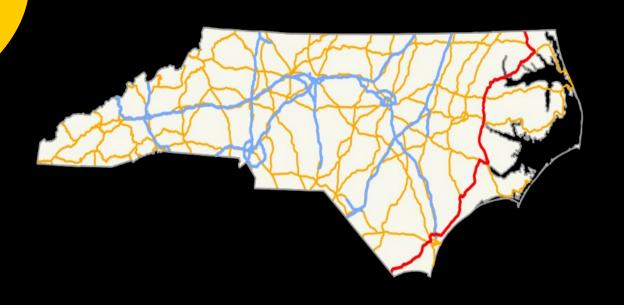
### THE CHANGING FACE OF NORTH CAROLINA: IMPLICATIONS FOR TRANSPORTATION



**Dr. Mike Walden** 

Reynolds
Distinguished
Professor

North Carolina State University

#### TRANSPORTATION = FREEDOM

#### **EXPANDS OPTIONS FOR**

HOME

WORK

**PLAY** 

# TRANSPORTATION = ECONOMIC DEVELOPMENT

#### REDUCING COSTS OF MOVING

**MATERIALS** 

**PRODUCTS** 

**LABOR** 

### TRANSPORTATION DEVELOPMENT LEADS TO ECONOMIC DEVELOPMENT

WALK



HORSE

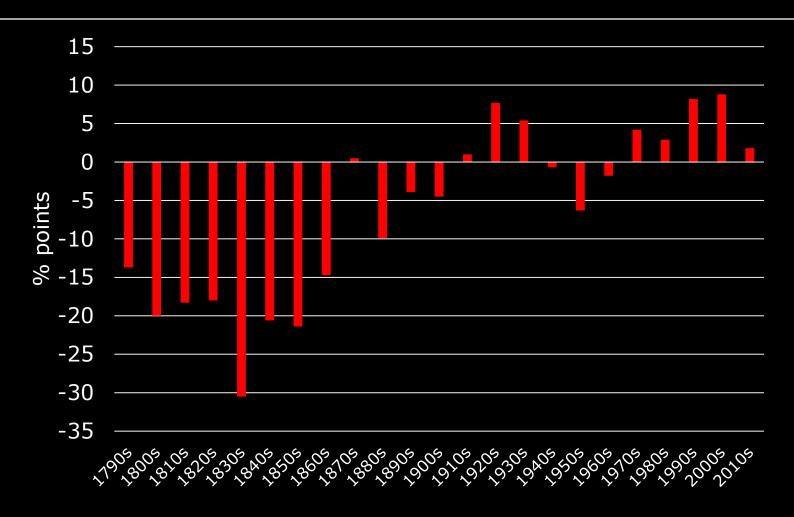
**BARGE** 

**TRAIN** 

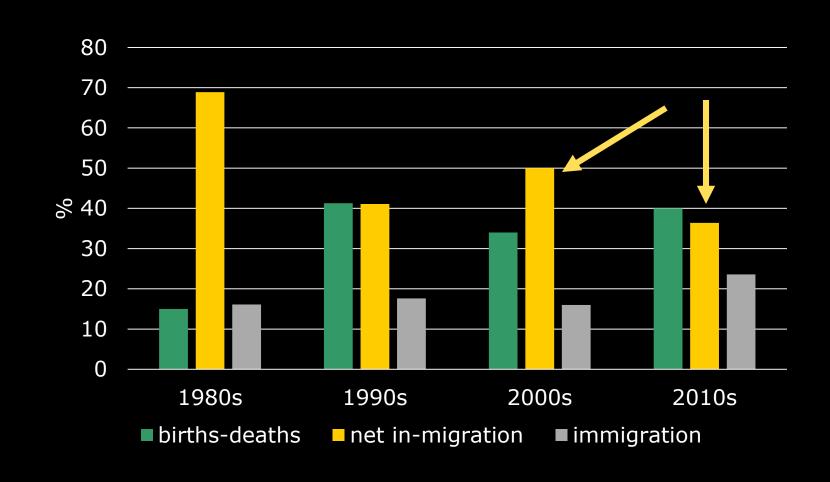
**VEHICLE** 

PLANE

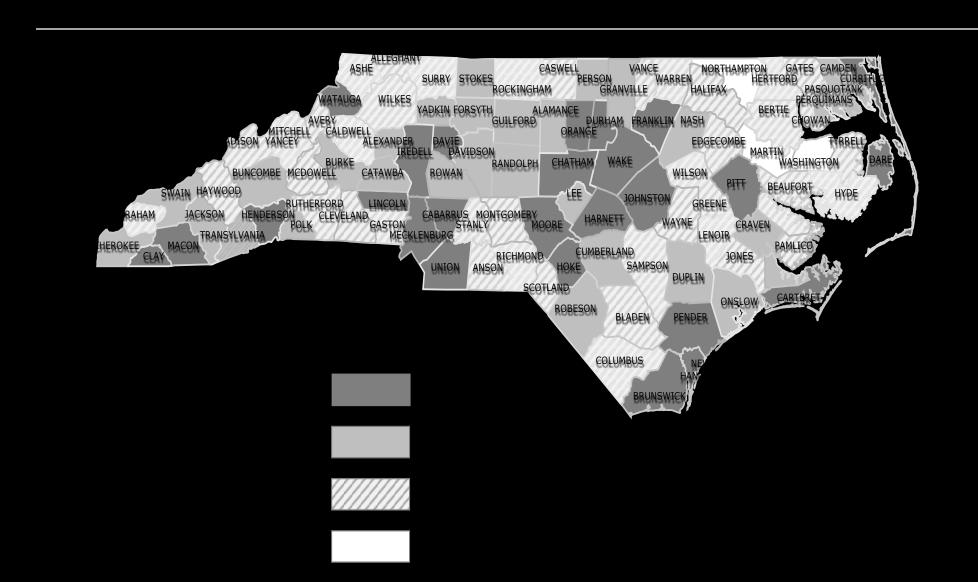
#### NORTH CAROLINA HAS BEEN OUTPACING THE NATION IN POPULATION GROWTH SINCE THE 1970S



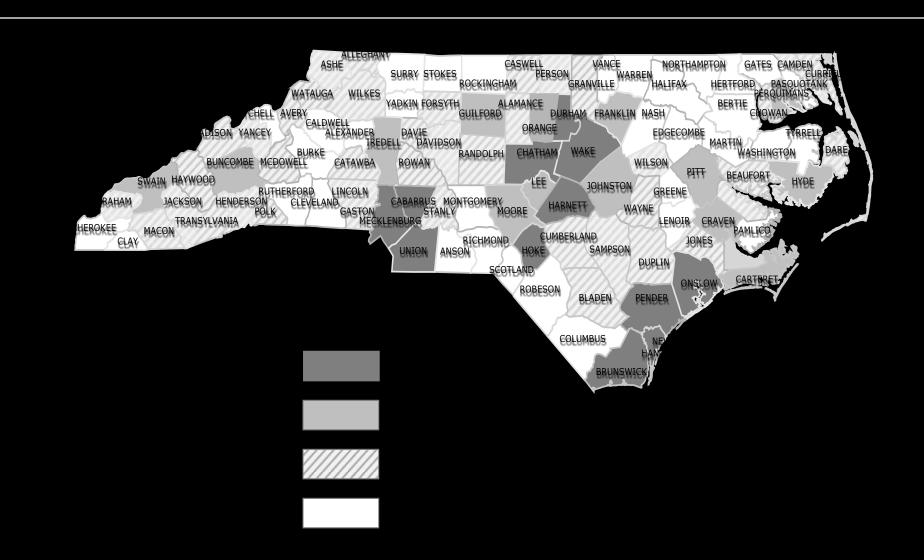
### LARGE SHARE OF STATE'S GROWTH COMES FROM NET IN-MIGRATION



#### **COUNTY POPULATION GROWTH: 1970 TO 2010**



#### **COUNTY POPULATION GROWTH 2010-2050**



### TRANSPORTATION ISSUES FOR FAST-GROWING URBAN CORES



CONGESTION

HIGH LAND COSTS FOR PROJECTS

**ROLE OF MASS TRANSIT** 

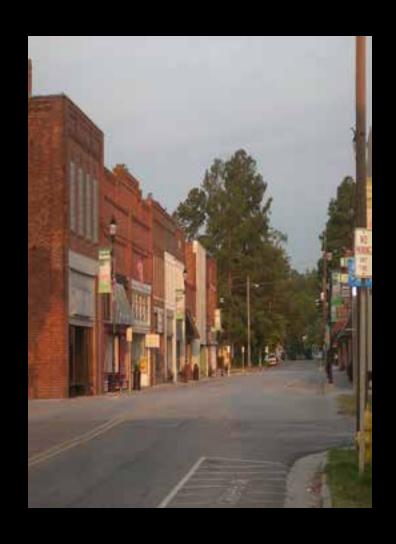
**NEW MODES OF TRANSIT** 

# TRANSPORTATION ISSUES FOR GROWING SATELLITE COUNTIES



FAST CONNECTIONS
TO URBAN CORE

### TRANSPORTATION ISSUES FOR SLOW-GROWING RURAL AREAS



USE TRANSPORTATION TO STIMULATE ECONOMIC DEVELOPMENT

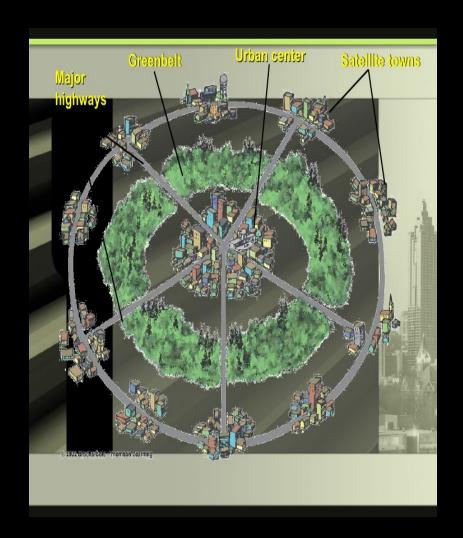
- \* AGRIBUSINESS
- \* MANUFACTURING
- \* TOURISM
- \* RETIREMENT/SECOND HOME

### "GAME-CHANGING" TECHNOLOGIES WILL IMPACT TRANSPORTATION



AUTONOMOUS VEHICLES
RIDE SHARING
LOW COST HIGH-SPEED INTERNET
VIRTUALIZATION
DRONE DELIVERY
REMOTE SERVICE DELIVERY
CHEAPER AND FLEXIBLE
TRANSPORTATION MATERIALS

# TECHNOLOGIES COULD IMPACT HOW WE LIVE, WORK, PLAY, AND MOVE



#### **IMPACTS ON:**

VEHICLE OWNERHIP
COMMUTING
REMOTE WORKING
PRODUCT/SERVICE ACCESS
REVERSE URBANIZATION

#### LAST, THE ISSUE OF TRANSPORTATION FUNDING



IMPROVED MPH AND
ALTERNATIVE FUELS ARE
WORKING AGAINST THE
GAS TAX

REPLACEMENTS?
GENERAL TAX REVENUE
MILEAGE TAX
TOLLS

## IMMEDIATE FUTURE FOR TRANSPORTATION: CONTINUE CURRENT TRENDS & ISSUES



CONGESTION

CONNECTION

**ECONOMIC DEVELOPMENT** 

### LONGER RUN FUTURE OF TRANSPORTATION IS LESS CERTAIN



DEPENDS ON HOW FAST TECHNOLOGY EVOLVES

AND HOW LIVING,
WORKING, AND
COMMUTING PATTERNS
CHANGE