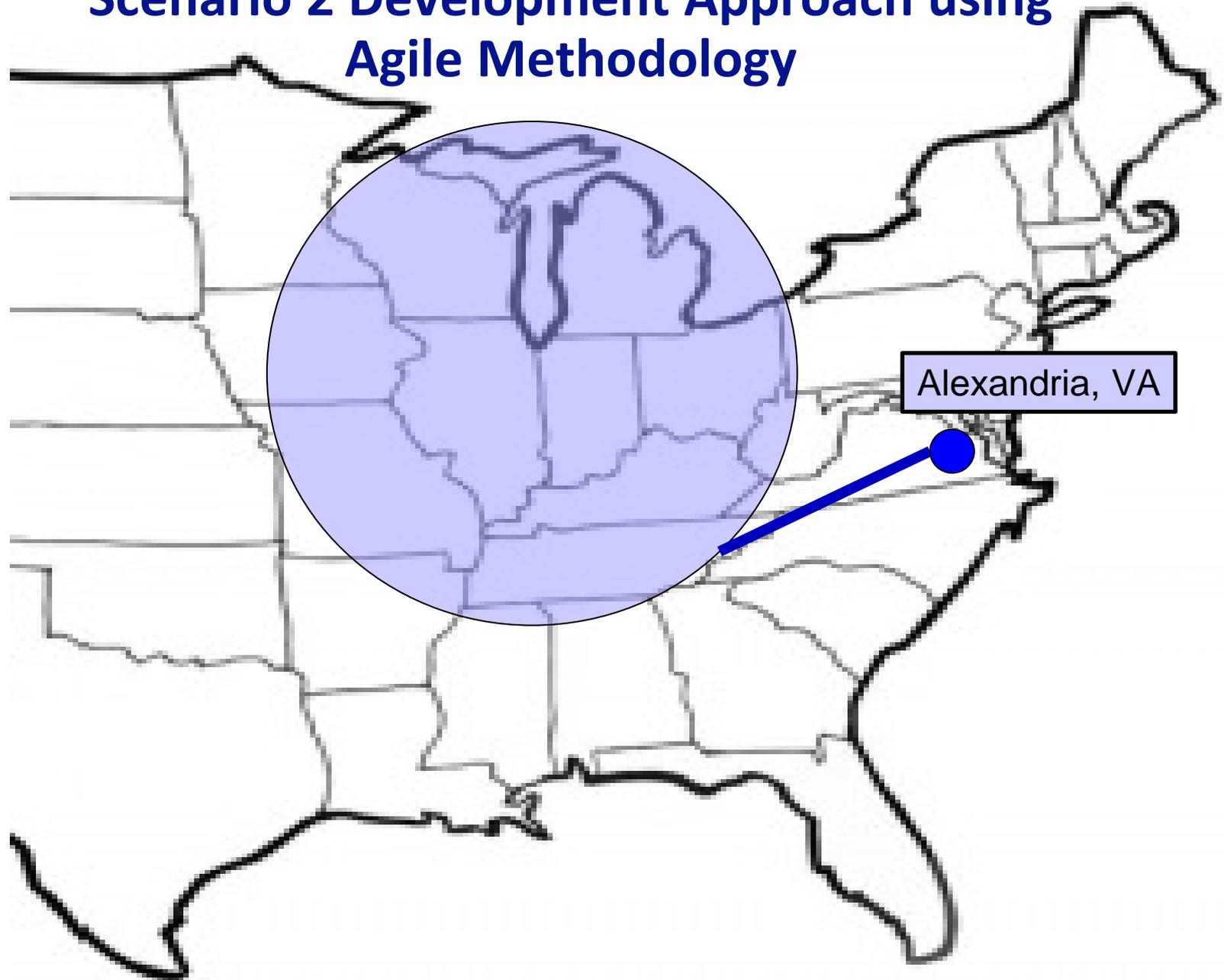
## Baseline Plan

1550 Total Miles

77 Gallons of Gas \* \$3.499 per gallon) = \$270

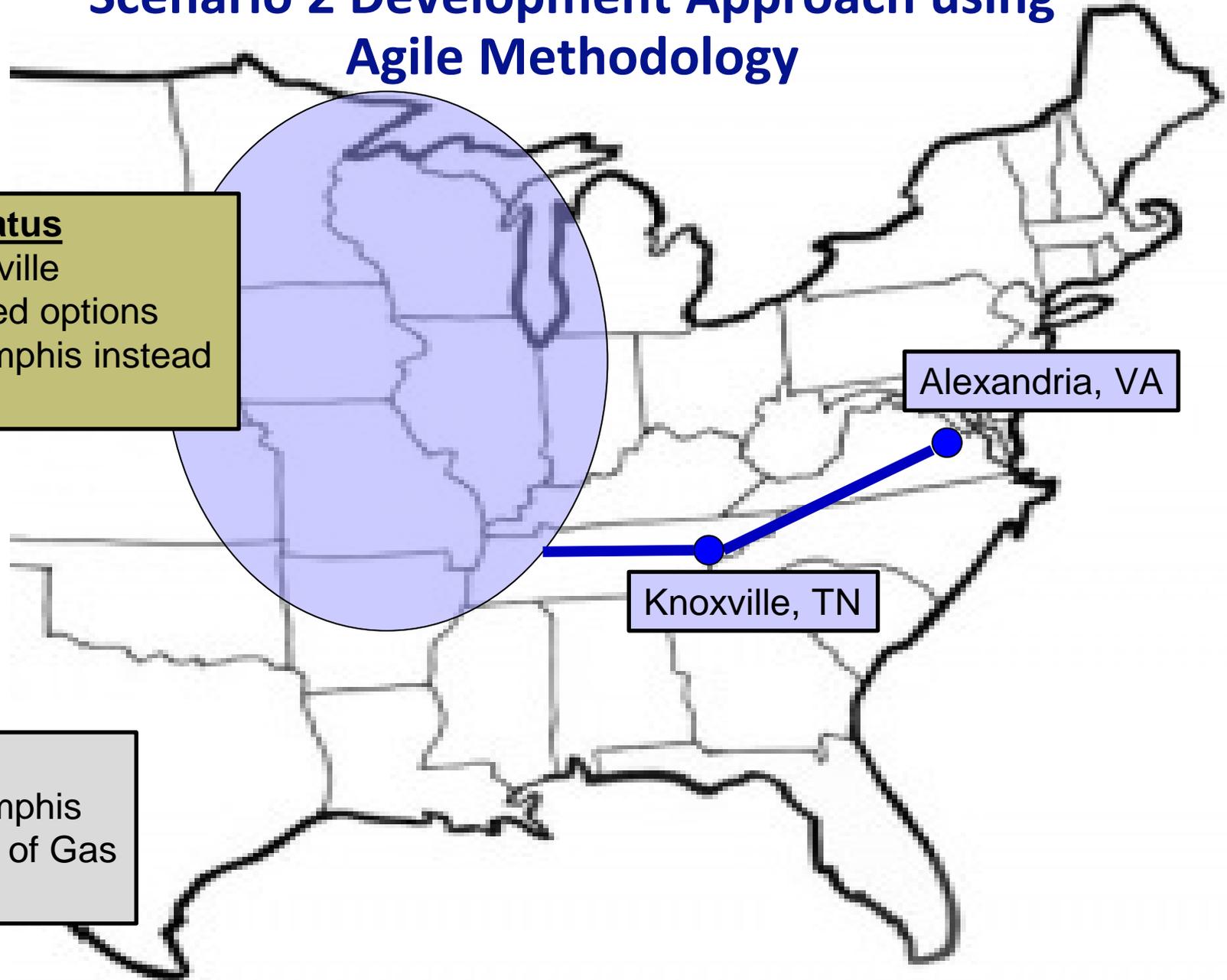
4 days travel days 1 day stay in Nashville

# Scenario 2 Development Approach using Agile Methodology



Alexandria, VA

# Scenario 2 Development Approach using Agile Methodology



Alexandria, VA

Knoxville, TN

**Sprint 1 Status**  
Got to Knoxville  
Reconsidered options  
Selects Memphis instead  
of Nashville

**Sprint 2**  
Get to Memphis  
22 Gallons of Gas  
1 Day



## Take Aways

- ▶ Integrated program management applies to all programs
- ▶ Different types of work and work scope drive both the rigor in which Integrated Program Management is implemented and how progress is measured
- ▶ Progress measurement impacts project set-up, tracking, and performance management



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QUESTIONS??