Chiltern Railways

- A train operating company with a difference
- Existed since privatisation in 1996
- Now owned by DB
- Initial franchise replaced with unique 20 year franchise in 2002
- Underlying market growth and opportunities
- Philosophy of gradual but continual improvement
- Consistency of approach over 15 years
Chiltern Railways
route network
15 Years Ago

- Downgraded in the 1960’s
- Survived closure plans
- Total Route Modernisation in 1991
  - New trains, signalling, improved stations
- Still a 75mph railway
- Extensive single track sections
- Capacity limitations
A Growing Market

Passenger Kilometres

UK Rail (billion)

Chiltern (million)

Chiltern Railways
What makes us different?
Why would a TOC do that?
Achievements

- £370m invested
  - Stations
  - Depots
  - Car parks
  - Track and signalling

Chiltern Railways
Aylesbury Vale Parkway
Wembley Depot
Evergreen 2
But it takes a very special mix of people…

- Infrastructure Engineers
- Signalling Engineers
- Rolling Stock Engineers
- Timetable planners
- Economists

All with extensive experience and understanding of the Chiltern business

All with an understanding of what the others do
The Heart of a Railway Business

- Relationship between timetable, infrastructure, trains
- TOC understands passengers better than NR or DfT
- “Investment should be led by those closest to the customer”
Evergreen 3 – Business Drivers

- Need to turn aspirations and ideas into defined project with ability to enter into contract
- Process and timescales set out in franchise agreement
- Essential to secure the 20 year franchise
Evergreen 3

- Increased speeds (mostly 100mph)
- More flexible track layouts
- A new route to Oxford
- New and improved stations
Development and specification – how was it done?

Specification ➔ Bright idea ➔ Demand & Revenue Forecast ➔ Engineering Assessment ➔ Timetable Modelling ➔ Specification
Decision Support Systems

- Demand and Revenue:
  - Econometric models

- Infrastructure Costs:
  - Expertise and costing models

- Timetable and Performance:
  - Expert timetable planners
  - Railsys – industry standard dynamic operational modelling
How did the scheme evolve…

Two distinct aims:

- Improve access to rail from north and west Oxfordshire
- Make journey time to Birmingham more competitive
How did the scheme evolve…

- M40 J6
- Chinnor
- Princes Risborough
- Bicester North
- London Marylebone
The Chinnor Line

[Image of a train on the tracks with a platform and a person walking along the platform.]

[Image of a section of the railway with trees and vegetation on either side.]
How did the scheme evolve…
The Thame Line

- Reuses a disused railway corridor
- Built as a single track line
- Single track tunnel at Horspath – now home to bats
- Housing built across the line since closure
- Breached by M40 – heavily skewed bridge required
- Congestion on southern approaches to Oxford
How did the scheme evolve...
The Bicester Town Line
Refinement of the preferred option

To MOD Site
Islip
To Didcot, Reading and London Paddington
To Banbury and Birmingham Moor Street
Wolvercot Tunnel (Length 135m)
Banbury Road Sidings
Oxford North Jn
Oxford
Oxford South Jn
To Didcot, Reading and London Paddington
To Bletchley (line out of use beyond Claydon L&NE Jn)
Bicester South
Bicester Town
Bicester North
To High Wycombe and London Marylebone
To Banbury and Worcester
Water Eaton Parkway
Islip
To MOD Site
Banbury Road Sidings
Engineer’s sidings
Up Carriage Sidings (or "Turbo sidings")
Down Carriage Sidings
To Bletchley (line out of use beyond Claydon L&NE Jn)
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Bicester South Jn
To High Wycombe and London Marylebone

Bicester Town
To Bicester North

Chiltern Railways
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Down Carriage Sidings
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Oxford
Meanwhile, on the Mainline….

- Numerous options tested to deliver <100 minute Marylebone – Moor Street journey time
- Preferred option consisting of a combination of infrastructure and rolling stock improvements
  - Increased line speeds north of Ruislip
  - Altered track layouts at several locations
  - Re-engining of existing fleet of trains
The Credit Crunch takes effect…

- Financing rolling stock enhancement becomes very difficult and very expensive
- But infrastructure enhancement is (relatively) unaffected
- Therefore a further 10 minutes of journey time savings had to be found from additional infrastructure enhancements and improved timetabling
The key to unlock the extra 10 minutes…
What made it all possible?

- People from different professional backgrounds…
- …all with an intimate knowledge of the Chiltern business….
- …working closely together to test ideas and refine the solution.
Chiltern Railways

If you think our way, travel our way.