Bestfact Rotterdam October 8th/9th 2015

Phil Mortimer
TruckTrain Developments & IT2

Bestfact Rotterdam

Synchro-modality and its relevance to freight transport with a focus on the rail sector

- Definitions: Inter-modal is the movement of goods/cargo in one and the same loading unit or vehicle which successively uses two or modes of transport without handling the good when changing modes.
- Multi-modal is the movement of cargo in the same loading unit between more than two modes (e.g.. truck/rail/barge/SSS/terminal/ship/terminal & reciprocal with variations) in a planned transit. The cargo is not handled at the modal changes.
- Bi-modal is the movement of cargo between two modes (primarily road and rail) using specialised cargo units requiring no external lifting during the transfer between modes.
- Co-modality is making the use of the strengths of each individual mode to best effect.
- Synchro-modality is the optimally (how defined??) flexible and sustainable deployment of different transport modes under the direction of one LSP. The shipper/forwarder is offered an integrated solution for his inland transport (pause for breath)

Bestfact Rotterdam

Inter-modal:

- Effectively the ability to move cargo in a “standardised” modular unit between modes using external lifting.
- Movement from original standards (ISO) to longer, wider and higher modules. Changing container fleet mix. Where are the 10’ and 30’ dvs? (Cuba & Moldova)
- For intra-European transits ISO dimensions not competitive in the face of cargo characteristics changes and increasing truck size. Opportunistic “cabotage” or triangulation only marginally deployed.
- Need to differentiate between the physical movement and the controlling documentary/information flows surrounding a planned transit and reflect shipper expectations in terms of service and transit visibility and performance

Bestfact Rotterdam

Bi-modal:

- A curious beast?
- Specialist trailer designed for inter-change between modes (road and rail) with no external lifting developed and deployed in the US.
- One “guiding mind” governing all commercial, operational, documentation and financial activities (Triple Crown®)
- Various iterations to MK5 (Wabash Trailers) retaining road wheels during rail transit
- Road trailers of equivalent capacity to normal road units but specialised with interlocking.
- Primarily used in point to point/corridors in large formations for specific high value time sensitive traffic.
- Triple Crown now (September 2015) downsizing its bi-modal operations and replacing some of this with twin stack container trains.

Bestfact Rotterdam

Co-modality?

HMM? What does this really mean and imply:

- At the strategic/policy level
- At a commercial level
- At an operational and technical level
- What does the shipper/fraternity make or understand of this?
- Where did it come from and why and what is the future for this concept?

Effectively "open season" for each mode with unclear rules of engagement and compromising aspirations for a more balanced but efficient spread of modes of transport and ignoring external issues such as environmental impact, energy dependency and external costs.

Market forces unbridled with minimal interaction between modes?

Bestfact Rotterdam

Synchro-modality

- An integrated solution for the shipper?
- Technically? Operationally? Commercially?
- Need to separate hardware aspects from planning, soft ware and disruption response.
- How does this align with terms of trade (the actual sale and purchase of the cargo) and the surrounding aspects of liability and insurance?

- Effectively synchro-modality is suggesting a “guiding mind” across the entire transit from source to final destination with the ability to adapt and change in response to evolving positions and advising all relevant parties throughout or allowing them to identify positions.
- What then is optimal and how is this affected by rolling changes and events outside the control of the involved parties in the freight and cargo movement.
- It assumes more perfect and available knowledge to respond to changed circumstances.
- Does this already happen without this “cap badge” of synchro-modality?

Bestfact Rotterdam

- For domestic or cross border flows options already exist within the major forwarders and other actors to plan, implement, operate and adapt within their own domains and to link with the other parties directly through linked and common systems and both formal and informal working arrangements.

- Legacy issues of multiple IT systems unable (or unwilling) to communicate readily and easily concerning transits and particularly delays, disruption and revised plans (ETA)
- What are the shipper's expectations and priorities? What is the shipper prepared to pay for? Does the shipper really care or is the shipper utterly indifferent to all of this?
- What is the likely impact of required formal reporting of emissions and could this bring about changes in modal preference and choices to minimise?
- Will this be the real catalyst to induce modal shift at both a tactical and strategic level?

Bestfact Rotterdam

- Building blocks for synchro-modality to become fully accepted must include:

- Effective borderless open data/IT able to provide open communication and information to the involved parties in a multi-modal transit (road/rail/IWW/SSS) with the ability of the shipper/receiver/freight paying party to identify the location and status of the cargo independently 24/7. There should be no surprises!
- Collaborative competition between the involved parties setting out “rules of engagement” in any transit involving multiple players whose role may differ at various points in the transit.
- Identify the benefits and beneficiaries.
- Will the shippers demand some of the cost savings made by synchro-modal players?
- What are the implications for inter-organizational working? Will it happen?

Bestfact Rotterdam

- Cost as the key driver?
- Environmental/external costs assuming greater importance together with smart planning and responsiveness to disruption and delay
- Minimization of administration in fixing shipment routings and modal involvement.
- e.g.Freight Arranger system advising routes, train space, schedules, real time transit monitoring, terminal arrangements plus pre & end haulage as a composite offer. A slow burn response to date!
- Generic non-accounting cost considerations may have an impact on domestic inter-urban, European cross border and international deep sea activities
- Intelligent 360 degree asset visibility and management is vital.
- Building blocks already in place to move to this sort of future.
- What are the limiting factors? People? Organizations? Risk aversion?

Bestfact Rotterdam

- Change of focus from the broad brush strategic aspirational!
- Rail in multi-modal logistics!

Bestfact Rotterdam

- What is rail's future role to be in inter-modal freight (Domestic and international)?
- Wholesaler effectively on a "hook and haul" basis? What added value?
- Conveyor belt type applications with longer and heavier trains (Marathon)
- Does this model (technical/operational/commercial) effectively constrain rail's ability to compete and secure positive and sustained modal shift ?Is something much more agile and responsive required?

- External factors offering some clues:
- Railway reform package full implementation
- Consolidation of major rail operating entities
- Major energy sector changes with loss of core rail traffic.
- Tightening environmental constraints (impact on rail, road, terminals and IWW/SSS)
- Rising cost of traction and rolling stock assets to ensure compliance.

Bestfact Rotterdam

- Despite railway reform packages and EU aspirations Rail's market share has weakened (CER 2013)
- What is causing this? Why is rail not capitalising on its inherent strengths?
- Too much emphasis on governance and structural reform at the expense of sharper commercial positioning?
- Umbilical links with government agencies still dominating despite liberalization and privatization
- Separation from or indifference to rapidly and continuously evolving market needs.(Hardware/Product/Service availability/responsiveness/24/7 availability)
- High cost base and low asset productivity
- Long lead times on new product introduction
- Seen as difficult to approach and deal with (SRA 2001… still true!)
- Problems! Problems! Problems!

Bestfact Rotterdam

- Inter-modal now a dominant component of rail freight traffic (UK) compared to other bulk flows. (22-24% of all i/m traffic but never above this despite growth)
- Changing patterns of international trade will have an impact with manufacturing returning from low labour cost countries
- Rail's market share constrained by road based competition (setting the bar on price and performance) train technology, terminal performance, systems limitations
- Longer heavier trains as a breakthrough? Marathon? Possibly the wrong answer.
- Industrialised train operation as proposed by New Opera?
- Complications of operating on a mixed traffic railway and with varying siding/loop lengths
- Well known issues of varying power supply, signalling, crew competence and cross border formalities.
- ENOUGH OF THE PROBLEMS!

Bestfact Rotterdam

A role for innovation?

Rail to play to its strengths and capitalise on these to the fullest extent.

How?

Develop a credible generic set of processes to encourage and manage innovation within national and European domains.

Develop an integral process of product and service development to enhance asset utilization and productivity (technical and commercial) by factor and not incremental amounts

Identify, address and resolve current structural weaknesses (e.g. 24/7!)

<u>Think and act like truckers</u> and not some bureaucratic agency of national government.

Improve terminal processes/availability and information flows between parties (back to synchro-modality!)

What markets are open to rail?

Bestfact Rotterdam

- Traditional markets (coal) under threat and already diminishing.
- Scale of volume and revenue loss and the need for replacement
- Rail has a very limited role in inter-urban high value time sensitive logistics
- How to break into this and seize market share on a sustained basis?
- SPECTRUM project identified rail competitive commodity and flows (12% of road flows)
- What are the implications if this was achieved?
- New technologies? New services?
- Use the cargo module shippers want and provide the service profiles (and better) they receive from the road operators
- A role for containers for domestic and Intra-European traffic??? Not exactly making a huge impact despite EC support
- Need to match volume and weight capability of road transport (getting bigger!)
- Tri-axle trailers – 2-3% of the European fleet (>800k units) is rail capable using existing technologies and operational methods.
- This is the big one!

Bestfact Rotterdam

Bestfact Rotterdam

- TopHat project using top-lifting based on ISO lifting points (40')
- No additional terminal equipment required
- Trailers on existing or new trains as the preferred inter-modal unit for domestic and intra-European traffic
- Wholly new connection options and service concepts
- Even interval high frequency clock face departures between cities with rapid load/off load and high rail asset utilization
- Turn up and go option?
- Pricing and yield management (airline style)
- Need for unfailingly reliable and precise train operations 24/7
- Possible development of routes (possibly privately owned) for freight priority with loading gauge enhancements for trailers on trains.

Bestfact Rotterdam

- Definitions still evolving but there is a need for clear understanding of what is being proposed and what each definition implies.
- The definitions can/could and perhaps should overlap
- What does the shipper/receiver actually want and need? Are they interested in the developing definitions?
- Are expectations being driven to unrealistic and unsustainable levels
- For rail within the inter-modal domain it still has a long way to go to get the industry to perform to a much greater level of competitive competence.
- The railway packages focused on governance. The need now is to exploit the new scenarios at a commercial level to make rail a more attractive and competitive option
- Think like truckers and stop whingeing!
- Use the inherent capabilities and endowments of rail to better effect.
- Innovate in a systematic way. There is always a better way!

Bestfact Rotterdam

- Thank you for your attention!
- Questions?

- BESTFACT Farewell!