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*Tram-Train – Grasping the  
Opportunity*

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# Content of Presentation

- Brief overview of Tram-Train
- Tram-Train: The stakeholder perspective
- The local opportunities
  - Leeds City Region
  - West Midlands

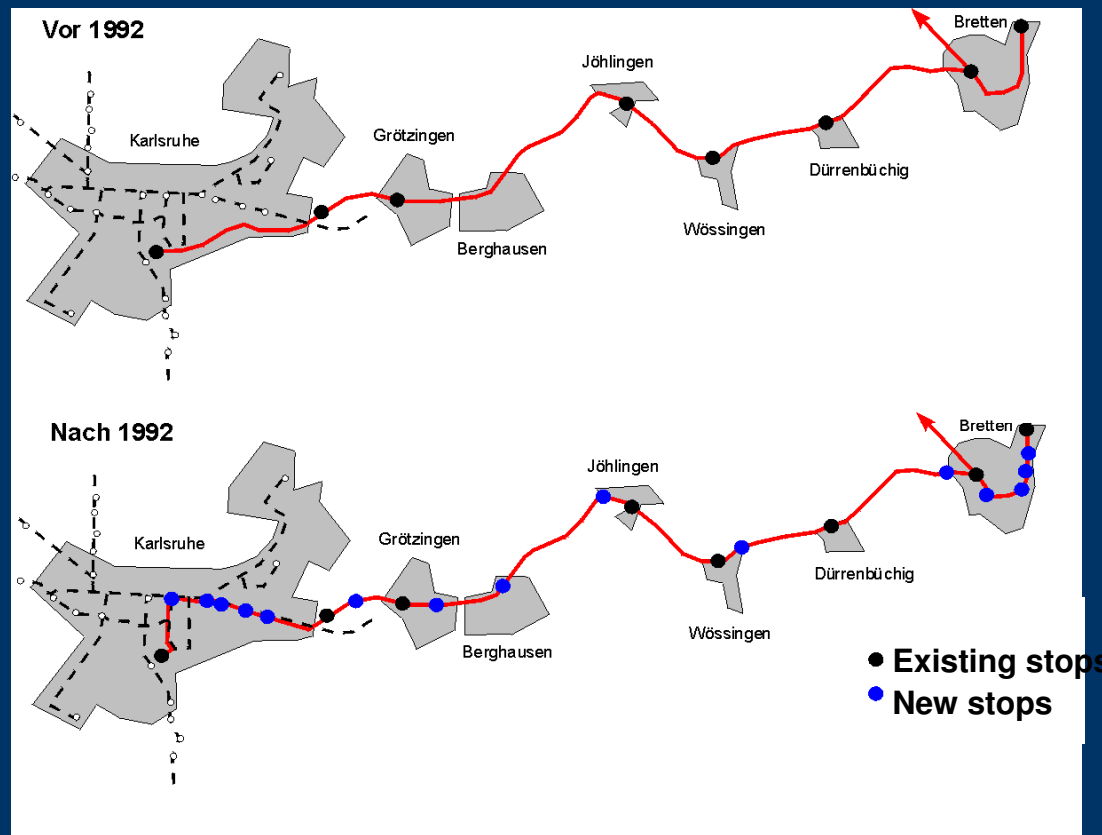




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# Philosophy

- Direct connections between the region and inner city
  - Faster services serve more stops while still reducing overall travel times



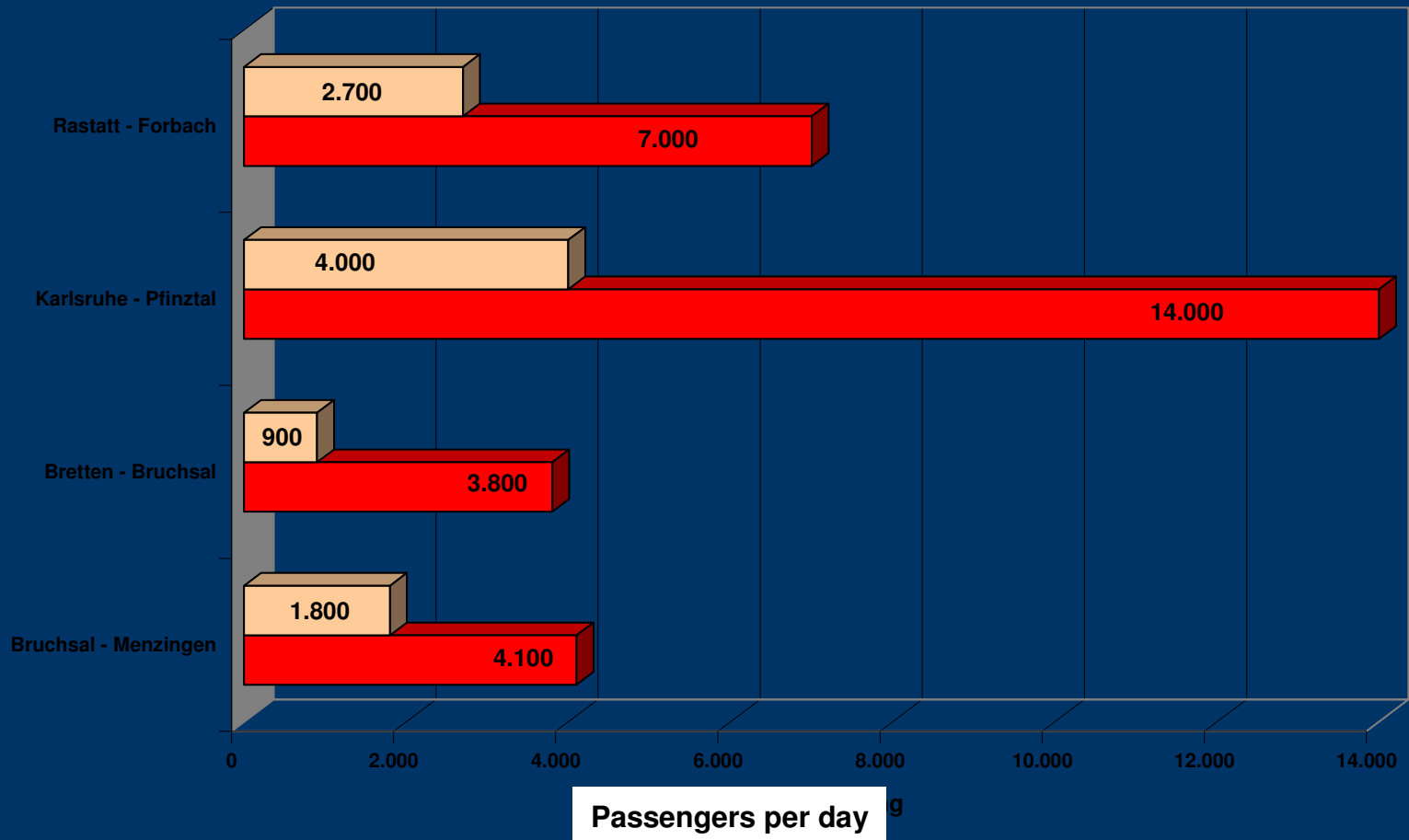
→ Public Transport Becomes Competitive





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# Ridership on selected routes







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# Reasons for Tram Train

- > **Potential new passengers all own cars**
  - > (Decreasing number of captives)
- > **Motorists would rather use trams than buses:**
- > **proportion of car owners using trams:**
  - > 40%
- > **proportion of car owners using buses :**
  - < 5%
- > **Creating direct connections: car owners don't like to change**
- > **Paying equal attention to traffic in inner cities and rural areas**
- > **Regional traffic between cities and rural areas is the main growth market for Public Transport!**

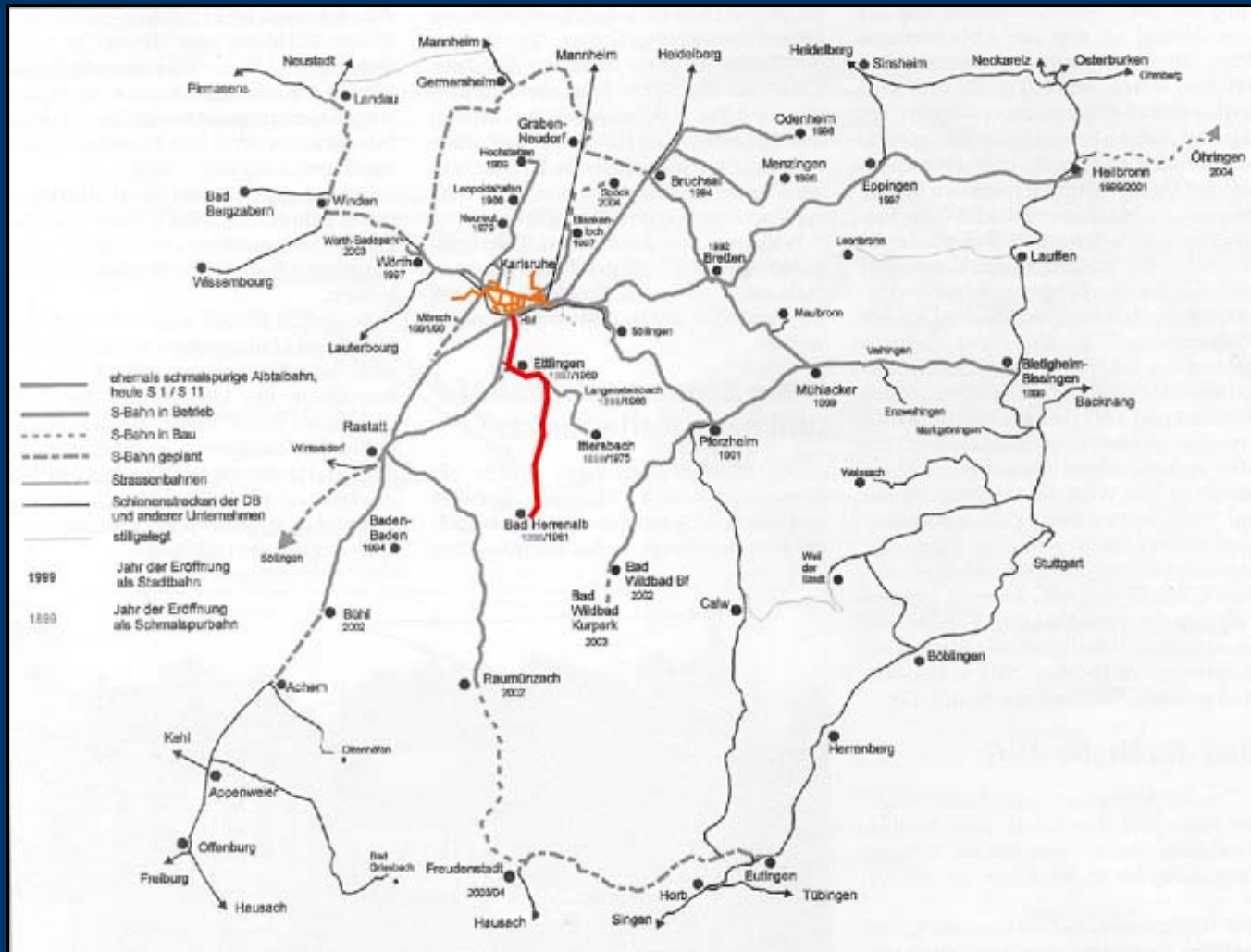




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1961

# Development of the Tram-train network in Karlsruhe

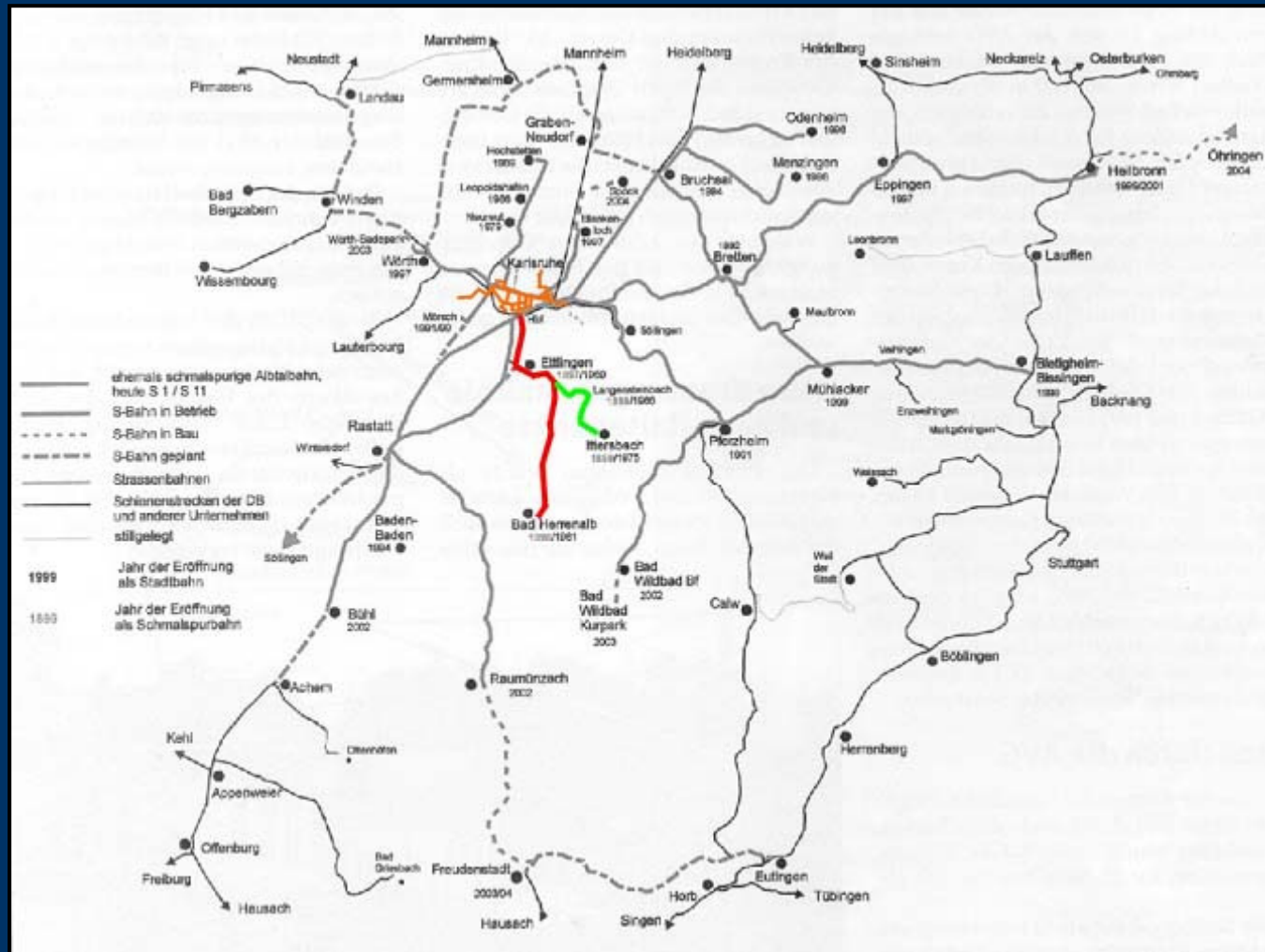




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1975

# Development of the Tram-train network in Karlsruhe

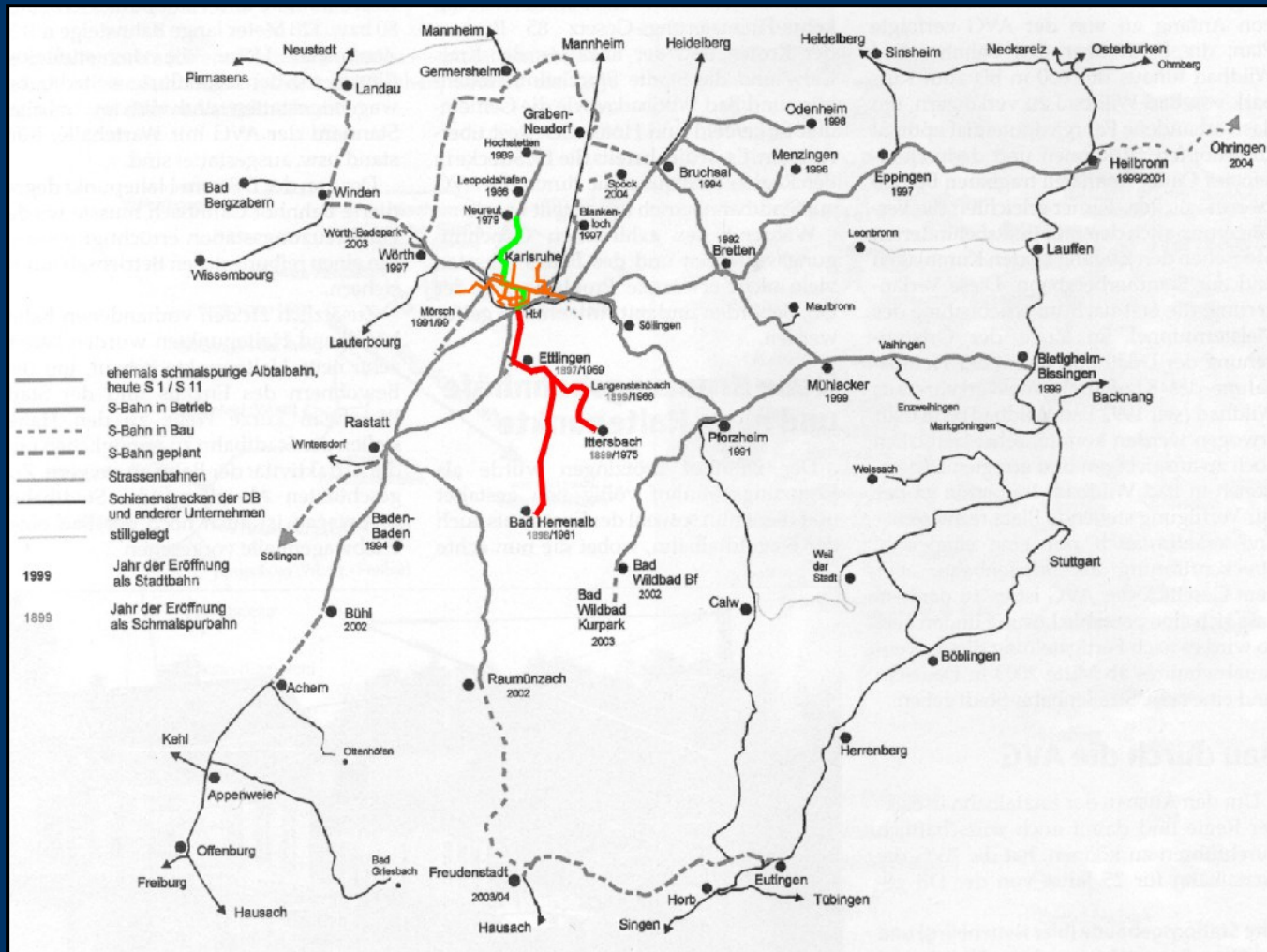




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1979

# Development of the Tram-train network in Karlsruhe





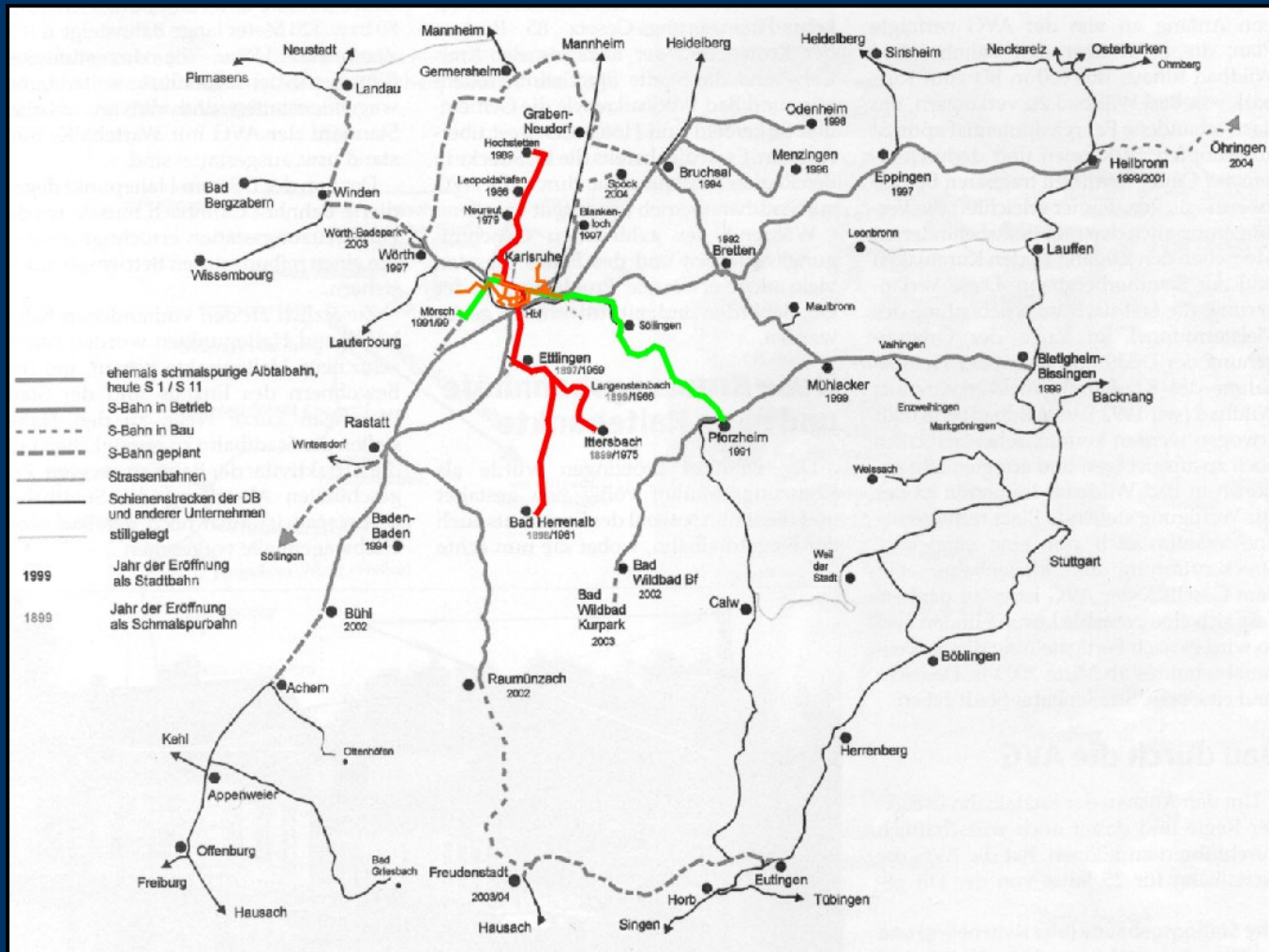




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# Development of the Tram-train network in Karlsruhe

1991

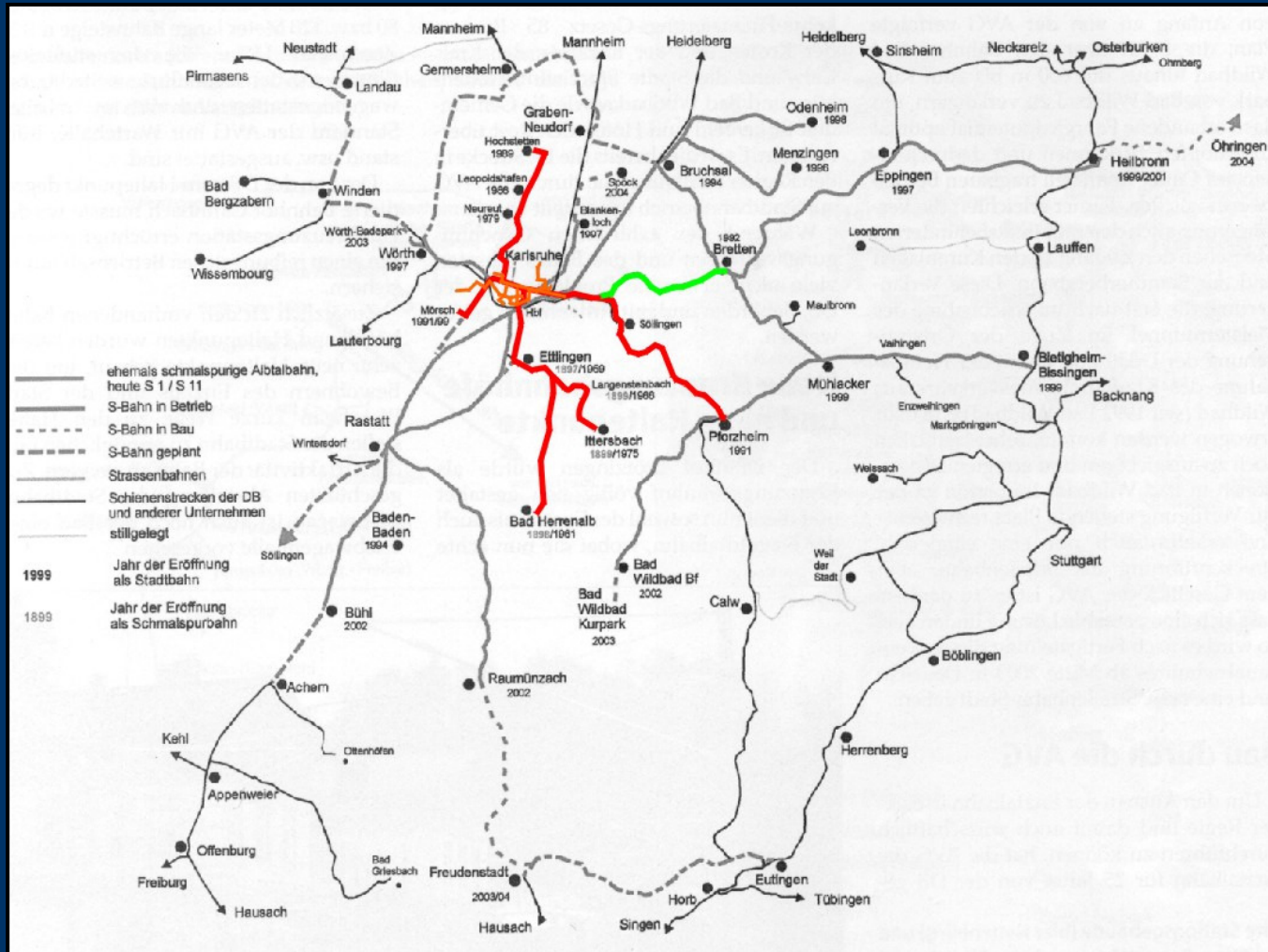




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# Development of the Tram-train network in Karlsruhe

1992



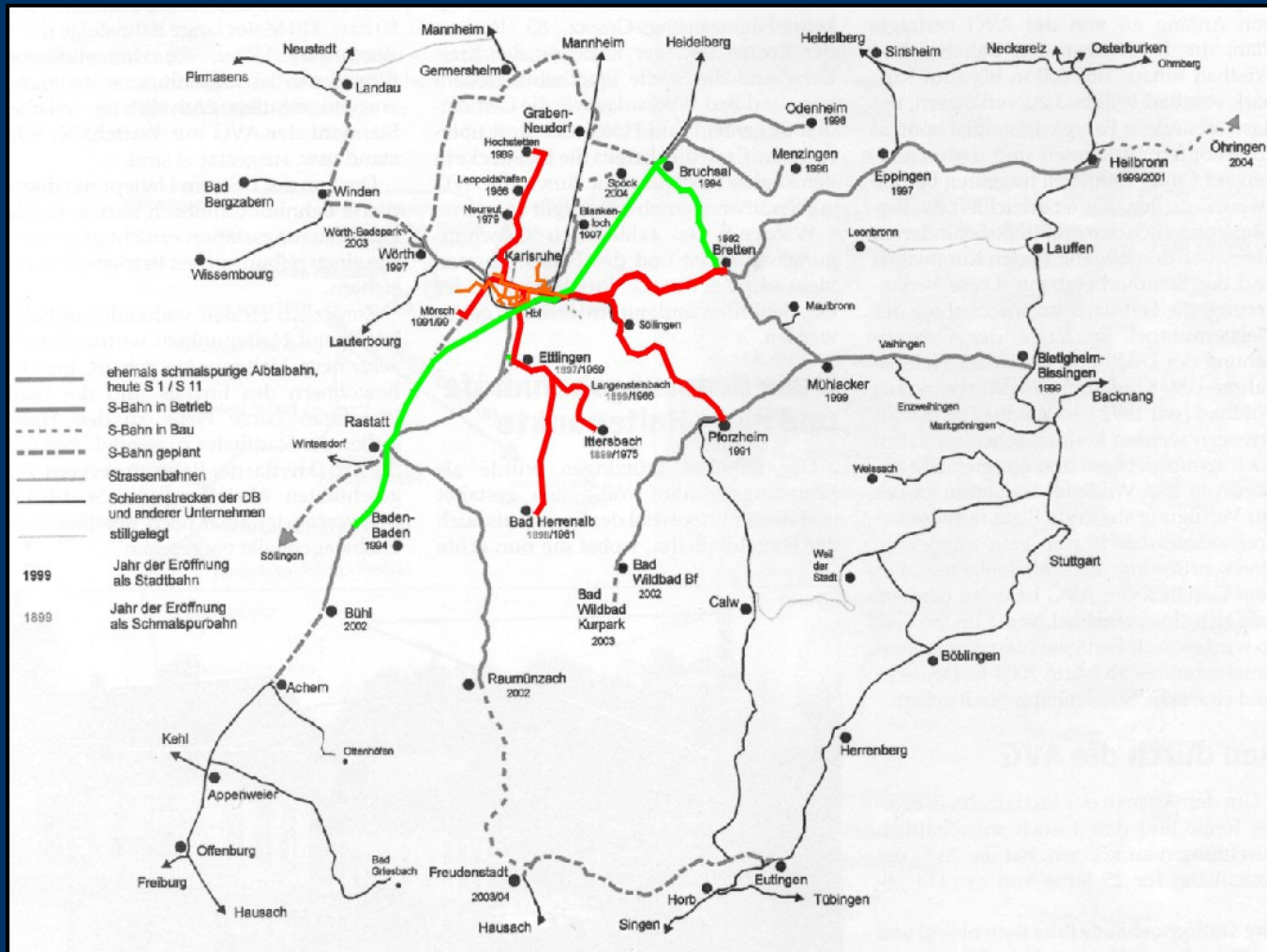




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# Development of the Tram-train network in Karlsruhe

1994



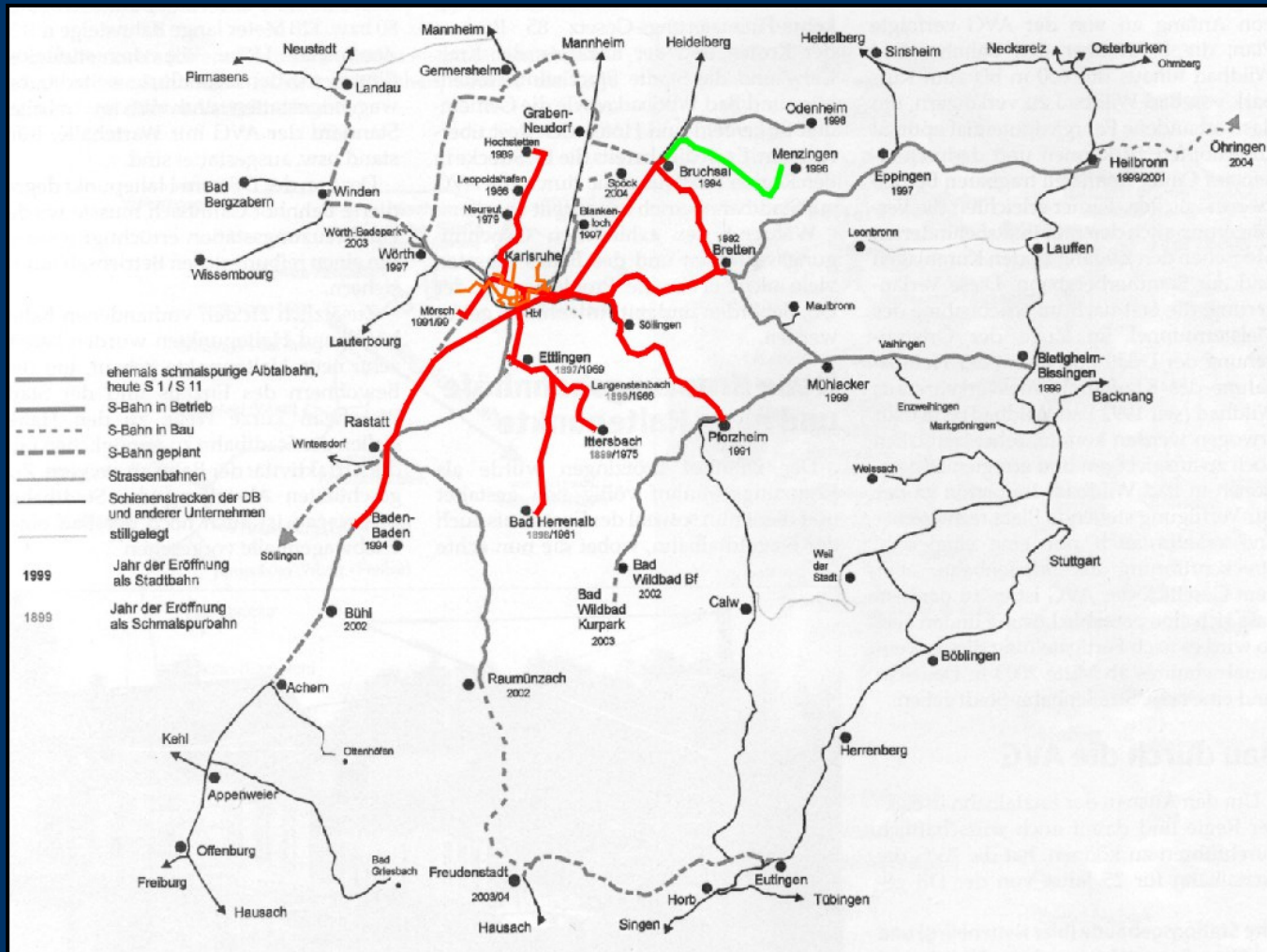




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# Development of the Tram-train network in Karlsruhe

1996

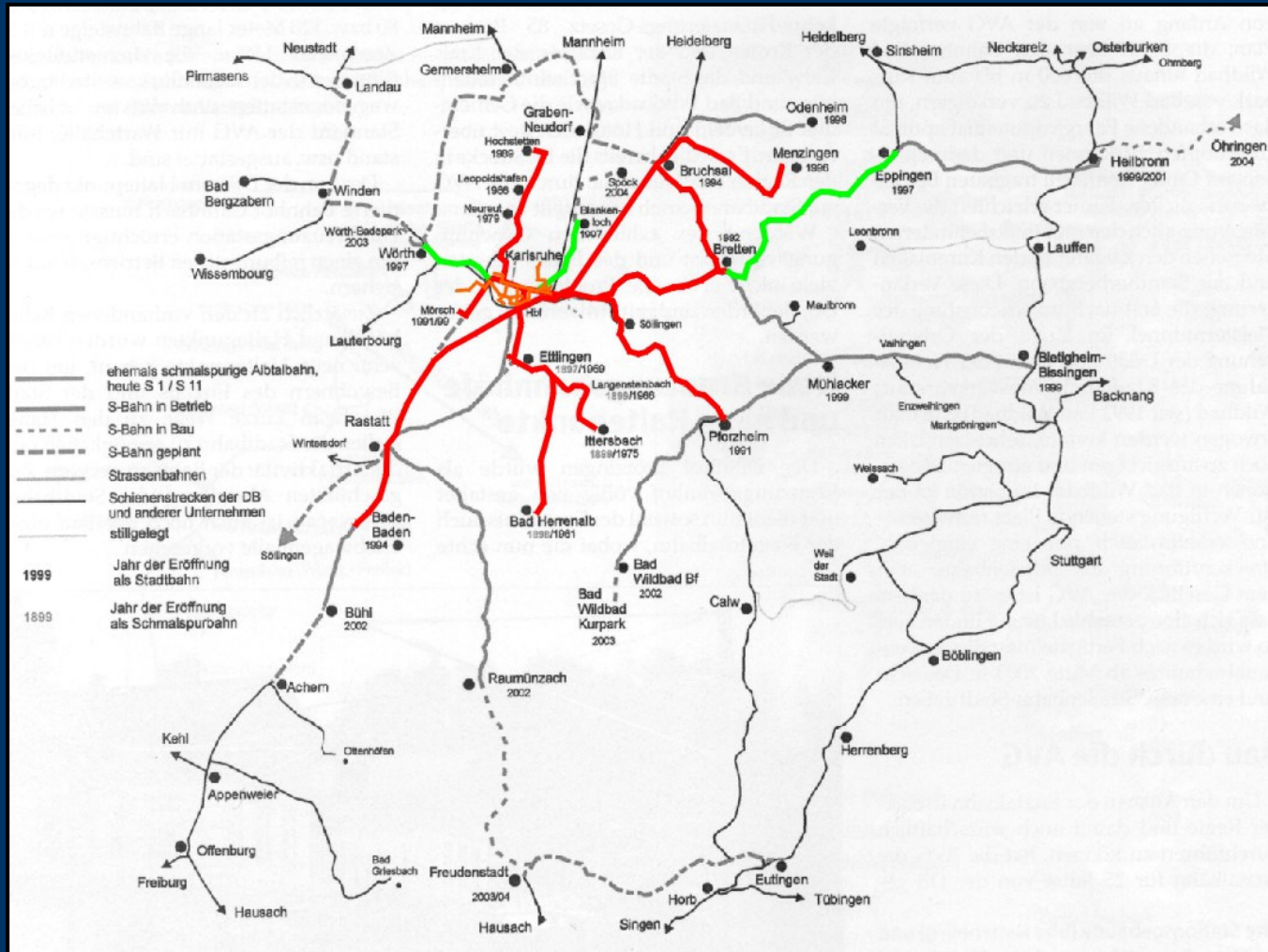




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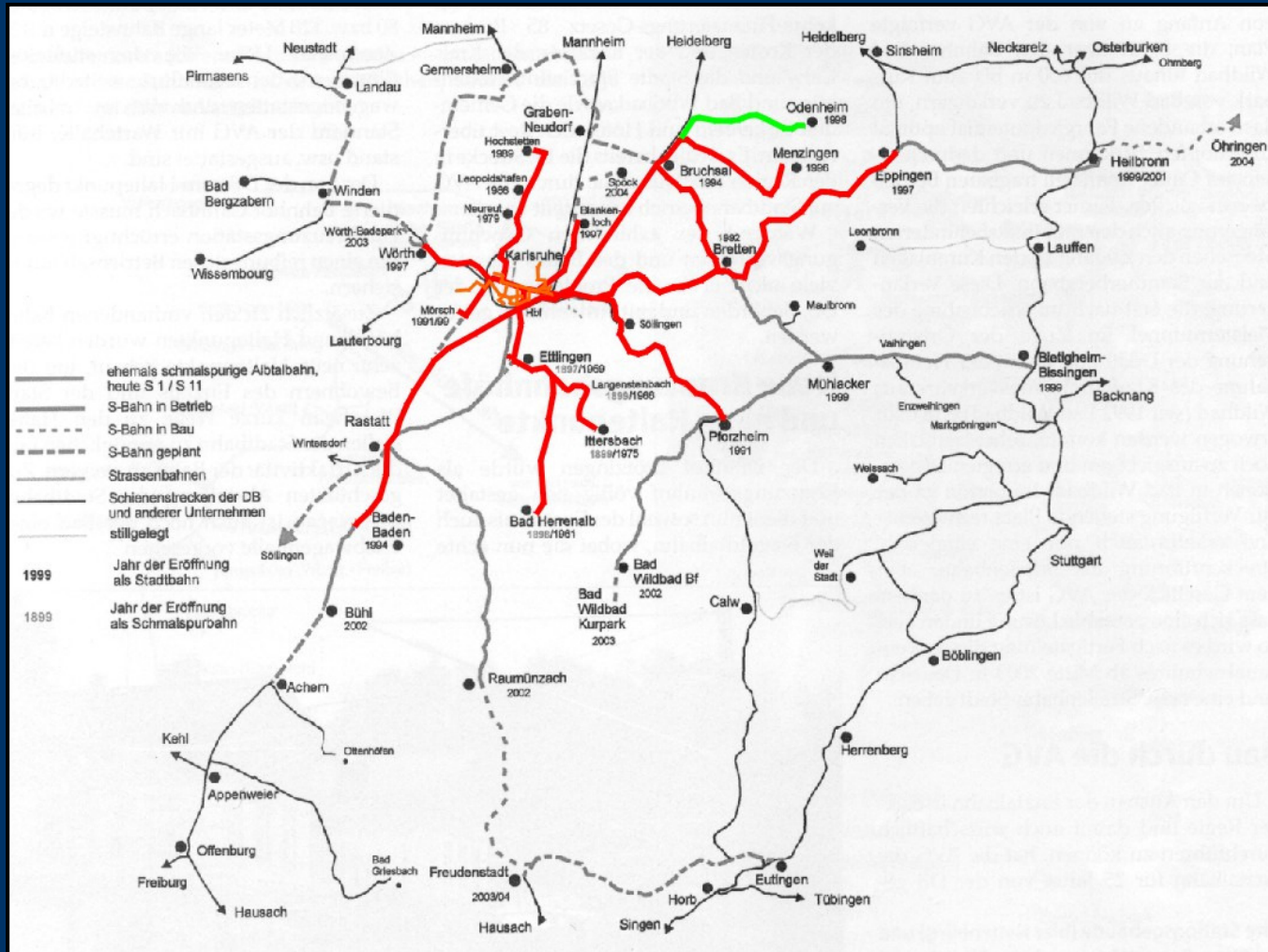
1997





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# Development of the Tram-train network in Karlsruhe



1998

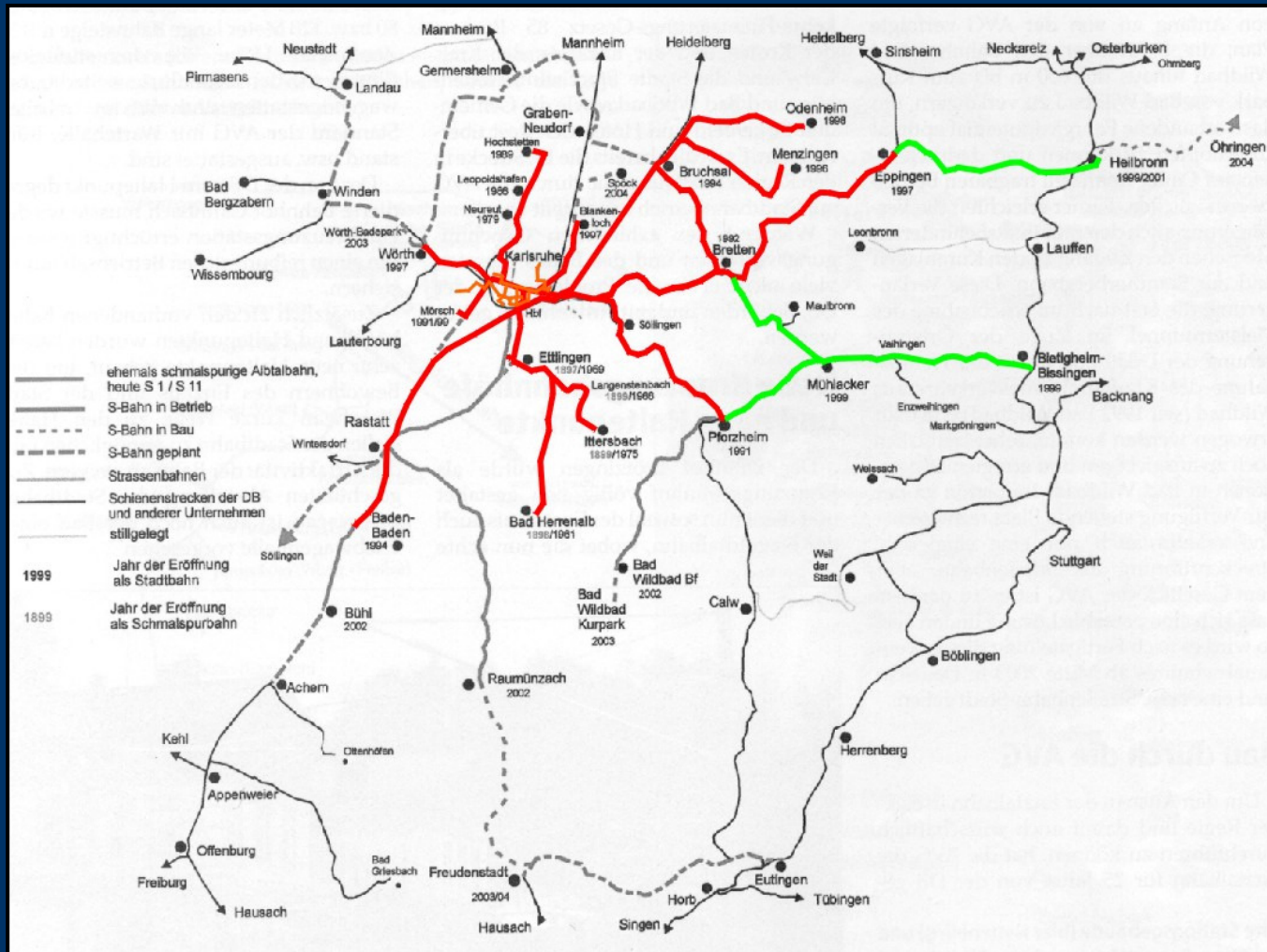






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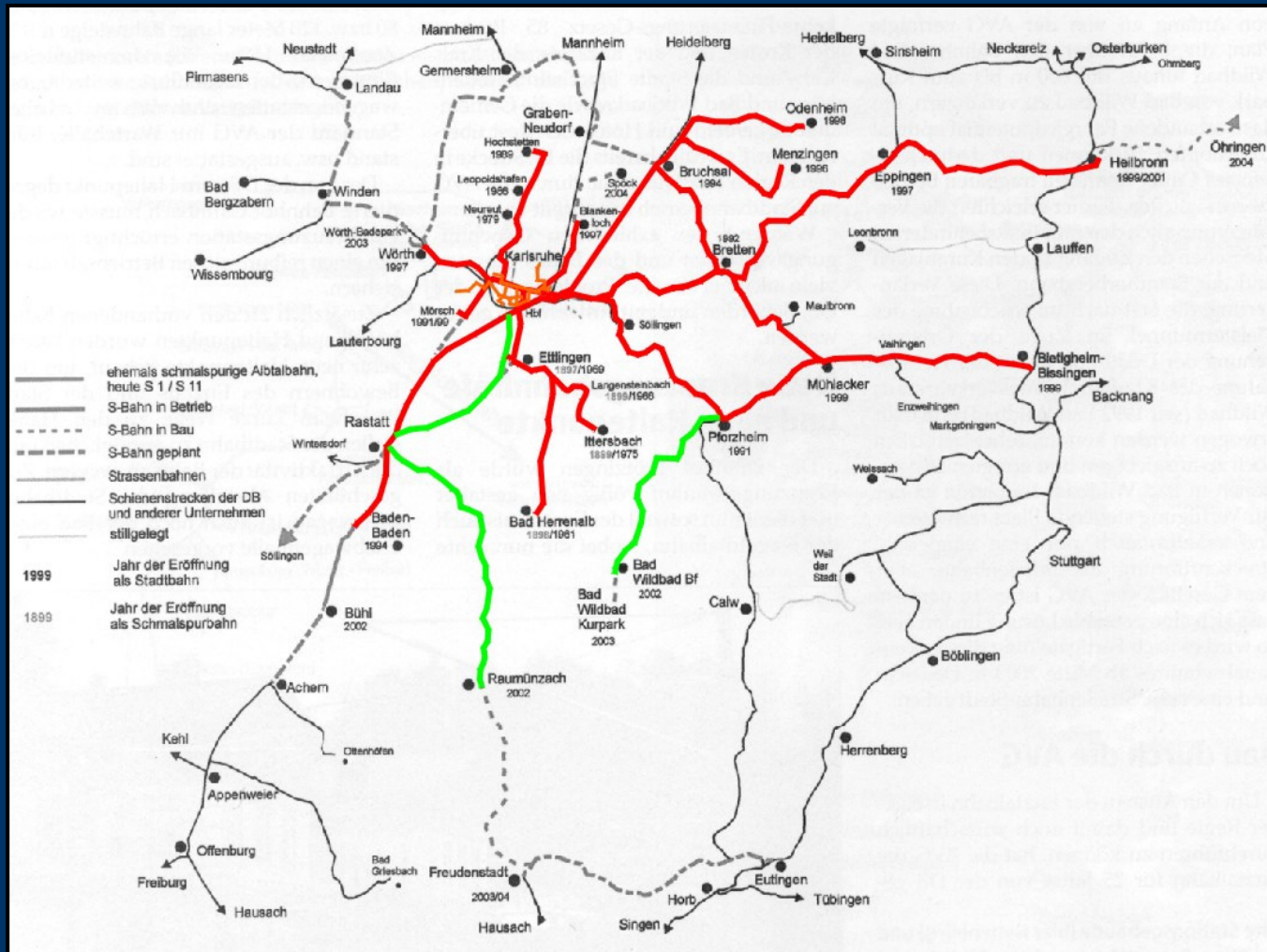
1999





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# Development of the Tram-train network in Karlsruhe



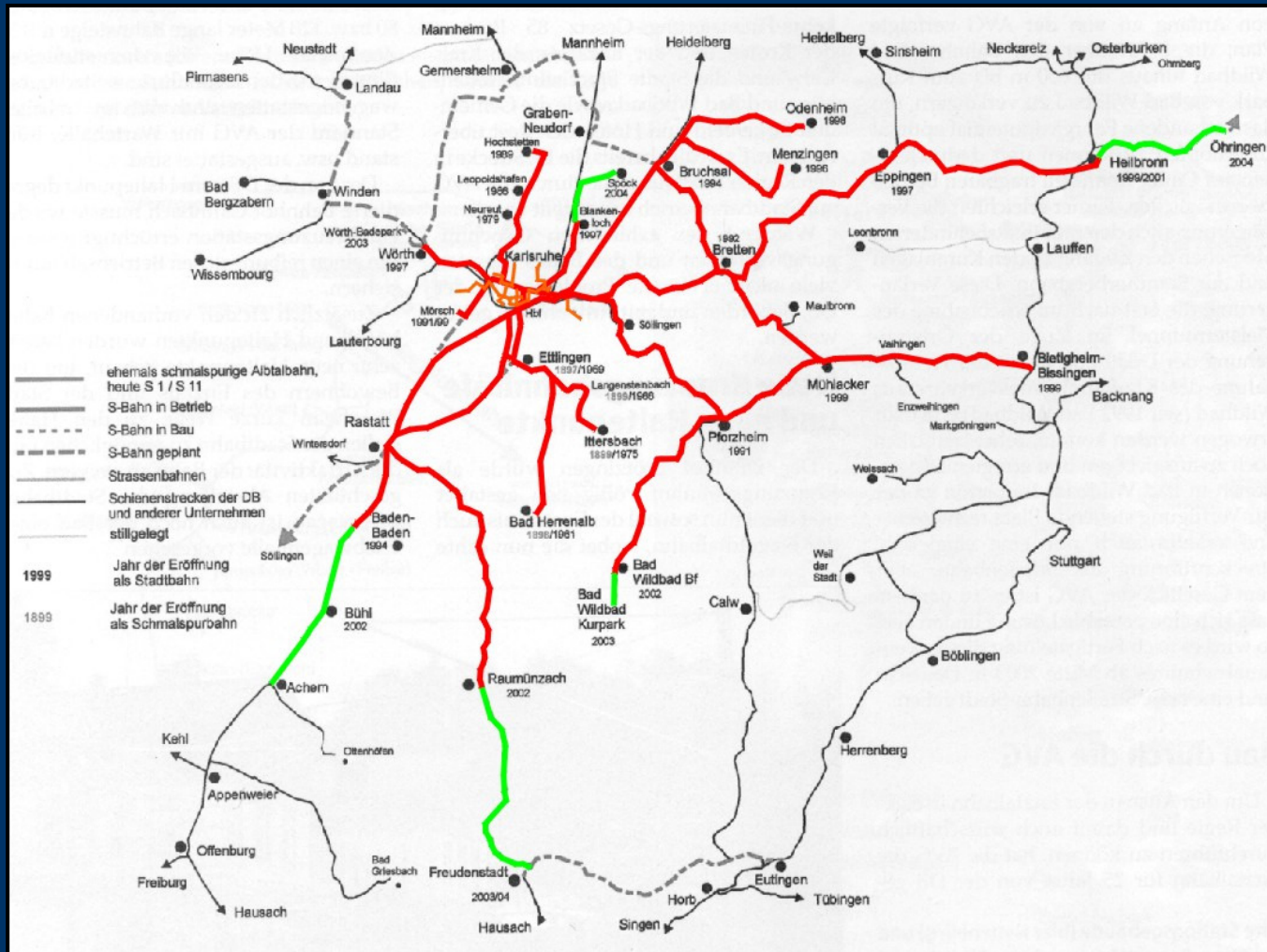
2002





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# Development of the Tram-train network in Karlsruhe



2003-  
2007

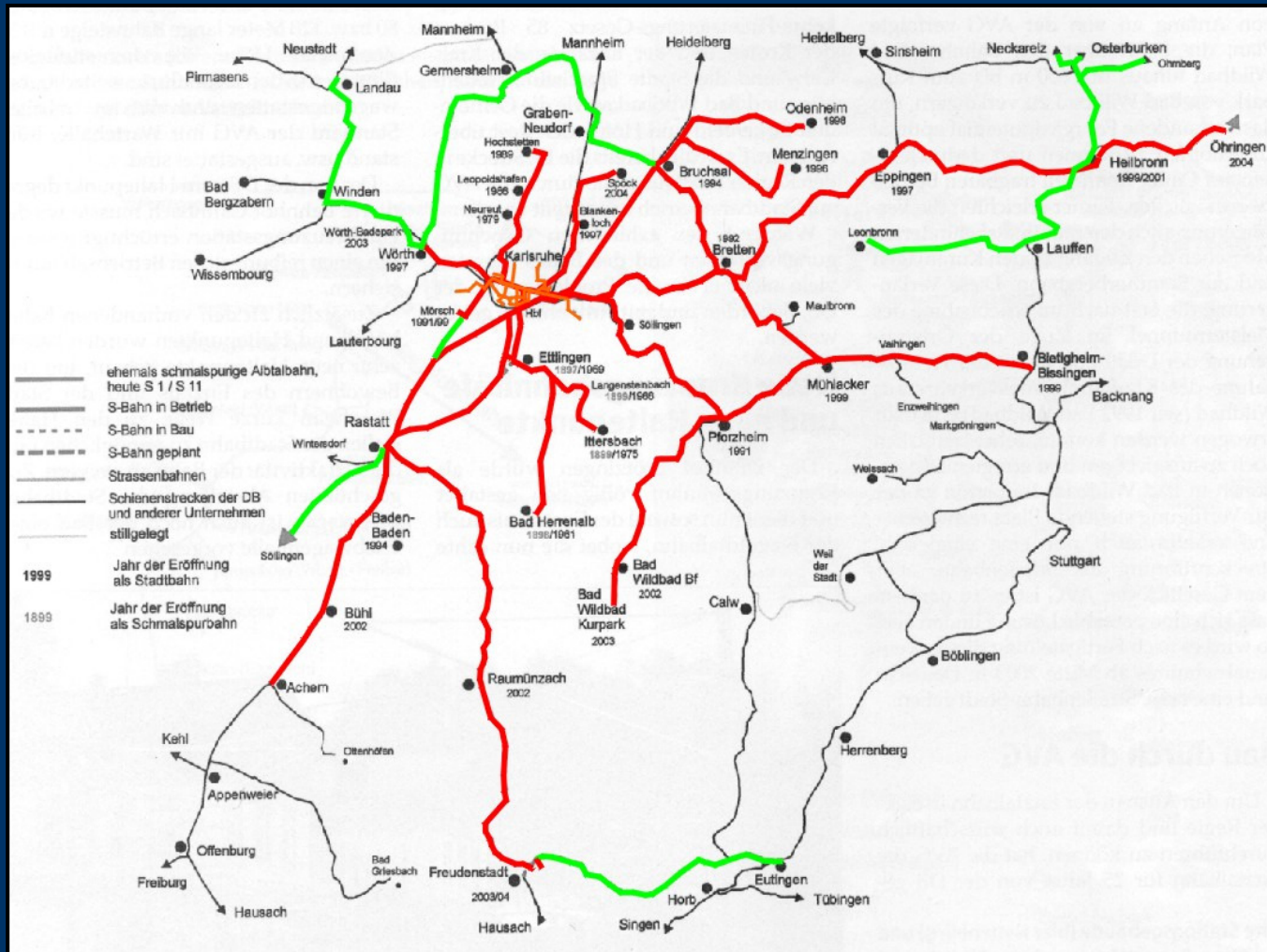






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# Development of the Tram-train network in Karlsruhe



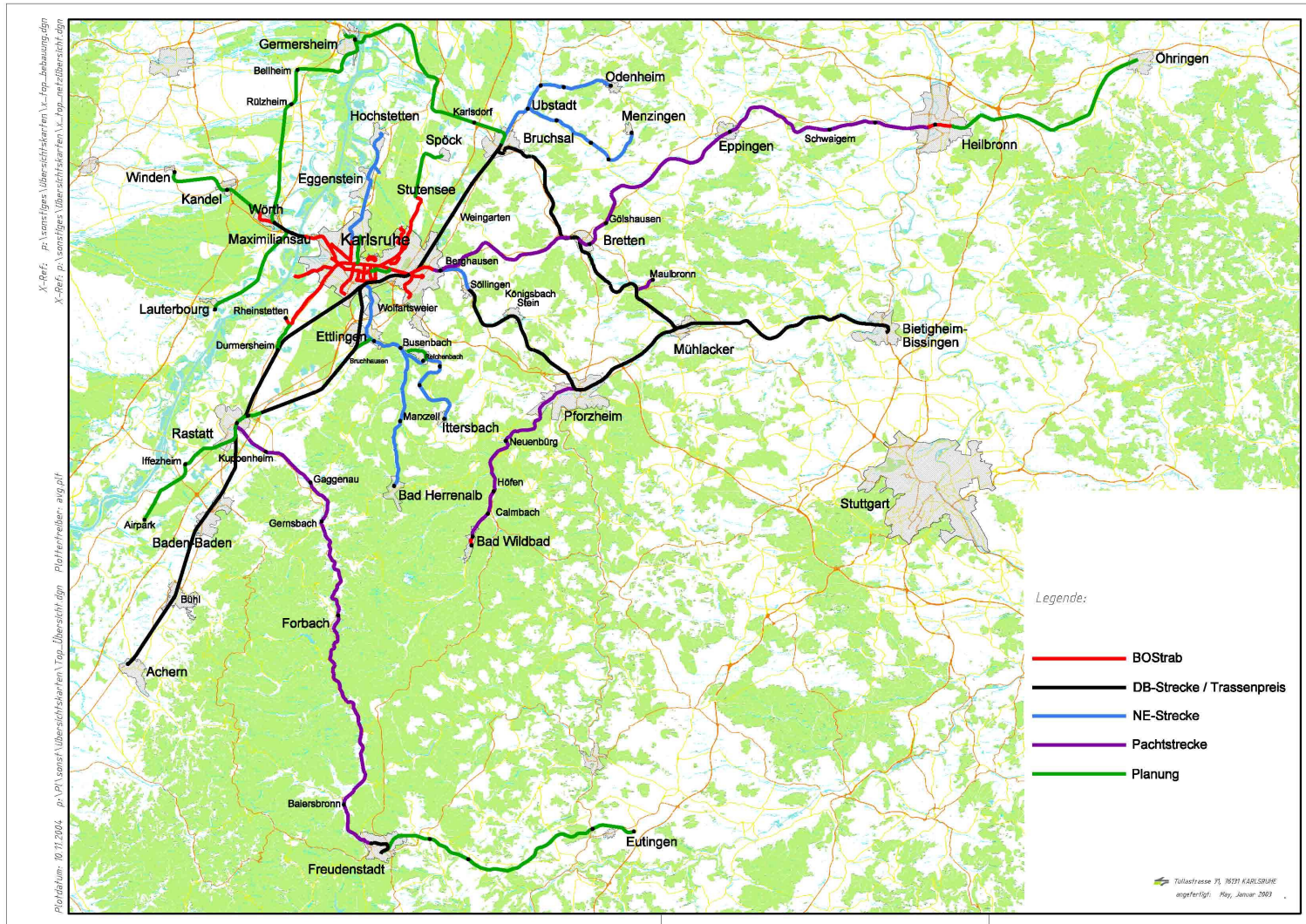
2007-  
2010





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# The Network today – 500 km in operation







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# Evaluating the Benefits - Heavy Rail versus Tram-Train Solutions?

- Key issues considered:
  - Capacity of vehicle / platform / line
  - Cost
  - Infrastructure constraints
  - Wider connectivity impacts
- Findings:
  - Significant cost implications of delivering increased heavy rail capacity
  - Tram-train is more cost effective means of increasing capacity





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# Tram-Train Stakeholders: Customers

## Opportunities

- Significant Connectivity benefits
- More frequent stops
- Higher frequency
- Longer operational day
- Penetration of communities
- Level Boarding - accessibility
- Journey reliability

## Risks

- Higher level of standing
- Toilet facilities





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# Tram-Train Stakeholders: Rail Operators

## Opportunities

- Further source of new rolling stock
- Improved journey times
- Increased patronage
- Cost reduction opportunities – operations/fuel
- Whole life cost savings
- Track access charges lowered

## Risks

- Risk of –ve passenger reaction
- Increased operational complexity
- New standards
- Realisation of lower costs





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# Tram-Train Stakeholders: Network Rail

## Opportunities

- Reduced track maintenance and renewals costs
- Reduce local service use of network capacity
- More train paths to sell
- Major station capacity

## Risks

- New standards
- Perceived risk of collision consequences
- Further interfaces and boundaries to manage
- Platform height / length provision





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# Tram-Train Stakeholders: Department for Transport

## Opportunities

- Franchise cost savings
- Additional capacity at lower cost
- Incremental development – spreads funding

## Risks

- Alien culture – rail / regions / light rail
- Uncertainty in franchise specs
- Rail to fulfil more complex objectives - finance





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# Tram-Train Stakeholders: Local Transport Authorities

## Opportunities

- Connectivity benefits over all other modes
- Uses spare capacity, thus lower cost of provision
- Best features of light and heavy rail
- Progressive implementation opportunities

## Risks

- RFA programme inclusion
- Dependence on Network Rail – not controllable
- Cross-boundary political agendas
- Development costs in face of uncertainty





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# Tram-Train Stakeholders: ROSCOs

## Opportunities

- New market opportunities on an international basis
- Good PR – pioneering in UK
- Shape rail vehicle markets – pacer replacement

## Risks

- Scale of fleet requirements

