OPERATIONAL PLANNING TRAINING

LEVEL 2 TRAIN PLANNING

SPEAKER'S BRIEF – PASSENGER

The Level 2 Train Planning workshop is designed to introduce students to the manual training planning skills used before the introduction of computer technology. The aim is that by the end of the 3 days, they can turn a Bid into a validated schedule and prepare a hand-drawn timetable graph. The aim of this spot is to challenge the notion that passenger train operators just change their minds for the sake of it! Also that a TOC actually owns very little – it exists to manage contracts (for rolling stock, for stations and for franchised operators a service spec. Inefficiency costs money; running the right trains at the right time increases the size of the fare box.

This is a 3 hour slot which can be broken down into 2 key segments; it is important that we don't get overlap between the two. It is designed to absorb the whole of the afternoon on the 2nd day.

PART A: The Role of the TOC

This can be delivered in a variety styles to suit the individual speaker. The most effective is that using a model railway – small groups of delegates get to "own" different parts – Track – Signalling – Units – Depots – NRES – ORR – DfT this enables the nature of relationships and contracts explored. This of course can then be compared with how a coach operator might wish to start up a commuter style coach operation (Vehicle Tax, Insurance, Driver) and off he goes!

It is also necessary to talk through some of the procedural issues; in particular the role of local authorities (who may provide funding for certain services); PTEs and user groups (How MPs can be very vocal in bringing about quite rapid change). There are some very 'techie' bits about data exchange – this is probably best done in a separate session covering rail industry data. Currently Informed Traveller is not included in this session – this would seem to be a more logical place to include it.

PART B: RESOURCING

There is no presentation or student notes to support this session!

The aim of this exercise is to help train planners understand that one of the key oncepts of any timetable is the availability of units to provide the service – if you don't have the units you can't run the trains! Also poor timetabling can so easily waste units (and crews). Also keeping small sub-fleets of units allocated to self-contained patterns of services can be effective in developing 'ownership' by station, depot and train staff it is usually sub-optimal. This can best be demonstrated by working out the unit diagrams (off timetable prints) for two groups of south Manchester services – when both are done together you can save a unit (and that's a lot of cash to a TOC).

Then there is a need to understand the balancing of units across a whole fleets so that units which are outbased overnight have enough fuel before getting back to the depot the next night.; how certain locations can only hold a limited number of units. That running stock around empty costs money and prevents NR from getting efficient possessions! This can best be demonstrated by looking at the units running along the North Wales Coast for ATW.

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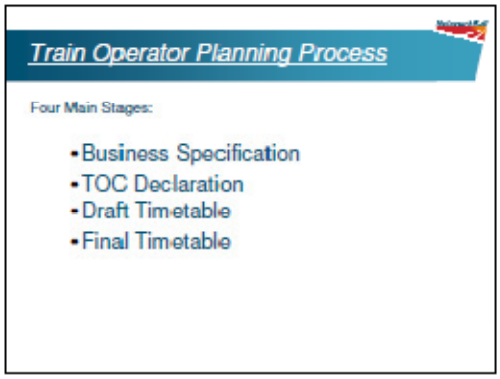
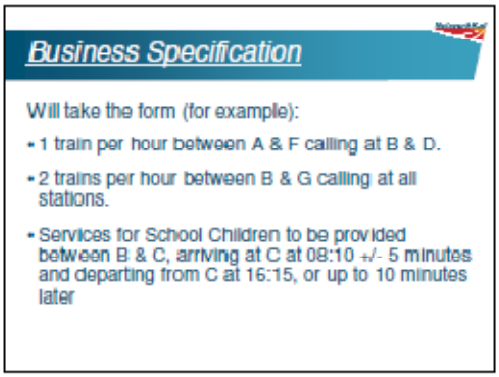
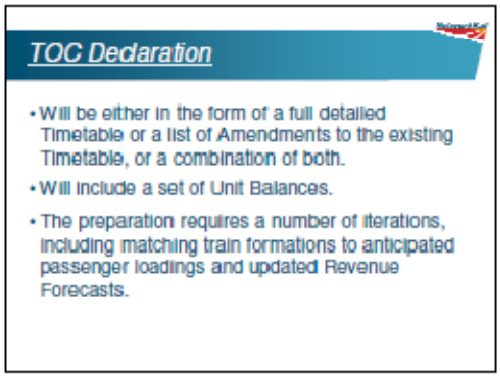
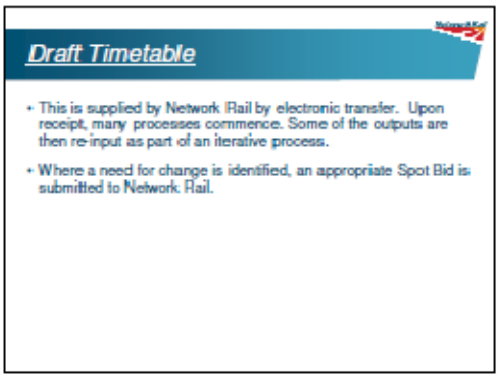
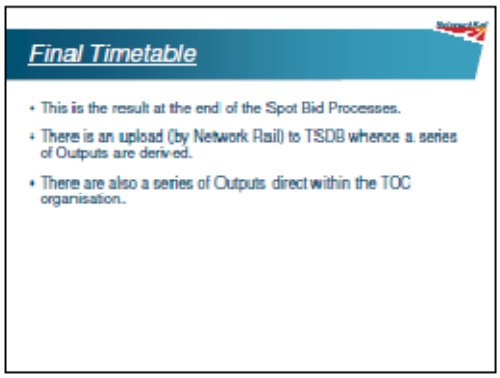
These are the current slides PART A):











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Inputs (1)

- Passenger loadings data

  Input to the Business Specification and updates at all stages.

- Rules of the Plan / Rules of the Route

  Input to preparation of TOC Declaration.

- Previous Timetable(s)

  Input to Business Specification and TOC Declaration

Inputs (2)

- Revenue Data

  Input to Business Specification Process.

- Performance Data

  Input to Business Specification & TOC Declaration.

- Costs (both Fixed and Variable)

  Input to Business Specification.

Inputs (3)

- PSR/SLC and Franchise Commitments (if any)

  Input to the Business Specification and Updates added at all Stages.

- "Stakeholders" – eg User Groups, PTEs and Passenger Focus

  Input to the Business Specification.

- Other TOC 's Requirements (eg connections)

  Input to the Business Specification.

Inputs (4)

- Other TOC's Trains using Common Infrastructure

  Input to TOC Declaration.

- Traincrew Conditions of Service

  Input to Business Specification and the Preparation of the Final Timetable.

- Fleet Size and Characteristics – eg fuel range

  Input to the Business Specification and Updates added at all Stages.

Inputs (5)

- Planned Changes to Infrastructure, Fleet & Personnel – eg new Traincrew Depot

  Input to the Business Specification.

- Catering Provision & Reservations

  Input to the Business Specification and a full Update made during the Preparation of the Finall Timetable.

Outputs from Draft Timetable

- Requests for Derogations from PSR

  Output from the Business Specification (for strategic derogations) and the Draft Timetable (for detailed derogations).

- Unit Diagrams
- Traincrew Diagrams
- Fuel Budget
- Train Miles Budget
- Station Access Budget
- Staff Budget

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Outputs

From TSDB (NR)
- NRT
- RJIS
- CIS
- TRUST
- *Delegates will recall earlier "Systems" slot*

From TOC Final Database
- NRS (Joint with TSDB)
- PTTs
- VPIS
- Station Departure Posters

Role of the Train Operator

Owns or leases trains, runs them over Network Rail's track and signalling infrastructure..

Pays Network Rail for access to that infrastructure.

Role of Network Rail

Owns track and signalling infrastructure over which trains run..

Manages timetable process ensuring equal opportunities and optimises allocation of line capacity.

Responsibilities of the Train Operator

- Determines train specification
- Defines traction and rolling stock
- Connectional arrangements
- Train length
- Platforming
- Resource plans e.g. loco, stock, guards, drivers
- Servicing, cleaning, water for toilets, catering vehicles

Responsibilities of Network Rail

- Validates plans
- Determines headways and margins
- Confliction resolution
- Optimises track capacity to ensure robust plan – good performance
- Engineering and contingency allowances
- Signalbox openings
- Production of accurate data and WTT

Station Layouts again!

- Number of platforms
- Type of platforms (e.g. through, bay)
- Platform occupation (number of trains)
- Length of platforms
- Crossing movement within or outwith platform
- Additional running lines e.g. avoiding/through
- Commercial need e.g. convenient to public
- Turn Round times
- Station Dwell times

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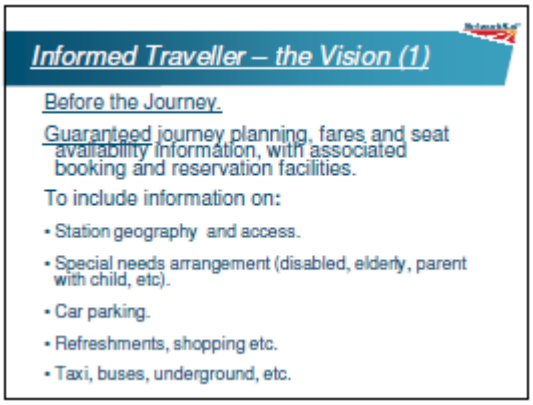
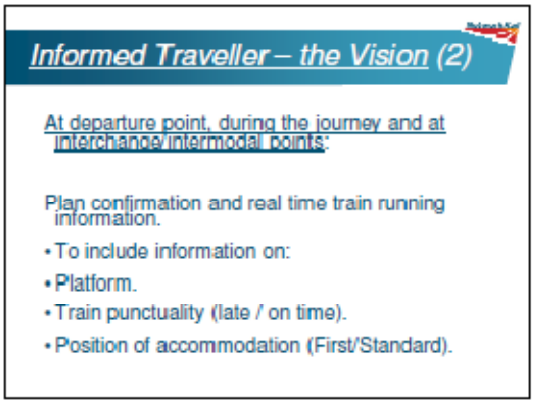
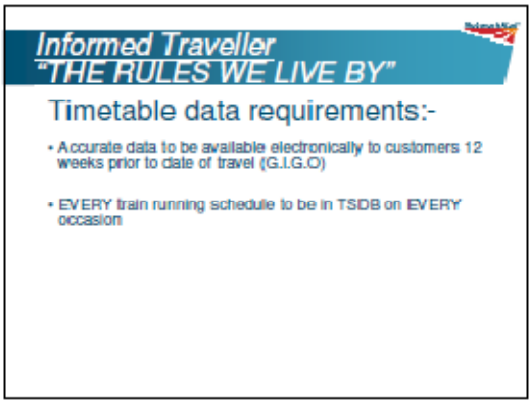
Informed Traveller Slides







Feel free to suggest changes that would better reflect your message.

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These are the supporting student notes (PART A)

The Role of the Train Operator

On 1st April 1994, British Rail (which itself have been created initially as the Railways Executive (of the British Transport Commission) on 1st January 1948. Was split into two organisations. Railtrack PLC who were the owner of all the railway infrastructure (track and signals) along with the operational controls. And British Rail who owned all the Train Operators along with all the Maintenance and Renewals companies. Prior to the 1st April all the Freight Companies had been sold (apart from Freightliner, all went to the American based Wisconsin Central and all the Rolling Stock (and passenger locomotives) had been sold off into 3 Leasing companies (ROSCOs); Angel Trains; Porterbrook Leasing and Eversholt Trains.

Under privatisation, shares in Railtrack PLC were sold by the Government in May 1996.

The 1993 Railways Act created two regulatory bodies; the Office of Rail Regulator (the first Regulator was John Swift QC) who was responsible for oversight of all Railway Undertakings. The Office of Passenger Rail Franchising (headed by merchant banker Roger Salmon) was establish to transfer the 25 British Rail owned train operating business into the Private Sector. The first franchises were South West Trains (run by bus operator Stagecoach) and Great West Trains (a management team 'by-out'). Both began operating at mid-night on Sunday (morning) 4th February 1996. It was expected to include LTS Trains (now better known as c2c) as a management buyout but irregularities involving Travelcard season ticket sales, forced the sale to be abandoned at the last minute.

Under the Office of Passenger Rail Franchising (OPRAF), and subsequently the Strategic Rail Authority and more recently the Department for Transport, each Franchise was let for fixed periods of time to owning groups e.g. National Express Group, First Group. Over time, a number of franchises have been combined; Anglia Railways; Great Eastern and part of WAGN became London Eastern Railway now known as National Express East Anglia. Some Franchises have been split up;

Silverlink metro services now operate as LOROL whilst the longer distance trains on the West Coast route merged with parts of Central Trains to form London Midland.

The role of the Train Operator is to provide services based on the commitments they have made within their Franchise Agreements with the Department for Transport. Each agreement will have be gained on the basis of running a minimum number of services (The Service Level Commitment[SLC]) in return for an agreed level of funding (supported services) or to make a payment back to the DfT (The Franchise Premium). It is the challenge of every franchise to operate the SLC for the minimum cost so that the costs of operation are covered by income (ticket sales) plus any payments from DfT. This challenge shapes each Train Operator.

For an operator to run services they must have a Safety Case, a Track Access Agreement and Station Access Agreements (for them to use any station not leased to them) along with agreements with rolling stock companies (from whom the train sets are leased) and other operators where access is need to any Light Maintenance Depot.

There are various types of franchised train operator (19 in total at time of compilation):

- The longer distance operators, which operate "intercity" type services, e.g. NX East Coast, Virgin Trains and Arriva Cross Country, provide fast, regular, reliable long-distance services based around providing a comfortable, high level product for business, commuter and leisure travellers.
- Regional type operators, e.g. Northern Rail and Arriva Trains Wales, are those that operate local stopping services in and around main towns and cities serving local communities and providing peak-hour commuter services.
- Commuter operators, e.g. South West Trains, Southeastern and Southern, who provide frequent, high-density services into and out of the capital mainly focussed around providing an intensive service in the morning and evening peak.

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The main focus for the Train Operators is to provide services based on customer demand, thereby providing revenue to maintain and improve the Franchise. It is worth remembering:

- Without the customer there is no revenue, just cost
- Without revenue, there is no train
- Without the train, there is no timetable
- Without the timetable, there is no business

The customer is vitally important to the business and the industry. The customer is why we exist.

Train Planning Role of the Train Operator

- Owns or leases trains, runs them over Network Rail's track and signalling infrastructure. Pays Network Rail for access to that infrastructure.
- Determines which trains they wish to continue to operate in each new timetable year (Principle and Subsidiary Timetables are treated as a single timetable).
- Determines which services it need to change to meet demands.
- Plans for any new services which might be needed.
- Submits Priority Date Declaration to Network Rail detailing:
  - Unchanged services
  - Services for which it has Rights but which are not currently timetabled (usually through lack of demand)
  - Services it wishes to change
  - Details of new Rights that will be needed to obtained for ORR for any new or amended services.

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Train Planning Responsibilities of the Train Operator

- Origin, destination and calling points of a train
- Proposes timings and/or point to point timings
- Length of stations stops (Station Dwell time)
- Connecting trains into/out of
- Traction, stock e.g. diesel electric etc.
- Length of train (number of coaches/wagons)
- Platform usage, limitation
- Maximum speed
- Economic use of locos, stock, train crews
- Servicing, cleaning etc. (Turn Round times)
- Station staffed (or not)
- Water (toilets, restaurant cars etc)

Train Planning Role of Network Rail

- Owns track and signalling infrastructure over which trains run, manages the process, ensures equal treatment of every Train Operator and publishes train timings in the National Rail Timetable and Working Timetables. All these activities are set out in its Network Licence.

Train Planning Responsibilities of Network Rail

- Maximises track capacity to ensure robust performance of trains.
- Validates the Train Operators plan
- Determines timing headways within signalling limits
- Resolves conflicting movements
- Manages all aspects of signalling along with Signal box hours of opening.
- Engineering allowances required to deliver planned maintenance and renewal but which will not de-grade performance.
- Production of NRT and WTT (like the NRT, the aim is to produce the WTT in electronic (pdf) format only

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These are the Informed Traveller Notes:

THE INFORMED TRAVELLER

The one overriding mandatory condition imposed in the planning of timetables for the whole of the rail industry is the demands made by the Informed Traveller initiative.

This is a licence obligation imposed on the industry and is very keenly overseen by the Rail Regulator.

In March 1995 the Secretary of State for Transport Dr Brian Malwhinney (at the time, he was also MP for Peterborough East) wrote to the chairmen of the British Railways Board (as it was then) and Railtrack expressing concern at the quality of the timetable data and the late availability of it, particularly at weekends when there is a lot of engineering work.

He looked for urgent action on monitoring data quality provided to passengers at stations, through Telephone Enquiry Bureaux (TEBs) etc., etc., and demanded that data MUST be available TWELVE weeks in advance.

Secondly, he demanded better presentation of information and clearer signing at stations, better PA systems and, thirdly, distribution of all data to all interested parties on time and at minimal cost to external bodies (i.e. free of profit margins!).

For Operational Planning this means:-

- ROBUST data to be available 12 weeks prior to date of travel to customers. This means that all retail systems used by NRES and Train Operators' staff must be up to date.
- EVERY train schedule to be in TSDB on EVERY occasion. If all the data is in TSDB then all the extracting systems get the same data (consistency!).
- ROBUST data in TSDB all the times. Remember G.I.G.O - Garbage In = Garbage Out.
- All timetable data to be available for dissemination by ELECTRONIC means e.g. internet timetables.

To meet the needs of Informed Traveller is relatively easy in the production of the permanent timetable plan because it falls nicely within the production schedule for the NRT, WTTs etc., but there is a need to ensure that the target is met for those passenger trains affected by Bank Holidays and Weekend Engineering.

Engineering Planning and the Informed Traveller

- Condition **A3** of the "**Network Licence**" requires Network Rail to provide access to information . . . all such changes to the national timetable . . . 12 weeks prior to the date such changes is to have effect. Amended train details are passed to Retail and Customer information services at T-10 to enable seat reservations

Informed Traveller Process

- T-32 weeks and NR issues its proposed possessions in the Draft Period Possession Plan [DPPP].
- T-26 weeks is the confirmation of the disruptive possession plan. (in 4 weekly chunks as the Confirmed Period Possession Plan [**CPPP**]).
- T-18 Bids from Train Operators.
- T-14 Offers back to Train Operators.
- T-13 TOC comments and latest time to bid for replacement Bus Services
- T-12 Upload to TSDB.
- Subsequent changes ONLY with the agreement of Operators. Try to use the 'Public Differential Adjustment' so that minimal change is experienced by passengers.