



Co-funded by the Seventh Framework
Programme of the European Union



Vi~~able~~ **W**agonload Production **S**chemes

Single Wagonload in the Year 2030 – Disappeared or Still Viable?

Final Conference

Lucerne

23 October 2015

Schiengüterverkehrsentwicklung [Mrd. tkm] in Deutschland

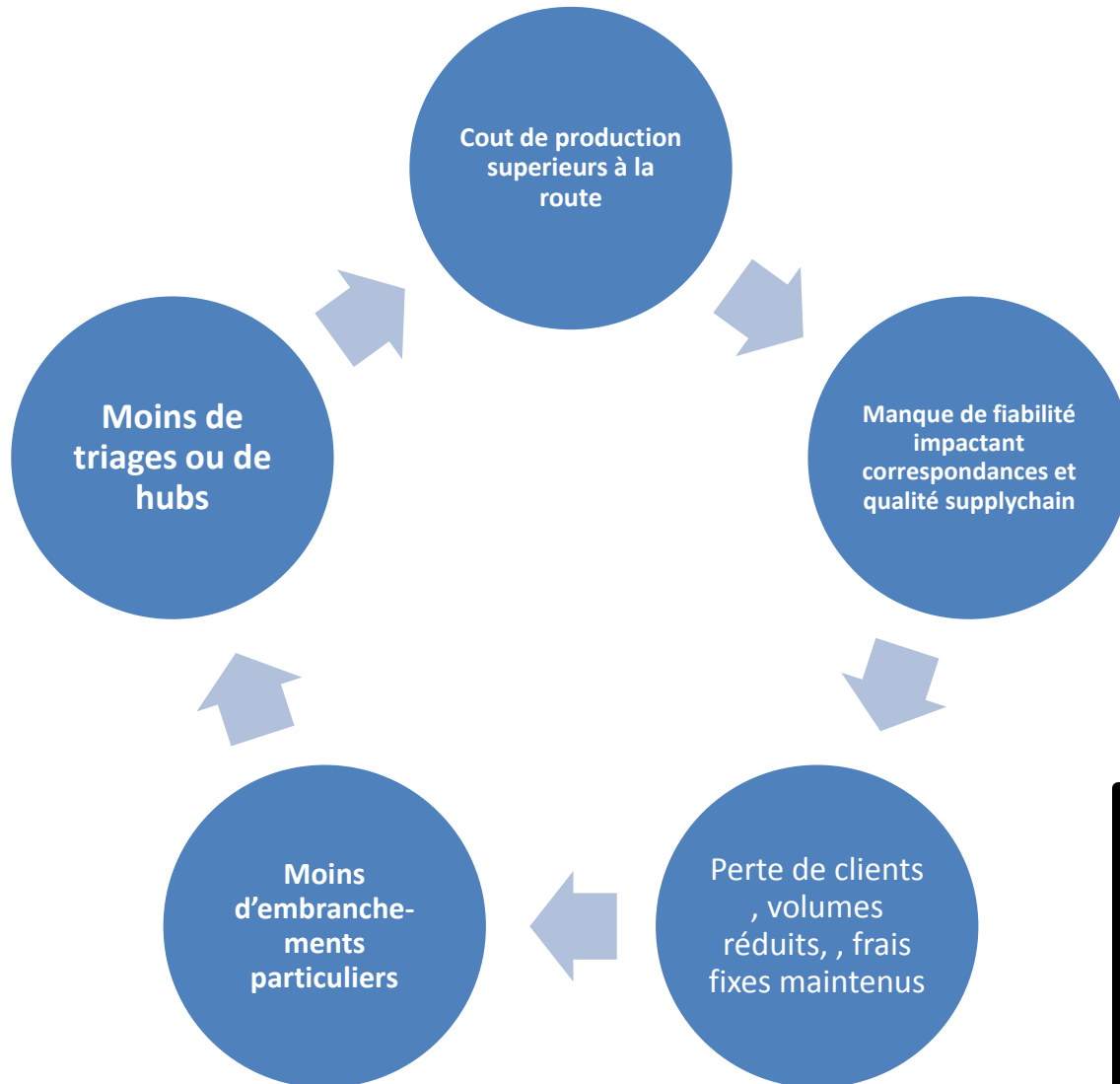
Jahr	Summe GV	Summe WLW	Anteil (%)	WLW EWLW	Anteil (%)	WLW GZ	Anteil (%)	Intermodal	Anteil (%)
1990	62.1	53.8	86.6	32.2	51.9	21.6	34.8	8.3	13.4
1995	70.5	62.3	88.4	31.6	44.8	30.7	43.5	8.2	11.6
2000	77.5	63.1	81.4	30.8	39.7	32.3	41.7	14.4	18.6
2005	95.4	72.2	75.7	32.5	34.1	39.7	41.6	23.2	24.3
2010	107.3	76.2	71.0	28.6	26.7	47.6	44.4	31.1	29.0
2013	112.7	70.3	62.4	28.3	25.1	42.0	37.3	42.4	37.6
2025 Prognose	151.9	96.0	63.2	36.4	24.0	59.6	39.2	55.9	36.8
2030 Prognose	153.7	87.5	56.9	30.5	19.8	57.0	37.1	66.2	43.1

**Anteile für EW und GZ wurden für 2025 und 2030 geschätzt
(keine Werte in der Prognose enthalten)**

Single Wagon load : the GAPS

- Low reliability: connections missed, supply chain jeopardized
- High costs of service:
 - multiple manual operations
 - High marshalling costs
 - Low filling coefficient of distribution trains
 - High last mile costs
- Decrease of private sidings number
- Insufficient volumes of traffics to cover fixed costs

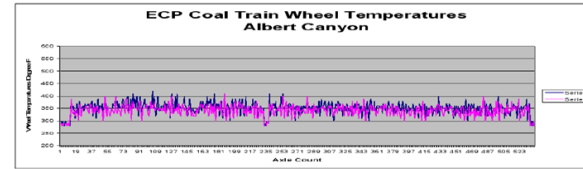
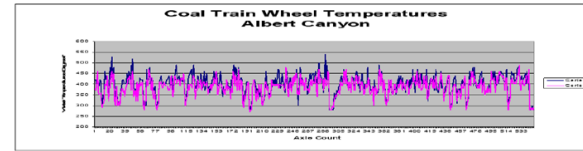
The vicious circle of the single wagon load decline



**BUT
wagon load
transport is
absolutely
necessary**

Possible reactions

- Improve Combined transport (all types)
- **Increase freight priority (political)**
- **Develop strongly innovation** (wagon design, EP Brake, Automatic couplers, Newlast mile solutions, automated marshalling yards,...)
- **Introduce freight villages** to bundle traffics economically (partly political)
- **Introduce automated traction on secondary tracks**
- Develop all possible information system for booking to increase the filling coefficient, for tracking and tracing, improving train management



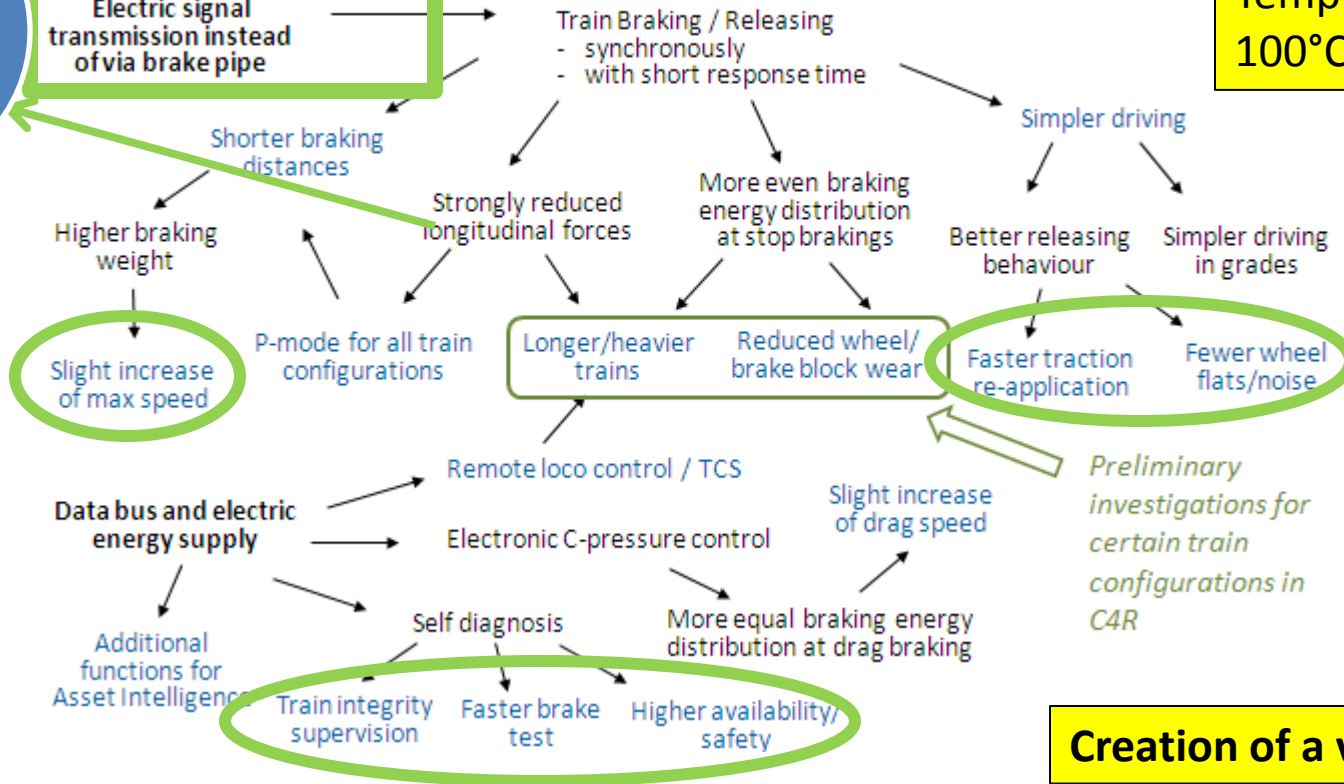
Source: Wachs et al., 2011, Electronically-Controlled Pneumatic (ECP) Brake Experience at Canadian Pacific

Temperature reduction according to braking system

Flexible Train length on the network

Advantages of Ep brakes
Electric signal transmission instead of via brake pipe

In USA Max Temp reduced by 100°C with ECP



Creation of a virtuous circle