

## Eurostar vs. Shinkansen

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## Brief Overview

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- Eurostar
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  - Costs and Benefits
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### References

- Shinkansen
  - [http://www.ieee.org/organization/history\\_center/mjstones\\_photos/shinkansen.html](http://www.ieee.org/organization/history_center/mjstones_photos/shinkansen.html)
  - <http://www.japanese-studies.org.uk/discussionpapers/Hood.html>
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- Eurostar
  - <http://www.eurostar.com/dctm/isp/index.jsp>
  - <http://www.ckeatino.com/hsr/eurostar.htm>
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## Background - Shinkansen

- World's first inter-city high-speed rail system
- Alternate to narrow gauge tracks that limit speed
- Considered source of national pride
- Cost overruns from original estimation

## Time Line

- 1940 – Idea of Shinkansen introduced and researched through Government
- 1959 – Construction begins
- 1964 – Inauguration of Tokyo – Shin-Osaka service
  - Coincided with Olympics held in Japan
- 1972-1988 – New Shinkansen service lines sporadically opened throughout Japan
- 1987 – Japan National Railways privatized

## Risks and Uncertainties

- Post-war economy unstable
- Was train service the best way to go? What about highways?
- Topographic obstacles
- Ridership estimations

## Statistics

- Maximum speed of 300 km/hr, Average speed of 286.1 km/hr
- No fatalities on the service due to collision, derailment, etc.
- More than 280 Shinkansen trains operate between Tokyo and Osaka each day
- Daily ridership of over 360,000 passengers

## Cost – Benefit Analysis

- High construction costs to be compensated by expected high revenues
- Government project rather than profit-seeking firm
  - Costs grew → added lines and employees
- HUGE Debt ¥37.1 trillion (\$274.8 billion)
  - Privatized to 6 companies to carry some debt and earn profit

## Background - Eurostar

- Longest Passenger Train in the World (20 cars long per train)
- Europe's First International Train to take advantage of the Channel Tunnel
- Plagued by unreliability during its first few years of operations
- Can reach speeds up to 186 miles per hour but can only travel 100 miles per hour in the Chunnel

## Timeline

- 1994: First Eurostar commercial services begin from London to Paris and Brussels
- 1995: Ashford station opens a direct service from London to Disneyland Paris
- 1996: Service expands to Moutiers and Bourg St Maurice from Ashford
- 1998: Opens facilities and renovations at Paris Gare du Nord

## Risks and Uncertainties

- Natural disasters occurring near the Channel Tunnel
- Ridership during Eurostar's opening
- Safety of the Eurostar

## Statistics

- Maximum speed reached is 186 mph
- 7.7 million riders during the 2002 fiscal year
- Will reach the profit zone at the end of 2003 if all goes well
- No severe injuries during the crash of 2000

## Cost-Benefit Analysis

- Eurostar cost approximately \$31 million for the entire project
- Crash in 2000 cost approximately \$850 million
- Will obtain a profit after the 2003 fiscal year