

# MAKING THE MOST OF HIGH-SPEED RAIL IN CALIFORNIA

## Lessons from France and Germany

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U.S. Department of Transportation  
Federal Transit Administration



The German Marshall Fund  
of the United States

STRENGTHENING TRANSATLANTIC COOPERATION

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REPORT

## Making the Most of High-Speed Rail in California: Lessons from France and Germany

June 11, 2015

Eric Eidlin

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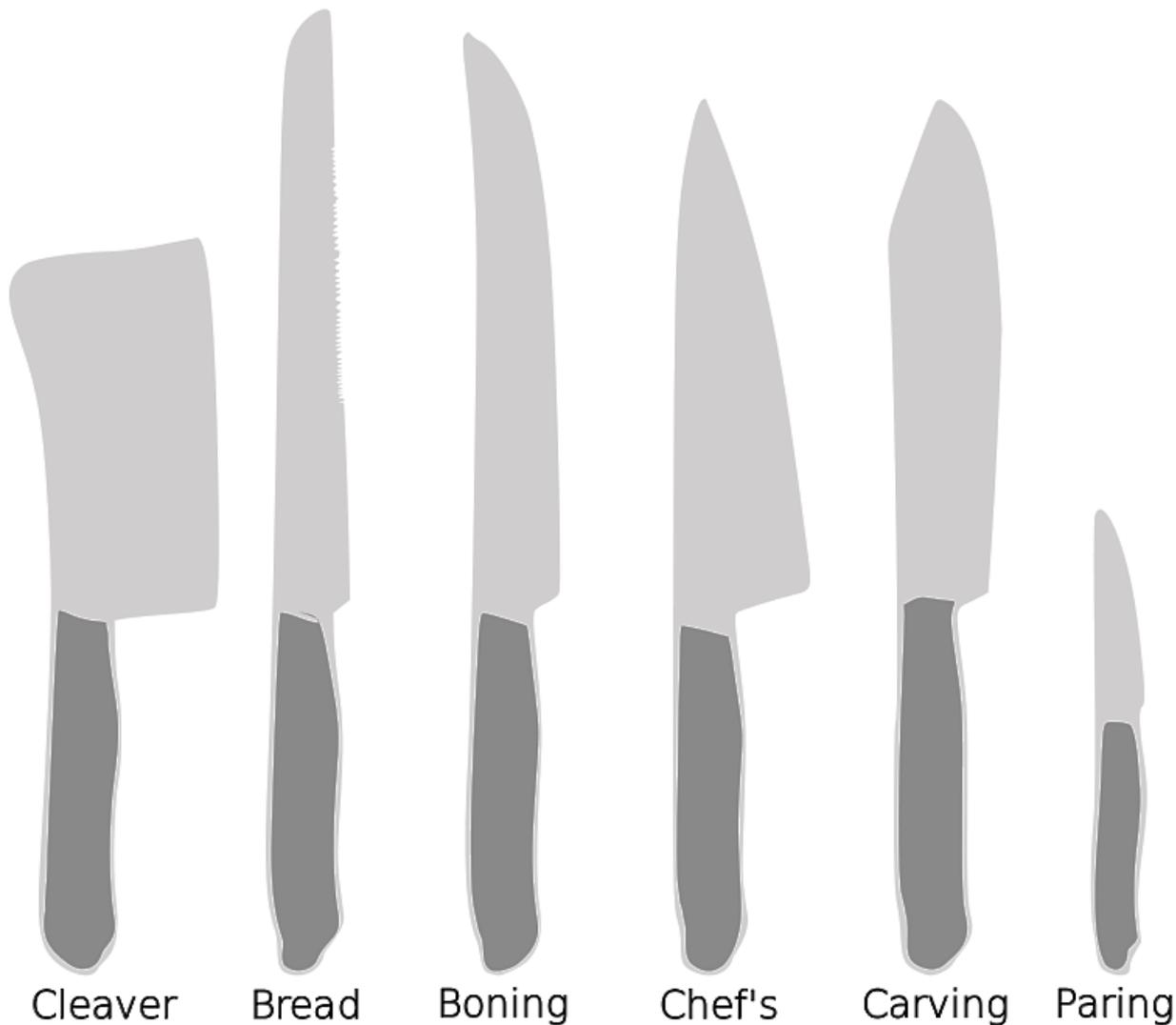


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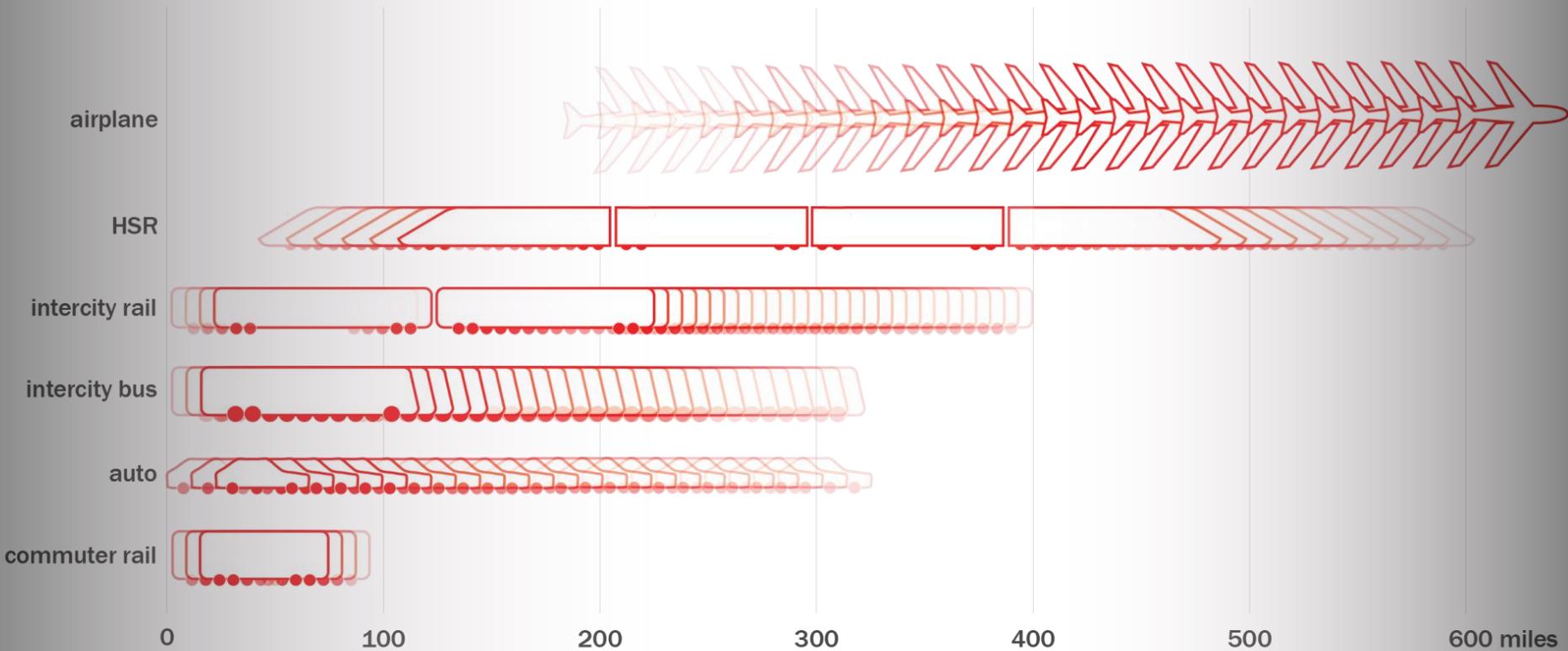
**Why High Speed Rail?**

**And is it well-suited to California?**

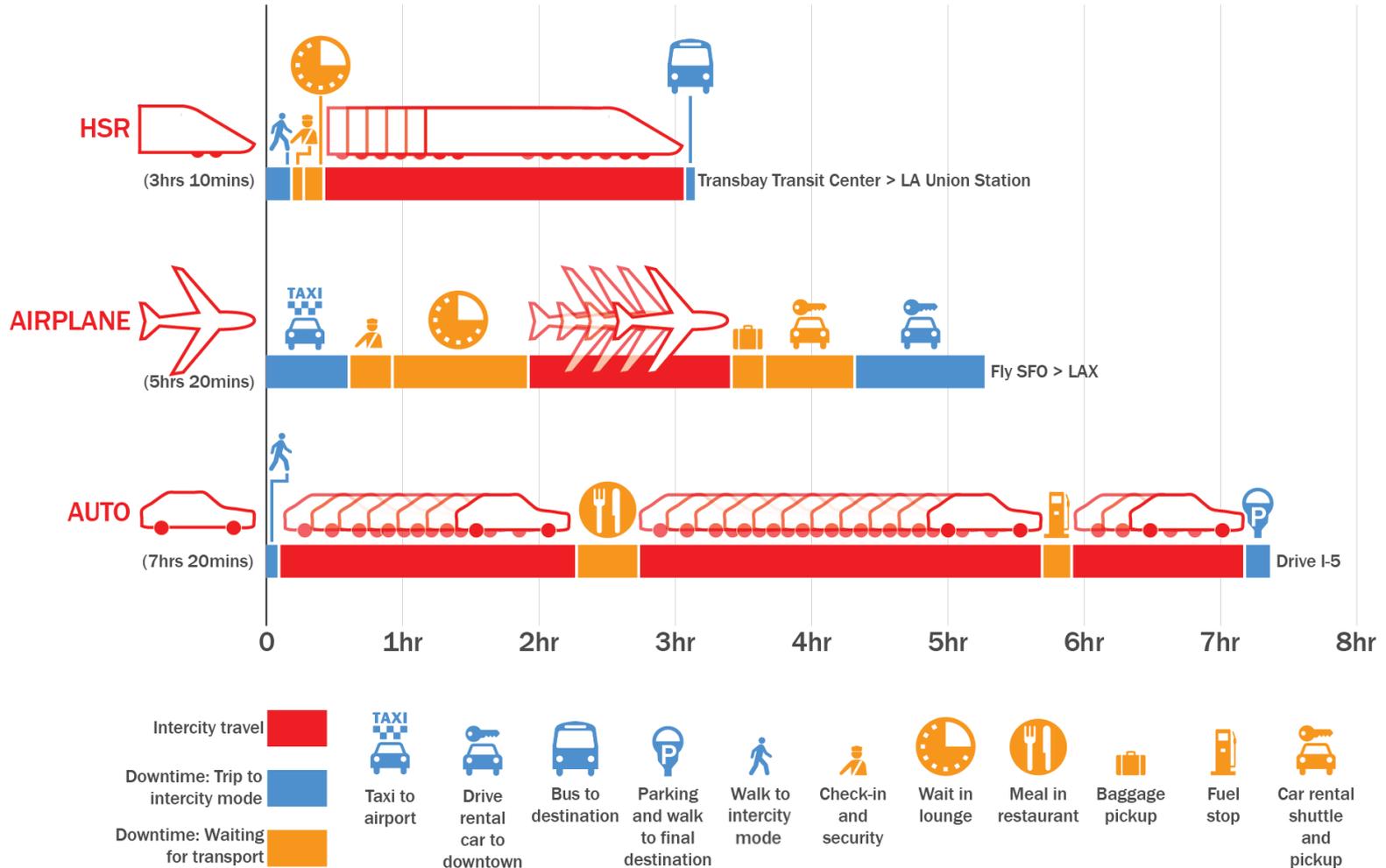
# We Need the Right Tool for the Job



# Optimal Distance Ranges of Intercity Travel Modes

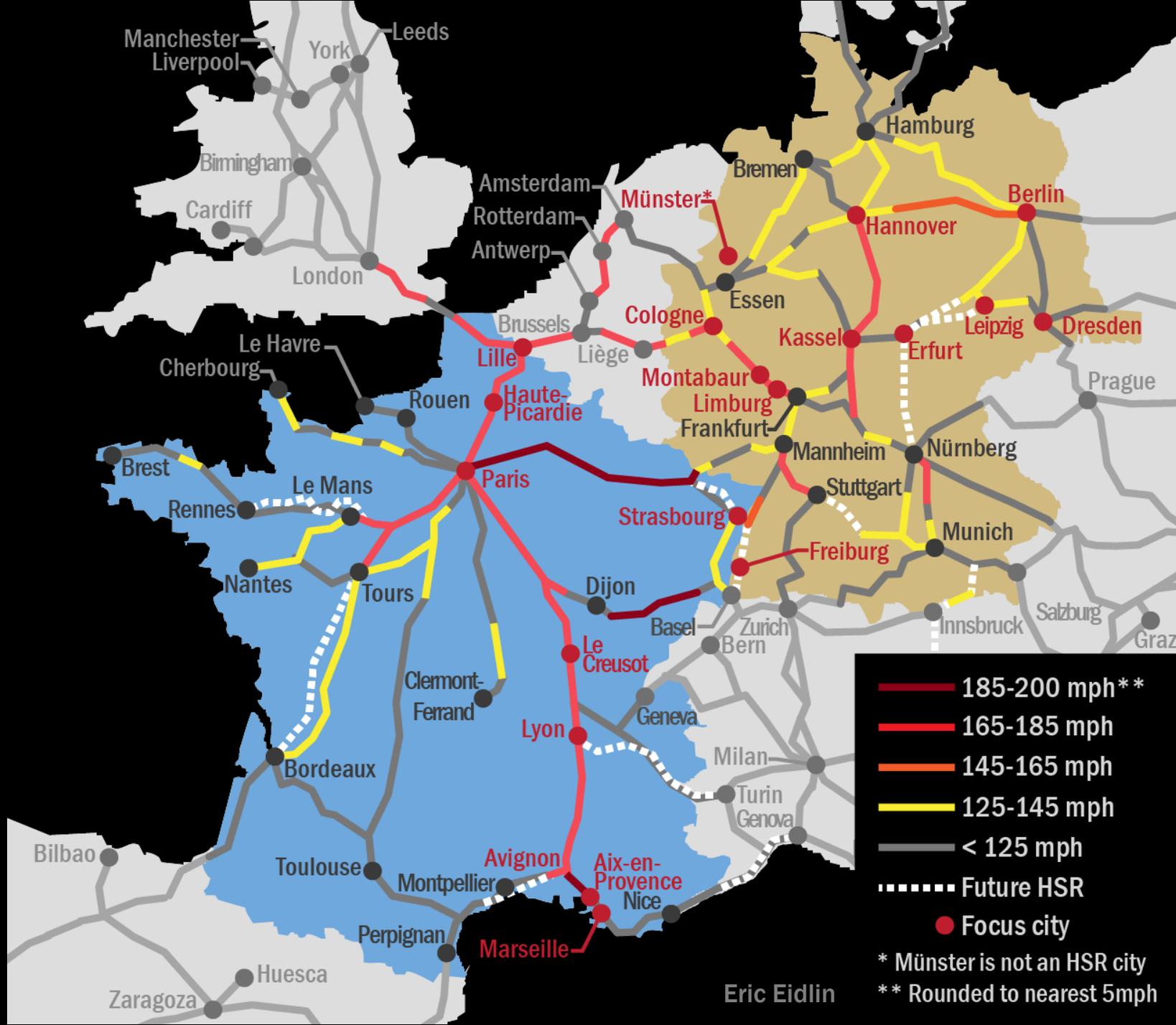


# SF Ferry Building to LA Grand Central Market



# **Speed Versus Connectivity**

**High speeds should be prioritized in sparsely populated places, while maximizing connections should be primary concern in densely populated areas.**

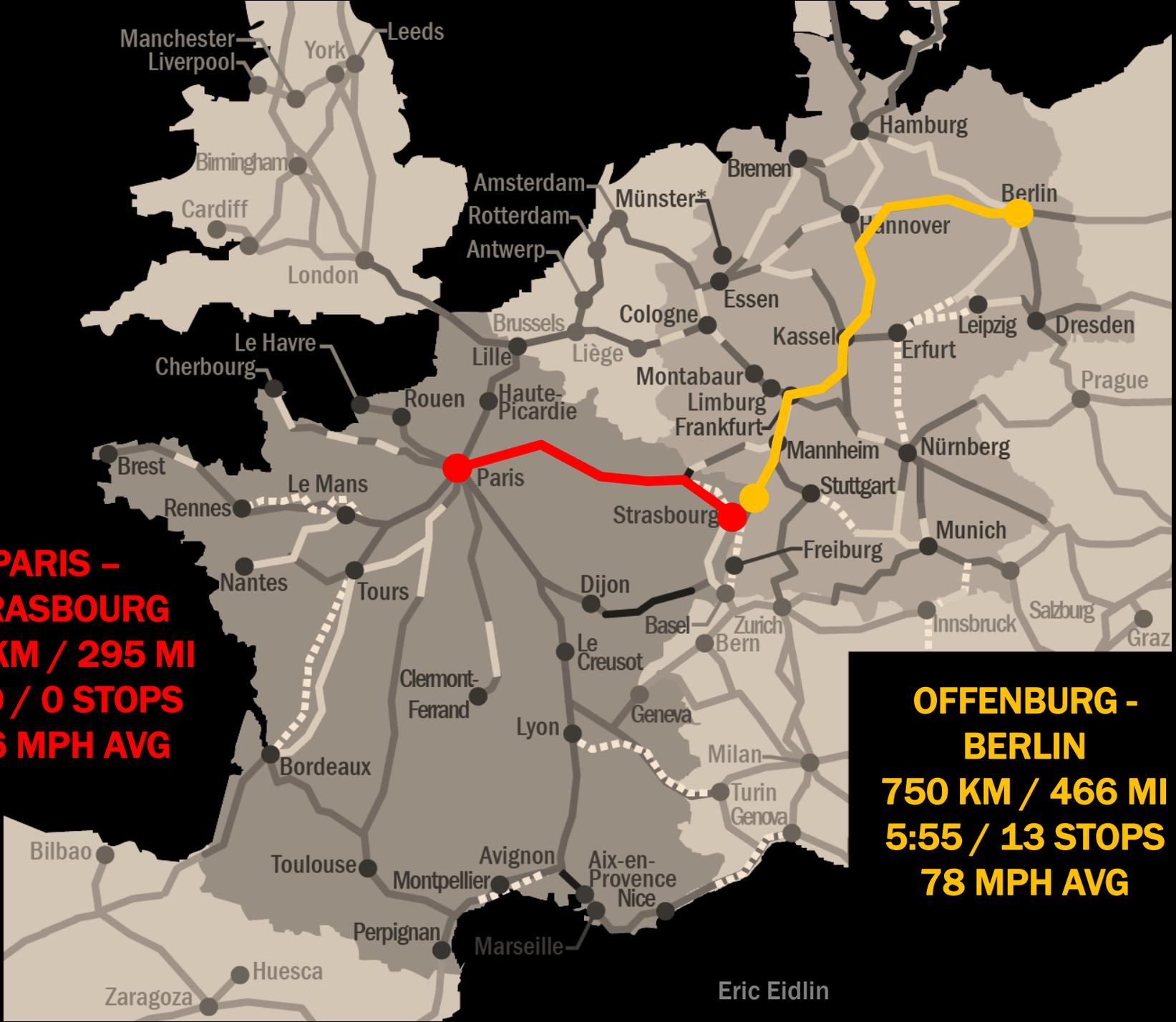


- 185-200 mph\*\*
- 165-185 mph
- 145-165 mph
- 125-145 mph
- < 125 mph
- ⋯ Future HSR
- Focus city

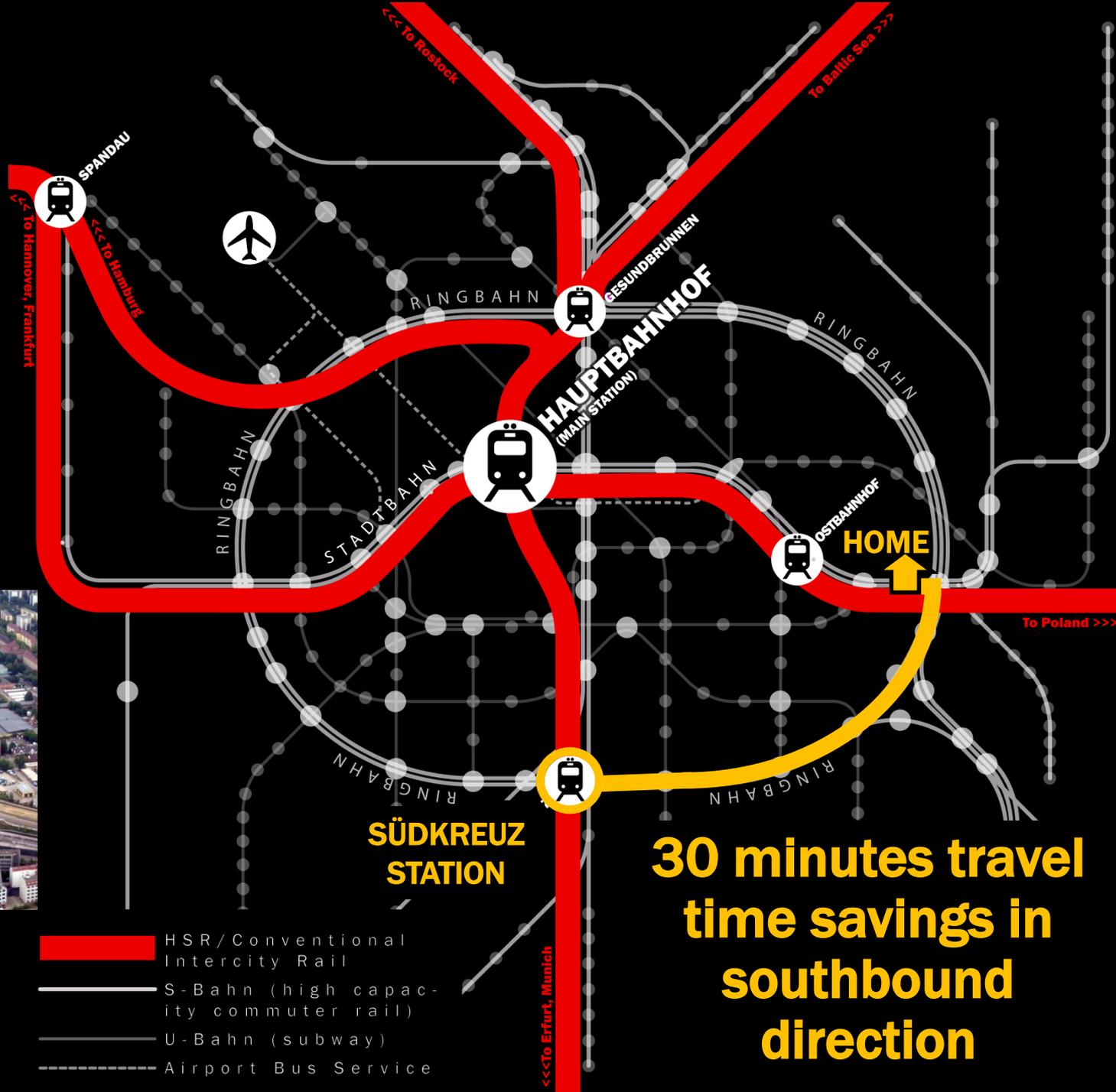
\* Münster is not an HSR city  
 \*\* Rounded to nearest 5mph

**PARIS -  
STRASBOURG**  
**474 KM / 295 MI**  
**2:20 / 0 STOPS**  
**126 MPH AVG**

**OFFENBURG -  
BERLIN**  
**750 KM / 466 MI**  
**5:55 / 13 STOPS**  
**78 MPH AVG**



# Berlin Transit and HSR



- HSR/Conventional Intercity Rail
- S-Bahn (high capacity commuter rail)
- U-Bahn (subway)
- Airport Bus Service

**30 minutes travel time savings in southbound direction**

# **Station Types**

**Central city stations maximize the economic development and mobility benefits of HSR.**



Flickr user Moellerh

# Central City – Cologne Main Station



“Gare Betterave”



Exurban - Le Creusot



**Opened: 1981**  
**3 Small towns of 10,000-15,000 nearby**  
**2,740 passengers/day**  
**750 parking spaces**  
**4 tracks ([2 pass-through](#))**

# Exurban Station – Le Creusot

# **Station Area Land Use**

**High-density employment and commercial uses are best for HSR station districts.**



Grand Lyon

# Central City – Lyon Part Dieu

## La Defense, Paris



## KEY NUMBERS

- Second office district in France
- 6.5 million sf new office space
- 1.6 million sf new residential space
- 2.2 million sf retail, event, and hotel space

## KEY CONCEPTS

- “Gare ouverte”
- “Gare connectrice”
- “Socles actifs”
- “Sol difficile” and “sol facile”

# New Center City - Lyon Part Dieu

# **Station Design**

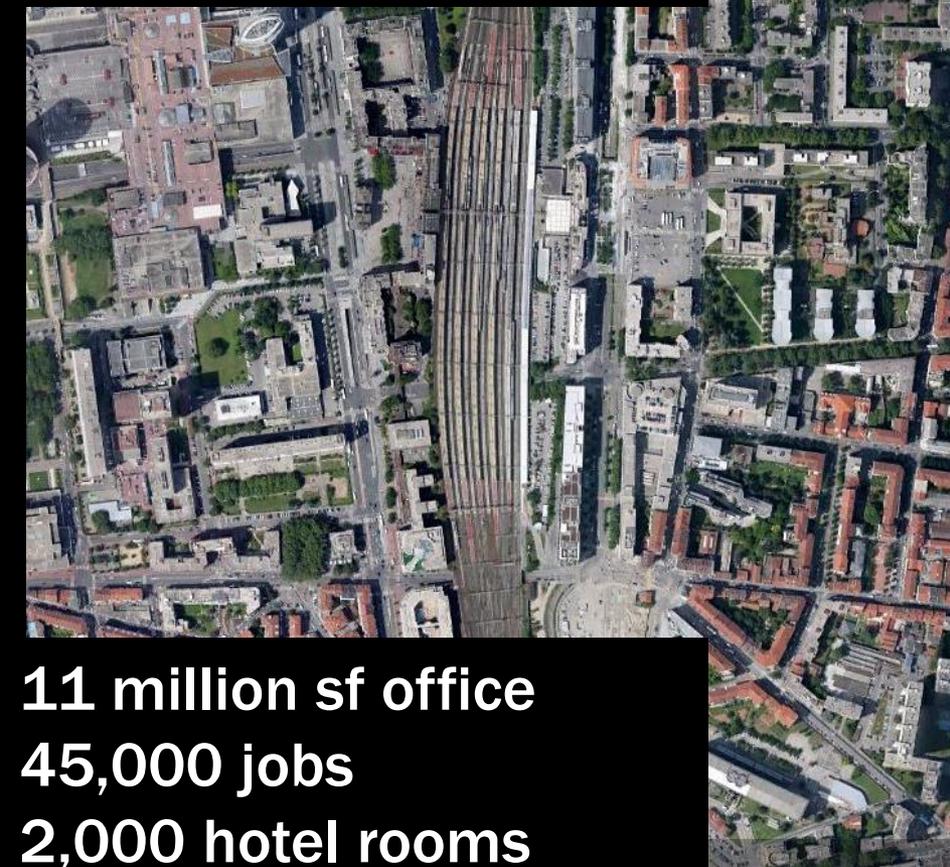
**HSR stations have inherent urban design advantages over other types of transportation facilities. California should recognize and take full advantage of these.**

## Lyon Part-Dieu HSR

26 million passengers (2011)

362 acres

5,000 parking spaces



11 million sf office

45,000 jobs

2,000 hotel rooms

## Lyon St. Exupéry Airport

8 million passengers in 2011

5,000 acres (approx.)

16,000 parking spaces



11,000 sf office

5,500 jobs

245 hotel rooms

# HSR Stations and Space-Efficiency



Christoph Büscher

# Permeable Station – Berlin Stadtbahn

# **Station Design and Land Use**

**HSR stations should celebrate their  
non-transportation functions.**



# Hannover Main Station



**Downtown Station / Mall - Hannover**

# **Space-Efficient Access Modes**

**Access to stations by space-efficient modes of transportation, including walking, transit, bicycling, taxi and carshare should be prioritized.**



- 3,300 bike parking spaces (largest garage in Germany)
- Importance of intermodalism

	Mieten	Parken	Service
 <p>Die Radstation direkt an Münsters Hauptbahnhof sorgt dafür, dass Sie</p>			

# Münster Bike Station



Introducing

# LYFT LINE

Your daily ride

lyft

# **Intermodal Connections**

**Within HSR stations, first-rate intermodal physical connections between HSR and non-auto access modes are essential.**



# Seamless Connections - Erfurt



Deutsche Bahn AG

# Blended Stations

# Conclusions

# The Importance of Vision

It is essential to articulate vision for project first and then figure out how to realize vision within constraints.

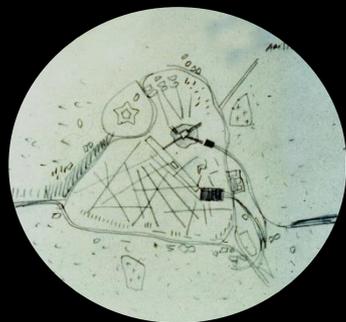




**Powerful champions who can forcefully advocate for their visions for HSR stations and station areas are essential.**



**Carefully-conceived phasing plans that will foresee how station areas will evolve over time into more urban, compact, and economically dynamic places are essential.**



**Each station area should establish a cross-cutting governance entity (such as a joint powers authority) to lead station and station area design efforts as early in the design process as possible.**

# **The Importance of Vision**

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