

Global CBTC Projects Database

21 benchmark CBTC deployments — supplier, automation grade, conversion date, length and peak throughput — assembled from the manuscript rather than from vendor marketing.

United States

SYSTEM / LINE	SUPPLIER	GOA	OPENED / CONVERTED	LENGTH	PEAK HEADWAY	NOTE
NYCT L Line (Canarsie)	Siemens Trainguard MT	2	2006 partial · 2009 full	~15 km	24–29 tph	The US flagship retrofit. Design 1999–2001, install 2001–2006, three segment cutovers, ~8 months shadow running. Roughly \$48M per km. No civil works; throughput up from ~20 tph.
NYCT 7 Line (Flushing)	Siemens Trainguard MT	2	—	40 km	—	Validated through thousands of scenarios on a full-system simulator running production software before any test train moved in Manhattan.
BART — TCMP	Hitachi Rail SelTrac	2	Awarded 2018	131 route-km	30 tph target	The most substantial current US CBTC implementation. Fleet- and function-phased.
Honolulu Skyline	Hitachi Rail Hitachi CBTC	4	2023 (service 2023–2026)	15.5 mi · 14 sta	—	Single-prime contract, ~\$398M, 78 railcars, vehicles co-designed for the CBTC. First US mass-transit line certified for unattended operation.
JFK AirTrain	Bombardier (now Alstom) CITYFLO / Innovia	4	2003	8.1 mi	—	An airport system rather than a metro, and one of only two long-standing US GoA 4 operations.
SFMTA Muni Metro	Alstom CITYFLO	2	1998	150 km	—	An early automated train control system predating modern CBTC standards; 25+ years of tenure informs current procurement practice.
PATH	—	1	—	13.8 mi	—	Frequently overlooked in US benchmark sets.
Denver International Airport A-Line	—	4 (part)	—	—	—	Some sections mixed-mode.
Las Vegas Monorail	—	4 (part)	—	—	—	Partial GoA 4 operation in certain sections.
MBTA Green Line	Alstom	—	In design	—	—	Hornell, NY manufacturing is a stated competitive advantage.
WMATA — Red / Green / Blue	Alstom · Siemens	—	In design	—	—	Emphasis on open interfaces and Buy America compliance.

International benchmarks

SYSTEM / LINE	SUPPLIER	GOA	OPENED / CONVERTED	LENGTH	PEAK HEADWAY	NOTE
Paris Métro Line 14	Siemens Mobility	4	July 1998	17.5 km (final) · 13 (final) sta	85 s (~42 tph)	The greenfield showcase: the first modern metro to open at GoA 4. 100% platform screen doors from day one. ~650,000 daily riders. €650–750M for the full line.
Paris Métro Line 1	Siemens Trainguard MT	4	2007–2012 conversion	16.5 km · 29 sta	90 s (~40 tph)	The brownfield paradigm shift: converted under traffic over a five-year phased cutover, PSDs retrofitted to 86% of platforms over five years. ~1.5M daily riders. €700M+. Throughput rose from ~20 to 27 tph.
Copenhagen Metro M1 / M2	Ansaldo STS (now Hitachi Rail)	4	19 Oct 2002	—	—	The longest uninterrupted GoA 4 record in continental Europe. 34 three-car driverless sets; unattended operation was a founding requirement, not a retrofit.
Copenhagen Metro M3 Cityringen	Ansaldo STS (now Hitachi Rail)	4	29 Sep 2019	15.5 km · 17 sta	~100 s (36 tph design)	Turnkey contract ~€700M covering signaling, power, comms, SCADA, PSDs, control centre, depot and rolling stock. M4 Nordhavn opened 28 Mar 2020; a 4.5 km Sydhavn extension 22 Jun 2024.
Vancouver SkyTrain	Bombardier / Hitachi Rail SelTrac	4	1985	—	—	Forty years of driverless operation — the deepest GoA 4 operating record behind any Western supplier's claims.
Hong Kong MTR — Tsuen Wan	—	—	—	—	24 tph	Throughput rose from 18 to 24 tph on unchanged civil infrastructure.
London Underground — Jubilee	Thales (now Hitachi Rail) SelTrac	2	—	—	—	Delivered under the Metronet PPP model, whose contractual structure is as instructive as its engineering.
Elizabeth Line (Crossrail)	—	—	—	—	—	Multi-signaling architecture at scale: CBTC in the core, conventional signaling on the outer branches, with transitions in service.
Singapore MRT	—	4	—	—	—	The LTA model for fully automated network expansion; fleet-phased retrofit on existing lines.
Dubai Metro	—	4	—	—	—	Operated by Keolis-MHI. A reference case for public acceptance of unattended operation at scale.

Read Paris twice. Line 14 opened greenfield at GoA 4 in 1998 with full platform screen doors from day one. Line 1 reached the same grade by conversion under traffic between 2007 and 2012, retrofitting PSDs to 86 percent of platforms across five years on a line carrying 1.5 million people a day, for €700M+. Same city, same operator, same supplier, same automation grade — and only the second number is a useful analogue for a US brownfield business case.

An empty cell is unverified, not zero. Every filled value on this sheet traces to the manuscript or to a published case study. Nothing has been interpolated to make the table look complete, so a cell you can read is a cell you can quote.