

Three standards, One journey



How Sweden Combines **NeTEx**, **OSDM** and **BoB** for National Ticketing

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The Swedish Challenge

A deregulated rail market with multiple operators, one national ticket and 30 years of experience.



30+

Years combining
operators



55+

Rail, Bus, Metro, Ferry
operators connected



7

Inventory
systems (IMS)



1

National
Distribution Service

*Interoperability doesn't require choosing one standard –
it requires making them work together strategically.*

Three Standards, Three Layers



NeTEx

Timetable & traffic data

Collects, harmonises and distributes traffic data from all operators with optimised transfer times between operators and modes



OSDM

Distribution & booking

National hub for offers, bookings, ticketing and settlement across all operators via the Distribution Service

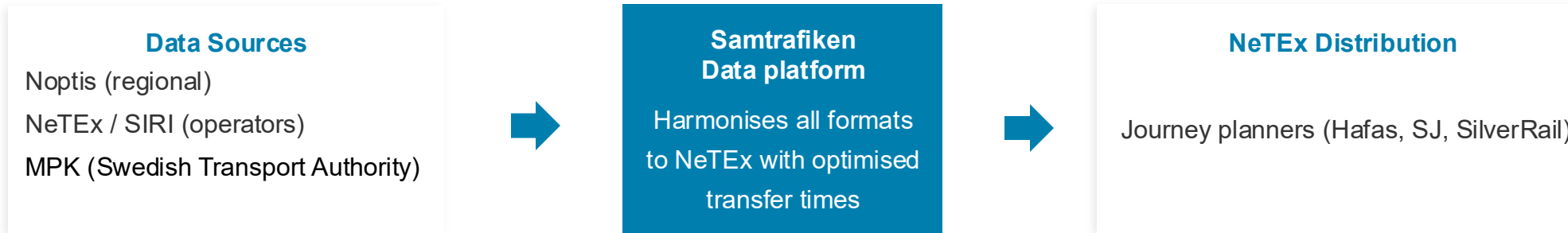


BoB

Regional ticketing

Connects regional public transport authorities' ticket systems into the national ecosystem via BoB Connect

Layer 1: Timetable Data – The Foundation

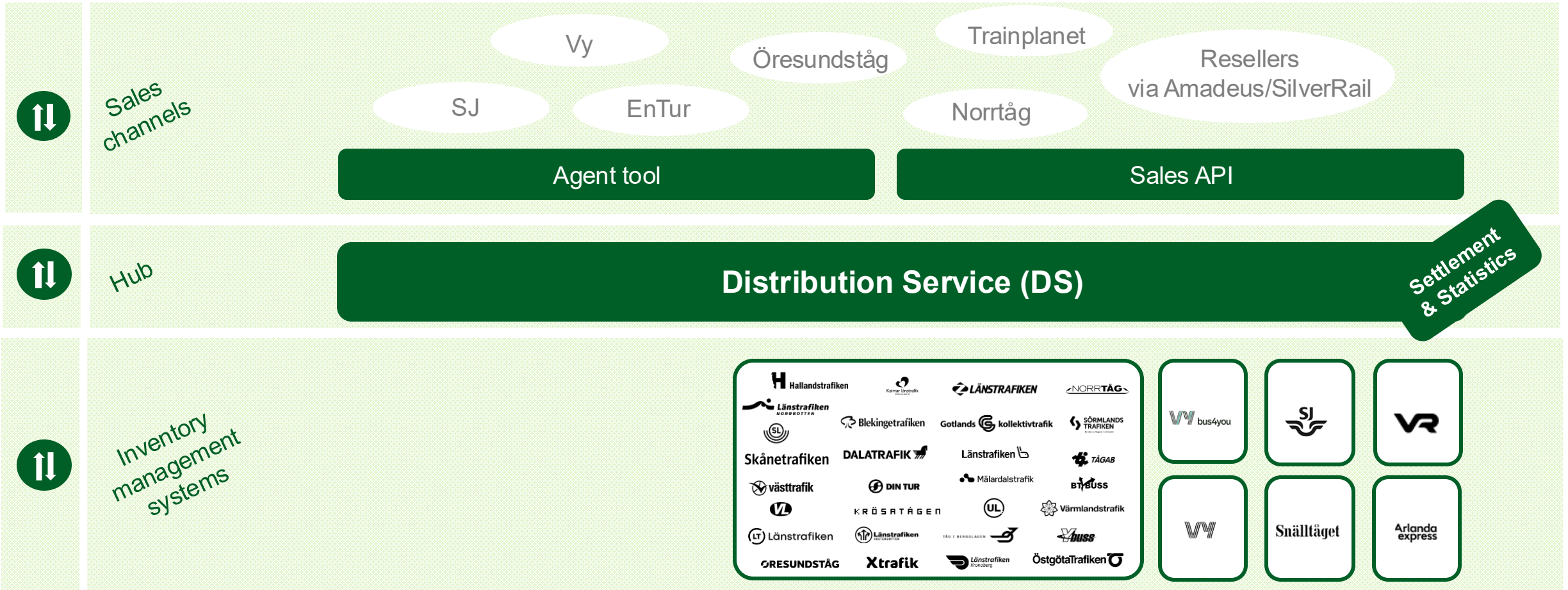


Optimised transfer times – a key differentiator

Samtrafiken enriches the NeTEx data with carefully calibrated transfer times between operators and transport modes at each interchange point. This means external journey planners using our data automatically suggest realistic connections, not just timetable adjacency, but actual achievable transfers considering walking distances, platform changes, and operator coordination. This is critical for Resplus combination journeys.

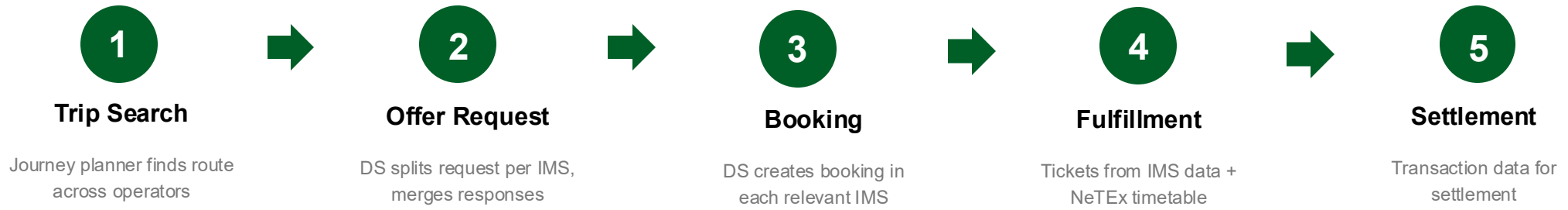
30+ years of combining journeys across operators and transport modes – we know what good transfer data looks like.

Layer 2: The Distribution Service (DS)

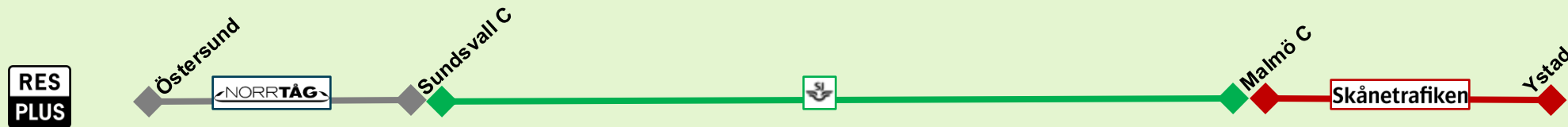


Design principle: DS is a simple hub – all business logic stays in the IMS or client. DS splits, routes and merges OSDM messages.

↕ The Booking Flow



Example: Östersund - Ystad



1. The journey planner finds route using NeTEx data: Norrtåg (Östersund - Sundsvall) + SJ (Sundsvall – Malmö) + Skånetrafiken (Malmö - Ystad)
2. DS sends offer request to Samtrafiken IMS (Norrtåg leg) and SJ IMS (SJ leg) and Samtrafiken IMS (Skånetrafiken leg)
3. DS merges prices into a combined Resplus offer for the customer
4. Booking creates reservations in the IMS systems, single tickets assembled by DS from each IMS's ticket data

Current Capabilities & Scale

Offer & Booking

Real-time pricing from each operator's IMS, combined Resplus offers

Seat Maps

Interactive seat selection with coach layouts delivered via OSDM

Ticketing

PDF tickets assembled by DS from each IMS's ticket data including Aztec validation codes

Settlement

Transaction data for monthly operator settlement

Disruption Handling

Refund flows and replacement ticket processes across operators



14 664 250

Sold tickets 2025

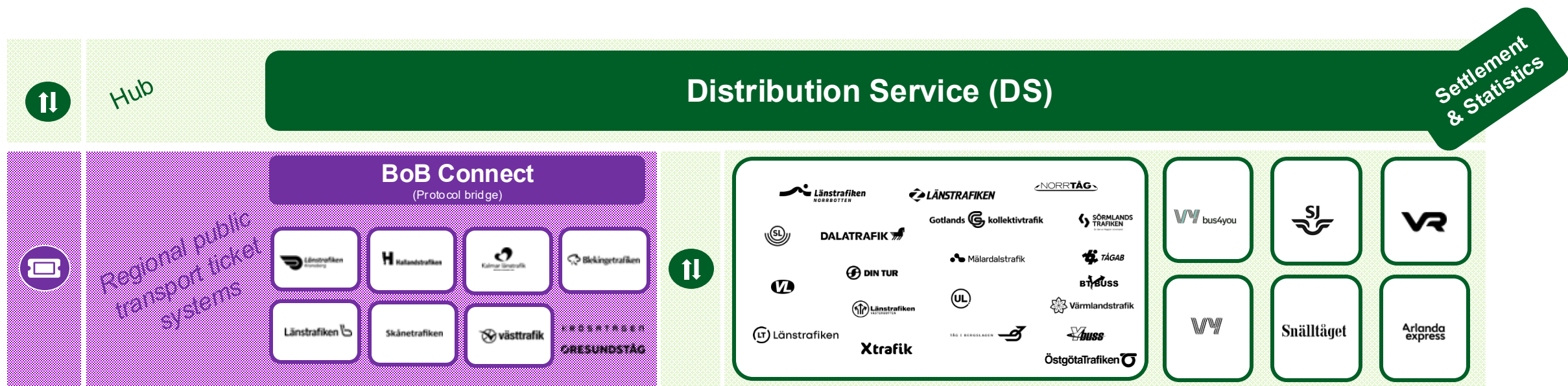


200+

Peak offer requests
per second

Layer 3: Connecting Regional Ticketing

*BoB (Standard for ticket distribution and ticket validation) –
the Swedish standard for regional public transport ticket systems*



What this enables – the RMVB project

- Regional operators sell tickets through the national distribution ecosystem
- Resplus journeys combine long-distance rail with regional bus/tram in one booking
- BoB Connect translates between OSDM (DS) and BoB (PTA systems)
- Passengers get a single ticket covering the entire door-to-door journey

Putting It All Together

End-to-end data flow through all three standards



Traffic Data Collection

Operators → Data → Harmonised NeTEx files with optimised transfers



Journey Planning

Journey planners use NeTEx to find multi-operator routes



Offer & Pricing

DS splits offer requests to each IMS via OSDM, merges responses



Booking & Ticketing

Reservations in each IMS, unified ticket from NeTEx + OSDM data



Settlement

Transaction data flows to settlement system for financial reconciliation

Lessons Learned



Keep the hub simple

DS has no business logic, it routes OSDM messages.
Each operator evolves independently while remaining part of the ecosystem.



Standards complement, not compete

NeTEx excels at timetable data, OSDM at distribution, BoB at regional ticketing.
Forcing one standard to do everything would have failed.



Transfer data is the invisible glue

30 years of calibrating transfer times between operators and modes is what makes multi-operator journeys actually work for passengers.



Governance matters as much as technology

Weekly architecture syncs, investigation processes, and formal prioritisation forums keep 7+ operators aligned without top-down control. And the entire ecosystem is funded by the industry itself, through transaction fees paid by both public and commercial operators and resellers, without direct government funding.

What's Next

Traffic data automation

Consolidating internal data flows to enable fully automated timetable processing, reducing manual handling and ensuring faster, more reliable NeTEx distribution across the ecosystem

OSDM version migration

Planned upgrade from 3.0.5 toward 3.8+ for better European compatibility, skeleton upgrade first, new functionality later

Exchange functionality

Ticket rebooking across operators, guidelines documented, DS and client integration implementation

Regional integration via BoB

Connecting all 21 regional PTA ticket systems to DS, enabling true door-to-door Resplus ticketing across Sweden with validatable tickets from each PTA, so the entire journey is covered by real, machine-readable tickets

Thanks

*The future of ticketing is not about choosing the right standard.
It's about making the right standards work together.*



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Questions?

