



TTC Fleet Procurement Strategy and Plan

2020-2034

**TTC Board Meeting
October 22, 2020**



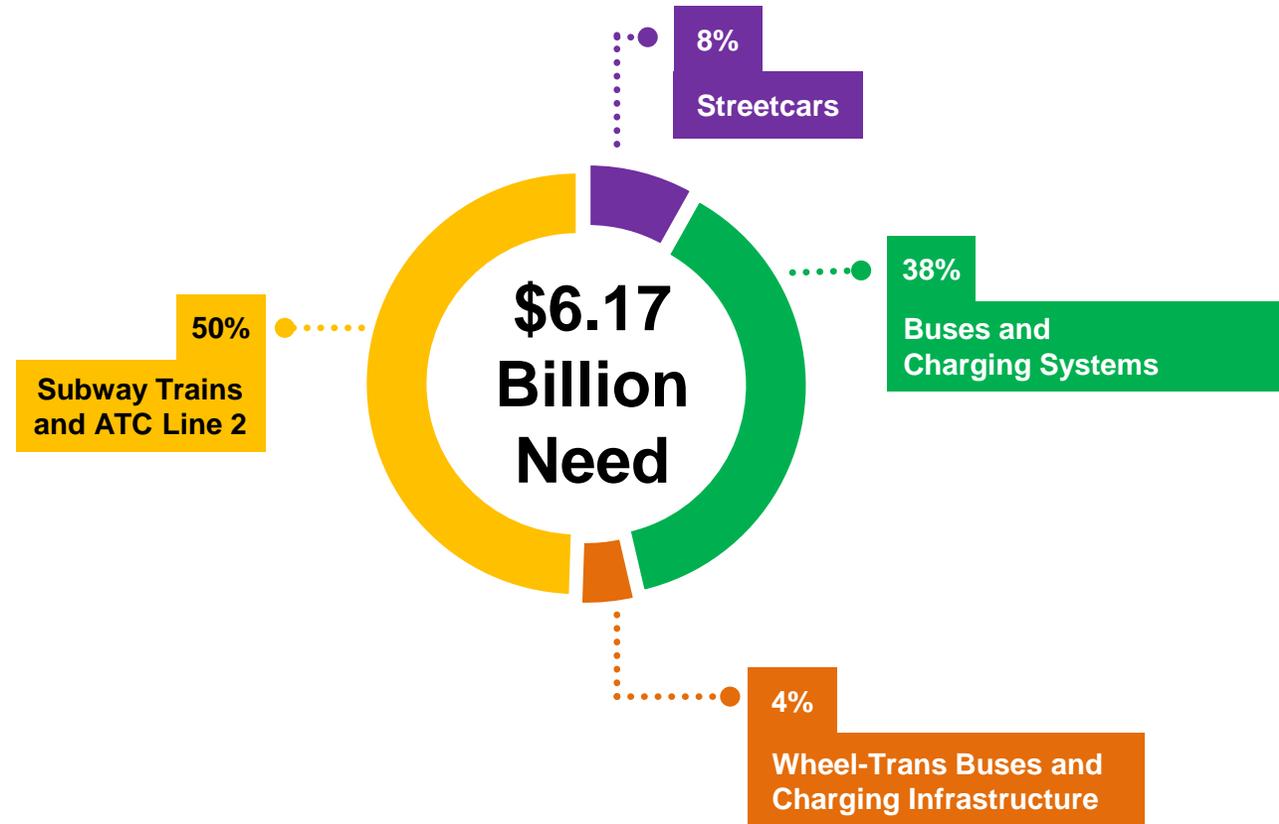
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Overview

TTC 10-Year Vehicle Investment Summary: Over 95% State-of-Good-Repair



ATC – Automatic Train Control



Overview

\$6.17 Billion Need

TTC 2020-2029 Capital Budget and Plan:

\$2.24B Funded
43%

\$3.92B Unfunded
57%



Need: 60 Streetcars

Estimated Cost: \$500M

Funding: \$140M

Initial Procurement: 13 Streetcars



Need: 1,422 Buses

Estimated Cost: \$1.86B

Funding: \$686M

Initial Procurement: 300 Buses

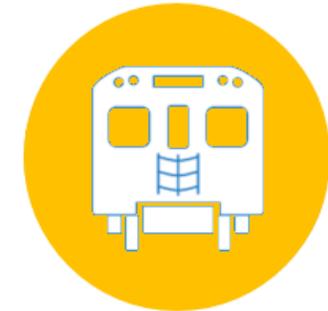


Need: 512 Wheel-Trans Buses

Estimated Cost: \$206M

Funding: \$52M

Initial Procurement: 70 Buses



Need: 80 Subway Trains

Estimated Cost: \$2.24B

Funding: \$624M

Initial Procurement: n/a

Streetcar Procurement

Strategy and Plan



Strategic Benefits:

1. Increases service capacity
2. Maximizes utilization streetcar infrastructure
3. Reallocates 50 buses

Funding Sufficient for 13 Streetcars

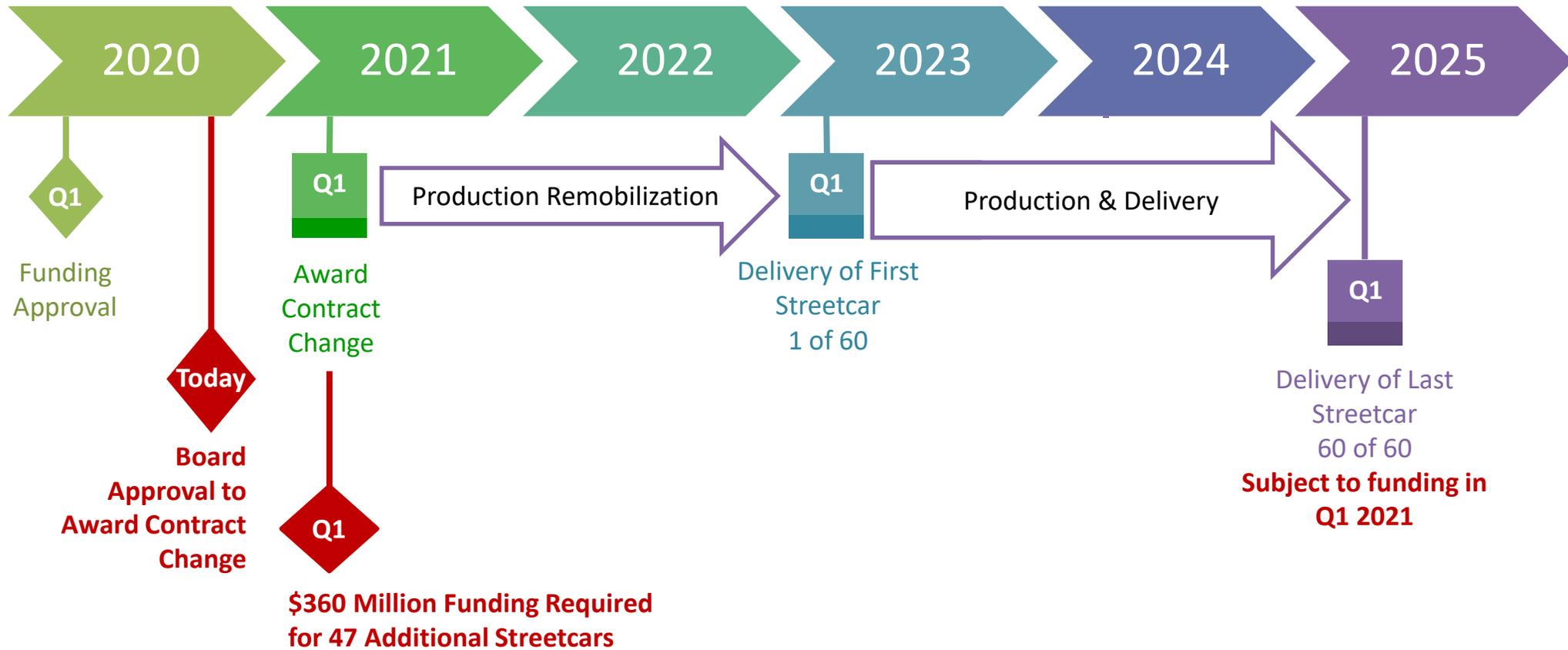
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
	-	-	-	20	20	20	-	-	-	-	60

Interdependency: Requires modification to Hillcrest Facility



Streetcar Procurement

Funding and Delivery Timeline



Streetcar Procurement

Summary Recommendations



1

Delegate authority to the CEO to issue a contract change with Bombardier for supply of up to 13 streetcars, based on the following:

1a

Negotiation of an acceptable agreement that is satisfactory to the CEO and TTC General Counsel

1b

Negotiation of contract pricing for the initial 13 streetcars and fixed pricing on options for up to 47 additional streetcars

7a

Secure \$360 million in additional funding by Q1 2021

Bus Procurement

Strategy and Plan



Strategic Benefits:

1. Maintains SOGR
2. Advances fleet electrification
3. Leverages buses reallocated from streetcar
4. Defers ninth garage

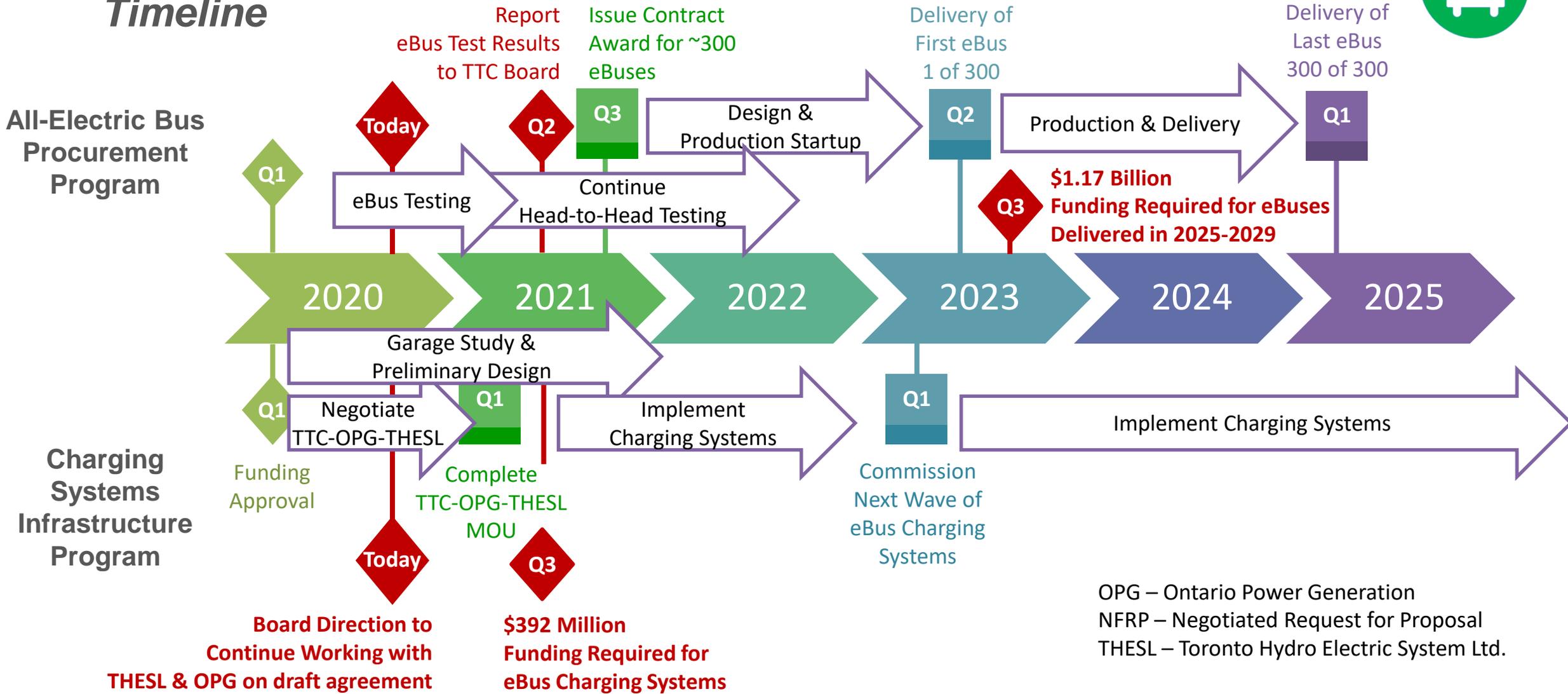
Funding Sufficient for ~600 Buses

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Hybrid	0	0	298	39	-	-	-	-	-	-	337
eBus	0	0	0	100	133	167	170	170	170	175	1,085
Total	0	0	298	139	133	167	170	170	170	175	1,422

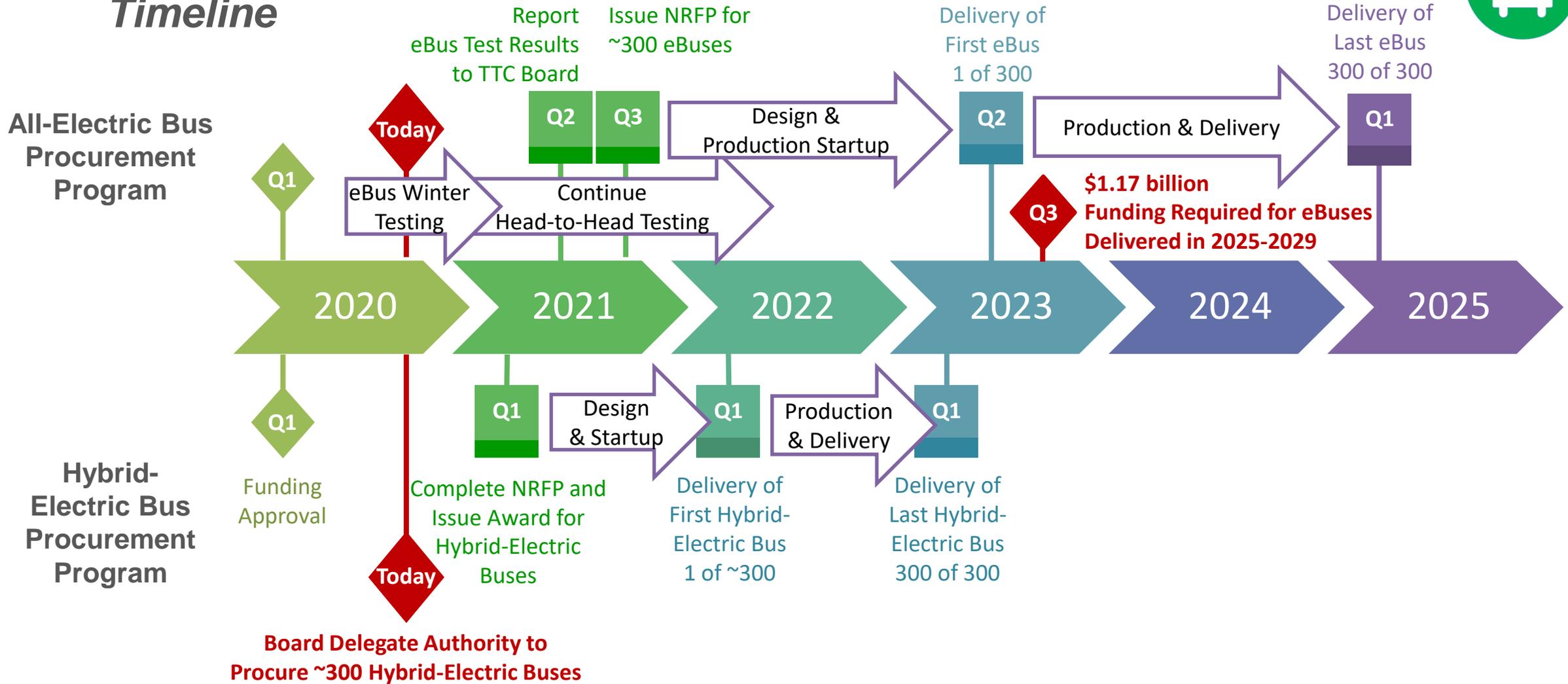
Interdependencies: Requires charging infrastructure ahead of procurements



Bus Procurement Timeline



Bus Procurement Timeline



Bus Procurement

Summary Recommendations



2

Delegate authority to the CEO to award up to two contracts for ~300 Hybrid-Electric Buses

3

Staff to report back to the TTC Board in Q2 2021 following eBus winter testing and initiate for ~300 eBuses

5

Staff to continue working with Toronto Hydro and Ontario Power Generation on agreement(s) for delivery of eBus charging infrastructure

7c

Secure \$1.17 billion in net new funding by Q1 2023 for 1,422 buses

7e

Secure \$392 million in net new funding by Q3 2021 for charging systems

Wheel-Trans Bus Procurement



Strategic Benefits:

1. Matches capacity with demand
2. Continues to green the fleet with retirement of existing diesel buses

Funding Sufficient for ~70 Additional Buses

6m Bus
7m Bus
Total

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
11	9	0	67	48	6	6	2	40	50	239
1	83	27	0	0	5	4	88	65	0	273
12	92	27	67	48	11	10	90	105	50	512

Interdependencies: Requires charging infrastructure ahead of procurements



Wheel-Trans Bus Procurement

Summary Recommendations



4

Delegate authority to the CEO to issue a contract change to Creative Carriage Ltd. for supply 70 Wheel-Trans Buses, based on the following:

4a

Approval of 7-meter ProMaster pilot bus by the Advisory Committee on Accessible Transit

5

Staff to continue working with Toronto Hydro and Ontario Power Generation on agreement(s) for delivery of eBus charging infrastructure

7d

Secure \$154 million in net new funding by Q2 2021 for 512 Buses

7e

Secure \$50 million in net new funding by Q2 2021 for charging systems

Subway Train Procurement



Strategic Benefits:

1. Replaces aging T1 fleet at end of design life
2. Maximizes utilization infrastructure with ATC
3. Mitigates risk of station overcrowding

Funding Sufficient for Project Planning Phase only

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Line 1					1		9	9					18
Line 2					1		12	13	12	12	12		62
Total					2		21	21	12	12	12		80

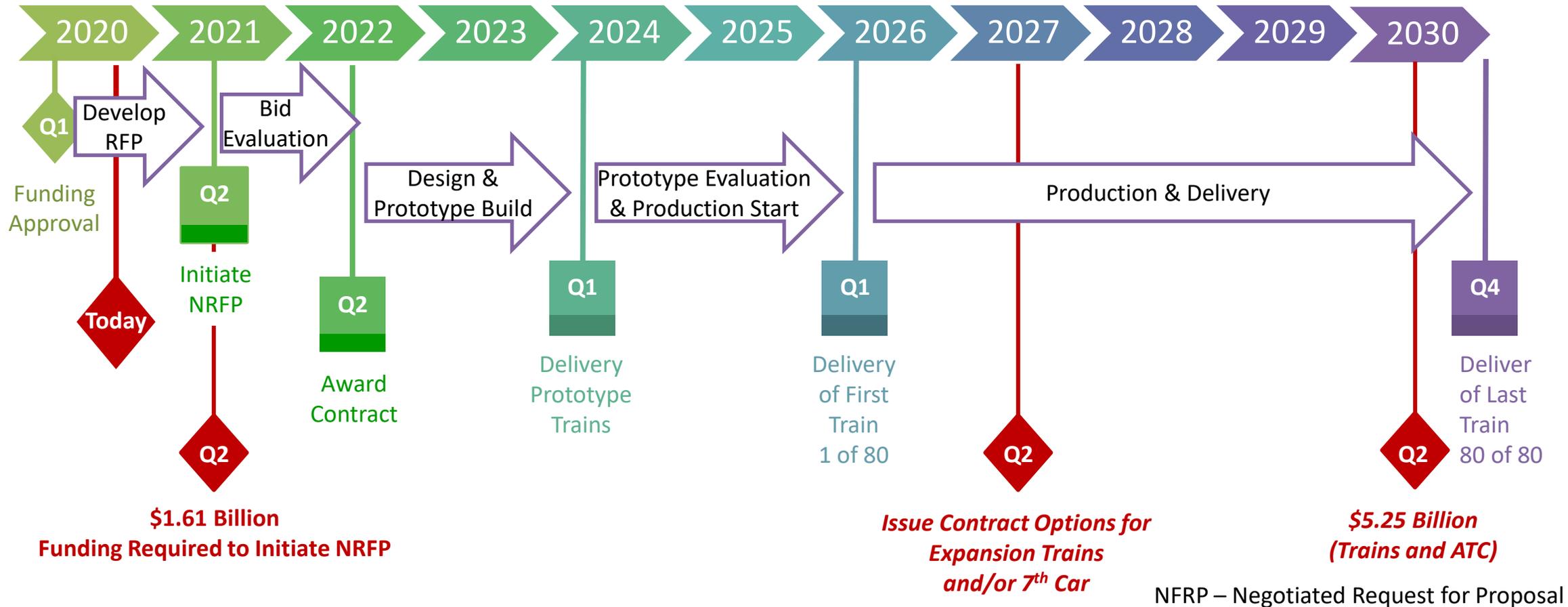
Interdependencies: Renewal and Upgrade to Greenwood Shop and Carhouse and ATC on Line 2



Picture Taken Pre-Covid-19

Subway Train Procurement

Funding Option A: Requires \$2.24 Billion over 15 Years



Subway Train Procurement

Summary Recommendations



6

Approve expenditure of \$3 million to advance planning phase

7b

Secure \$1.61 billion in net new funding by Q2 2021 for 80 Trains

Summary



**\$6.17B
Need**

**43% Funded at \$2.24B
683 of 2,074 vehicles**

**57% Unfunded at \$3.92B
1,391 of 2,074 vehicles**

Today

Vehicle Type	Number of Vehicles Required ¹ and Estimated Cost	Vehicle Procurements Advanced through Approval of This Report ¹	Funding Approved	Expenditure Approval Through This Report
Streetcars	60 Streetcars estimated at \$500M	Issue contract change for supply of 13 Streetcars with Delivery Starting in Q1 of 2023	\$140M	\$140M
Buses	1,422 Buses estimated at \$1.86B	Enter into contract(s) for supply of 300 Hybrid Buses with Delivery Starting in Q1 of 2022 Development of RFP for 300 eBuses with Delivery Starting in Q2 of 2023	\$686M	\$390M
Wheel-Trans Buses	512 buses estimated at \$206M	Enter into contract(s) for supply of 70 Wheel-Trans Buses with Delivery Starting in Q1 of 2022	\$52M	\$20M
Subway	80 Subway Trains estimated at \$2.24B	Develop RFP for 80 Subway Trains	\$624M	\$3M
Total	2,074 new vehicles estimated at 4.81B	383 New Vehicles	\$1.50B	\$553M



