

WEBVTT

00:00:04.060 --> 00:00:09.880

<v SPEAKER_1>Hello again, and welcome to Global Exchange, part of the Canadian Global Affairs Institute's Podcast Network.

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<v SPEAKER_1>I'm your host Colin Robertson.

00:00:12.500 --> 00:00:32.520

<v SPEAKER_1>On this episode that we were recording on May the 1st, we talked with Vice Admiral Angus Topshee and Richard Gimblett about the Battle of the Atlantic, Richard's new book, Guardians of the North, Canadian Warships and Maritime Aircraft 1910-2025, and then looked to future developments in the Royal Canadian Navy.

00:00:33.520 --> 00:00:37.740

<v SPEAKER_1>Vice Admiral Angus Topshee is the 38th Commander of the Royal Canadian Navy.

00:00:38.600 --> 00:00:50.220

<v SPEAKER_1>Richard Gimblett is a former Naval Officer, scholar, historian, and author of several books on Canadian Naval history, with another, a Canadian Naval Strategy reader, forthcoming.

00:00:51.500 --> 00:00:58.580

<v SPEAKER_1>For listeners, Canada is a maritime nation, and Marie-Eusek Admaire is our national model.

00:00:58.580 --> 00:01:13.060

<v SPEAKER_1>We should add another C to that, of course, with the Arctic, with the world's longest coastline, and as I said, access to three-ish oceans, the Atlantic, the Pacific, and now the Arctic, and a growing strategic state in an increasingly navigable Arctic as well.

00:01:13.720 --> 00:01:16.600

<v SPEAKER_1>Canada's prosperity and sovereignty depend on the sea.

00:01:17.360 --> 00:01:28.000

<v SPEAKER_1>In an era of geopolitical tension, fragile supply chains, and renewed great power rivalry, maritime power matters more today than since the Second World War.

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<v SPEAKER_1>That is why Canada is currently purchasing 12 new submarines, two joint support ships, 15 river-class destroyers, and six Arctic and offshore patrol ships.

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<v SPEAKER_1>Guardians of the North, Canadian Warships and the

Maritime Aircraft, 1910–2025 by Rich and illustrator Carl Gagnon, provides the background and context for both the evolution and necessity of Canada's seagoing hardware.

00:01:58.220 --> 00:02:07.440

<v SPEAKER_1>A visual history of Canadian naval platforms from early cruisers to modern frigates and maritime patrol aircraft, the deeper lesson is strategic.

00:02:07.800 --> 00:02:17.680

<v SPEAKER_1>Ships and aircraft tell the story of how Canada has tried, sometimes successfully, sometimes haltingly, to defend its maritime interests.

00:02:18.360 --> 00:02:23.780

<v SPEAKER_1>I encourage you to get a copy to inform you on the evolution of our naval capacity.

00:02:24.180 --> 00:02:26.200

<v SPEAKER_1>Admiral Rich, welcome.

00:02:27.600 --> 00:02:28.400

<v SPEAKER_2>Well, thanks Colin.

00:02:28.400 --> 00:02:29.720

<v SPEAKER_2>It's great to be with you today.

00:02:29.820 --> 00:02:31.760

<v SPEAKER_3>Yeah, the same for me.

00:02:31.760 --> 00:02:33.040

<v SPEAKER_3>Good to hear from you.

00:02:33.380 --> 00:02:35.340

<v SPEAKER_1>Well, it's a pleasure if you can join us.

00:02:35.720 --> 00:02:36.820

<v SPEAKER_1>So let's get started.

00:02:36.900 --> 00:02:44.540

<v SPEAKER_1>Admiral, we remember the Canadian contribution to the Battle of the Atlantic and ceremonies across Canada on the first Sunday in May.

00:02:45.260 --> 00:02:57.200

<v SPEAKER_1>The longest campaign of World War II, Winston Churchill said the threat of losing access to the supplies brought by convoys was the quote, only thing that really frightened me.

00:02:58.120 --> 00:03:05.860

<v SPEAKER_1>Can you tell us what was Canada's contribution and what did it involve in terms of national commitment in ships and sailors?

00:03:06.280 --> 00:03:07.140

<v SPEAKER_2>Yeah, absolutely.

00:03:07.140 --> 00:03:10.540

<v SPEAKER_2>I mean, Colin, it was a massive effort on the part of Canada.

00:03:10.540 --> 00:03:17.160

<v SPEAKER_2>We began the war with a very small Navy, six destroyers, a few other ships, about 3,500 sailors.

00:03:18.300 --> 00:03:19.820

<v SPEAKER_2>In fact, we saw the war coming.

00:03:20.220 --> 00:03:25.360

<v SPEAKER_2>We had two of our destroyers come around from the West Coast in time to sail with the first convoys across the Atlantic.

00:03:26.080 --> 00:03:27.960

<v SPEAKER_2>But the Battle of the Atlantic started right away.

00:03:27.960 --> 00:03:31.360

<v SPEAKER_2>The first ship, the Athenia, was sunk on the 3rd of September.

00:03:32.480 --> 00:03:34.580

<v SPEAKER_2>It carried right to the very end of the war.

00:03:34.580 --> 00:03:42.940

<v SPEAKER_2>The last Royal Canadian Navy ship to be sunk in battle was HMCS Esquimalt on the 16th of April, 1945, with inside of Halifax.

00:03:43.740 --> 00:03:47.040

<v SPEAKER_2>The reality is that that was a battle that came all the way to Canadian shores.

00:03:47.040 --> 00:03:49.460

<v SPEAKER_2>There were countless ships sunk within the Gulf of St.

00:03:49.460 --> 00:03:53.620

<v SPEAKER_2>Lawrence, the harbour of Belle Isle, and other places.

00:03:53.740 --> 00:03:56.120

<v SPEAKER_2>More Canadians actually died in the Gulf of St.

00:03:56.120 --> 00:03:59.740

<v SPEAKER_2>Lawrence than died on June 6th at Juno Beach in Normandy.

00:04:00.400 --> 00:04:03.520

<v SPEAKER_2>As Canadians, we reacted to that.

00:04:03.840 --> 00:04:05.240

<v SPEAKER_2>We built a massive Navy.

00:04:05.240 --> 00:04:16.420

<v SPEAKER_2>We leveraged the Naval Reserve divisions across Canada to recruit over 90,000 Canadians, men and women, with the Rennes as well, into the Royal Canadian Navy.

00:04:16.420 --> 00:04:25.520

<v SPEAKER_2>It was largely a reserve force, wartime-only conscripts, built up to what is the third largest Navy in the world by the end of the war.

00:04:25.760 --> 00:04:30.720

<v SPEAKER_2>We built 123 corvettes, some other destroyers and ships in Canada.

00:04:30.780 --> 00:04:38.500

<v SPEAKER_2>The Canadian industry turned to and built the merchant ships that were necessary to transport all of that war equipment across the Atlantic.

00:04:39.980 --> 00:04:51.500

<v SPEAKER_2>It's hard to imagine today, given the size of our Navy today, but a quarter of all the ships at the Normandy landings, the largest amphibious landings in history, were Canadian across the full spectrum of naval capability.

00:04:52.400 --> 00:05:03.360

<v SPEAKER_2>We started in a pretty small state, but we're proud of that moment in our history because we grew to be a major naval force, a decisive factor in winning the Battle of the Atlantic.

00:05:03.920 --> 00:05:05.580

<v SPEAKER_1>Rich, how did we do it?

00:05:05.620 --> 00:05:12.180

<v SPEAKER_1>Because that's quite, what the Admirals described, really is a monumental achievement that probably deserves a historical minute.

00:05:12.180 --> 00:05:14.380

<v SPEAKER_3>As the Admiral said, it was a massive undertaking.

00:05:14.380 --> 00:05:24.000

<v SPEAKER_3>You know, it required the mobilization of Canadian

industry in a way that it had never been undertaken before, even more so than in the First World War.

00:05:24.260 --> 00:05:27.360

<v SPEAKER_3>First World War, we concentrated on shells and guns.

00:05:27.860 --> 00:05:29.660

<v SPEAKER_3>Second World War, and some ships.

00:05:30.560 --> 00:05:36.940

<v SPEAKER_3>But Canadian shipbuilding industry had not really fully matured by that time.

00:05:37.520 --> 00:05:40.000

<v SPEAKER_3>And it was rather immature at the start of the war.

00:05:40.080 --> 00:05:42.460

<v SPEAKER_3>Well, it ramped up very quickly.

00:05:42.680 --> 00:05:49.400

<v SPEAKER_3>And, you know, we were building ships on both coasts, up the St.

00:05:49.400 --> 00:05:51.400

<v SPEAKER_3>Lawrence into the Great Lakes.

00:05:51.520 --> 00:05:58.740

<v SPEAKER_3>Great Lakes, we had the restriction though that the seaway had not been built yet, and ships had to be able to squeeze through the old style locks.

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<v SPEAKER_3>So that's why we were restricted to building corvettes and smaller ships in the lakes.

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<v SPEAKER_3>But on both coasts, especially on the West Coast, a lot of the merchant ships were built.

00:06:10.660 --> 00:06:12.800

<v SPEAKER_3>It was a massive undertaking.

00:06:13.520 --> 00:06:17.720

<v SPEAKER_1>I think that's important to underline, that the merchant ship side of it, that we were a big player in that.

00:06:17.720 --> 00:06:27.620

<v SPEAKER_1>We think of the Navy, but the merchant marine was also a big piece of getting the goods and people and things across the Atlantic to Britain.

00:06:27.920 --> 00:06:28.760
<v SPEAKER_1>Is that correct?

00:06:29.940 --> 00:06:30.420
<v SPEAKER_3>Yes.

00:06:31.160 --> 00:06:44.120
<v SPEAKER_3>Another point I should have made in the building the ships, we were building ships to the designs of mostly British construction, but a couple of American types for the merchant ships.

00:06:44.180 --> 00:06:49.380
<v SPEAKER_3>A lot of our ships were knockoffs of the Liberty ships that you will be aware of.

00:06:49.900 --> 00:06:56.660
<v SPEAKER_3>But for the Navy, the corvette frigate destroyer types were all British designs.

00:06:57.240 --> 00:06:58.820
<v SPEAKER_1>Did Canadians play any role?

00:06:58.820 --> 00:06:59.640
<v SPEAKER_1>Go ahead, Admiral.

00:07:00.120 --> 00:07:00.360
<v SPEAKER_1>Yeah.

00:07:00.360 --> 00:07:08.420
<v SPEAKER_2>I was just simply going to add that the other thing, as we remember the Battle of the Atlantic, what a lot of Canadians don't appreciate is how many civilians fought in that battle.

00:07:08.420 --> 00:07:10.240
<v SPEAKER_2>The Merchant Marine was a civilian organization.

00:07:10.240 --> 00:07:14.680
<v SPEAKER_2>We call it, in a sense, the fourth service of Canada in the Second World War.

00:07:15.580 --> 00:07:28.000
<v SPEAKER_2>But it was only much, much later that they were recognized for their wartime service, received pensions, but in fact, the treatment of many of those veterans was great horrific for a long time after the war.

00:07:28.440 --> 00:07:40.200
<v SPEAKER_2>The other thing that was the casualty rate that they endured for a civilian service is put them amongst some of the worst

casualty rates of any branch of the Canadian Armed Forces in the war.

00:07:40.800 --> 00:07:49.020

<v SPEAKER_1>Because Admiral, it wasn't just taking convoys across to Liverpool and ports in Britain, it wasn't also going up taking them up to Romancek and places like that?

00:07:49.900 --> 00:07:50.140

<v SPEAKER_1>Yeah.

00:07:50.140 --> 00:07:56.620

<v SPEAKER_2>In fact, my great-grandfather, my grandfather served on the Romancek Crown aboard a British minesweeper in the early part of his wartime service.

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<v SPEAKER_2>The tales he tells of the run up around the Colub Peninsula and into Romancek is just unbelievable.

00:08:04.900 --> 00:08:10.300

<v SPEAKER_2>They prayed for bad weather because in the bad weather, the stucas couldn't fly and the submarines couldn't find them.

00:08:11.620 --> 00:08:17.540

<v SPEAKER_2>Instead, they just lived with the misery of seasickness in freezing waters and hoped to get through.

00:08:18.540 --> 00:08:22.200

<v SPEAKER_1>Rich, do you want to say a bit of a few words about just the construction of these ships?

00:08:22.200 --> 00:08:30.340

<v SPEAKER_1>Because I think, didn't we go from basically, as you pointed out using initially, didn't we buy British ships to begin with, and then we actually started doing the construction ourselves?

00:08:31.580 --> 00:08:32.060

<v SPEAKER_3>Yeah.

00:08:33.060 --> 00:08:53.560

<v SPEAKER_3>So the first destroyers that the Navy entered the war with in 1939, the half dozen older style river class destroyers had all been built in England for, in Britain for the Royal Navy, and in fact had been recommissioned into the RCN in the mid 1930s as part of our mobilization plan.

00:08:54.980 --> 00:09:00.840

<v SPEAKER_3>But then all of the corvettes that we had, that we employed were built in Canada.

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<v SPEAKER_3>We, you know, 123 of them built in Canada.

00:09:07.040 --> 00:09:13.020

<v SPEAKER_3>We built 10 for the Royal Navy, but they gave them back to us in exchange for other ships in the course of the war.

00:09:13.760 --> 00:09:16.560

<v SPEAKER_1>123, a lot of ships, go ahead Admiral.

00:09:16.840 --> 00:09:25.040

<v SPEAKER_2>Yeah, I was just going to say, you know, so as Rich pointed out, we built ships to largely British and American designs during the war, but we built it in a pretty impressive shipbuilding industry.

00:09:25.520 --> 00:09:33.060

<v SPEAKER_2>And in the sense you really get from Rich and Carl's book, Guardians of the North, is just what an incredible shipbuilding industry that was.

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<v SPEAKER_2>In the 50s and 60s, we started to produce some of the best anti-submarine warfare destroyers and frigates in the world.

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<v SPEAKER_2>We pioneered all sorts of stuff.

00:09:41.440 --> 00:09:48.000

<v SPEAKER_2>I just think that that is actually what I took away from reading that book, is I had forgotten just how incredibly impressive our shipbuilding and innovation were.

00:09:48.400 --> 00:09:49.580

<v SPEAKER_1>No, I agree.

00:09:49.580 --> 00:09:52.460

<v SPEAKER_1>I read that and I thought, I did not realize we had that much talent.

00:09:52.460 --> 00:09:57.120

<v SPEAKER_1>And this was really a skilled professional jobs that these people employed.

00:09:57.120 --> 00:10:04.860

<v SPEAKER_1>And also there are, I think as Rich points out there, these are not small numbers that were involved in the shipbuilding industry across Canada.

00:10:05.980 --> 00:10:09.420

<v SPEAKER_3>Admiral Topshee raises a good point there about the 1950s.

00:10:09.440 --> 00:10:13.780

<v SPEAKER_3>If we can shift from the Second World War to the Cold War for a minute.

00:10:14.580 --> 00:10:24.140

<v SPEAKER_3>It's really that early 1950s experience that compares best to what Admiral Topshee is taking the Navy through right now.

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<v SPEAKER_3>After the Second World War, Canada demobilized the Navy within a year so that we were down to a little smaller actually than the pre-war level.

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<v SPEAKER_3>We had just a dozen ships again, but at least the Corps now is a decent fleet.

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<v SPEAKER_3>We had an aircraft carrier.

00:10:39.280 --> 00:10:41.400

<v SPEAKER_3>It was just commissioning at the end of the war.

00:10:43.120 --> 00:10:50.740

<v SPEAKER_3>And a couple of cruisers and a half dozen decent destroyers, all of the venerable Tribal class destroyers.

00:10:53.100 --> 00:10:58.640

<v SPEAKER_3>HMCS Haida in Halifax Harbor is the only remaining example of that type anywhere in the world.

00:10:59.260 --> 00:11:01.500

<v SPEAKER_3>But we commissioned eight of them.

00:11:01.500 --> 00:11:04.260

<v SPEAKER_3>And at the end of the war, we had six in service.

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<v SPEAKER_3>But within a couple of years of the end of the war, the Cold War started simmering.

00:11:09.880 --> 00:11:19.080

<v SPEAKER_3>And again, it was a submarine fleet, but now the Soviet submarines, they built largely with German, captured German technology.

00:11:19.820 --> 00:11:31.940

<v SPEAKER_3>And they threaten not only the Atlantic lifeline again, but also these submarines were being adapted to launch cruise missiles against the North American coast.

00:11:31.960 --> 00:11:40.080

<v SPEAKER_3>So it was bringing the war home to the North American homeland in a way that had never happened in the Second World War.

00:11:40.300 --> 00:11:47.220

<v SPEAKER_3>And that really focused the attention of the naval staffs that we had to come up with a better Navy.

00:11:47.220 --> 00:11:49.260

<v SPEAKER_3>And we started building a better Navy.

00:11:49.620 --> 00:11:52.140

<v SPEAKER_3>We wanted to find the ships didn't exist.

00:11:52.220 --> 00:11:53.180

<v SPEAKER_3>So the St.

00:11:53.180 --> 00:12:04.560

<v SPEAKER_3>Laurent destroyer escort was designed by Canadian naval constructors and built here in Canada, specifically to hunt for submarines in our offshore waters.

00:12:05.460 --> 00:12:15.840

<v SPEAKER_3>And we built 20 of those in the end, which was a massive undertaking for the post-war Navy, or post-war Canadian shipbuilding industry.

00:12:16.600 --> 00:12:21.260

<v SPEAKER_1>And that anti-submarine warfare capacity was something we were really excelled at.

00:12:21.260 --> 00:12:22.600

<v SPEAKER_1>Is that correct Admiral?

00:12:23.440 --> 00:12:26.000

<v SPEAKER_2>Yeah, that has always been our specialty.

00:12:26.260 --> 00:12:34.160

<v SPEAKER_2>So we pioneered the use of the mention of a variable depth sonar that allowed you to get the sonar down into the same water as the submarine.

00:12:34.440 --> 00:12:43.600

<v SPEAKER_2>Sonobuoys, the idea of putting a large anti-submarine warfare helicopter on a small destroyer and the bear trap that would allow you to do that in the high sea states of the North Atlantic.

00:12:44.000 --> 00:12:45.440

<v SPEAKER_2>And we kept that innovation up.

00:12:45.440 --> 00:12:50.920

<v SPEAKER_2>In fact, we sustained that shipbuilding industry up until the delivery of the Halifax class.

00:12:51.480 --> 00:13:05.020

<v SPEAKER_2>And the Halifax class, the frigates that we have in service today, at the time they came out in the 1990s, were revolutionary in that they had a combat system that controlled all of the sensors and weapons on that ship through a single platform at a single console.

00:13:05.220 --> 00:13:06.960

<v SPEAKER_2>No other Navy had done that before.

00:13:07.120 --> 00:13:16.000

<v SPEAKER_2>We had an integrated communication system that did everything from sort of call the cabin next door to broadcast across the entire ship to radio calls around the world and by a satellite.

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<v SPEAKER_2>Again, no one had ever managed to integrate that degree of different communications into a single system.

00:13:22.280 --> 00:13:31.200

<v SPEAKER_2>We had an integrated machinery control system that allowed you to control all of the machinery of the ship remotely from anywhere, a couple of different remote positions.

00:13:31.940 --> 00:13:42.500

<v SPEAKER_2>That system has evolved into what's called the Integrated Platform Management System today, and that's actually in use on the UKs, the Royal Navy's aircraft carriers, still based on Canadian technology.

00:13:42.740 --> 00:13:50.340

<v SPEAKER_2>A lot of what's being used in combat systems for ships around the world has its ancestry in the combat system that was built for the Halifax class.

00:13:50.340 --> 00:13:56.220

<v SPEAKER_2>And the one tragedy is that once we finished building the Halifax class, we abandoned shipbuilding.

00:13:56.280 --> 00:14:00.840

<v SPEAKER_2>Naval shipbuilding went away in Canada, and so it has been a tough fight over the last 15 years.

00:14:01.020 --> 00:14:15.260

<v SPEAKER_2>I think with the new Defence Industrial Strategy, we should be able to deliver not just the Navy Canada needs, but the industrial capacity to get back to our history of innovating the ships that Canada needs to make sure that we can protect our coastlines.

00:14:15.840 --> 00:14:27.940

<v SPEAKER_1>Rich, the Admiral underlines something that comes through in your book as well, and that is that Canadians were actually highly innovative when it came to maritime naval power, and there were things we did which others hadn't done, as the Admiral's pointed out.

00:14:28.260 --> 00:14:40.880

<v SPEAKER_1>Can you take us through a bit of the evolution and what stands out in that period 1910 to 2025 that you looked at, some of the highlights of Canadian innovation that were particular to our maritime naval power?

00:14:43.100 --> 00:14:53.240

<v SPEAKER_3>Yeah, sure, Colin, but look, we're going to whip past from 1910 up until the 1950s, where I was, because there wasn't a lot of innovation there.

00:14:54.600 --> 00:15:03.500

<v SPEAKER_3>We borrowed ships that had been pre-built for the Royal Navy, and we made the best use out of them that we possibly could for a very small Navy.

00:15:05.660 --> 00:15:07.420

<v SPEAKER_3>We did do some innovative things, though.

00:15:07.560 --> 00:15:16.300

<v SPEAKER_3>First World War, we built a lot of trawlers and drifters that were for anti-submarine forces off of our East Coast.

00:15:16.460 --> 00:15:21.060

<v SPEAKER_3>But yeah, no, not worth taking up the audience's time here.

00:15:21.640 --> 00:15:24.560

<v SPEAKER_3>But in the 50s, I've described a lot of that.

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<v SPEAKER_3>The Admiral talked about the Saint Laurent class being adapted to be helicopter carriers.

00:15:29.820 --> 00:15:37.820

<v SPEAKER_3>We were the first Navy in the world to make our ships able to carry that big helicopter off the back end.

00:15:37.980 --> 00:15:48.380

<v SPEAKER_3>And why we had to do that was because the onboard weapon systems of the ship were not good to go attacking against the submarine.

00:15:48.420 --> 00:15:56.000

<v SPEAKER_3>If you could attack a submarine with the ship, you were in the submarine's torpedo firing arc and you wouldn't have had a chance to fire them.

00:15:56.280 --> 00:16:04.940

<v SPEAKER_3>The way to do it was to get a helicopter that could go out to where the submarine was, you know, 10s, 20s, 100 kilometers away.

00:16:05.800 --> 00:16:08.920

<v SPEAKER_3>And that, at the time, was the sea king.

00:16:08.920 --> 00:16:14.740

<v SPEAKER_3>And we, like I say, adapted our ships to carry that.

00:16:14.900 --> 00:16:22.600

<v SPEAKER_3>Another adaptation people are not aware of is our aircraft carrier, HMCS Bonaventure, was the first one in the world with an angled deck.

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<v SPEAKER_3>The British were building it and we had the money to purchase it from them while it was under construction.

00:16:31.900 --> 00:16:42.940

<v SPEAKER_3>But that angled deck allowed the launching of larger and heavier aircraft with more ordnance and fuel to go out with a further range.

00:16:43.720 --> 00:16:47.340

<v SPEAKER_3>The other big Canadian adaptation was in our replenishment ships.

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<v SPEAKER_3>Other navies had a fleet train, the US Navy and the Royal Navy had a fleet train to follow them around with specialized ships for each different type of stores that required fuel, ammunition, food, whatever.

00:17:03.440 --> 00:17:09.860

<v SPEAKER_3>We couldn't afford a fleet train, so we combined all of those stores' capabilities into a single hull.

00:17:10.580 --> 00:17:26.080

<v SPEAKER_3>It was called one-stop shopping when it came out, with HMCS provider being the first one, and then we built another pair, the original protector and preserver that I served in both of those latter ships.

00:17:28.220 --> 00:17:40.560

<v SPEAKER_1>Admiral, you spoke earlier about the Naval Reserve System, which came into effect in the 20s, which really has also, I thought, highly innovative and has served Canadian recruitment and keeping our capacity going.

00:17:40.560 --> 00:17:42.300

<v SPEAKER_1>Do you want to tell us a bit of the story about that?

00:17:42.300 --> 00:17:46.460

<v SPEAKER_1>Because didn't it celebrate, what, 100 years in the last year or so?

00:17:47.240 --> 00:17:47.680

<v SPEAKER_2>Yeah.

00:17:47.720 --> 00:17:55.780

<v SPEAKER_2>It was created by Admiral Hose in 1923, and he recognized that at the time, as Rich pointed out, we were in a bit of a low moment.

00:17:55.840 --> 00:17:58.060

<v SPEAKER_2>The government was cutting back Navy budgets.

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<v SPEAKER_2>And so Admiral Hose's idea was that he would put these Naval Reserve half companies, they were called at the time, in 12 different locations across Canada to be the face of the Navy to Canadians.

00:18:08.120 --> 00:18:11.460

<v SPEAKER_2>And they would be the places that would attract and recruit Canadians into Naval service.

00:18:11.460 --> 00:18:16.680

<v SPEAKER_2>And in the event of war, those Canadians would be brought into full-time service and serve at sea.

00:18:16.680 --> 00:18:19.600

<v SPEAKER_2>And so that's ultimately what we did in the Second World War.

00:18:19.800 --> 00:18:23.940

<v SPEAKER_2>We recruited 17,000 alone through HMCS York and Toronto.

00:18:24.940 --> 00:18:27.180

<v SPEAKER_2>And that became the bulk of our Navy.

00:18:27.480 --> 00:18:35.060

<v SPEAKER_2>Since then, in the post-war era, we continued that goal of attracting and recruiting Canadians into the Navy through the Naval Reserve.

00:18:35.060 --> 00:18:39.540

<v SPEAKER_2>But at unification, that went away, and we centralized all of that processing in Canada.

00:18:39.540 --> 00:18:46.260

<v SPEAKER_2>And then in the consolidation in the post-Cold War, where the Navy used to do its recruit training at Cornwallis in Nova Scotia, also went away.

00:18:46.260 --> 00:19:00.820

<v SPEAKER_2>And so all of the recruit training was basically centralized under one common Canadian Armed Forces model, which made sense at the time with the efficiencies, but what we've been doing lately is we've realized that if we're trying to produce the sailors that Canada needs as quickly as we need them, we're going to go back to our roots.

00:19:00.820 --> 00:19:06.360

<v SPEAKER_2>And so we're now recruiting both regular and reserve sailors through the Naval Reserve divisions.

00:19:06.360 --> 00:19:16.700

<v SPEAKER_2>There are now 24 of them across Canada, and we're growing that footprint to reflect the changing demographics of Canada and make sure every major population center is serviced by the Naval Reserve Division.

00:19:17.020 --> 00:19:21.760

<v SPEAKER_2>And the other innovation we've got is we're going to start shifting the initial training through those Naval Reserve divisions.

00:19:21.860 --> 00:19:32.440

<v SPEAKER_2>The lesson that this worked in the past is by keeping people closer to home in the initial phases, we make sure that they're right people for us to invest all of the time and attention and training.

00:19:32.580 --> 00:19:35.200

<v SPEAKER_2>We're going to centralize Naval basic training.

00:19:35.200 --> 00:19:37.820

<v SPEAKER_2>So once they've got through an initial phase, we'll take them away.

00:19:37.960 --> 00:19:43.020

<v SPEAKER_2>We'll give them everything a sailor needs to be a fully qualified sailor on board a ship for general duties.

00:19:43.320 --> 00:19:49.260

<v SPEAKER_2>That will likely be done on the West Coast at a repurposed training establishment that we've got.

00:19:49.840 --> 00:19:51.660

<v SPEAKER_2>Then we're going to have those sailors go out into the fleet.

00:19:51.660 --> 00:20:01.640

<v SPEAKER_2>The other interesting innovation is, like we did in the Second World War, where people signed up, they wanted to be a sailor, and we got them in the door and then figured out how we assign them an occupation.

00:20:01.840 --> 00:20:03.340

<v SPEAKER_2>We're going back to that as well.

00:20:03.500 --> 00:20:11.960

<v SPEAKER_2>Rather than having someone try and figure out what occupation they want to be before they even join the Navy, we're saying, if you know you want to be a sailor, come on in, we'll train you to be a sailor.

00:20:12.140 --> 00:20:18.560

<v SPEAKER_2>In the course of that training, you will be exposed to the full range of duties and trades and occupations within the Navy.

00:20:18.740 --> 00:20:20.740

<v SPEAKER_2>And then you can pick the one that you like best.

00:20:20.740 --> 00:20:24.860

<v SPEAKER_2>We'll make sure you've got the aptitude for that and then send people off on that way.

00:20:24.860 --> 00:20:30.540

<v SPEAKER_2>So there's a lot of, what we've done is just by studying our history said, you know, there's some real lessons in how we did things in the past.

00:20:30.540 --> 00:20:36.580

<v SPEAKER_2>And we're trying to get back to that spirit of rapid innovation and initiative that won the Battle of the Atlantic.

00:20:38.140 --> 00:20:41.240

<v SPEAKER_4>Hi, I'm Dave Perry, the President and CEO of the Canadian Global Affairs Institute.

00:20:41.540 --> 00:20:45.780

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00:20:46.160 --> 00:20:54.760

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00:20:55.020 --> 00:20:59.880

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00:21:02.260 --> 00:21:05.040

<v SPEAKER_1>And we're back into recruitment mode again.

00:21:05.220 --> 00:21:10.380

<v SPEAKER_1>And if you're interested, for listeners who are saying, well, I've got a, I'm interested or I've got a child who's interested.

00:21:11.720 --> 00:21:14.360

<v SPEAKER_1>There, you know, there's the Naval cadets.

00:21:14.680 --> 00:21:27.880

<v SPEAKER_1>There's various programs that if you're interested in Canada's Navy, and as you just described what the reserves do, and I'd ask you to talk a little bit about if you're younger and you want to get involved in high school, you've also perhaps the Naval Experience Program.

00:21:27.880 --> 00:21:31.580

<v SPEAKER_1>And then talk a little bit about the trades, because people sometimes say, well, what do you mean by trades?

00:21:32.340 --> 00:21:33.060

<v SPEAKER_2>Yeah, absolutely.

00:21:33.060 --> 00:21:39.000

<v SPEAKER_2>Well, I mean, as a parent of four kids, I certainly appreciated just how expensive programming is for kids.

00:21:39.620 --> 00:21:41.140

<v SPEAKER_2>And so there's two different cadet programs.

00:21:41.140 --> 00:21:50.500

<v SPEAKER_2>There's Navy League Cadets for children aged 9 to 12, which is just this incredible program where these young kids are given uniforms free of charge.

00:21:50.580 --> 00:22:00.220

<v SPEAKER_2>They're paraded by these outstanding volunteers who take care of the kids and teach them some skills, give them a basic introduction to music and drill and everything else.

00:22:00.400 --> 00:22:06.360

<v SPEAKER_2>Then there's the actual Royal Canadian Sea Cadet Corps program in line with the rest of the Army and Air Force cadet programs.

00:22:06.360 --> 00:22:08.220

<v SPEAKER_2>That's for 12 to 18 years old.

00:22:08.480 --> 00:22:16.560

<v SPEAKER_2>The focus of that program is teaching Canadians citizenship, physical fitness and leadership, things that every parent would prize in their child.

00:22:16.560 --> 00:22:17.760

<v SPEAKER_2>Again, it's free.

00:22:17.760 --> 00:22:19.260

<v SPEAKER_2>Uniforms are provided.

00:22:19.260 --> 00:22:23.860

<v SPEAKER_2>In fact, they offer summer camps where the cadets can make small salaries.

00:22:24.080 --> 00:22:25.820

<v SPEAKER_2>All of those things are outstanding.

00:22:25.820 --> 00:22:33.940

<v SPEAKER_2>In fact, the Air Cadet program, you can go through a glider license and a power license, and actually learn to fly a plane if you're one of the top cadets that they offer that to.

00:22:34.060 --> 00:22:36.520

<v SPEAKER_2>The cadet programs are absolutely outstanding.

00:22:36.860 --> 00:22:44.500

<v SPEAKER_2>What we've started to realize, and the government has reflected this in their spring economic statement, is there's opportunities for trades training.

00:22:44.500 --> 00:22:55.900

<v SPEAKER_2>So some of those construction trades, technical trades, welding, pipe fitting, electrical, all of these things, which we certainly need in the Navy, and Canada needs to build ourselves up.

00:22:56.680 --> 00:23:02.000

<v SPEAKER_2>A lot of that will be available through cadet programs where we can sponsor people into co-ops through the Naval Reserve.

00:23:02.640 --> 00:23:05.000

<v SPEAKER_2>We've done this very successfully in Southern Ontario.

00:23:05.240 --> 00:23:08.560

<v SPEAKER_2>If that works for people, there are options in the shipbuilding industry.

00:23:08.900 --> 00:23:15.340

<v SPEAKER_2>Irving Shipyard has this fantastic program where they'll take people out of high school co-op program and straight into Red Seal apprentices.

00:23:15.740 --> 00:23:17.620

<v SPEAKER_2>We're looking at reserve programs.

00:23:17.640 --> 00:23:29.540

<v SPEAKER_2>We've enrolled all sorts of people in the reserves through co-op education programs, and then they can go on to trades training through the local community colleges and everything else, which now government is starting to work through a subsidization.

00:23:30.280 --> 00:23:35.800

<v SPEAKER_2>I think it's a great way for someone who's not sure what they want to do in life, to get a good start on a variety of different things.

00:23:35.800 --> 00:23:37.720

<v SPEAKER_2>So there's lots of tremendous opportunities.

00:23:37.920 --> 00:23:45.560

<v SPEAKER_2>For anyone to access those, it's really a matter of finding where is your local cadet program, or for the Navy specifically, the local Naval Reserve Division.

00:23:45.560 --> 00:23:47.840

<v SPEAKER_2>Like I said, there's 24 of them across the country.

00:23:49.020 --> 00:23:52.980

<v SPEAKER_1>You just simply go online and look up Canadian reserves or you go in Canadian cadets.

00:23:53.120 --> 00:23:54.020

<v SPEAKER_1>That's how you do it?

00:23:54.140 --> 00:24:01.020

<v SPEAKER_2>Well, selfishly, I would say if you look up Naval Reserve Canada, then you will probably find your local Naval Reserve Division.

00:24:01.020 --> 00:24:07.700

<v SPEAKER_2>For example, here in Ottawa, it's HMCS Carleton, in Toronto, it's HMCS York, in Montreal, it's HMCS Donacana.

00:24:08.660 --> 00:24:11.300

<v SPEAKER_2>So there's a variety of these across the country.

00:24:11.700 --> 00:24:12.840

<v SPEAKER_1>As you say, 24 of them.

00:24:13.760 --> 00:24:16.460

<v SPEAKER_3>The Sikadet Corps is all across the country as well.

00:24:17.100 --> 00:24:21.120

<v SPEAKER_3>I got a note this morning from the Sikadet Corps here in Port Hope.

00:24:22.420 --> 00:24:29.060

<v SPEAKER_3>Royal Canadian Sikadet Corps, Sikina, reminding me that Sunday is the Battle of the Atlantic Parade that they're going to be trooping for.

00:24:29.320 --> 00:24:34.680

<v SPEAKER_3>And for me to come down of full uniform medals if you got them.

00:24:35.640 --> 00:24:39.320

<v SPEAKER_3>And just further on to what Edwin Topshee was saying.

00:24:40.120 --> 00:24:41.160

<v SPEAKER_3>It's a deep dark secret.

00:24:41.160 --> 00:24:46.760

<v SPEAKER_3>I was in the Air Cadets and I got a flying scholarship out of them and an exchange trip.

00:24:46.760 --> 00:24:48.220

<v SPEAKER_3>I did very well out of it.

00:24:48.220 --> 00:24:53.800

<v SPEAKER_3>But when I joined the Navy, I found my true vocation.

00:24:54.820 --> 00:24:56.520

<v SPEAKER_3>All of that came back.

00:24:57.200 --> 00:24:58.200

<v SPEAKER_3>It was a great help.

00:24:58.440 --> 00:25:00.820

<v SPEAKER_3>I was an air controller in the Navy.

00:25:00.880 --> 00:25:06.120

<v SPEAKER_3>So having an understanding of how aircraft worked was helpful in that.

00:25:06.340 --> 00:25:09.120

<v SPEAKER_3>And well, in the book, if I can make a plug.

00:25:09.640 --> 00:25:10.200

<v SPEAKER_1>Please.

00:25:11.700 --> 00:25:23.580

<v SPEAKER_3>I made sure that we included maritime aviation, all the different aircraft that were operated off of our warships and that the RCAF has flown in support of operations at sea.

00:25:24.160 --> 00:25:26.760

<v SPEAKER_1>In the book, just to remind listeners, is Guardians of the North.

00:25:27.020 --> 00:25:30.500

<v SPEAKER_1>You can find it on Amazon or Indigo or any bookstore near you.

00:25:30.500 --> 00:25:32.400

<v SPEAKER_1>And if it's not there, ask them to get it for you.

00:25:32.480 --> 00:25:33.140

<v SPEAKER_1>Right, Rich?

00:25:33.580 --> 00:25:34.280

<v SPEAKER_3>That's right.

00:25:34.300 --> 00:25:37.020

<v SPEAKER_3>And we have an e-book version of it now as well.

00:25:37.360 --> 00:25:37.860

<v SPEAKER_1>Yes.

00:25:38.000 --> 00:25:38.840

<v SPEAKER_1>That's how I read it.

00:25:38.840 --> 00:25:42.880

<v SPEAKER_1>So I highly recommend it because the illustrations really

are remarkable.

00:25:42.880 --> 00:25:47.080

<v SPEAKER_1>I was remarking before we began the program that the pictures are often worth a thousand words.

00:25:47.080 --> 00:25:53.020

<v SPEAKER_1>The stories they tell of the evolution of the Navy are really, it's there and the pictures are just terrific.

00:25:54.460 --> 00:26:01.560

<v SPEAKER_1>Admiral, let me turn back to you because of course, there's a reason why we're recruiting people and building ships, and that's that the threat environment has changed.

00:26:01.580 --> 00:26:08.640

<v SPEAKER_1>Can you describe what our current maritime threat environment is and situate it against the plans for force development?

00:26:08.640 --> 00:26:18.260

<v SPEAKER_1>I talked earlier about the submarines, the destroyers, the future of warfare, which I'd ask you to look also at, include things like drones that you've talked about, unmanned and autonomous systems.

00:26:19.380 --> 00:26:19.720

<v SPEAKER_2>Yeah.

00:26:19.720 --> 00:26:21.740

<v SPEAKER_2>I mean, it's a pretty challenging picture at sea.

00:26:21.740 --> 00:26:24.640

<v SPEAKER_2>I think everybody's seen the news coming out of the Strait of Hormuz.

00:26:25.260 --> 00:26:40.760

<v SPEAKER_2>The challenge has always been historically, every Navy has a problem in what we call the littorals, either the parts of the coastline that are close to shore, where not just naval capabilities, but Air Force and Army capabilities, and now increasingly drones can be brought to bear.

00:26:41.700 --> 00:26:45.200

<v SPEAKER_2>All of that's a factor in today's world.

00:26:45.320 --> 00:26:52.880

<v SPEAKER_2>What's of note is that we're seeing an increasing challenge to the shipping lanes and critical Straits that have enabled global commerce.

00:26:53.200 --> 00:26:59.580

<v SPEAKER_2>If you look back to the 80 years since the Second World War, we've seen probably the greatest sustained increase in human prosperity.

00:26:59.780 --> 00:27:11.940

<v SPEAKER_2>That was enabled by two things, the advent of the shipping container that allowed goods to be moved easily and quickly by sea, and the fact that the seas were free and open for the use of all, and there weren't places where you couldn't send ships through.

00:27:12.720 --> 00:27:16.440

<v SPEAKER_2>Over the last few years, we've seen the Suez Canal blocked by a ship that turned sideways.

00:27:16.440 --> 00:27:18.120

<v SPEAKER_2>We've seen challenges in the Red Sea.

00:27:18.120 --> 00:27:21.320

<v SPEAKER_2>We've seen the current dilemma, problems in the Strait of Hormuz.

00:27:21.340 --> 00:27:23.940

<v SPEAKER_2>We've had a history of piracy in a number of different places around the world.

00:27:23.940 --> 00:27:28.680

<v SPEAKER_2>All of those are creating challenges that make it harder for us to move commerce around the world.

00:27:28.680 --> 00:27:35.760

<v SPEAKER_2>So there's a general interest in Canada in having a Navy that can contribute to making sure that the seas stay free and open to all.

00:27:36.200 --> 00:27:37.880

<v SPEAKER_2>That's always been a part of our mandate.

00:27:38.300 --> 00:27:40.840

<v SPEAKER_2>But increasingly, we were seeing threats from Russia.

00:27:41.120 --> 00:27:49.440

<v SPEAKER_2>If you look at the work of the Russian Dark Seas Fleet, we're seeing challenges to critical undersea infrastructure, the attacks on the Nord Stream pipeline a few years ago.

00:27:49.520 --> 00:28:01.140

<v SPEAKER_2>All of these are challenges that could manifest in Canadian waters just as easily on top of the traditional threat we've always faced since the Second World War of submarines that are able to

fire cruise missiles into North America.

00:28:01.580 --> 00:28:04.660

<v SPEAKER_2>So the Navy is determined to evolve to meet that threat.

00:28:05.060 --> 00:28:16.100

<v SPEAKER_2>Right now, our current force of Halifax class frigates are still decent enough for today to do that mission of keeping a hostile submarine far enough away from our coasts that it couldn't launch missiles at us.

00:28:16.480 --> 00:28:20.000

<v SPEAKER_2>But we need a lot more ships to be able to sustain that effort.

00:28:20.100 --> 00:28:22.700

<v SPEAKER_2>We're building a new series of river class destroyers.

00:28:22.720 --> 00:28:26.800

<v SPEAKER_2>Going back to our heritage, the first one will be named Fraser, then Saint Laurent and Mackenzie.

00:28:26.980 --> 00:28:29.060

<v SPEAKER_2>Great ship names that we've had in our past.

00:28:29.060 --> 00:28:31.560

<v SPEAKER_2>Building on that heritage of outstanding ships.

00:28:32.240 --> 00:28:36.640

<v SPEAKER_2>Going back to the names of the class that was such an innovative class when it was delivered.

00:28:37.120 --> 00:28:41.920

<v SPEAKER_2>The government is committed to the acquisition of up to 12 conventionally powered diesel electric submarines.

00:28:42.040 --> 00:28:53.480

<v SPEAKER_2>Interestingly, this will be the first time in our history that we've bought submarines to defend Canadian waters rather than to serve as targets for our own anti-submarine warfare efforts.

00:28:53.480 --> 00:28:58.100

<v SPEAKER_2>In the past, most submarines that we bought were actually about training our own forces to hunt submarines.

00:28:58.560 --> 00:29:04.320

<v SPEAKER_2>The new class of submarines is going to be about making sure no one comes into Canadian waters without our permission.

00:29:04.320 --> 00:29:09.640

<v SPEAKER_2>On top of that, we've got the Harry DeWolf class of icebreakers, which are for the first time since 1954.

00:29:10.740 --> 00:29:17.900

<v SPEAKER_2>The Canadian Navy has icebreakers that are able to take us into the Arctic through the summer navigation season and anywhere around the Arctic for the rest of the time.

00:29:18.280 --> 00:29:26.560

<v SPEAKER_2>We're looking at plans for a Continental Defence Corvette, just to make sure that we've got the number of surface combatants that we need to patrol the longest coastline in the world.

00:29:26.560 --> 00:29:29.800

<v SPEAKER_2>That's what Canada has, 244,000 kilometres of it.

00:29:30.880 --> 00:29:32.420

<v SPEAKER_2>Some Continental Defence Corvettes.

00:29:32.460 --> 00:29:39.140

<v SPEAKER_2>Then to round it all out, we want to make sure all of those Naval Reserve divisions across Canada are enabled by a fleet of training vessels.

00:29:39.300 --> 00:29:43.280

<v SPEAKER_2>We've got eight really good Orca-class training vessels on our West Coast.

00:29:43.620 --> 00:29:50.860

<v SPEAKER_2>We want to basically renew and expand that fleet, so probably get up to potentially as many as 30 of them, but station them through the St.

00:29:50.860 --> 00:30:11.700

<v SPEAKER_2>Lawrence, through the Great Lakes, bring them closer to where Canadians are, so that young Canadians have a chance to see the Navy in action, while we help provide sovereignty and security along that critical waterway and patrol that border with the United States to make sure, as the US has asked us, that we make sure that we enforce all of the border regulations on both sides.

00:30:11.700 --> 00:30:22.780

<v SPEAKER_2>So we're looking to build out that fleet of renewed and enhanced Orca craft that will contribute to that mission, at the same time they accelerate the training of the sailors and officers that we need to lead this Great Navy.

00:30:23.060 --> 00:30:25.420

<v SPEAKER_2>The joint support ship is the formal name of the project.

00:30:25.420 --> 00:30:26.460

<v SPEAKER_2>There's two of them being built.

00:30:26.460 --> 00:30:31.200

<v SPEAKER_2>The first ship is HMCS Protector, followed very closely by HMCS Preserver.

00:30:31.480 --> 00:30:42.180

<v SPEAKER_2>They're being built at the C-Span Yard in North Vancouver, and it's really neat when you watch, as you get back into shipbuilding, it's been in construction for a while.

00:30:42.180 --> 00:30:44.240

<v SPEAKER_2>We learned a lot about building that ship.

00:30:44.240 --> 00:30:54.160

<v SPEAKER_2>Then Preserver, where the yard had the advantage of seeing, okay, this is how the plan comes together, it is coming along so much faster than Protector because of all of the lessons that they've learned.

00:30:54.160 --> 00:30:57.880

<v SPEAKER_2>That just demonstrates some of the quality of the shipyard that they've got out there as well.

00:30:58.360 --> 00:31:03.900

<v SPEAKER_1>The intent for these shipyards, I think it's fair to say, is that this will be permanent shipyards.

00:31:04.060 --> 00:31:09.440

<v SPEAKER_1>We're not going to have the problem we did in the 90s when basically, we shut the shipyards and we were down to nothing and had to retrain.

00:31:09.600 --> 00:31:18.280

<v SPEAKER_1>The intent is it not to keep the permanent capacity of this important, with all the various important trades that go into making ships?

00:31:19.240 --> 00:31:19.980

<v SPEAKER_2>That's exactly it.

00:31:19.980 --> 00:31:20.200

<v SPEAKER_2>Yeah.

00:31:20.200 --> 00:31:23.200

<v SPEAKER_2>The idea is the government is committed to a continuous shipbuilding program.

00:31:23.660 --> 00:31:27.060

<v SPEAKER_2>What are now three yards under the National Shipbuilding Strategy.

00:31:27.520 --> 00:31:32.240

<v SPEAKER_2>The Halifax Shipyard for the Irving Shipbuilding Incorporated.

00:31:32.620 --> 00:31:34.320

<v SPEAKER_2>It's going to build all the surface combatants.

00:31:34.360 --> 00:31:39.880

<v SPEAKER_2>It built the Harry DeWolf class of icebreakers to basically get itself up to speed as a shipyard.

00:31:39.880 --> 00:31:41.220

<v SPEAKER_2>Now it's building river class.

00:31:41.860 --> 00:31:44.960

<v SPEAKER_2>Fifteen of those, which will take it into the 2040s.

00:31:45.480 --> 00:31:48.400

<v SPEAKER_2>Then we'll look at what's the fall along class to that ship.

00:31:48.640 --> 00:31:56.380

<v SPEAKER_2>The C-Span Yard in North Vancouver has built so far eight ships for a mix of Coast Guard and Navy ships.

00:31:56.900 --> 00:32:00.380

<v SPEAKER_2>It's got a plan for some multipurpose icebreakers coming up.

00:32:00.400 --> 00:32:07.080

<v SPEAKER_2>It's had a lot of success because the design for that multipurpose icebreaker has been picked up by the US and the Davey Yard in Quebec City.

00:32:07.320 --> 00:32:11.560

<v SPEAKER_2>It was added a little bit later than the other two that have had 15 years to get up and going.

00:32:11.640 --> 00:32:16.400

<v SPEAKER_2>The Davey Yard is already building the Polar Max, a heavy icebreaker for the Coast Guard.

00:32:16.400 --> 00:32:20.340

<v SPEAKER_2>Then it's got a couple of other projects in mind, including program icebreakers.

00:32:20.640 --> 00:32:22.400

<v SPEAKER_2>Lots of work for all of the shipyards.

00:32:22.620 --> 00:32:31.620

<v SPEAKER_2>There's the capacity to build that Continental Defence Corvette that we believe we need in the Navy and possibly some other capabilities for the Coast Guard and the Navy as we go forward.

00:32:31.620 --> 00:32:39.740

<v SPEAKER_1>Let me ask you then about autonomous warfare, the future of warfare, unmanned, drones.

00:32:39.740 --> 00:32:41.280

<v SPEAKER_1>I know you've been looking at these things.

00:32:41.480 --> 00:32:46.560

<v SPEAKER_1>Do you want to give listeners a sense of what the future of warfare may look like for the Navy?

00:32:47.540 --> 00:32:47.840

<v SPEAKER_2>Yeah.

00:32:47.900 --> 00:32:49.660

<v SPEAKER_2>We're at a really interesting transition point.

00:32:49.660 --> 00:33:01.980

<v SPEAKER_2>I think the best way to imagine where we're at for drones is, if you think back to the days from the Wright brothers to the end of the Second World War, the evolution of aircraft.

00:33:03.080 --> 00:33:11.000

<v SPEAKER_2>In the First World War, the first aircraft to be used were just flown over enemy lines to see where is the enemy force, so it could be targeted with artillery.

00:33:11.400 --> 00:33:17.040

<v SPEAKER_2>Then pilots started taking pot shots at each other's with at first just pistols, then they put machine guns on.

00:33:17.200 --> 00:33:25.900

<v SPEAKER_2>Initially, they just dropped some grenades over the side, and eventually you saw the full spectrum of fighters and bombers and every other type of aircraft capability, and transport aircraft.

00:33:25.900 --> 00:33:30.300

<v SPEAKER_2>We're going to see the same thing with drones in the air, and on the water, and under the water.

00:33:30.420 --> 00:33:39.420

<v SPEAKER_2>I think there's two fundamental things that we're going to be looking for out of the drones that are already being employed in

the Royal Canadian Navy, and of course, this will become increasingly an important part of what we do.

00:33:39.680 --> 00:33:41.560

<v SPEAKER_2>The first part is contributing to the picture.

00:33:42.340 --> 00:33:45.300

<v SPEAKER_2>What we call intelligence, surveillance, and reconnaissance.

00:33:46.100 --> 00:33:54.020

<v SPEAKER_2>Out there patrolling continuously, looking for things on and under the waters of Canada, through the Northwest Passage, around the Arctic Archipelago.

00:33:54.620 --> 00:33:58.640

<v SPEAKER_2>Some real challenges in there, given the distances and the complexity of that environment.

00:33:58.700 --> 00:34:03.720

<v SPEAKER_2>A lot of that will be autonomous, probably not remotely operated, but where it's actually run through its own AI.

00:34:03.740 --> 00:34:10.740

<v SPEAKER_2>We've got to work to make sure that the safety systems are there so that it doesn't cause a hazard to navigation to anyone else out there using the water.

00:34:11.960 --> 00:34:17.780

<v SPEAKER_2>The second set of them are going to be things that either defend a ship or enable a ship in an attack.

00:34:18.660 --> 00:34:21.560

<v SPEAKER_2>One-way attack drones are being used in a lot of different places.

00:34:21.800 --> 00:34:24.400

<v SPEAKER_2>Right now, drones can be used to defend against that.

00:34:24.520 --> 00:34:27.220

<v SPEAKER_2>I see a future where every ship is a drone carrier.

00:34:27.220 --> 00:34:29.020

<v SPEAKER_2>It's going to carry a whole mix of things.

00:34:29.160 --> 00:34:42.120

<v SPEAKER_2>And one of the best things about the design of the River Class Destroyer is it was built with a very large mission bay with two big mission bay doors that will open up on the side, allowing that ship to launch an entire fleet of drones in the air and on the water.

00:34:42.680 --> 00:34:48.520

<v SPEAKER_2>So I think what we're going to see is that evolution of drones that are used in both attack and defense.

00:34:48.780 --> 00:34:58.520

<v SPEAKER_2>The keys are going to be to figure out how you can leverage artificial intelligence so that you have a swarm of drones that's under the control of a single operator rather than every drone having its own operator.

00:34:59.080 --> 00:35:07.460

<v SPEAKER_2>What's the right mix between autonomy and remotely operated such that you make sure that there's always a human in the decision-making loop if we're talking about the use of deadly force.

00:35:08.740 --> 00:35:20.260

<v SPEAKER_2>So it's going to be a very interesting thing and we're already seeing the complexity of some of the things that we have to use to shoot drones down at very expensive missiles and other systems against very inexpensive drones.

00:35:20.320 --> 00:35:33.060

<v SPEAKER_2>So we've got to make sure that we understand how we get on the right side of the cost curve such that we're not spending immense sums of money on exquisite technology to defeat things that can be done quite cheaply because ultimately that's a losing exercise.

00:35:33.060 --> 00:35:39.140

<v SPEAKER_2>So a lot of work going to innovate and imagine the future, but it is definitely a hybrid Navy future.

00:35:39.600 --> 00:35:41.260

<v SPEAKER_1>Are we trying to do much of this in Canada?

00:35:41.260 --> 00:35:46.900

<v SPEAKER_1>Because I know the Prime Minister talks about made in Canada solutions to Canadian problems.

00:35:46.900 --> 00:35:52.940

<v SPEAKER_1>It strikes me that this might be one that we'd be looking at in terms of drones having capacity to do innovate in Canada.

00:35:52.940 --> 00:35:54.580

<v SPEAKER_1>Is that something we're looking at?

00:35:54.780 --> 00:35:55.280

<v SPEAKER_1>Absolutely.

00:35:55.280 --> 00:35:57.540

<v SPEAKER_2>There's some great Canadian companies that are already working.

00:35:57.860 --> 00:36:09.440

<v SPEAKER_2>The main ones in the naval world are Kraken Robotics on the East Coast and Cellular Robotics on the West Coast in terms of things that are under the water and on the water and systems that allow sensors.

00:36:09.440 --> 00:36:18.080

<v SPEAKER_2>But I know of a lot of other Canadian companies that are working to pioneer autonomous systems to build boats and submersibles that can get after solving these problems.

00:36:20.160 --> 00:36:26.340

<v SPEAKER_2>On the Navy side, we've already managed to pioneer the use of taking one of our target drones that we usually use to test our own proficiency.

00:36:26.660 --> 00:36:30.480

<v SPEAKER_2>We were able to weaponize that and figure out how to drive it into another target.

00:36:30.640 --> 00:36:34.700

<v SPEAKER_2>We've taken something that went from being a target to being an offensive weapon.

00:36:34.700 --> 00:36:37.140

<v SPEAKER_2>That's the type of innovation that we're seeing across the board.

00:36:37.880 --> 00:36:40.640

<v SPEAKER_2>We're also taking lessons from other navies.

00:36:40.640 --> 00:36:43.800

<v SPEAKER_2>Australia has done some amazing things with a program they call Ghost Shark.

00:36:43.800 --> 00:36:45.240

<v SPEAKER_2>We study that quite closely.

00:36:45.620 --> 00:36:51.060

<v SPEAKER_2>The Americans have been operating uncrewed systems in the Arabian Gulf for quite a while.

00:36:51.700 --> 00:36:54.220

<v SPEAKER_2>We're certainly watching the lessons that they've picked up from that.

00:36:54.420 --> 00:36:55.160

<v SPEAKER_2>It's going to be interesting.

00:36:55.160 --> 00:36:56.420

<v SPEAKER_2>Not every one of them is going to be a weapon.

00:36:56.420 --> 00:37:01.840

<v SPEAKER_2>A lot of them are going to do this very simple transport functions that historically we had to dedicate sailors and resources to.

00:37:02.260 --> 00:37:11.680

<v SPEAKER_2>Instead, it's probably that we could just have autonomous vessels go out and provide services without putting a human at risk in the space and simplifying a lot of the process.

00:37:12.420 --> 00:37:16.920

<v SPEAKER_1>Rich, you've been looking, you're putting a book together on Canadian Naval Strategy Reader.

00:37:18.580 --> 00:37:20.640

<v SPEAKER_1>I take it Naval Strategy is evolving.

00:37:20.860 --> 00:37:25.620

<v SPEAKER_1>Do you want to say a few words about the future of Naval Strategy from your perspective and what you've been looking at?

00:37:26.960 --> 00:37:27.680

<v SPEAKER_3>Yeah.

00:37:27.720 --> 00:37:37.980

<v SPEAKER_3>I think the future of Naval Strategy is to pay attention to the past as I'm writing this book, The Canadian Naval Strategy Reader.

00:37:38.740 --> 00:37:42.420

<v SPEAKER_3>It could be subtitled Naval Strategy for Canadian Dummies.

00:37:44.020 --> 00:37:50.960

<v SPEAKER_3>We tend to forget a lot of the lessons, the theories that have been developed in the past.

00:37:51.180 --> 00:37:57.760

<v SPEAKER_3>Many of them were developed because the fundamental principles are lasting.

00:37:59.020 --> 00:38:11.040

<v SPEAKER_3>You don't have to look at specific types of ships or methods of tactics of engagement to understand that, as Admiral Topshee said, you know, the seas are important.

00:38:11.040 --> 00:38:18.200

<v SPEAKER_3>They're fundamental to our trade and the protection of the routes is important.

00:38:20.200 --> 00:38:28.280

<v SPEAKER_3>So I can't say anything much for the future of strategy, but I'd like to pick up on a couple of things that Admiral Topshee said.

00:38:29.800 --> 00:38:33.760

<v SPEAKER_3>There's that, it triggered me, so to speak, to things that are important.

00:38:34.080 --> 00:38:39.240

<v SPEAKER_3>First of all, he's talking about all these, the new classes of ships that are coming on, the river class destroyers.

00:38:39.480 --> 00:38:47.820

<v SPEAKER_3>Well, they're going to be built when the first one hits the water at the rate of one or two every couple of years.

00:38:48.940 --> 00:38:51.160

<v SPEAKER_3>That's extending way out into the 2040s.

00:38:51.320 --> 00:38:54.820

<v SPEAKER_3>And the present Halifax class are not getting any younger.

00:38:55.480 --> 00:38:57.260

<v SPEAKER_3>They are 30 years old.

00:38:58.220 --> 00:39:01.800

<v SPEAKER_3>So you can only build a ship so fast.

00:39:01.840 --> 00:39:14.360

<v SPEAKER_3>I think drones are going to become really, really important as ship fits in the interim, because that's how you keep on top of the changing nature of a war at sea.

00:39:15.260 --> 00:39:22.500

<v SPEAKER_3>The other thing that has come to me in the process of putting this strategy reader together is the importance of mass.

00:39:22.760 --> 00:39:24.600

<v SPEAKER_3>That is the numbers of ships.

00:39:26.080 --> 00:39:31.440

<v SPEAKER_3>12 Halifax class was barely adequate for the needs that Canada had.

00:39:31.700 --> 00:39:43.080

<v SPEAKER_3>And we got off lucky that they weren't called upon for open conflict warfare in the time that we've had them so far.

00:39:43.540 --> 00:39:54.720

<v SPEAKER_3>But we went through a period in the 2010s where we only had one or two ships per coast that were available because they were going through a process of modernization at that time.

00:39:55.140 --> 00:40:05.720

<v SPEAKER_3>So I think 12 to 15 river class, if I can use one example, is the bare minimum of number of ships that we will want to have.

00:40:05.880 --> 00:40:13.540

<v SPEAKER_3>The corvettes could be a way to bulk that up with the numbers that Admiral Topshee has been talking about looking at getting.

00:40:14.000 --> 00:40:22.580

<v SPEAKER_3>But if you go to the rule of four, where you have one ship for every ship that you have deployed, you need three others.

00:40:23.540 --> 00:40:39.540

<v SPEAKER_3>That's the one that just went off station, the one that is undergoing repairs, getting ready to go out, and the third one that is working up and in the process of deploying to replace the one that's on station.

00:40:39.840 --> 00:40:43.860

<v SPEAKER_3>So if you have for four ships, you only have one in operations.

00:40:43.980 --> 00:40:59.900

<v SPEAKER_3>Well, if you have to have two ships ready for operations, for example, on each coast, you need a total of eight ships per coast, and that only gives you two guaranteed ships for operations on each coast.

00:41:00.980 --> 00:41:08.360

<v SPEAKER_1>We promised to have three ships often in doing tours in the Indo-Pacific, I think in one of the last Indo-Pacific strategy.

00:41:08.480 --> 00:41:08.940

<v SPEAKER_1>Interesting.

00:41:08.940 --> 00:41:13.340

<v SPEAKER_1>So now I don't think many people appreciate that rule for you just described, Rich.

00:41:13.960 --> 00:41:20.160

<v SPEAKER_1>Well, look, I know what you're writing these days, but tell me what are you reading or streaming these days as well, Rich?

00:41:20.960 --> 00:41:37.980

<v SPEAKER_3>Well, I don't do a lot of streaming, but it goes back to, I'm doing some background reading for the Strategy Reader, and the book I am reading right at the moment at the top of my pile is called Strategy Shelved.

00:41:38.440 --> 00:41:43.320

<v SPEAKER_3>It's by a chap named Stephen Wills, US Navy Captain Retired.

00:41:43.420 --> 00:41:54.120

<v SPEAKER_3>He subtitles it, The Collapse of Cold War Naval Strategic Planning, and he spends most of the book actually talking about how the US Navy developed its maritime strategy.

00:41:54.500 --> 00:42:03.360

<v SPEAKER_3>That was what governed our operations at sea when I was actively at sea in the last decade of the Cold War in the 1980s.

00:42:04.360 --> 00:42:14.080

<v SPEAKER_3>That was the one that was the rationale for the 600 ship Navy that the US Navy had, and that they are desperately trying to rebuild now.

00:42:14.680 --> 00:42:34.280

<v SPEAKER_3>Anyways, it was a good primer on that there, and then how it all fell apart after the Cold War ended, and we thought we had won the war, and history had ended, and whatnot, and we got into looking for peace dividends and cooperative strategies where navies of the world will all work together.

00:42:34.300 --> 00:42:42.340

<v SPEAKER_3>Well, we're seeing now that that's falling apart, where especially the big one is not so inclined to work together with everybody else.

00:42:42.340 --> 00:42:46.260

<v SPEAKER_3>The Navy is, but the people guiding it, not so much so.

00:42:46.260 --> 00:42:48.320

<v SPEAKER_3>Anyway, Strategy Shelved, Stephen Wills.

00:42:48.680 --> 00:42:50.240

<v SPEAKER_1>All right, Strategy Shelved, Stephen Wills.

00:42:50.240 --> 00:42:50.540

<v SPEAKER_1>Excellent.

00:42:50.540 --> 00:42:50.820

<v SPEAKER_1>Thank you.

00:42:50.820 --> 00:42:52.640

<v SPEAKER_1>Admiral, what are you reading or streaming these days?

00:42:53.380 --> 00:43:02.720

<v SPEAKER_2>Well, I think one of the great books for anyone who's interested in the Battle of the Atlantic, it's a little bit off of that, is Pirate of the Adriatic by Sean Livingston.

00:43:03.240 --> 00:43:30.820

<v SPEAKER_2>I finished it a little while ago, so that's the sort of book that comes to mind for the Battle of the Atlantic, but the technical answer to your question is, I'm actually reading Dive, A History of Australian Submariners at War by Mark Carlton, which is really neat to see how the Australian Navy has adapted and grown over the years, and my Carlton's written a series of books about Australian Naval history and the one about the submarines is truly incredible what those brave sailors did throughout the years defending Australia.

00:43:31.260 --> 00:43:34.540

<v SPEAKER_1>All right, Pirates of the Adriatic, I think you said, and Dive.

00:43:34.820 --> 00:43:35.260

<v SPEAKER_1>Yes.

00:43:35.940 --> 00:43:39.440

<v SPEAKER_1>Well, thank you both and thank you for listening to this episode of The Global Exchange.

00:43:39.720 --> 00:43:43.380

<v SPEAKER_1>We were joined today by Vice Admiral Angus Topshee and Richard Gimblett.

00:43:43.560 --> 00:43:53.260

<v SPEAKER_1>I encourage listeners to the copy of Rich's new book, Guardians of the North, Canadian Warships and Maritime Aircraft 1910 to 2025.

00:43:53.800 --> 00:44:00.520

<v SPEAKER_1>You can find The Canadian Global Affairs Institute on Facebook, Twitter and LinkedIn, and the CGAI Network on iTunes, Spotify and Google Play.

00:44:01.160 --> 00:44:09.000

<v SPEAKER_1>The Global Exchange is brought to you by our team at the Canadian Global Affairs Institute, and as always, my thanks go to our producer, Jordyn Carroll, and to Drew Phillips for providing our music.

00:44:09.160 --> 00:44:10.340

<v SPEAKER_1>I'm Colin Robertson.

00:44:10.620 --> 00:44:12.560

<v SPEAKER_1>Thanks for joining us today on The Global Exchange.