The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

Support RAND

Browse Books & Publications
Make a charitable contribution

For More Information
Visit RAND at www.rand.org
Learn more about the RAND Corporation
View document details

Limited Electronic Distribution Rights
This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND PDFs to a non-RAND Web site is prohibited. RAND PDFs are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see RAND Permissions.
This product is part of the RAND Corporation corporate publication series. Corporate publications describe or promote RAND divisions and programs, summarize research results, or announce upcoming events.
Quick Impact.
Sustainable Investments.
Guiding Vision.

Three Proposed Initiatives for Improving Mobility, Quality of Life, and Economic Growth in the West Bank

A Visual Summary
Three Initiatives for Improving Mobility, Quality of Life, and Economic Growth in the West Bank

The RAND Corporation has been working with the Palestinian Authority (PA) to develop a suite of proposals for immediate, practical projects that would promote economic development in the region while also advancing the U.S. policy agenda in the Middle East. The initiatives, which draw on findings from RAND’s comprehensive assessment of requirements for a successful Palestinian state, reflect five years of close consultation between RAND and the PA at the highest ministerial levels and the Office of President Abbas.

The projects address the critical issues of mobility, infrastructure, and organized development in the following ways:

• Inauguration of a regional transit system for the West Bank. The core of the system is a bus line linking Jenin, Nablus, Ramallah, and Hebron, with three station areas in each city, connected by transit boulevards.

• Development of several new urban districts in the cities served by the transit system. Model stations improve quality of life for commuters, areas around the stations are zoned for private sector development, and stations incorporate best practices for energy and water conservation.

• Design of the first national physical plan for Palestine, incorporating transportation and urban development. This master plan, which integrates RAND’s initial work on infrastructure with studies and plans developed by the PA Ministry of Planning, guides long-term development.

All of these initiatives could be implemented in the current political and diplomatic environment, beginning immediately and evolving in parallel over several years. The projects are consistent with and supportive of plans recently put forward by the PA to begin building the state institutions required for an independent Palestinian state.

The images that follow illustrate the nature of each initiative and the power of their collective contributions.
Three Initiatives

1. Quick Impact Transit Line
   The West Bank’s First Regional Transit Line

2. Sustainable Investments Urban Districts
   Model Urban Districts Around Transit Stations

BUS LINE WITH 12 STATIONS

THREE STATION TYPES PER CITY

THREE MODEL DISTRICTS PER CITY
3
Guiding Vision
National Plan
A National Physical Plan for Palestine

URBANIZATION, OPEN SPACE, INFRASTRUCTURE
Concept Schedule
Three Timeframes

Quick Impact
Transit Line
The West Bank’s First Regional Transit Line

100 days

- set up operations center
- launch website
- select station sites
- develop system branding
- select and procure buses
- install station landscaping and signage

= VISIBLE PROGRESS

300 days

- establish fares
- prepare buses
- designate and upgrade highway
- designate and restripe transit boulevard
- install crosswalks and signals
- train drivers, mechanics, and managers
- install shade structures and photovoltaic panels
- design and install maps
- test line operation

= INITIAL OPERATION

1,000 days

- complete station improvements
- complete highway improvements
- complete signal synchronization
- full testing

= FULL OPERATION
## Sustainable Investments
### Urban Districts
Vibrant Urban Districts Around Transit Stations

- define model district boundaries
- establish district guidelines
- identify key sites and projects
- identify public projects

= **CONCEPTS**

- develop incentives for private development
- launch facade improvement program
- launch energy and water conservation incentives
- install green infrastructure and landscaping
- improve pedestrian facilities and linkages
- break ground on key projects

= **VISIBLE PROGRESS**

- complete public space improvements
- complete private development projects
- full integration with transit

= **REVITALIZATION**

## Guiding Vision
### National Plan
A National Physical Plan for Palestine

- establish working technical team
- begin inventory of national resources and policies
- begin to identify basic principles and goals
- establish and define sectors

= **INITIAL CONCEPTS**

- concept maps and drawings
- launch website, begin public outreach
- develop options and alternatives
- feasibility studies
- establish financial strategy and priorities

= **FIRST DRAFT**

- select and refine alternatives
- extensive public outreach
- selected preliminary engineering
- prepare final draft
- submit for adoption

= **COMPLETE AND ADOPTED**
Quick Impact
Transit Line Elements

Transport Modes

Right-of-Ways

Walking and Biking Integrated with Transit

Upgraded Existing Highways or New Segments

Existing Private and Group Taxis

Enhanced Arterial Boulevards with Transit Lanes

Existing “Fill and Go” Shuttle Bus Lines

Existing Local Bus Routes

Scheduled InterCity and Municipal Buses

Center City Streets with Bus Lanes and Crosswalks
Station, Bus, and Route Signage

Digital Fare Cards and Phone Applications

Online Services and Information

Tickets, Refreshment, and Bathrooms

Seating and Enhanced Permeable Paving

Shade Structures with Photovoltaic Panels

Shade Trees and Water-Conserving “Bio-Swales”
Existing Conditions
In most West Bank city centers, microbus and taxi services operate out of privately run parking lots or structures. These typically lack basic passenger services, such as ticket booths, maps, schedules, seating, shade, lighting, refreshment, restrooms, trash receptacles, or other amenities. Passengers must often hold seats by waiting inside hot vehicles until they are filled. Few provisions are made for families with children.

**STATION TYPE**

Central

**STATION FEATURES**
- located in the historic city center
- incorporates existing streets, curb space, off-street parking areas
- publicly owned and operated
- integrates existing microbus, taxi service with new municipal rapid bus service
- high levels of passenger information and amenity

**DISTRICT IMPROVEMENTS**
- upgraded sidewalks and crosswalks
- facade and building renovations, housing, shops, cultural facilities, parks
- photovoltaic arrays
- bio-swales and graywater recapture
Existing Conditions
Outside historic city centers, major arterial roads extend to other districts and cities. These roads are typically designed for high-speed traffic but without any special provisions for public transport. Many road segments lack sidewalks, and crosswalks are almost nonexistent. Landscaping is minimal at best. This environment discourages walking and transit use, and sharply diminishes the livability of adjacent office, retail, and residential structures.

STATION TYPE

Boulevard

STATION FEATURES

- located on arterial roadway converted into transit boulevard
- incorporates existing streets and medians
- publicly owned and operated
- integrates existing microbus, taxi service with new municipal rapid bus service
- high levels of passenger information and amenity

DISTRICT IMPROVEMENTS

- upgraded sidewalks and crosswalks
- housing, offices, shops, schools, parks
- photovoltaic arrays
- bio-swales and graywater recapture
Existing Conditions
The peripheries of most West Bank cities remain relatively undeveloped. Many opportunities exist to create national transport and infrastructure facilities and new urban districts in close proximity to the historic city centers. Exploiting those opportunities is essential to avoiding unchecked urban sprawl, which would impose enormous financial and environmental costs on a prospective Palestinian state.

STATION TYPE

Arc

STATION FEATURES

• located at urban periphery where transit boulevard intersects planned Arc corridor
• publicly owned and operated
• major transfer point from intercity bus line
• integrates microbus, taxi, municipal and intercity bus
• high levels of passenger information and amenity

DISTRICT IMPROVEMENTS

• layout of new district
• initial investments in office, commercial, and technology development
• sites for government, university, and hospital use
• photovoltaic arrays and windfarms
• bio-swales and graywater recapture
Arc Station District - Long-Term Development

Near Term: Medium Density with Intercity Bus

Long Term: High Density with Intercity Rail
Interior of Intercity Rail Station

Intercity Bus Station Upgraded to Rail Station at Arc Corridor
Contact Information

C. Ross Anthony, PhD
Director
RAND Palestine Initiative
rossa@rand.org

Doug Suisman, FAIA
Principal
Suisman Urban Design
suisman@suisman.com

Mary E. Vaiana, PhD
Communications Director
RAND Health
vaiana@rand.org

To learn more about the RAND Palestine Initiative and to view a short video, please visit:

www.rand.org/palestine