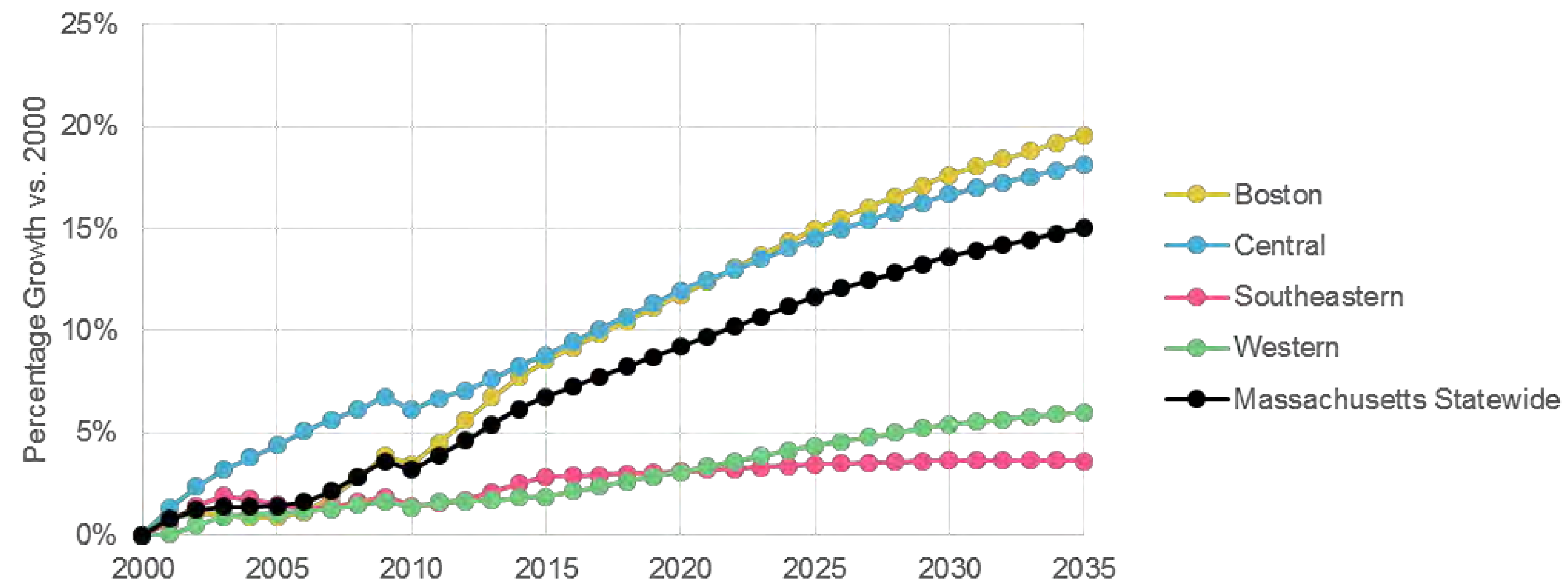




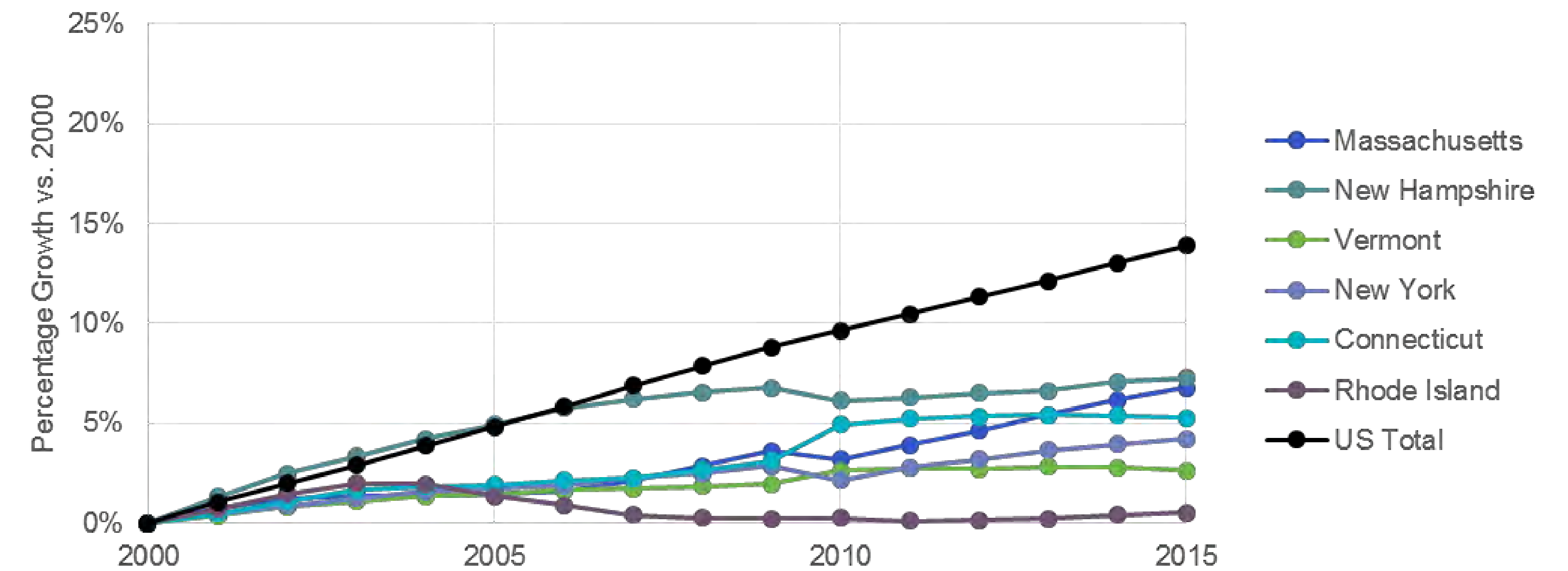


# Background

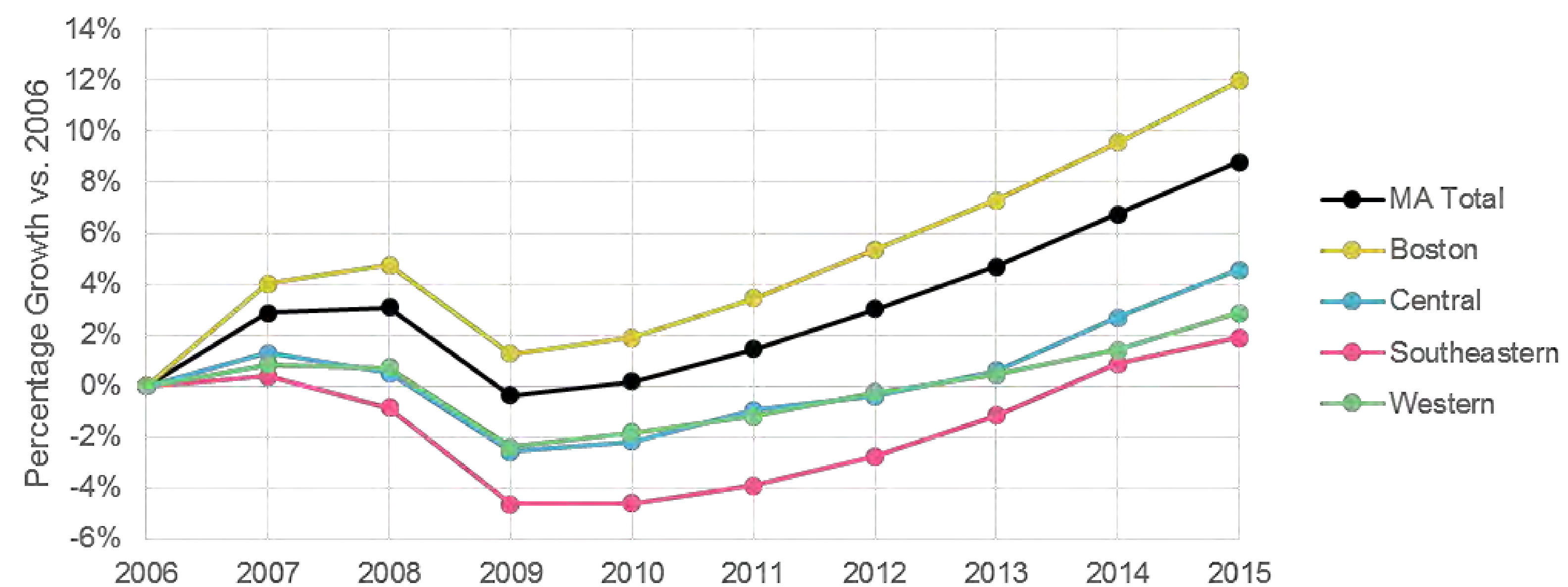
## Population in Massachusetts Regions



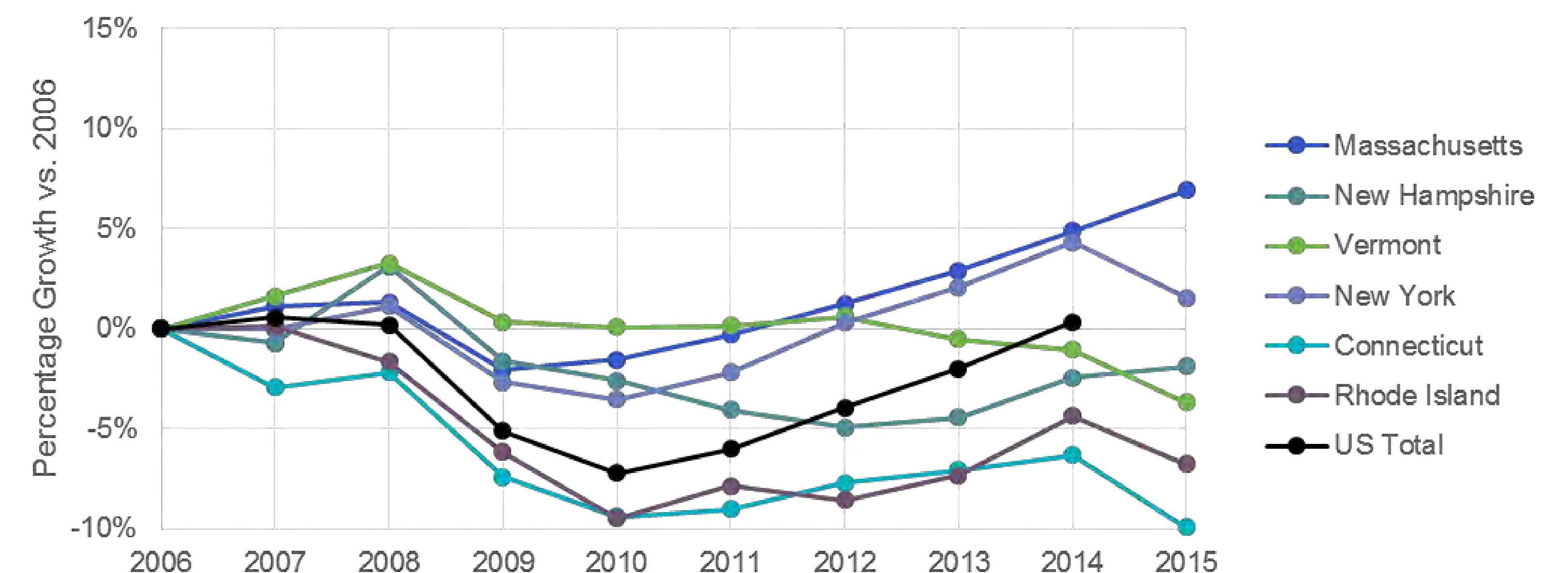
## Population in Massachusetts and Neighbor States



## Employment in Massachusetts Regions



## Employment in Massachusetts and Neighbor States







# Massachusetts Freight Plan



Industry	In US, MA is
Education and Knowledge Creation	4 <sup>th</sup>
Information Technology and Analytical Instruments	4 <sup>th</sup>
Fishing and Fishing Products	4 <sup>th</sup>
Jewelry and Precious Metals	6 <sup>th</sup>
Biopharmaceuticals	7 <sup>th</sup>
Performing Arts	7 <sup>th</sup>
Recreational and Small Electric Goods	7 <sup>th</sup>
Financial Services	8 <sup>th</sup>
Marketing, Design, and Publishing	8 <sup>th</sup>
Communications Equipment and Services	9 <sup>th</sup>
Medical Devices	9 <sup>th</sup>
Video Production and Distribution	9 <sup>th</sup>
Footwear	10 <sup>th</sup>
Apparel	10 <sup>th</sup>

# Industries

## What did we find out about INSTITUTIONS?



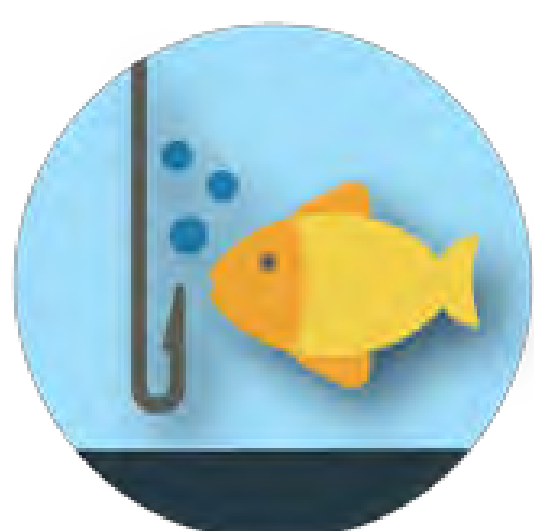
- They consume many things and produce mainly waste
- They are located in difficult locations for trucks, and cannot move
- They share suppliers for many important goods (food, milk, etc)
- They depend on integrated carriers (UPS, FedEx) more all the time

## What did we find out about BIOPHARMA?



- 100 firms in Cambridge, 50 on Route 128
- They manufacture very little product in MA - mostly research
- They take in many things - chemicals, proteins, and equipment
- What they do ship is valuable and time-sensitive

## What did we find out about FISHING?



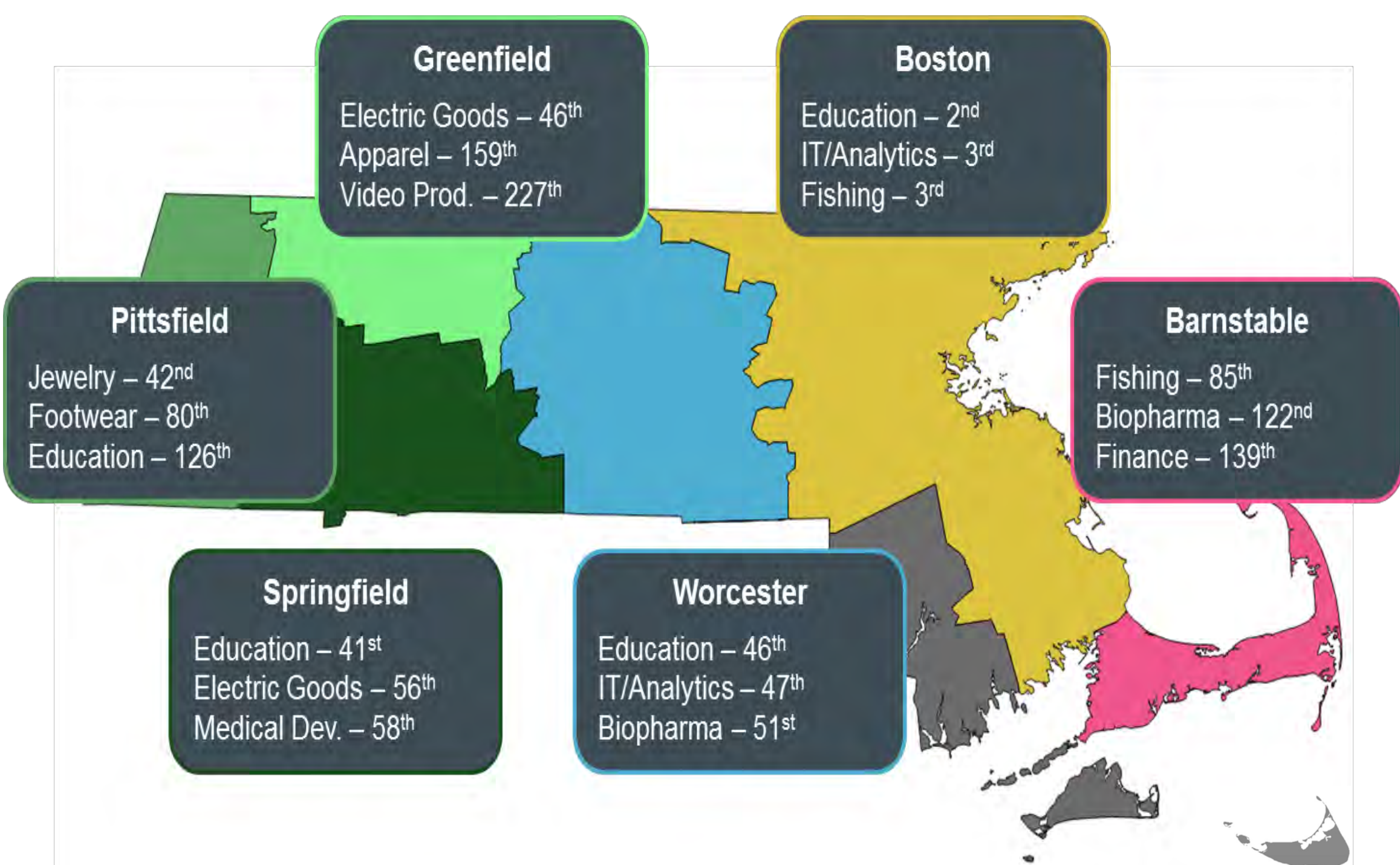
- What is caught here is not necessarily processed here
- And what is processed here may have been flown in
- 75% of fish produced in Boston is exported
- Fish is valuable enough to drive direct international flights

## What did we find out about FUEL & CONSUMER GOODS?



- Fuel arrives to ports vulnerable to flooding and climate change
- Gasoline trucks are impeded by urban traffic, HAZMAT bans
- An urban population is driving stores to be smaller, specialized
- In every way, deliveries are growing smaller and more frequent

## How do Mass. Metro Areas Rank Nationwide?







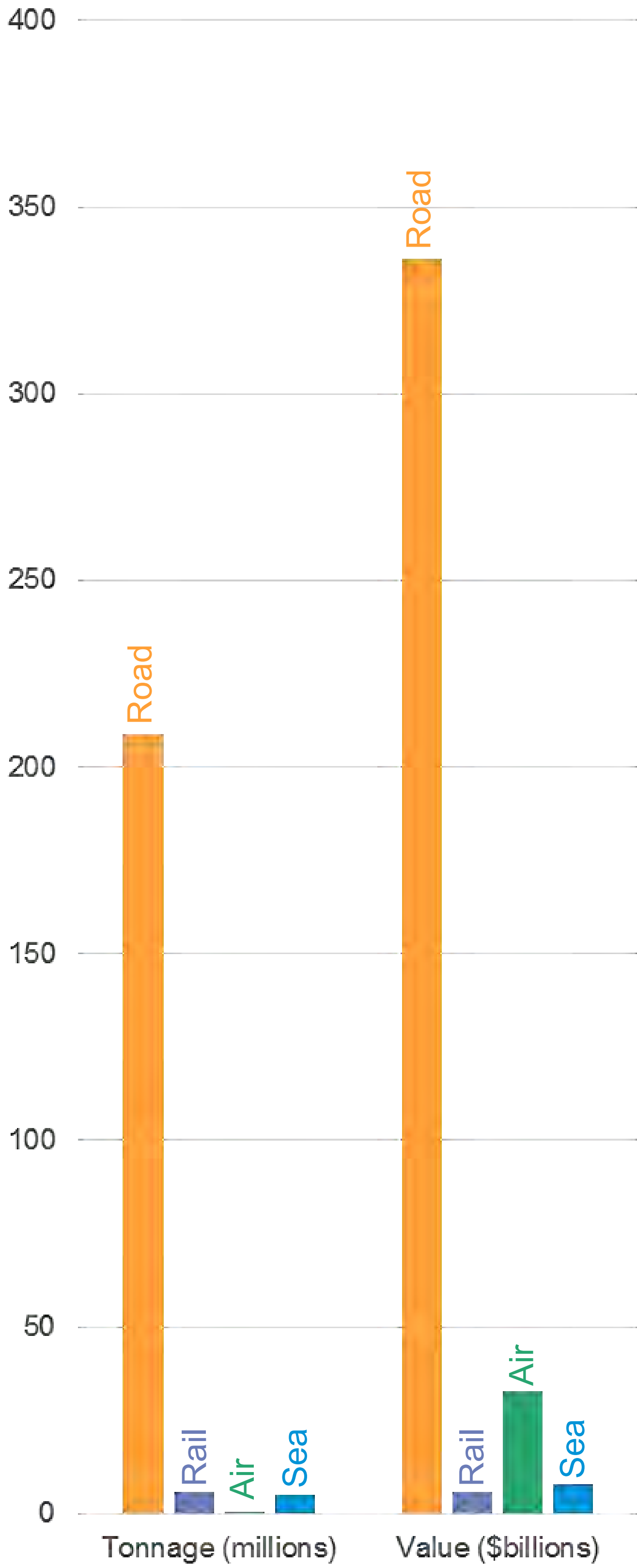
# How Freight Moves



By Weight		By Value	
Commodity	Tonnage (millions)	Commodity	Value (billions)
Gasoline	46.5	Gasoline	\$46.9
Gravel	26.3	Mixed Freight	\$46.1
Waste/Scrap	17.2	Electronics	\$24.2
Nonmetal Mineral Products	16.3	Misc. Manufactur. Products	\$16.9
Mixed Freight	14.5	Motorized Vehicles	\$16.2



By Weight		By Value	
Commodity	Tonnage (millions)	Commodity	Value (billions)
Animal Feed	0.21	Electronics	\$9.4
Basic Chemicals	0.08	Precision Instruments	\$6.9
Precision Instruments	0.05	Misc. Manufactur. Products	\$5.3
Meat/Seafood	0.05	Machinery	\$4.2
Electronics	0.04	Pharmaceuticals	\$1.8



By Weight		By Value	
Commodity	Tonnage (millions)	Commodity	Value (billions)
Other Foodstuffs	0.90	Motorized Vehicles	\$1.50
Newsprint/Paper	0.69	Plastics/Rubber	\$0.74
Cereal Grains	0.67	Chemical Products	\$0.71
Wood Products	0.64	Newsprint/Paper	\$0.51
Waste/Scrap	0.55	Other Foodstuffs	\$0.45



By Weight		By Value	
Commodity	Tonnage (millions)	Commodity	Value (billions)
Gasoline	2.53	Gasoline	\$2.00
Fuel Oils	1.11	Mixed Freight	\$1.11
Coal	0.61	Fuel Oils	\$0.89
Nonmetal Mineral Products	0.52	Plastics/Rubber	\$0.54
Plastics/Rubber	0.09	Electronics	\$0.47





# What **POLICIES AND REGULATIONS** support an efficient freight system?





Massachusetts Freight Plan

# How can MassDOT COLLABORATE with system users to collect feedback?





# How can MassDOT INVEST to relieve bottlenecks and maximize utility?





# How is the freight world **CHANGING**?

## What do we need to prepare for?