RACE ANALYSIS REPORT

1976 Olympic Regatta - Olympians

CLASS	DATE	RACES
J70	8/14/2026	2

SAIL·VOILE CANADA

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SCAN FOR RACE REPLAY AND AI FEEDBACK

FLO'S OVERALL COACHING INSIGHTS

Upwind VMG patterns: Race 1's fastest upwind work came on the left side on leg 1 and on the right on leg 3; in Race 2 both upwind legs paid to go right—adapt to that side-specific pressure and shifts each leg.

Start impact & penalties: CST3 (Race 1 winner) executed a pin-biased start (4% line, +16 m bias); in Race 2 CST5 went OCS (-2 m) and was 16 s late, costing the early upwind edge that CST7 capitalized on.

Heel vs VMG correlation: Boats keeping average heel in the 4–5° range posted the highest mark VMGs; those over 7° heel tended to lose 0.3–0.5 kt in VMG.

First-leg leaders hold differently: Leg 1 winner took Race 1, but in Race 2 CST7 clawed back from a midline start with clean maneuvers and right-side tactics on leg 3 to secure the win.

FLO'S COACHING INSIGHTS

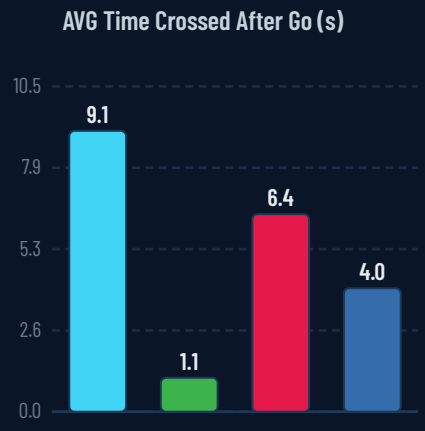
BOAT	STRENGTH	WEAKNESS
CST3 (318)	Delivers top upwind VMG when combined with precise pin-biased starts.	Speed dipped under shifted pressure, as seen in Race 2's longer leg durations on both upwinds.
CST7 (320)	Recovers from suboptimal starts by consistently choosing the faster right side on upwind legs.	Late or mid-line starts often leave early gaps to close, relying on catch-up tactics.
CST1 (316)	Maintains stable heel control, delivering steady but predictable VMG.	Lacks the peak upwind speed bursts needed to challenge for the lead.
CST5 (319)	Produces the fastest VMG on both upwind legs when clear of start penalties.	An OCS start in Race 2 and marginal heel control undermined its overall results.

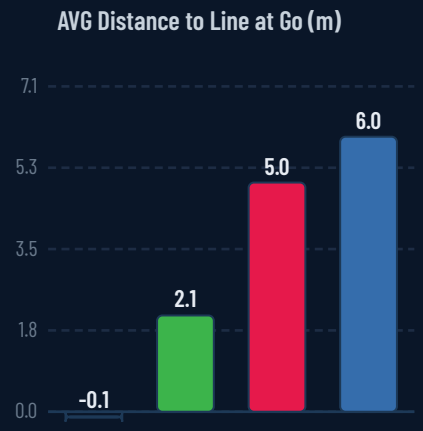
RESULTS

#		BOAT	R1	R2	TOTAL
1		CST7 (320)	2	1	**3**
2		CST3 (318)	1	3	**4**
3		CST5 (319)	4	2	**6**
4		CST1 (316)	3	4	**7**

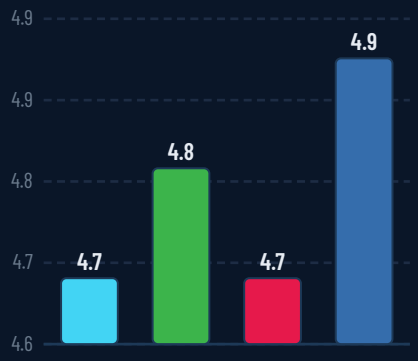
OVERALL PERFORMANCE CHARTS

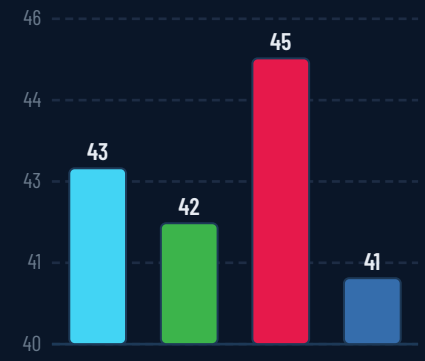
AVG Starting Stats Charts

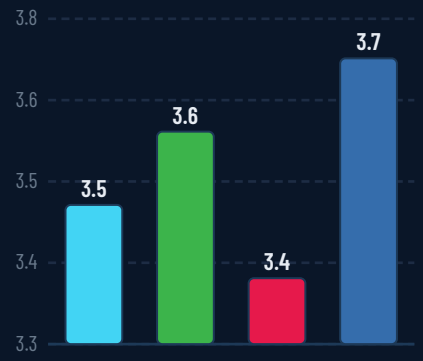




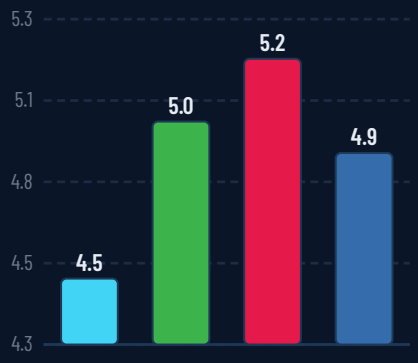
AVG Upwind Charts

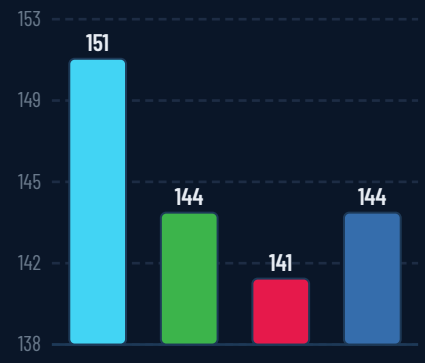


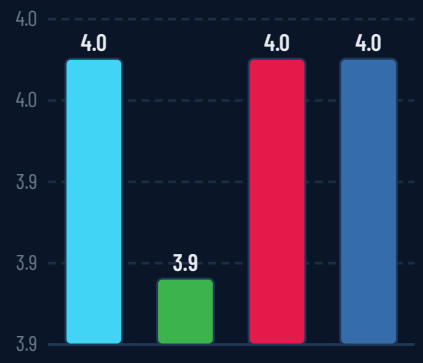




AVG Downwind Charts







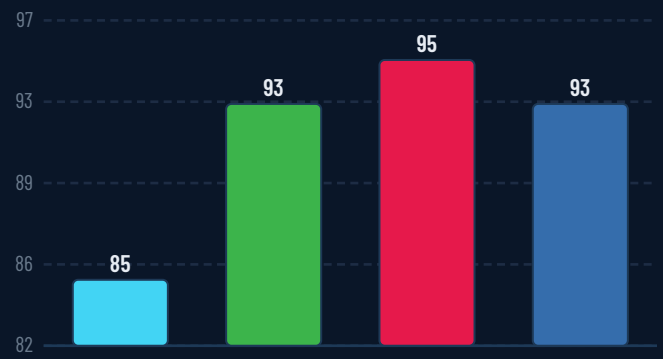
CST5 (319) CST3 (318) CST1 (316) CST7 (320)

Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

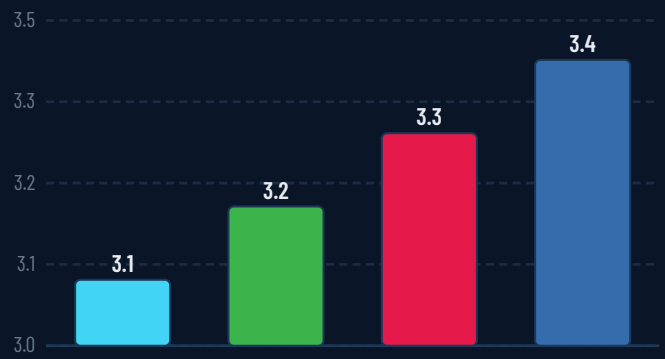
UPWIND MANEUVER ANALYSIS

Upwind Maneuver Charts

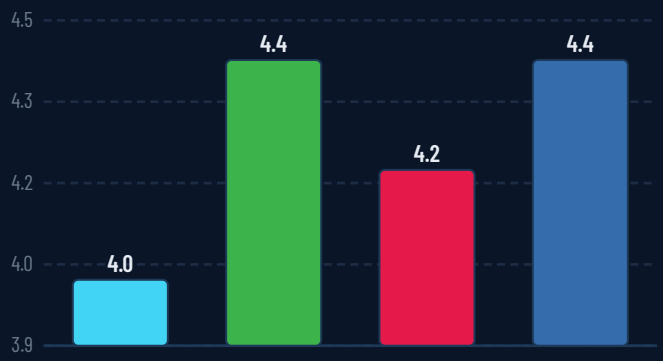
AVG Tacking Angle (°)



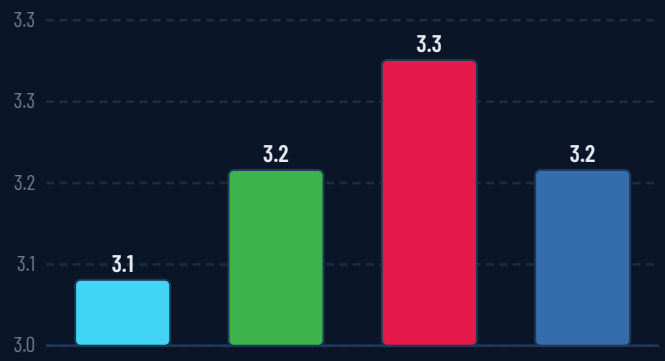
AVG Min SOG in Tack (kts)



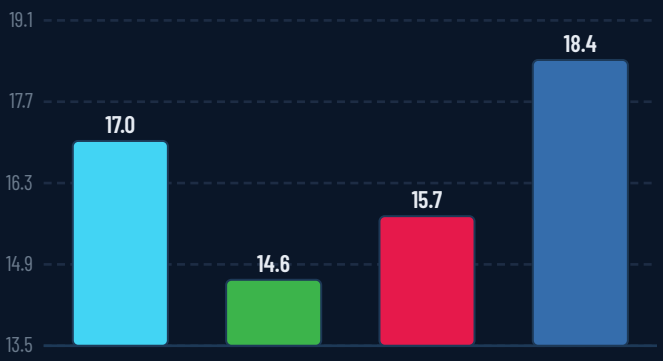
AVG Exit SOG (kts)



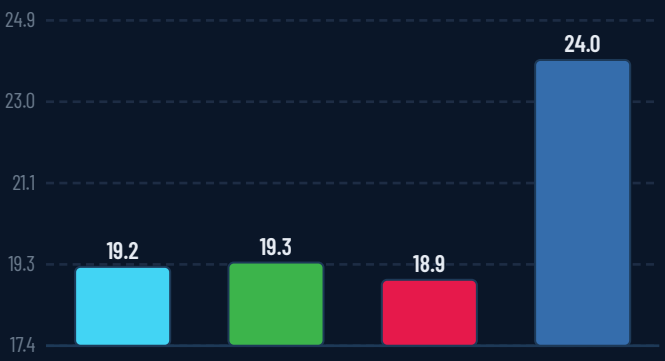
AVG VMG ±5s (kts)

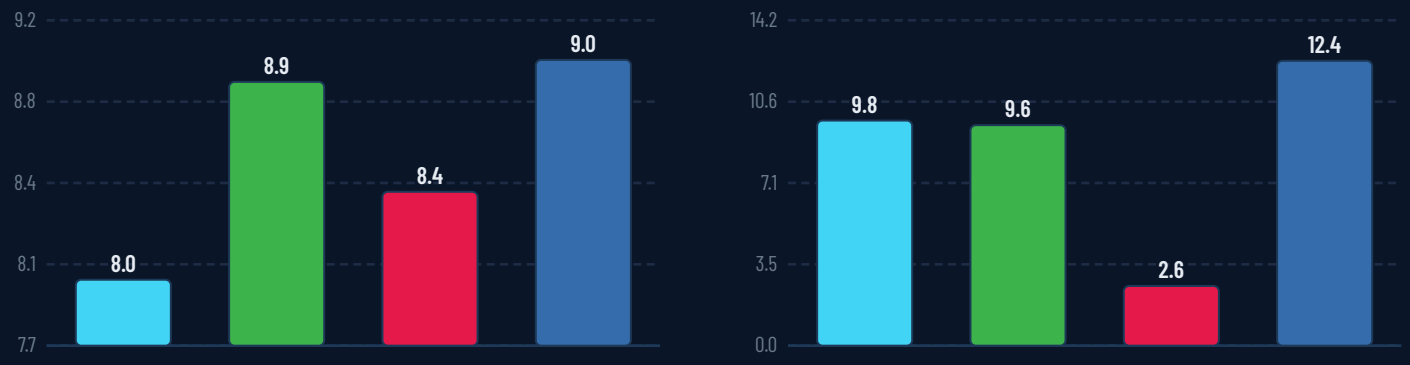


AVG VMG Loss (m)



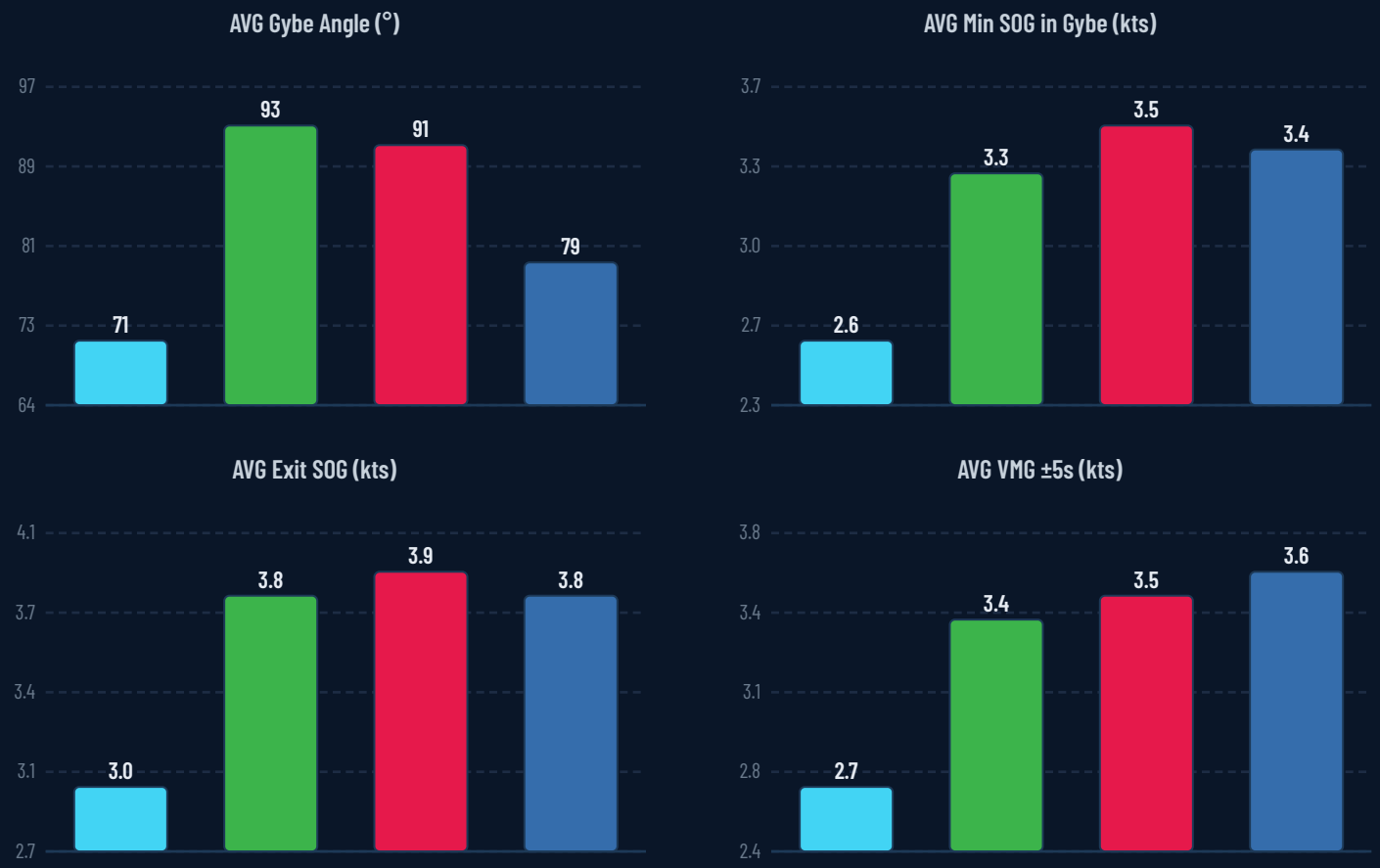
AVG Max Turn Rate (°/s)

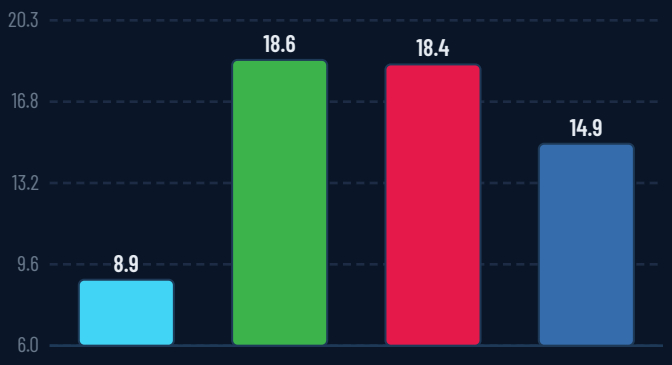


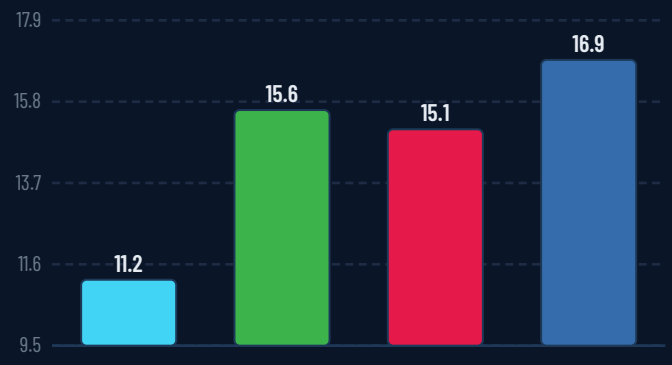


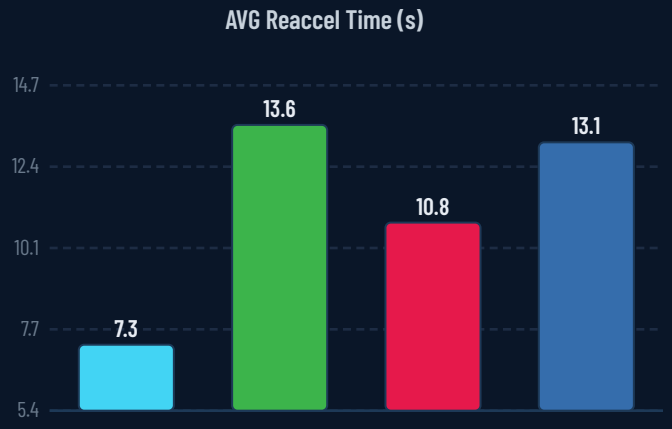
DOWNWIND MANEUVER ANALYSIS

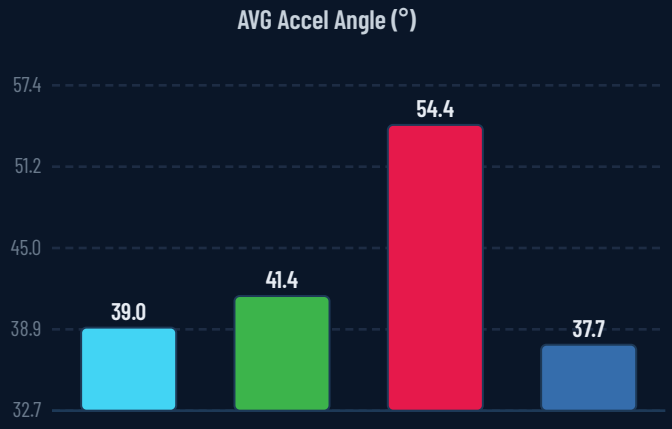
Downwind Maneuver Charts











CST5 (319) CST3 (318) CST1 (316) CST7 (320)

01 RACE ONE

• START 16:03:01

FLO'S RACE INSIGHTS

Pin-biased start & Leg 1 lead: CST3 nailed a 4% pin-end start (+16 m bias, 1 s late) and sailed the left-side upwind fastest (304 s), grabbing the early lead they never relinquished.

Upwind side-shift pays on Leg 3: Leg 3's quickest boat (CST3) tacked right—others staying left lagged. Mirroring broader patterns, right-side upwind in leg 3 unlocked the best VMG.

Heel control drives VMG: CST3 held heel around 5°, whereas rivals averaged 7°–9° and lost ~0.3 kt mark VMG. On this J/70, targeting 4°–5° heel upwind optimizes speed.

Downwind gybes & side choice: Fastest downwind legs (L2 – CST7; L4 – CST5) both favored the left side. CST3's more conservative left-only approach cost time; focus gybe patterns leftward on J/70 runs.

RACE 1 — FULL RACE SUMMARY

RANK	BOAT	DISTANCE	TIME	UPWIND SOG	UPWIND VMG	DOWNWIND SOG	DOWNWIND VMG	MAN.
1.	CST3 (318)	3201.6m	00:19:43	5.2kts	4.4kts	5.7kts	4.3kts	10
2.	CST7 (320)	-108.9m	+00:00:05	5.1kts	4.1kts	5.2kts	4.4kts	8
3.	CST1 (316)	-27.1m	+00:00:21	4.9kts	3.9kts	5.7kts	4.7kts	7
4.	CST5 (319)	-166.6m	+00:00:35	4.9kts	3.7kts	5.2kts	4.8kts	8

Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

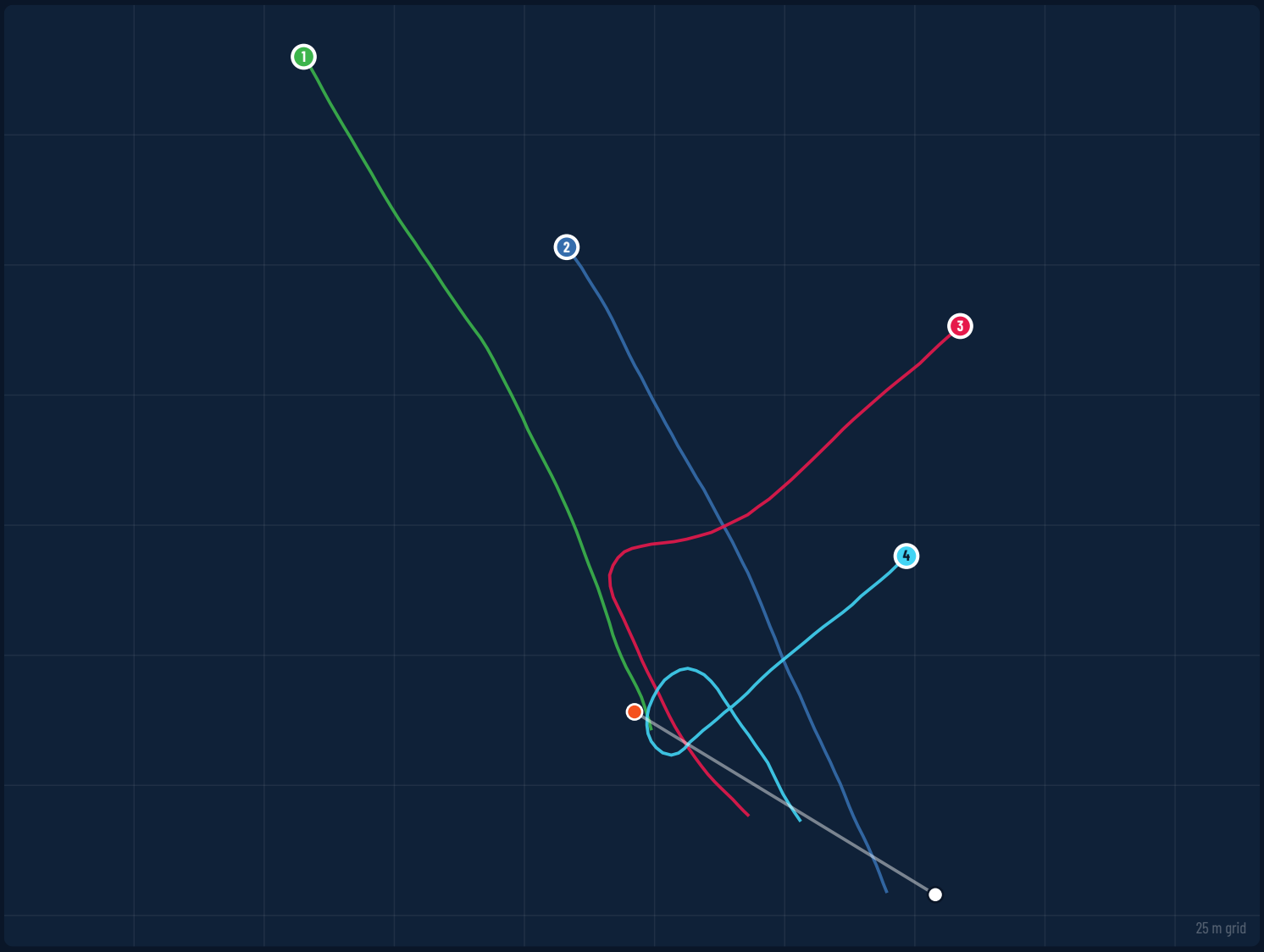
RACE 1 — START REPORT

10 m grid — map scale reference | (1) Boat numbers = **Finish order** — match the Finish # column below

FAVORED END	LINE LENGTH	WIND	COMM TO M1
Pin (35.1m)	**67.6m**	**79.0°**	**94.3°**

FINISH #	BOAT	DIST TO LINE	SOG AT GO	START DELAY	FLEET POS	POSITION ON LINE	TACK AT GO
1.	CST3 (318)	1.8m	4.7kts	1.0s	100%	96%	starboard
2.	CST7 (320)	6.0m	3.7kts	4.0s	0%	21%	starboard
3.	CST1 (316)	7.5m	2.7kts	10.8s	67%	84%	starboard
4.	CST5 (319)	1.9m	3.9kts	1.8s	33%	48%	starboard

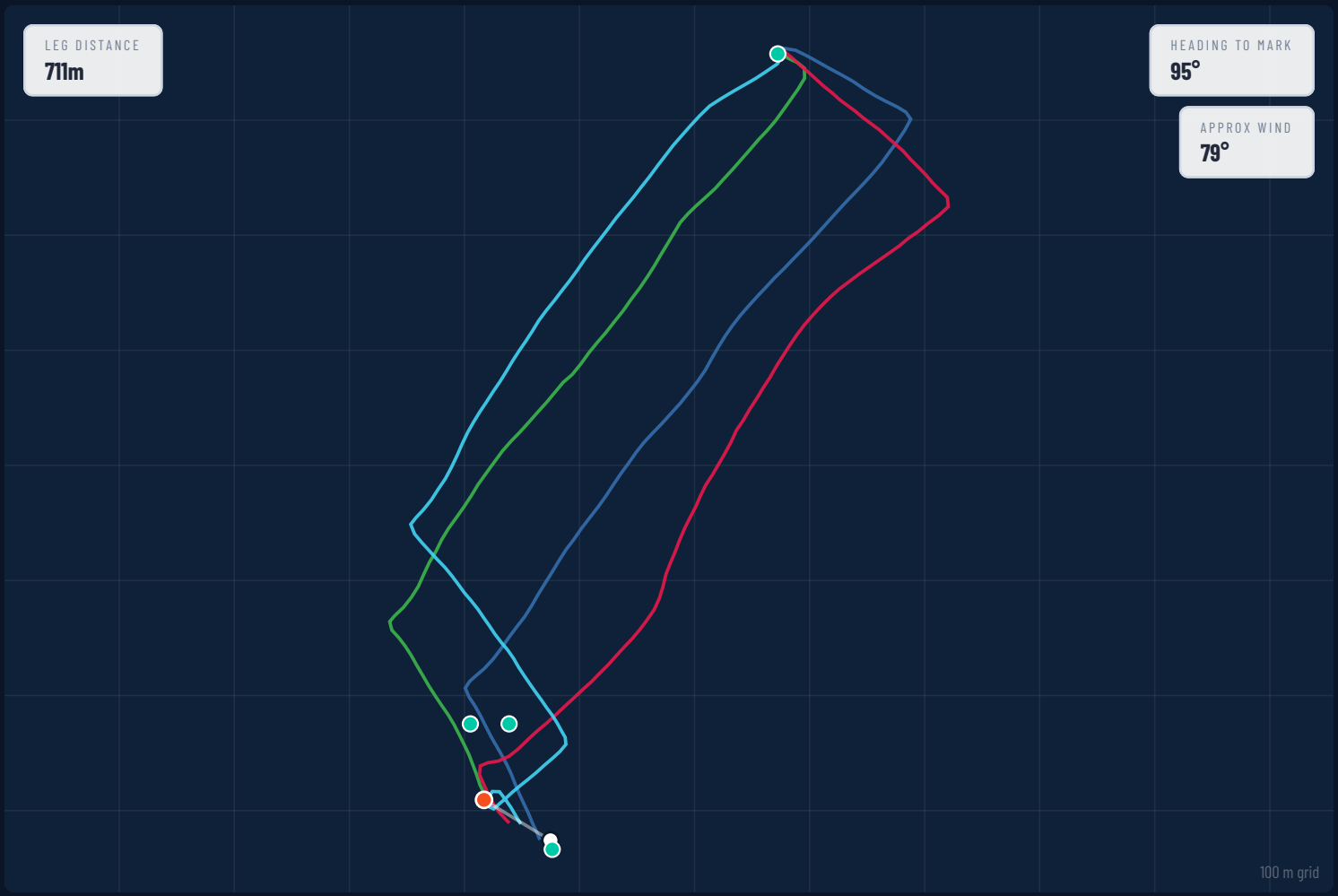
RACE 1 — OFF THE LINE · +60S



FINISH #	BOAT	DISTANCE	SOG	VMG	TWA	BEHIND
1.	CST3 (318)	143.7m	4.7kts	4.2kts	27°	—
2.	CST7 (320)	136.2m	4.5kts	4.0kts	26°	+52m
3.	CST1 (316)	136.5m	4.5kts	3.0kts	44°	+73m
4.	CST5 (319)	117.0m	3.8kts	2.6kts	68°	+136m

= finishing position for the race

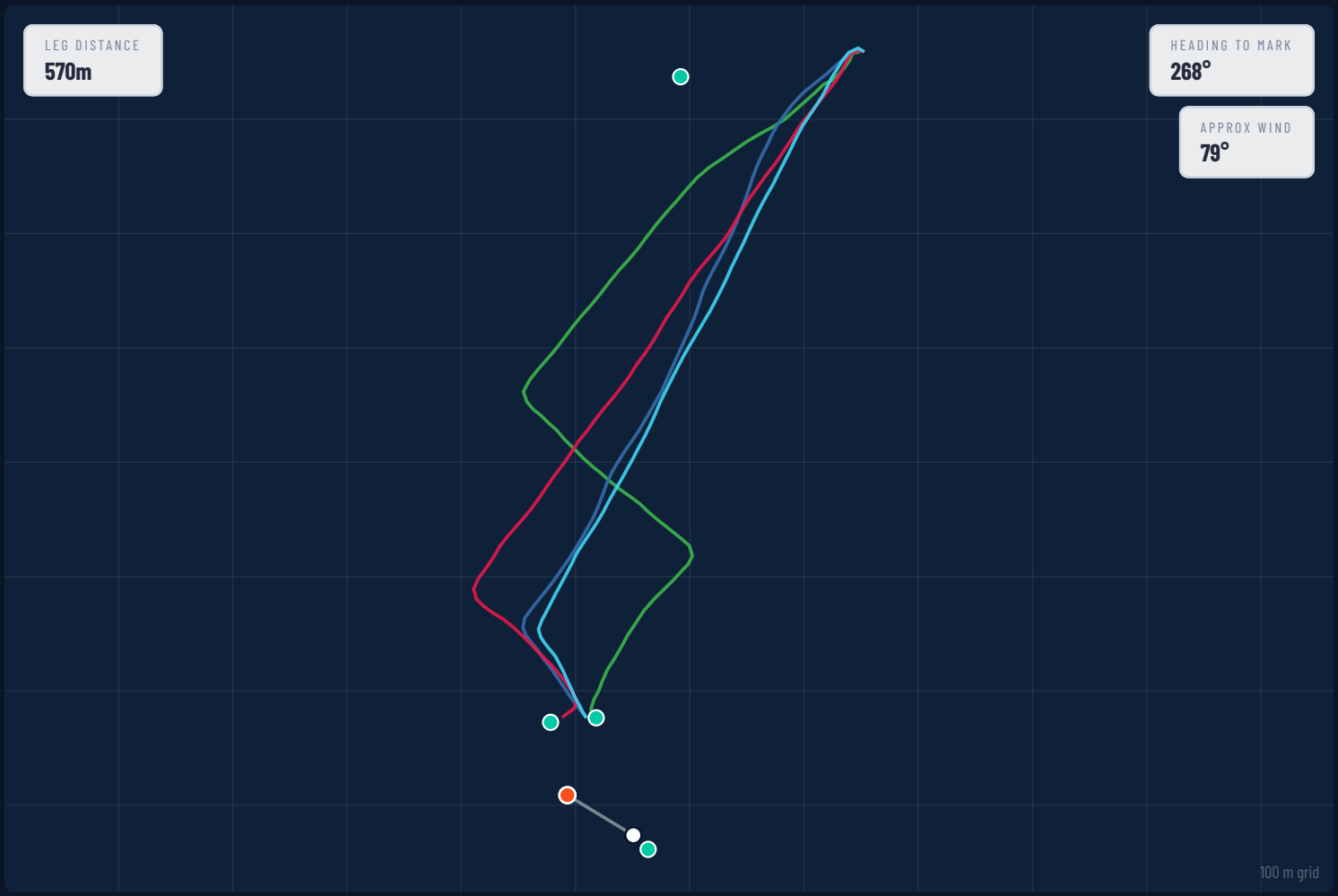
RACE 1 — LEG 1 (UPWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST3 (318)	00:05:04	811.4m	5.3kts	35.2°	4.2kts	left	2
2.	CST7 (320)	+00:00:34	909.8m	5.4kts	38.8°	4.0kts	middle	2
3.	CST1 (316)	+00:00:57	907.4m	5.0kts	40.8°	3.6kts	right	2
4.	CST5 (319)	+00:01:09	909.4m	4.8kts	43.3°	3.7kts	left	3

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

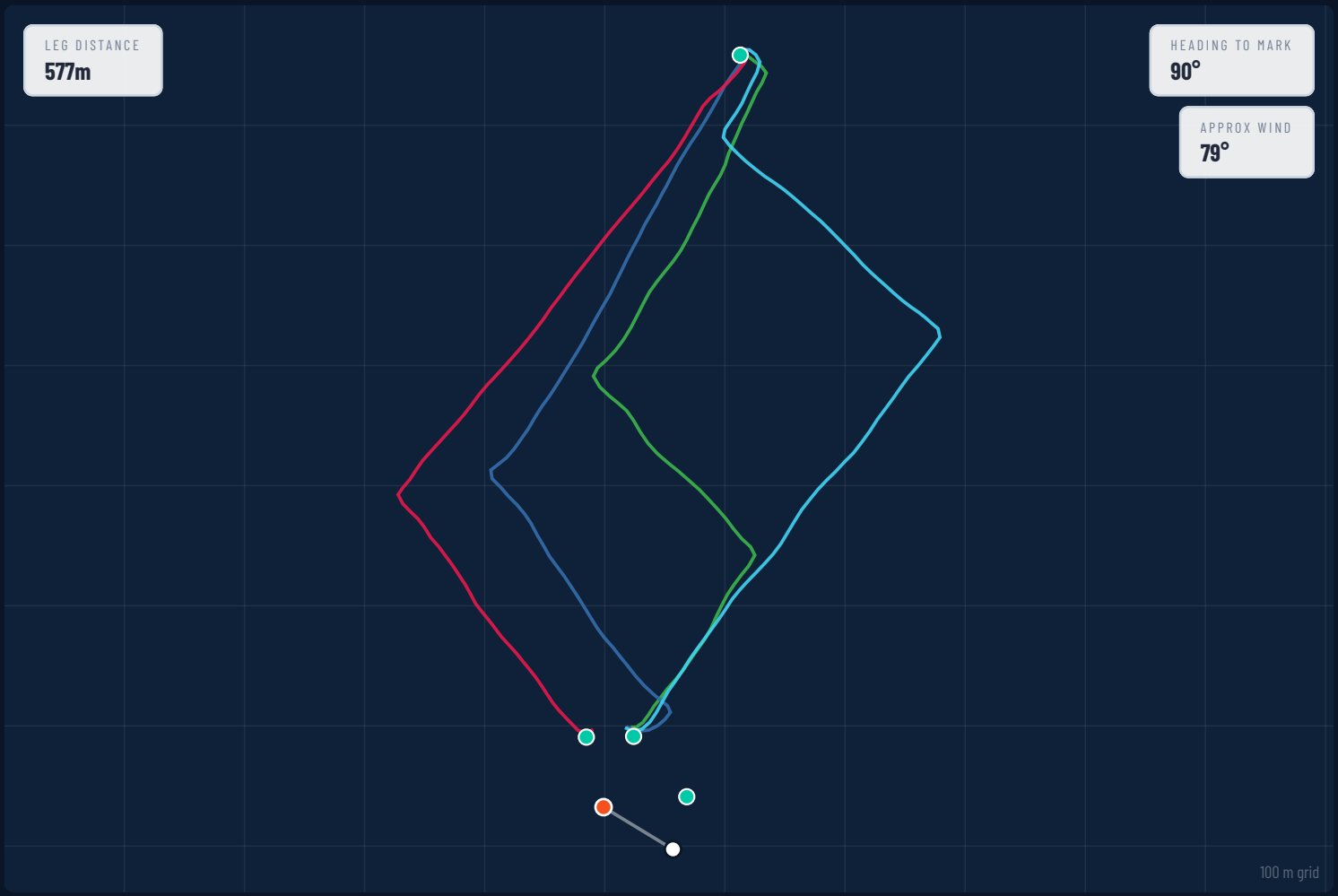
RACE 1 — LEG 2 (DOWNWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST3 (318)	00:04:51	805.8m	5.6kts	136.4°	3.9kts	left	3
2.	CST7 (320)	+00:00:00	689.4m	5.1kts	150.0°	4.3kts	left	1
3.	CST1 (316)	+00:00:01	744.2m	5.7kts	142.9°	4.3kts	left	2
4.	CST5 (319)	+00:00:15	678.8m	4.8kts	151.1°	4.1kts	left	1

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

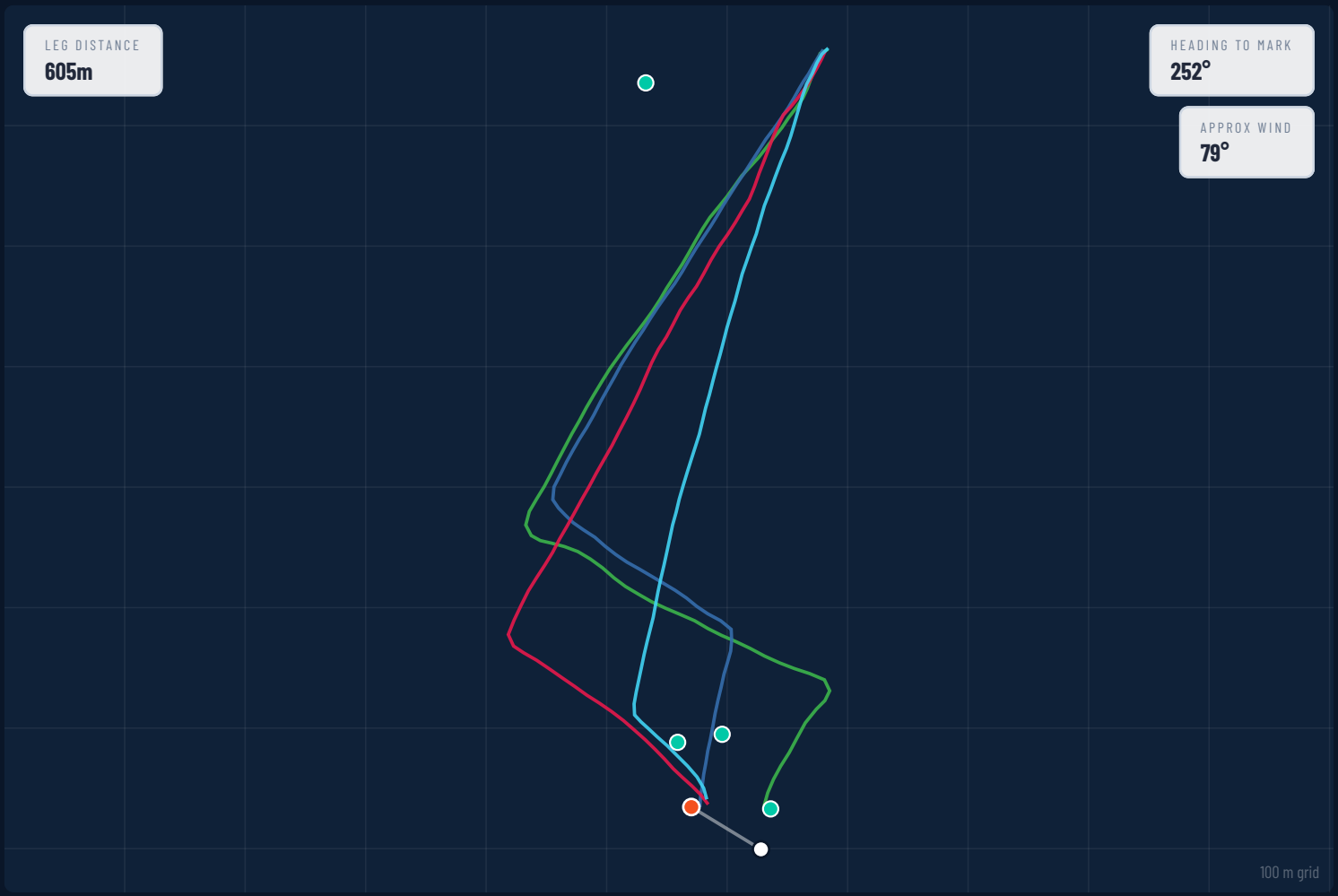
RACE 1 — LEG 3 (UPWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST3 (318)	00:04:43	702.2m	5.0kts	33.9°	3.9kts	right	3
2.	CST7 (320)	+00:00:09	717.5m	4.9kts	35.4°	3.8kts	left	3
3.	CST1 (316)	+00:00:24	744.5m	4.8kts	38.3°	3.7kts	left	2
4.	CST5 (319)	+00:00:34	764.7m	4.9kts	41.7°	3.5kts	right	3

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

RACE 1 — LEG 4 (DOWNWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST3 (318)	00:05:05	876.4m	5.7kts	138.9°	4.0kts	left	2
2.	CST7 (320)	+00:00:45	769.6m	5.2kts	146.7°	4.2kts	left	2
3.	CST1 (316)	+00:00:22	772.1m	5.6kts	145.5°	4.5kts	left	1
4.	CST5 (319)	+00:00:00	676.4m	5.5kts	160.7°	4.9kts	left	1

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

02 RACE TWO

• START 16:35:01

FLO'S RACE INSIGHTS

Start & penalties: CST5 went OCS (–2 m) and lost 16 s getting back behind the line, negating its fast off-the-line pace; CST7, despite a 32 s late, middle-of-line start, stayed clean and clawed back.

Upwind side selection: The winner CST7 (and CST5) consistently drove right on both upwind legs, posting the fastest VMGs (~3.2 kt) and shortest times; CST1/CST3 on the left trailed by 20–60 s.

Mid-race lead shift: CST5 claimed leg 1 (373 s) but on leg 3 CST7's sharper VMG (~3.3 kt vs 3.2 kt) from the right side flipped the leaderboard.

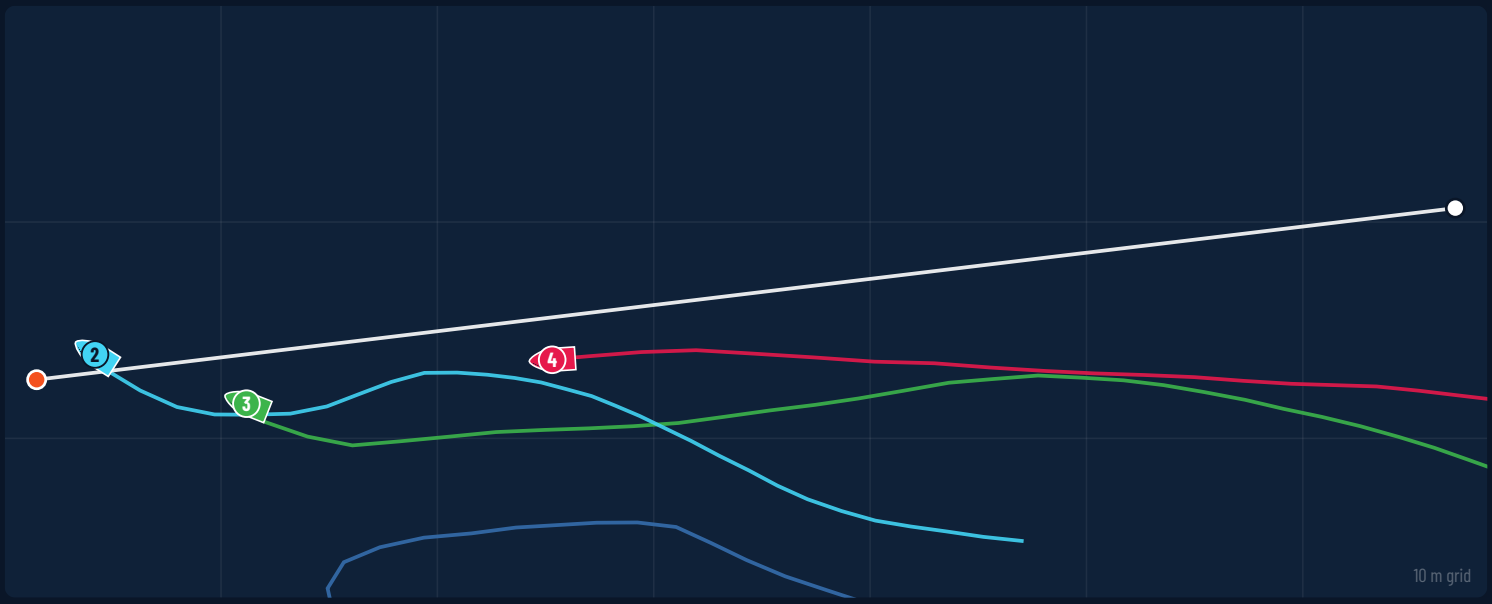
Heel control & VMG: CST7 kept average heel around 4°, within the 4–5° sweet spot, underpinning its top mark VMG compared with boats heeling >5°.

RACE 2 — FULL RACE SUMMARY

RANK	BOAT	DISTANCE	TIME	UPWIND SOG	UPWIND VMG	DOWNWIND SOG	DOWNWIND VMG	MAN.
1.	CST7 (320)	3229.5m	00:23:03	4.6kts	3.2kts	4.6kts	3.5kts	8
2.	CST5 (319)	-187.2m	+00:00:41	4.6kts	3.2kts	3.9kts	3.2kts	7
3.	CST3 (318)	-70.9m	+00:01:07	4.3kts	2.8kts	4.3kts	3.6kts	7
4.	CST1 (316)	+261.6m	+00:01:58	4.6kts	2.9kts	4.7kts	3.3kts	12

Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

RACE 2 — START REPORT

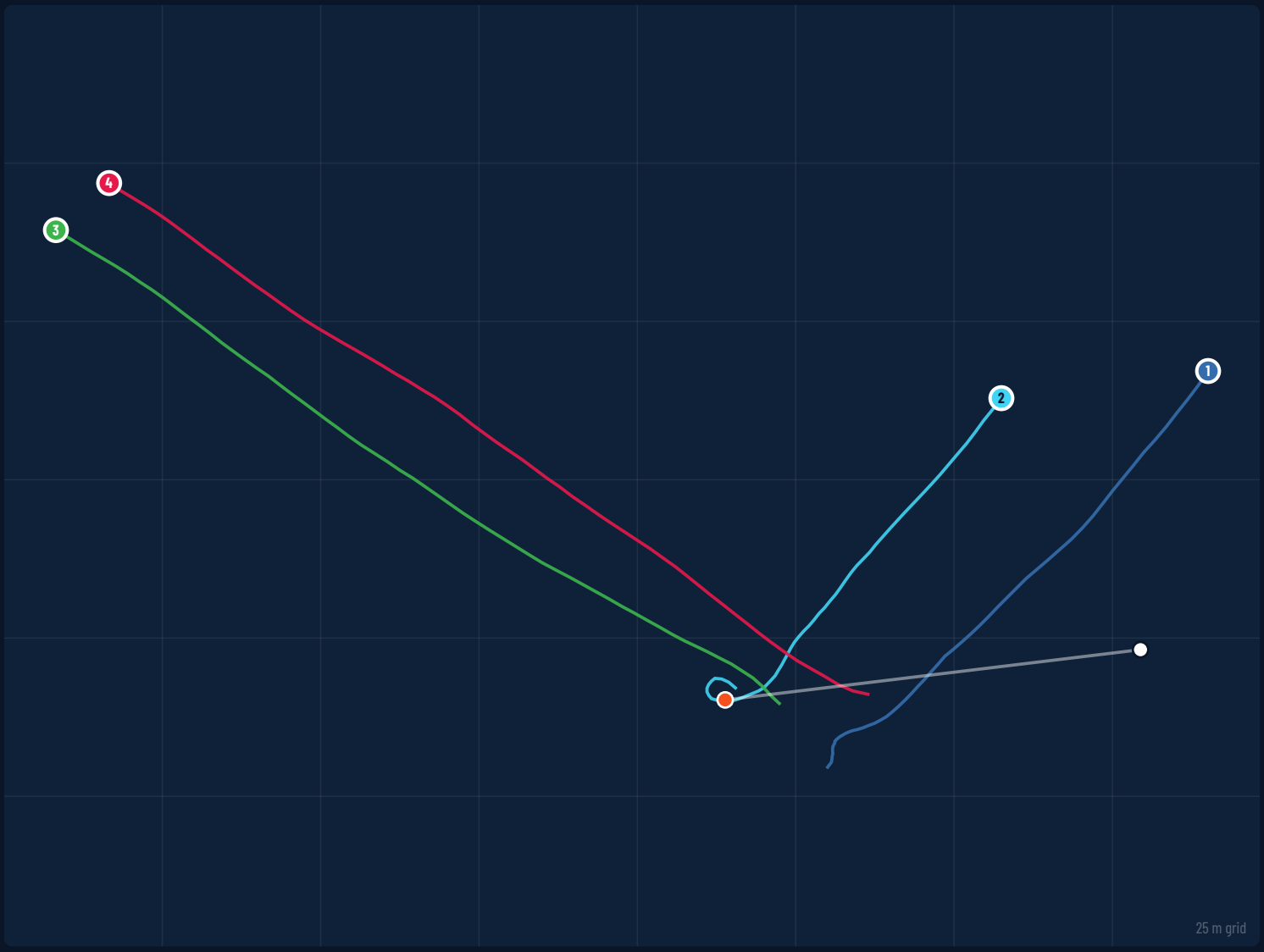


10 m grid — map scale reference | (1) Boat numbers = **Finish order** — match the Finish # column below

FAVORED END	LINE LENGTH	WIND	COMM TO M1
Boat (7.9m)	**66.0m**	**79.0°**	**69.0°**

FINISH #	BOAT	DIST TO LINE	SOG AT GO	START DELAY	FLEET POS	POSITION ON LINE	TACK AT GO
1.	CST7 (320)	16.9m	0.9kts	32.0s	0%	50%	port
2.	CST5 (319)	-2.0m	3.5kts	OCS +16.5s	100%	96%	starboard
3.	CST3 (318)	2.3m	4.2kts	1.3s	67%	89%	starboard
4.	CST1 (316)	2.5m	5.3kts	2.0s	33%	73%	starboard

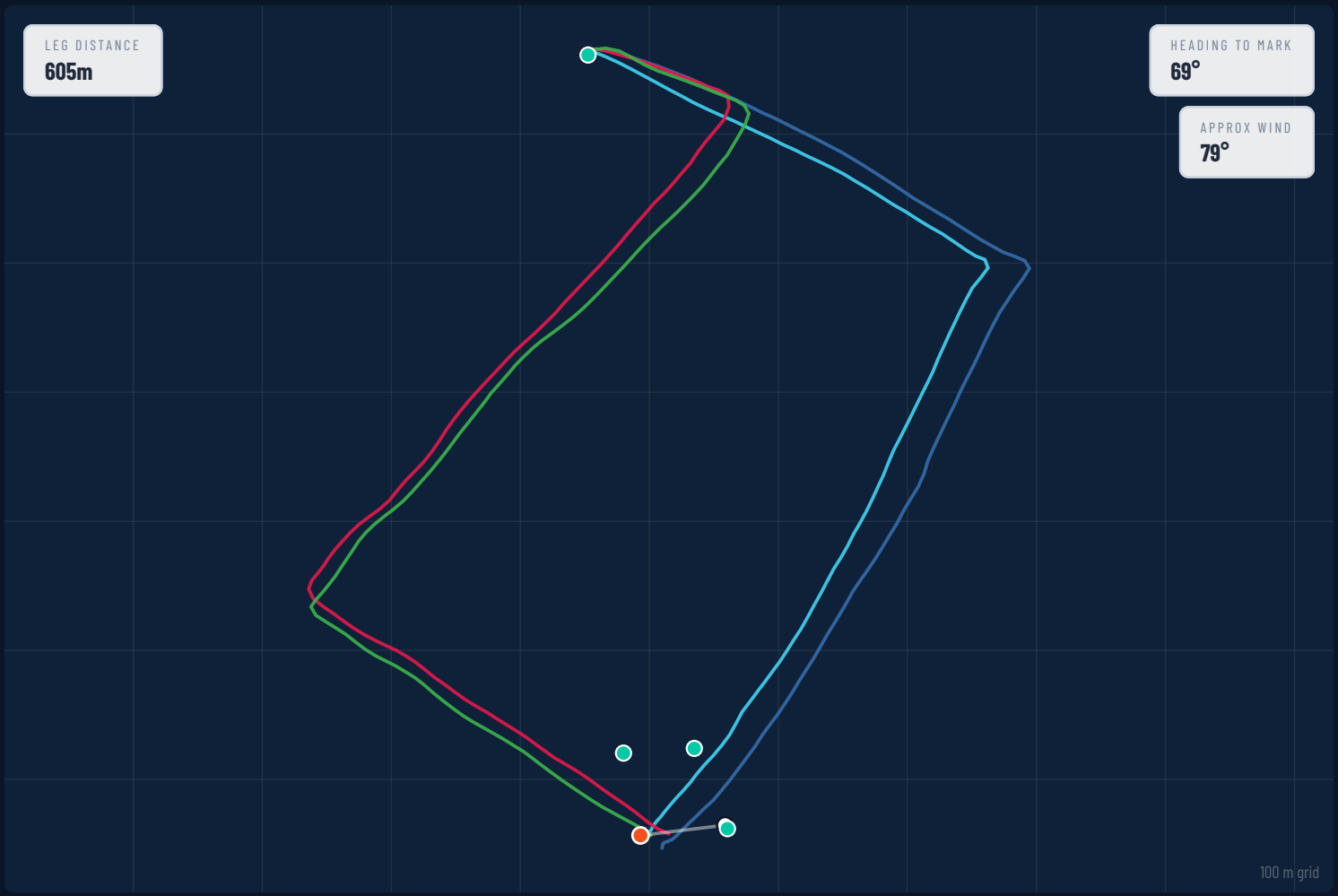
RACE 2 — OFF THE LINE · +60S



FINISH #	BOAT	DISTANCE	SOG	VMG	TWA	BEHIND
1.	CST7 (320)	85.6m	2.8kts	1.9kts	42°	—
2.	CST5 (319)	73.5m	2.3kts	1.6kts	61°	+6m
3.	CST3 (318)	134.7m	4.5kts	2.4kts	57°	—
4.	CST1 (316)	142.7m	4.7kts	2.6kts	56°	—

= finishing position for the race

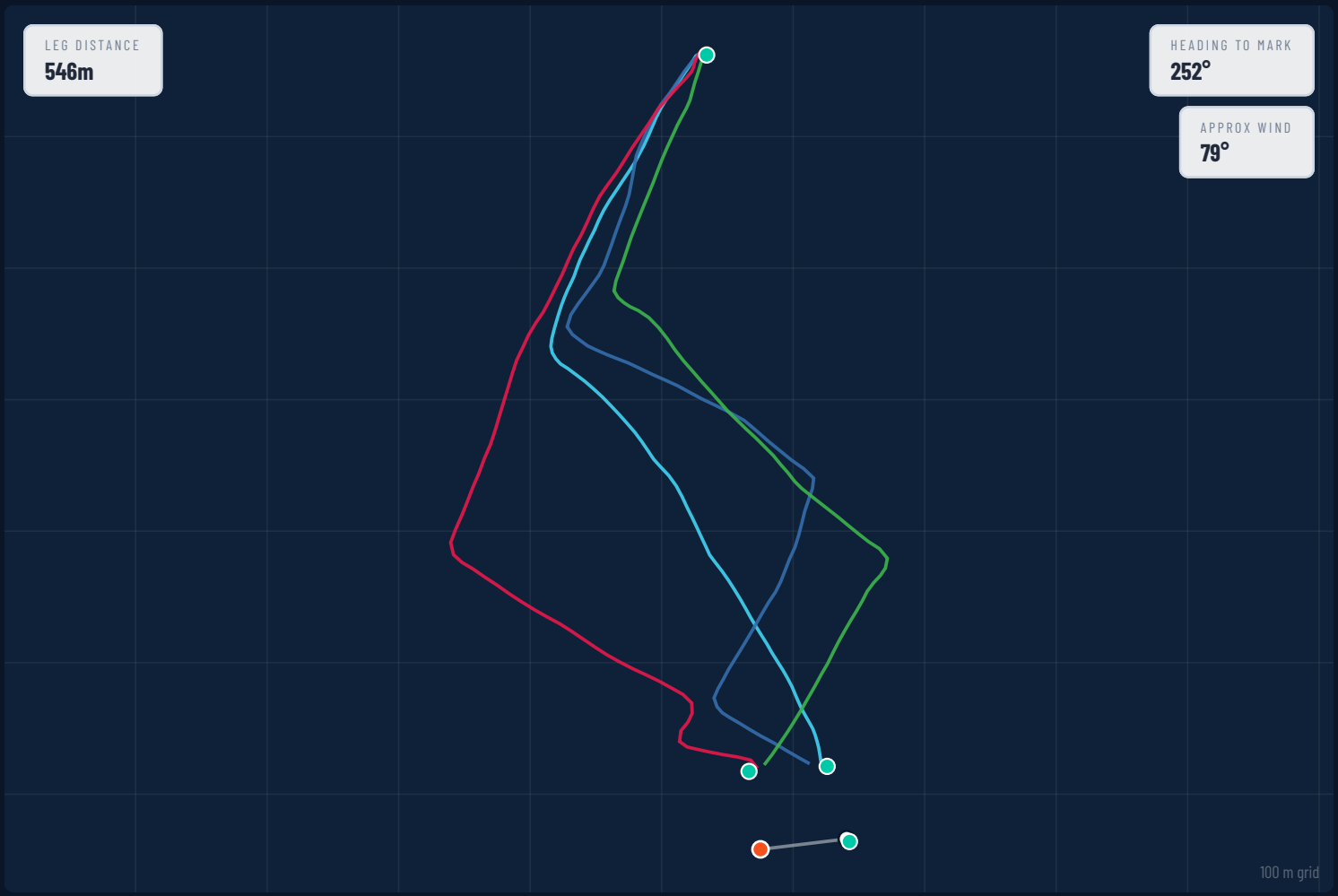
RACE 2 — LEG 1 (UPWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST7 (320)	00:06:27	923.4m	4.7kts	44.6°	3.1kts	right	3
2.	CST5 (319)	+00:00:00	882.3m	4.6kts	45.2°	3.2kts	right	2
3.	CST3 (318)	+00:00:40	969.8m	4.6kts	50.0°	2.9kts	left	2
4.	CST1 (316)	+00:00:20	959.2m	4.8kts	50.1°	3.0kts	left	2

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

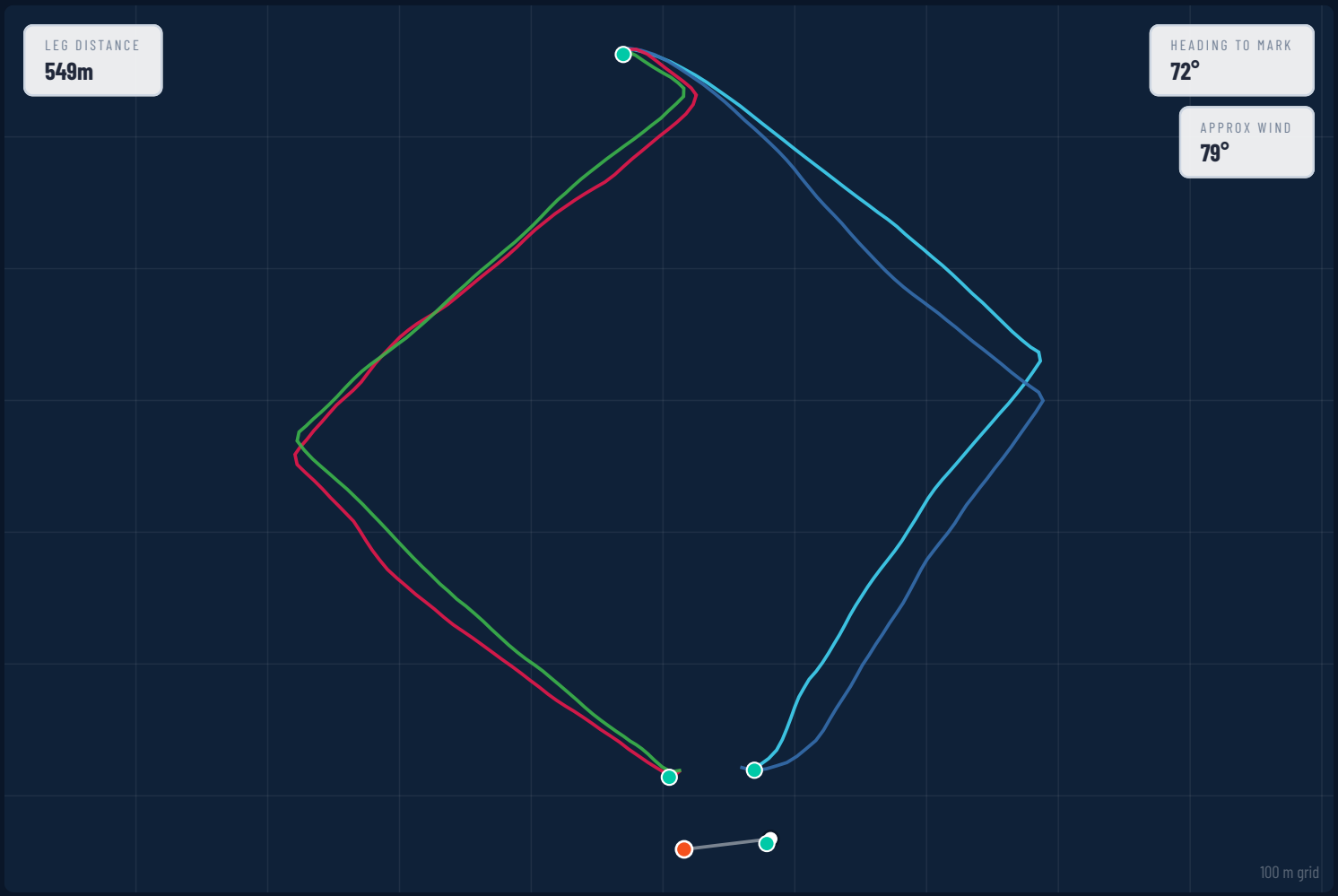
RACE 2 — LEG 2 (DOWNWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST7 (320)	00:05:07	739.5m	4.9kts	140.4°	3.4kts	left	3
2.	CST5 (319)	+00:00:43	644.5m	3.8kts	149.8°	3.1kts	left	1
3.	CST3 (318)	+00:00:06	677.8m	4.5kts	145.6°	3.5kts	middle	2
4.	CST1 (316)	+00:00:00	749.6m	5.1kts	143.4°	3.6kts	left	3

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

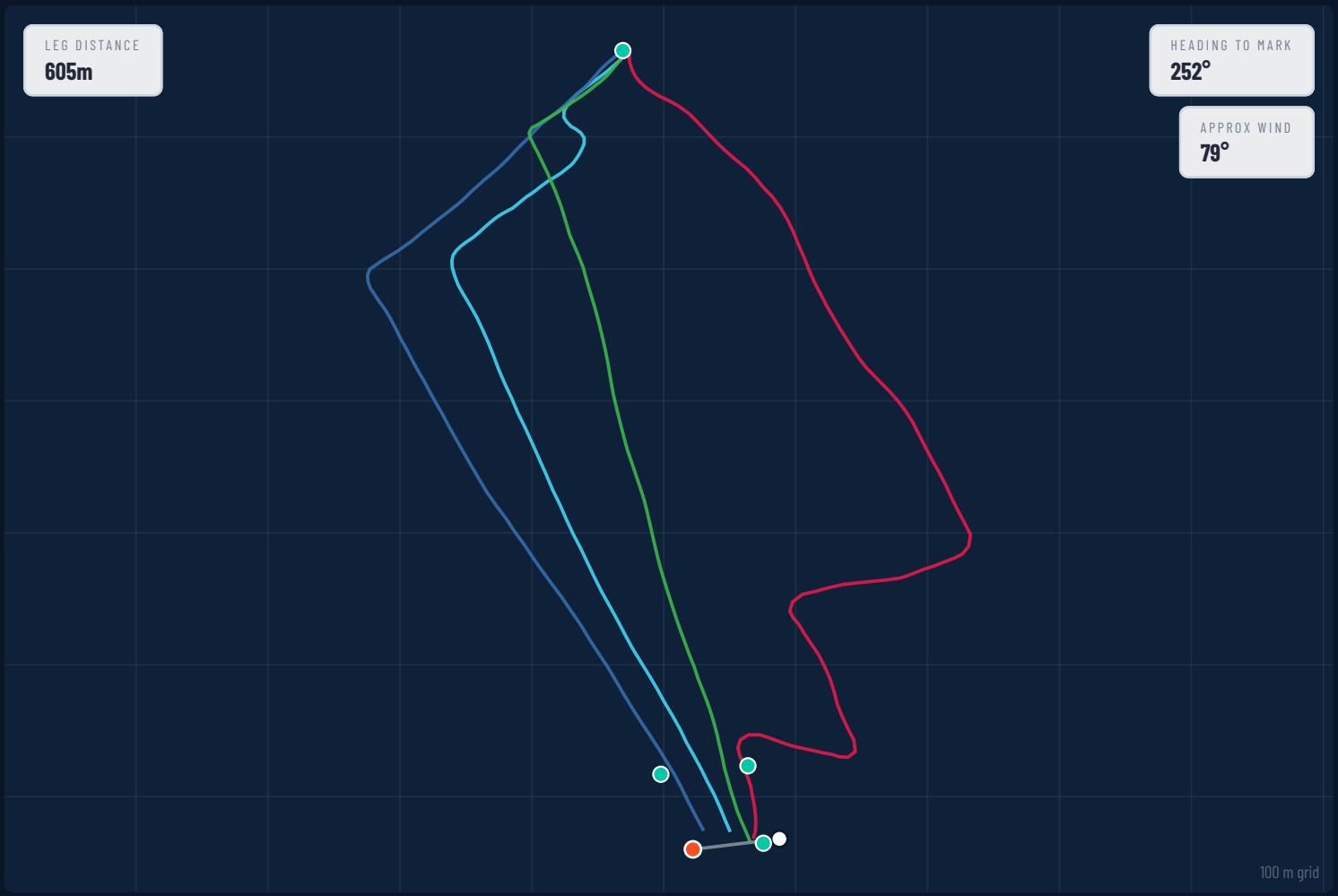
RACE 2 — LEG 3 (UPWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST7 (320)	00:05:46	795.6m	4.5kts	44.7°	3.1kts	right	1
2.	CST5 (319)	+00:00:00	785.1m	4.5kts	43.7°	3.1kts	right	1
3.	CST3 (318)	+00:01:10	843.7m	4.1kts	49.6°	2.6kts	left	2
4.	CST1 (316)	+00:00:58	869.7m	4.3kts	50.2°	2.7kts	left	2

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.

RACE 2 — LEG 4 (DOWNWIND)



FINISH #	BOAT	TIME	DISTANCE	SOG	AVG TWA	VMG	SIDE	MAN.
1.	CST7 (320)	00:05:43	763.9m	4.4kts	140.4°	3.4kts	left	1
2.	CST5 (319)	+00:00:47	724.1m	4.1kts	141.6°	3.1kts	left	3
3.	CST3 (318)	+00:00:00	660.7m	4.1kts	155.6°	3.6kts	left	1
4.	CST1 (316)	+00:01:29	906.0m	4.4kts	134.0°	3.0kts	right	5

= finishing position for the race Performance metrics (SOG, VMG, TWA) use straight-line segments only — excluding maneuvers (±10s) and the first/last 5s of each leg.