



## Gen3 Model Development Project

Travel Forecasting Subcommittee Meeting  
January 24, 2020

IN PARTNERSHIP WITH



Metropolitan Washington  
Council of Governments

# RSG Overview

**8 OFFICES ACROSS THE US**

★ VT HEADQUARTERS  
● RSG OFFICE  
● HOME OFFICE

FOUNDED IN **1986** BY DARTMOUTH COLLEGE PROFESSORS

EXPERIENCE WORKING WITH THE **US** FEDERAL GOVERNMENT  
REGIONAL & STATE AGENCIES AND **FORTUNE 500** COMPANIES

**100+** EMPLOYEES

EXPERIENCE WORKING IN **50** STATES AND, IN OVER **30** COUNTRIES

**AWARD-WINNING CULTURE**

ESOP **100%** EMPLOYEE-OWNED

**RSG**  
www.rsginc.com



# What We Do

## RESEARCH & ANALYTICS

For over 30 years, RSG has been a thought leader in developing and applying analytical techniques to help our clients understand and forecast complex human behavior and systems dynamics.

- Survey-based research
- Passive mobility data analytics
- Choice modeling
- Travel model development
- Freight modeling
- Noise control engineering
- Software development

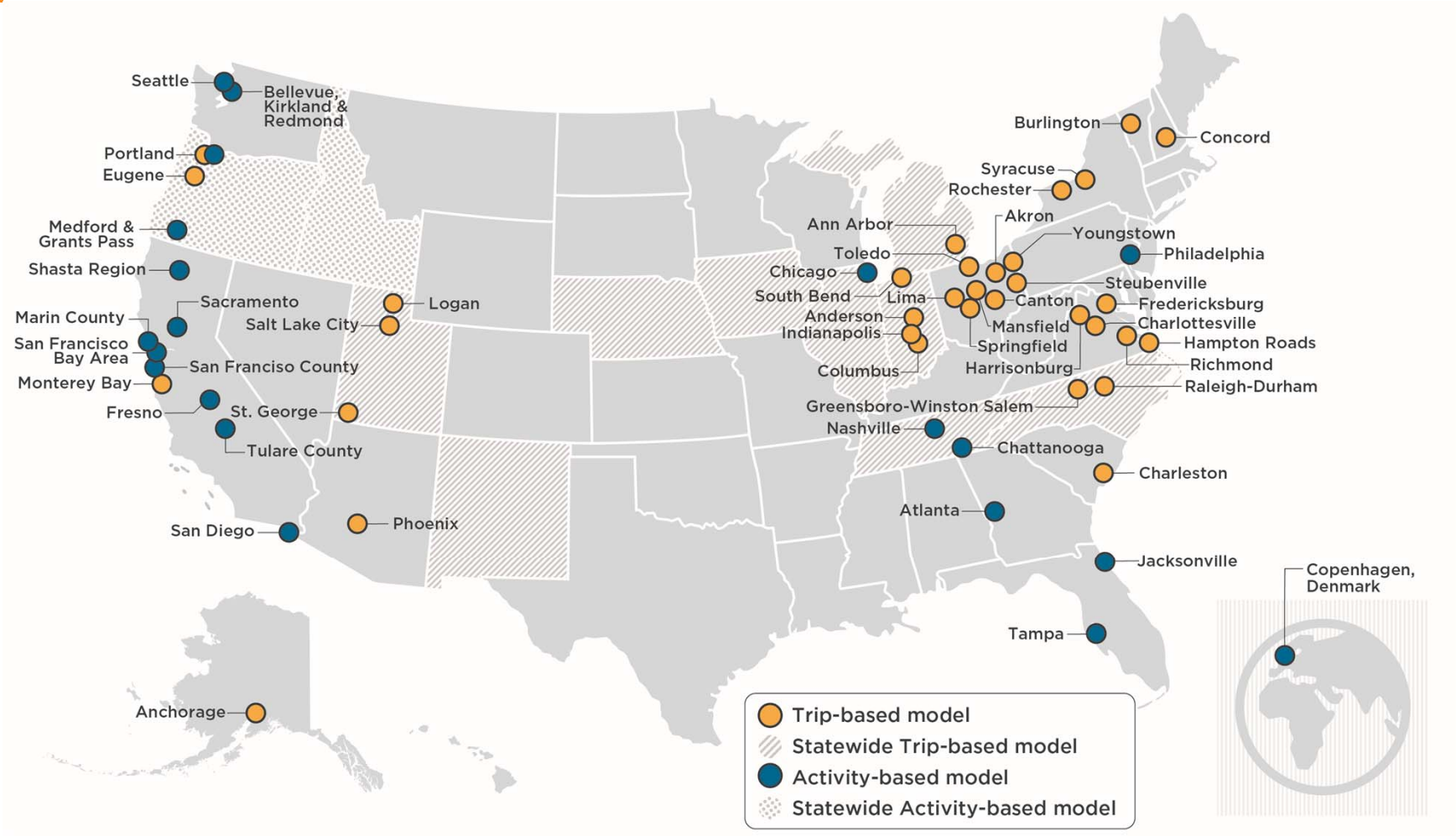
## STRATEGIC INSIGHTS

RSG helps organizations make better business decisions through data-driven insights. Our research and analytical methods include a focus on behaviors in a comprehensive system and are more sensitive and more resilient to change.

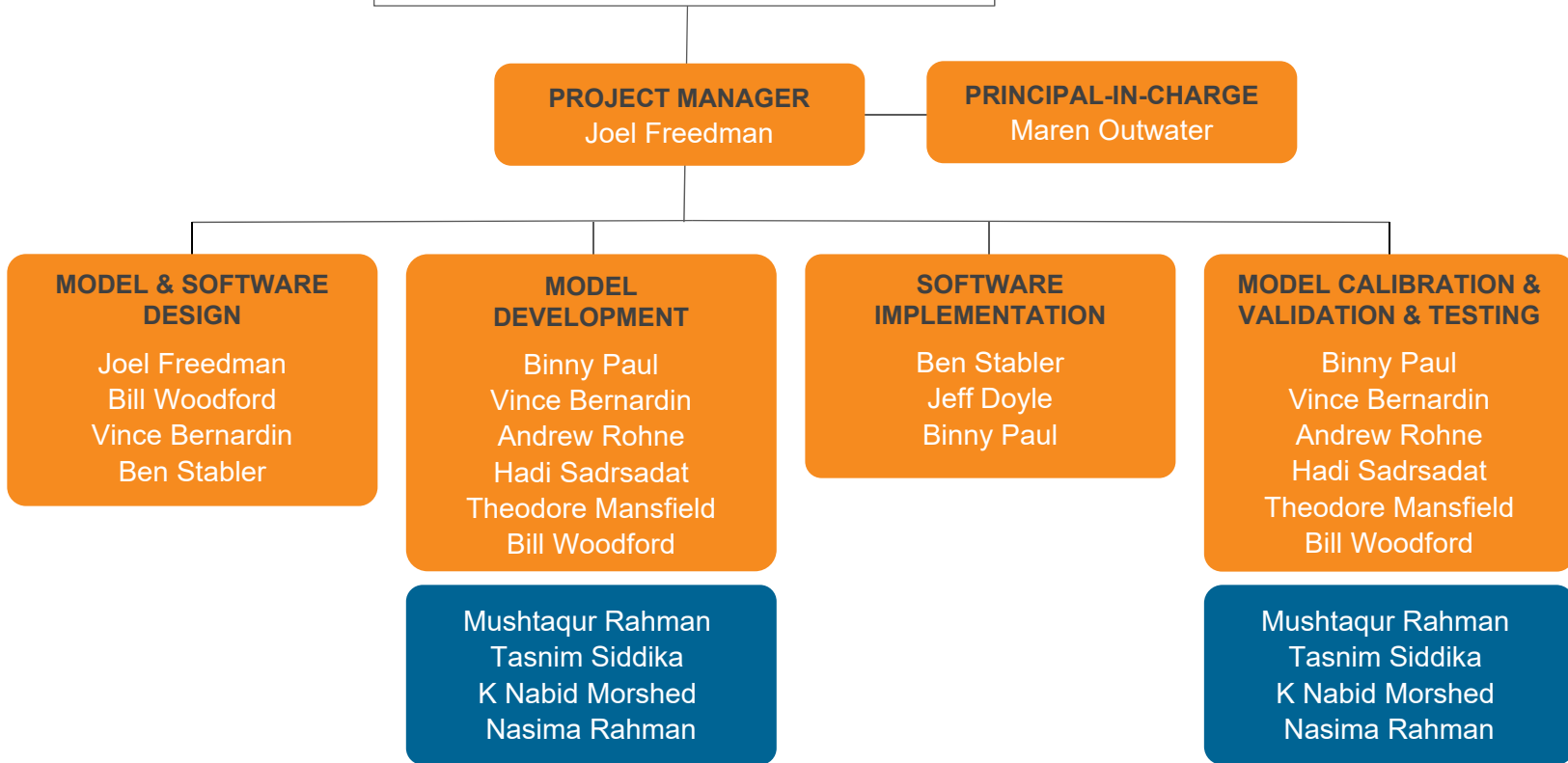
- Transportation forecasting
- Strategic transportation planning
- Public lands planning
- Pricing strategies
- Product & service development



# Model Development Experience



# Project Organization Chart



# Baseline Mobility

Baseline Mobility Group, Inc. (BMG) is a professional services firm in the mobility space. The firm was formed in the Research Triangle region in 2015 to reimagine urban transportation systems in an environmentally and socially responsible way.

## PRACTICE AREAS

- Traffic Engineering
- Transit and Transportation Planning
- Modeling and Data Analytics
- Freight Mobility

## MARKET AREAS

- Highways and Roads
- Mass Transit
- Port Authorities
- State, Regional, and Local Governments
- Colleges and Universities
- Private Developers



## Project Manager Joel Freedman



- 14 different activity-based model development projects and multiple model applications over 20 years
- Project manager and co-architect of MTC and ARC CT-RAMP models that were used as basis for ActivitySim
- Experienced with all facets of model development
- Certified *Senior Project Manager*, Certified National Highway Institute Instructor
- Co-author of Travel Model Improvement Program activity-based modeling webinar series



# Model Development Experience

## 15 YEARS

- San Francisco Bay Area CT-RAMP TM1: 2003-2010
- San Francisco Bay Area CT-RAMP TM2: 2013-2018

## 10 YEARS

- San Diego CT-RAMP County Model: 2009-2019
- Atlanta Region CT-RAMP Model: 2004-2012

## 5 YEARS

- Oregon DOT Statewide PT Model: 1999-2004
- San Francisco County DaySim Model: 1999-2000
- Ohio DOT Statewide PT Model: 2003-2007
- Chicago CT-RAMP Model: 2010-2012
- Idaho Statewide PT Model: 2014-2015
- Southern Oregon CT-RAMP Model: 2015-2018
- Fresno County DaySim Model: 2017-2018
- Marin County CT-RAMP Model: 2017-2019
- Portland CT-RAMP Model: 2018 - present
- Tulare County DaySim Model: 2019 - present





# Model Applications Experience

TRANSIT	PRICING	REGIONAL PLANS	ASSET MANAGEMENT
<ul style="list-style-type: none"><li>• San Francisco County (SFCTA) Central Subway</li><li>• Sacramento State University Bus-Rapid Transit Project</li></ul>	<ul style="list-style-type: none"><li>• San Francisco County (SFCTA) Mobility Study</li><li>• MTC Regional High Occupancy Toll Lane Analysis</li></ul>	<ul style="list-style-type: none"><li>• MTC Regional Transportation Plan Update Assistance</li><li>• ARC Regional Transportation Plan On-Call</li><li>• SANDAG Regional Transportation Plan Support</li></ul>	<ul style="list-style-type: none"><li>• Oregon DOT Rough Roads Ahead</li></ul>



# Key staff include highly respected experts with a wealth of experience in travel modeling



## MAREN OUTWATER

- Pioneered activity-based models in 1999 for San Francisco County
- Project Manager for the DVRPC activity-based model
- Co-author of the TMIP Activity-Based Modeling Webinar series
- Leads Transport Analytics at RSG



## BILL WOODFORD

- Focuses on transit ridership forecasting, alternatives analysis, and system analysis.
- Consulted with many of the largest transit agencies in the United States
- Primary author of Simplified Trips On Project (STOPS) software



## BEN STABLER

- Project Manager for ActivitySim
- Experienced ABM model developer
- Manages DaySim software
- Integrated ABMs with other model components
- Leads RSG's transportation software development



## JEFF DOYLE

- 30 years of experience developing software and leading software jobs
- Lead developer of ActivitySim
- Has built many modeling tools – population synthesis, freight models, travel survey technology
- RSG's lead software architect



## BINNY MATHEW PAUL

- Expert in ABM estimation and calibration –CT-RAMP and DaySim
- Experienced ABM developer
- Developed special generator models for ABMs
- Co-developer of PopulationSim, BCA for ABM, ABM Dashboard



## MUSHTAQ RAHMAN

- Principal of Baseline Mobility Group.
- Has worked on over 30 transportation planning studies including the South Capitol Street project and the Purple Line project
- Traffic Design Lead for 5+ years for the South Capitol Street Improvements project



## Conclusions

The RSG team is very excited to be working on this project and looking forward to engaging with this committee as we proceed!

