

**PANAMA CANAL'S
DEPUTY ADMINISTRATOR
ILYA ESPINO DE MAROTTA**

**'GENDER EQUALITY IN
DECISION-MAKING IS A
WIN-WIN FOR THE
WORLD IN ANY
INDUSTRY.'**

Armed with degrees in both Marine Engineering and Engineering Economics as well as 35 years – and counting – of experience at the Panama Canal Authority, Ilya Espino de Marotta has blasted through the glass ceiling wearing a pink hard hat. Amongst the diverse roles she has under her belt, ranging from Marine Engineer in the shipyard to Vice President for Transit Business, Ilya has notably led the Canal's expansion as head engineer and now oversees operations from the second highest position at the authority.

My original inspiration was Jacques Cousteau. He caught my imagination. I started scuba diving when I was 16 and I wanted to be a marine biologist.

Can you tell me about your academic and professional background and experience?

I am a marine engineer. I went to school at Texas A&M in Galveston. Since I knew I didn't want to ship out, I didn't take the license option to go to sea. I decided I would work in shipyards or ship design, and that's what I did.

Actually, my original passion and major was marine biology and I had won a scholarship to study that. But back in 1982 in Panama, marine biology was not a career that would take me where I wanted to go. That's when I switched to marine engineering. I just wanted to be by the water – that was my driving force. When I came back to Panama after graduation, I got a job at the Panama Canal in the shipyard, which was perfect as that's exactly what I had studied. I worked in the shipyard for about four and a half years.

Within the Canal, I have had many, many functions. I've worked here since 1985 and the Canal is big with about 10,000 employees. There was a small newspaper where you could apply for jobs within the authority to move around, so I applied for a job in the dredging division, and then worked there for about two years. Then I applied for a job as a mechanical engineer in the design office and I was there for four years. After that I became a valuation engineer in accounting, followed

by a job as capital investment coordinator for the maritime operations department which was the biggest department at the time. After working there, I got a call in 2002 from the then deputy administrator – which is the role I have now – to participate in the development of a masterplan to create the expansion programme. That lasted till 2019, when I moved over to head the operations of the Panama Canal, which is the biggest vice presidency. I was the first woman to be Vice President for Engineering, the first woman to be Vice President for Operations and then, since January of this year, the first woman Deputy Administrator. In a nutshell that's my career. It's been pretty amazing.

During your remarkable career, who has inspired you?

My original inspiration was Jacques Cousteau. It was he that caught my imagination. I started scuba diving when I was 16 and told everyone I wanted to be a marine biologist. Realistically marine biology wasn't feasible then in Panama, but I found something that would keep me by the water. Besides Cousteau, my parents inspired me

by their work ethic, their dedication and commitment.

Do you enjoy your new role as Deputy Administrator of the Panama Canal?

It's been challenging. I'm still wearing two hats. I'm still COO and running operations, and I'm doing the Deputy role as well. It's a lot of work but being Deputy gives me an overview of the entire institution. I support the Administrator, Ricaurte Vásquez Morales, so whatever he asks me to concentrate on, I do. But I get to participate more in strategy areas in addition to operations.

What are the challenges you are facing in your new role?

Actually, the biggest challenges I faced since January 2019 when I became COO had to do with constantly dealing with union issues. During the expansion programme, there were no labour unions working in engineering; the Vice-presidency charged with the execution of the Project. But as a COO of the



Meet Ilya Espino de Marotta

In May 1985, Ilya received a degree in Marine Engineering from Texas A&M in Galveston, Texas, USA. Since graduating, she has worked with the Panama Canal in diverse roles. Her 1 January 2020 commencement as Deputy Administrator crowns her more than 35 year career at the authority. Before her latest role, she fulfilled pivotal positions such as Executive Vice President for Engineering and Program Management which included heading the execution of the Panama Canal Expansion, and Executive Vice President for Transit Business where she was responsible for all maritime operations, emergency response, dredging operations, maintenance of Canal's infrastructures, floating and rolling equipment, customer affairs and marketing analysis.

In 1996 she received a Masters in Economic Engineering from The Old Saint Mary University in Panama City, Republic of Panama. She also took courses in Managerial Development at the INCAE Business School in Managua, Nicaragua and the Kellogg School of Management at Northwestern University in Evanston, Illinois, USA.

She has been recognised widely for her achievements, including being named 'Outstanding Woman of the Year' by the Panamanian Association of Business Executives and added to Forbes Magazine of Mexico's list of the 50 most powerful women in Central America. Ilya is a judge for the Queen Elizabeth Prize for Engineering as well as a member of the Boards of Directors of the Ronald McDonald Charity Organization of Panama, the International Women's Forum, and Asociación Directoras de Panama, an association which aims to improve the effectiveness of Panama's boards of directors through the inclusion of women.

Canal, things were different, and I had a lot to learn. We have six different unions in the Panama Canal and I have to deal with all of them because they all under operations. This was a learning experience that expanded my knowledge and my horizons. As Deputy, I still have to maintain that part of my job because the deputy is the last administrative resort on union labour issues.

The other challenge has been managing the Canal during COVID-19. Our workforce went down to about 40% of its normal capacity at one point. After a while, we went up to 55% of the workforce in order to keep the Canal opened. But still 45% of people were on leave or working from home. In spite of a country-wide quarantine, we had to keep the operations running smoothly, maintaining shipping while half of the workforce was home.

With this smaller workforce, we had to create a special schedule. On March 24th, we implemented a 14 day cycle with people working 12 hour shifts, 7 days a week. Then they would go home and rest for seven days and we would bring in other employees. In this way, people were social distancing and if someone tested positive, we could isolate them and mitigate the spread. Most importantly, we had enough people working all the time so we didn't have to shut down operations.

On June 8th, we brought almost everybody back. And that too was a challenge. In a little over two weeks' time, we prepared all areas for people to return to the office – all of the distancing requirements, the signaling everywhere and the capacity of the rooms. Cleaning up the trucks, the cars, and the launches, all of that was a learning curve.

Now we are back to normal. Of the Canal's 9,600 employees, 1,200 remain at home. All the administrative employees that can actually do their work from home, we are keeping at home for now.

Is working from home likely to become a permanent change?

So far it's a temporary measure we are doing to ensure social distancing. Personally, I love working from home. I work longer hours and harder but I have more flexibility with my lunch time or if I need to work out in the morning. I think I actually put in more hours. For example, having to drive to work, that time you have gained. Having to get dressed up to go to work, that time is gained. You can be more casual. You eat healthier because you eat all your meals at home. Working at home has definite advantages.

How did you make decisions with stringent measures regarding health and safety so early, already in January, when the world was struggling to understand the scope of the problem?

In the beginning, we took drastic measures and went to the bare minimum of employees. We asked ourselves 'What was the critical number of people we need to *not* shut down?' We reduced our

'I think I should wear a pink hard hat just to make a statement that I am a girl and I can do this job'.

workforce to 3,600 but soon we realised that that was a bit tight. Little by little we increased the number. For instance, you can stop maintenance for a while but not forever. We saw that we needed maintenance people to come in two days a week, every week. We shut down 100% of dredging, 100% of preventative maintenance and only had running maintenance. Each week we learned something new and adapted.

This process also gave us a good idea of things we could improve upon in the long term. At times, there was some idleness or not full workloads, but this gave us the opportunity to evaluate and better utilise resources, and refocus on some areas. It was a good learning experience to see how a company could run with 50% of its workforce.

What is the impact of COVID-19 on world trade from the Canal's perspective?

We had multiple things going on at the same time so it's difficult to differentiate what was the biggest impact. 2019 was one of the driest years in 70 years at the Panama Canal. Water levels were low. As a result, on 15 February, we implemented a new, freshwater charge for all vessels transiting in the Canal: a \$10,000 flat rate for the biggest vessels with a length overall greater than 300 feet, \$5,000 for the 200-300 foot range and \$2,500 for the smaller vessels under 200 feet in length. In addition to that, there is an adjustable rate that is a percentage of how many tolls you pay according to the lake level. The idea was to restrict traffic a bit because we didn't want to implement draught restrictions for our customers. We wanted the lake level at a good elevation to provide a competitive draught. In addition, there are the US-China conflicts. Add that to the freshwater fees raising our tolls, and COVID-19, and yes there has been a reduction in trade.

The impact to the Canal has occurred with a two or three month delay from when the pandemic hit. In March, there was maybe a 1% decrease in arrivals, 5% in April and then 14% in May, which is basically COVID-19 causing a drop in trade. At first, production stopped in certain areas of the world, and then consumers were buying less because the economies in the world were affected.

To what extent is the Cascade Effect affecting the Panama Canal?

Roll on/roll off is one of the main segments that's been impacted. Of course we've had a dramatic number of cancellations in cruise vessels. Panama was just established as a home port so even though that doesn't impact the Canal, it impacts the country.

Another impact was the drop in fuel prices which came in the middle of everything. When fuel costs are low, there are some sea routes that become more competitive than the Panama Canal. Add to that low charter rates and that affects us. As of now, however, fuel prices are coming back up. Container vessels are less loaded, coming with less containers than normal. The Cascade Effect has also meant less port calls in our ports. There are many blank sailings now – also an effect of the coronavirus – and less transits through the Canal because 72% of the ships that transit the Panama Canal do make port calls. If you have a drop in transit, then you have a drop in port calls.

Looking back to the Panama Canal Expansion, how did your role change throughout the course of the project?

From 2002 to 2006, we were a small team of four or five people working with 120 other professionals from the Canal. We were integrating everything – environmental,

engineering and financial issues – into one single proposal, and developing a communication strategy. We needed this communication plan because to expand the Panama Canal with a third set of locks required a national referendum. We analyzed it for five years. We had contractors from the USA – Parsons Brinckerhoff – who helped us put the project together with 120 studies and \$40 million that we managed as a team. In 2006, they created an office to implement the execution, create the organizational structure, and everything that had to be put into place if the referendum were positive.

Luckily, the referendum was positive and after that they created the position of Vice President of Engineering that was going to lead the project. I was the manager for resources and was in charge of safety, environment, historical documentation, budget, control, and legal. It was quite intense and that was my role from 2007 until 2012.

In February 2012, my boss got promoted to Administrator and I became the lead of the project. From February 2012 until June 2016, which was the inauguration of the new locks, I headed the project. All of the engineering of the Panama Canal was under the same Vice Presidency. Then from June 2016 until January 2019, I became head of engineering, which encompassed all of the engineering of the Panama Canal. During this time, we also had to build a bridge on the Atlantic side because there was no bridge. To cross from one side of the country to the other, you drove on top of the lock gates. In February 2019, I became Chief Operating Officer.

What was it like to work on such a massive project?

We were a little over 800 people working at the Canal on the expansion project and we had over 200 contractors from all over the

A Pink Hard Hat with a Message

When Ilya was tasked with leading the construction of the Panama Canal's third set of locks, she began wearing the standard white hard hat. Soon she realized that there were a few people that were not too comfortable with a woman leading the project. Ilya remarked to her husband 'I think I should wear a pink hard hat just to make a statement that I am a woman and I can do this job'. Beginning as a personal message, the item became very popular. Ilya explains: 'I didn't think of the ramifications wearing a pink hard hat would bring but I'm very glad I did it because it made a statement that women can do any kind of a job. The pink hard hat was a statement from me to the people around me that weren't confident that I could do the job. It said "Hey I'm a woman and I'm doing this job".'



world. I told people 'I'm here to make your life easy to do the big stuff. I'm here to facilitate things, to make things happen, to resolve problems.

When you have a very good team working with you, you can do great things. Being the lead puts pressure on you. You need to make sure people are happy, engaged and committed. Of course it was stressful. My motto was 'never a dull moment'. There was always something to be resolved, every single day. I made sure I was always available to everybody, the contractors or the Panama Canal people to act as a liaison and make sure things ran as smoothly as possible. Communication was always primary. And it was the hardest part of the project, not the engineering.

We had over 80 nationalities working on the project. We had contractors that had

never worked with the Canal before. We had contractors who were not very happy with each other. It was demanding but fun because you get to see this amazing project being built close up. I got to go to South Korea to see the valves fabrication, I went to Italy to see production of the rolling gates. It was a project built in Panama that came from all over the world. A team in the Netherlands designed the gates. The main designer of record was Montgomery Watson Hart from Chicago, Illinois, USA. The challenge was maintaining all the moving parts.

How did you orchestrate and maintain the communications between the international stakeholders?

I had regular meetings. I had a staff meeting every week with the full staff. I would make sure to go to the field a minimum two to three days a week. I always went to see the project.

On the Atlantic side, once a week or every two weeks because it was a little farther out, and on the Pacific, a minimum of two to three days a week. Also I went to the different parts of the project because we had dredging parts, construction parts, and environmental parts. I went to reforestation projects, I went to the live animal rescues, I went to see the archeological findings, and I went to the construction. I participated in everything. If coronavirus had happened during the expansion, I don't think it would have been such an easy, smooth task at all. Being able to be out there was very critical for me.

What were the environmental goals of the project?

We had two things in our favour. The area where the project was, was all patrimony area of the Canal so we didn't have to buy land or expropriate land. A few areas had already been

We also did animal rescue for whichever animals were not inclined to leave the area on their own. We had the contractors relocate them to specific areas.

impacted in 1939 when the Americans tried to build a third set of locks at the Panama Canal. They abandoned it in 1942 because of World War II. As a result, a big portion of the project was done in areas that had already been impacted. Another area of the project was land where the US had had their military bases in Panama. It was a shooting range where there was unusable land which we cleared and could use. The deforestation taking place in all areas of the projects would be compensated for as we reforested twice as much land in national parks all over the country. Our environmental agency decided where reforestation should be done. It was a five-year project – one year for planting, four years for maintenance. For the communities that live around the area, it was a positive impact. They were hired to do those jobs giving them guaranteed employment for five years. Also they could use this knowledge of reforestation to do it elsewhere in the future. We also did animal rescue for whichever animals were not inclined to leave the area on their own. We had the contractors relocate them to specific places.

We also had an archeologist on call in case there were any findings. Many areas had never been excavated before and we had a contract with the Smithsonian Institute for research they wanted to do on paleontology. It was a five-year project, with a \$1 million budget, and they had important findings. The environmental part was done very responsibly in preparation for the national referendum, and communication was key. We issued reports to Congress, to the cabinet, and to our lenders. We borrowed \$2.3 billion of the \$5.2 billion estimated on the project and we self-financed \$2.9 billion. Reporting, standardized information and a programme management system to make sure the information was maintained the same way was crucial.

What other factors played a role in the project's preparations?

Since we had to go to a national referendum, we definitely had to take into account all the pros and the cons. We analysed the job generation. There were 41,000 jobs generated in the nine years. During execution of the works we had 14,000 people working at the same time. We also implemented a training programme with some national institutions on the skills that would be the most required for the project such as heavy equipment maintenance, heavy equipment operations,

sophisticated welding, specific masonry and electrical. In this way people with the right trades could be put to work when the contractors arrived. This was necessary because Panamanian law requires that 90% of the unskilled workforce and 85% of the skilled work must be Panamanian. In this way we could guarantee that contractors would find qualified people in-country and hire people locally which would have a positive impact on the economy. We developed some training programmes with national entities and some companies like Caterpillar participated in the trainings too.

In addition, we established full offices with the Ministry of Labour and the Ministry of Immigration to make sure that contractors coming from abroad would have expedited processing of their work permits in Panama. We trained about 300 people in programme management within the Canal and we certified about 75 of them as programme managers. Even though some of these people were hired on a temporary basis, once the project was done, they could move into the economy better prepared to provide growth for the country.

What were the considerations in the Panama Canal project's design and construction to create sustainable infrastructure?

The first reason – the reason we needed to expand the Panama Canal – was because ships were getting much bigger and we were losing market share. To maintain the Canal as a sustainable, reliable route, we had to make bigger locks. However, because of the market demand, we couldn't make two lanes. The original Canal has two lanes so you could take one lane out to do maintenance while the other one is operating. Well in the new Canal, you only have one lane so you can never take it out for maintenance. We took measures that would allow us to operate the Canal while maintenance is going on, and one of those things were the gates. The original Canal has miter gates and you actually need to bring a floating crane on site to remove the gates to take them to a shipyard, and you need to shut the lane down for that process. Now, we have rolling gates that go into a recess and you block the recess with some stop logs so you actually do the maintenance on site. We have two gates everywhere so one gate can be in maintenance while the other is in operation.



The second thing is we don't have locomotives in the new locks. Locomotives require extensive maintenance. The structure would have to be much bigger and more expensive. We are operating with tug boats in the new locks.

The filling and emptying system on the original locks is through the bottom of the locks – through the floor. This gives a very symmetrical flow, but to do maintenance, you need to dry the chambers and empty the lanes. We cannot do that in the third set of locks so we did a lateral filling and emptying system that comes through the walls so you can actually block areas of the tunnels where the water runs to do maintenance. All we do is slow down the traffic but we don't stop it.

Also the locks were built to allow 55-foot draught vessels but our channels are not dredged to offer that. Right now we offer a maximum of a 50-foot draught on vessels. In the future we can expand to 55 feet by dredging all of our navigation channels. These are the main things we considered for the long term.

We also put water-saving basins in the new locks which we don't have in the original locks. This allows us to recycle 60% of the water of each transit to utilize it on the next one. So the new locks – even though they

are much larger – use 7% less water than the existing locks and you can transit a ship with three times more cargo using less water.

The gates are fantastic, my favorite part of the project. How the gates were transported across the ocean by ship, how the gates for the Atlantic and Pacific sides are different sizes, how they were put in place, and how they were installed. It's just a completely amazing project.

How can the dredging industry inform clients best about the concept of Dredging for Sustainable Infrastructure?

Our main concern right now for sustainability and reliability of the canal is water projects. In the next couple of months we are putting out a tender to bid on water solutions to guarantee the right amount of water for the uninterrupted transit of the canal. This is because in the last five years, we have seen that rainfall has diminished and we are a freshwater canal. We rely 100% on rainfall. We have a certain capacity and most years we spill large amounts of water. Last year was an exception and we didn't spill any water because there was so little rainfall. If we can increase the reservoir capacity of the lake then we can store rain to prepare for scarcity. Gatun Lake

also provides drinking water for 60% of the population of the country. This is definitely one of our main concerns and our main focus right now.

During the construction of the Panama Canal Expansion you were the 'face' of the project and you started wearing a pink hard hat. How did that start?

It was an unplanned thing. During my studies, there were two women in the faculty. When I worked in the shipyard, we were two women in the engineering division. I was pretty used to working around men. To me it's been clear that the higher up you go in management, the stranger it is for a woman to get a role. That's changing now but it certainly hasn't been the norm, especially in the construction or maritime fields. I found out about six months after I had been appointed to lead the project that there were people that didn't trust a woman heading the project. Or maybe they were not comfortable with women.

If you look at the first pictures, I'm wearing a white hard hat which is the standard. When I found out that people were making comments about a woman leading the project, I thought, 'I should wear a pink hard hat just to make a statement that I am a woman and I can do this job'. So that is how the pink hard hat came about. It was mainly a very personal message and feeling but the pink hard hat became very popular. I didn't think of the ramifications wearing a pink hard hat would bring, but I'm very glad it did because it made a statement that women can do any kind of a job.

What would it take for the maritime industry to achieve a more balanced gender equal workforce? What role does management play in this shift?

I've seen the shift from when I went to school. As I said, we were two women in the faculty of marine engineering. When I went back to my Alma Mater in November last year, there were many more women.

I think there are role models out there. I see more women in shipping. Even on board ships.

Even in the Panama Canal. Many years ago, being a line handler was a job just for men but no longer. Women are becoming line handlers. Women are becoming launch operators, tug boat captains and pilots. The more women you have, the more it will broaden. More women will see it and say 'hey I can do that too'. I think the maritime industry is an important and good field to be in. In dredging, I don't see many women at

the competences? Having a quota doesn't mean just because you are female you get the job. It's gender with all of the right qualifications. You need opportunities and you need role models. You need both sides to make gender equality happen.

Quotas force management to look for qualified women. On a professional level, it's easier to achieve gender parity than in management positions. Changing management is harder, so you need to make it visible. In Panama, a law was approved that boards of directors of government entities and government-regulated entities need to have 30% women in their Board of Directors. The law stipulates this should be achieved in three years' time because, of course, you haven't had these women developed so you're not going to have an influx of women that are qualified. If you do it gradually over three years, eventually you will build that workforce and there will be an equal pool of women and men to choose from. It's going to take a while. But it's forcing companies to look for these women – and they are out there.

In what ways are you actively promoting the next generation of professionals to follow in your footsteps? I saw you are a judge for the Queen Elizabeth Prize for Engineering. How did that role come about?

I guess they saw my pink hard hat in London and they contacted me saying, 'We are looking for women role models for women to go into STEM. We want women to be involved with the prize'. I said 'sure I'll be happy to'. Of course anything to be able to make an impact and contribute to gender equality in the world, I'm there.

It's another learning experience. All the nominees have been men because as I said, it's going to take time to reach that critical mass of women to be able to be recognised as engineers, but there are some. We want to influence women to study engineering. And if you have a role model, people will be more keen and interested.

It's a relatively new prize, it only exists for three years. And so far, in all the teams, it's been only men winning. The prize is for an innovation that has been implemented, that

An award dedicated bold, groundbreaking engineering innovation which is of global benefit to humanity, the Queen Elizabeth Engineering Prize gives £1 million to celebrate engineering's visionaries.

all. Not even in the dredging of the Panama Canal so that's an area where it could also be extrapolated to. It takes one or two, and then they become role models. In every industry, the more gender equality you have, the better because as I tell people, one gender is not better than the other. We are different and we complement each other. Decision-making becomes richer when you have different points of view. When you have more positions you make better decisions, absolutely. Gender equality in decision-making is a win-win for the world in any industry.

In the beginning I wasn't for quotas because I thought 'I've never been a quota and I made it where I made it'. All the jobs I moved into, I was the only woman. I was the only woman in the mechanical branch of the design section, I was the only woman in the shipyard.

This seemed normal. I thought nobody was interested and it was not an issue – until I had to buy my pink hard hat. That was the first time ever that it hit me that I thought 'oh wow, there is an issue'. And I think that that's the point I thought 'there *should* be quotas'. If you don't present the opportunity, nobody will go for it. Having a quota doesn't mean I am going to put a woman in a job no matter what. Is she qualified? Does she have

The Queen Elizabeth Engineering Prize

An award dedicated to bold, groundbreaking engineering innovation of global benefit to humanity, the Queen Elizabeth Engineering Prize gives £1 million to celebrate engineering's visionaries. The award recognises engineering as a diverse, multifaceted and continually evolving discipline. One which creates solutions to global challenges and improves billions of lives. Engineers have enabled us to work together across the planet, explore the smallest cells and the most distant stars, and navigate our way around the world.

The prize serves to encourage engineers to help extend the boundaries of what is possible across all disciplines and applications, while inspiring young minds to consider engineering as a career choice and to help to solve the challenges of the future. In 2019, the prize winners were Dr Bradford Parkinson, Hugo Fruehauf, Professor James Spilker, and Richard Schwartz for their work on the Global Positioning System (GPS) which has transformed navigation and precision timing and is essential for today's transportation services, smartphones, food production, banking and science.

<https://qeprize.org>

has made an impact in society, and is being utilised. Inventions like the internet. GPS is the most recent one. There was also a medical device that gives medication intravenously. All these recognised innovators have been given to men. I hope that soon we'll see women up there as the winners of the Queen Elizabeth Prize for Engineering.

How do you make time for all of these activities? Do you say yes to everything and welcome the opportunities?

Yes. My husband says 'Sometimes you have to say no'. Sometimes I do say no but I consider

myself a mentor. Many people tell me 'Well you should pick what you say yes and no to.' But just because it's a small group of people or because it's students from a high school, how can I say no? On the contrary, those are the ones I should yes to because that's where you want to make a difference. More than any corporation that may invite you for something. Sometimes I do say no, many times because of conflicts. I don't know if I would keep my sanity without my secretary. I have three kids, they are all grown and working, thankfully, and my husband sometimes complains that I don't dedicate enough time to family but I try. And I try to keep time for myself. I do try to balance.

What has impacted your career?

Something that was critical in my personal life: In September 2010, my middle child had cancer and my husband as well, three months apart. We were in the middle of the Expansion project so I took a partial sabbatical year from work to go to the States and take care of my son and my husband. I would come back to the office one week a month for that year and my mother would fly to the States that week to watch over them. So that was a very critical year that made me a more empathic person because I saw a part of the world I've never been exposed to before.

You said empathy came out of that experience. How does empathy come into your daily life after that experience?

I've always been a very introverted person. With the Expansion project I had to become more of an extrovert in the sense that I had to give many presentations, I had to speak to the media. But I also had to care about people's lives. Not just the professional part of their lives, but caring about their personal

needs. I had to have empathy. When I was out for a year I had an amazing team working for me, and they kept my work going. I came one week a month, and with the great people working with me, it was fantastic. The work got done. Shortly after that, I got promoted. I could not have done it without them. Through my own difficult experience, I became more empathetic and understanding of others.

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Resumé

Jan 2020-Present
Deputy Administrator

Feb 2019-Present
Vice President for Transit Business (COO)

Sep 2012-Jan 2019
Executive Vice President Engineering and Program Management

Oct 2007-Sep 2012
Executive Manager Resources Management and Project Controls

Oct 2004-Apr 2007
Multidisciplinary Engineer - Office of Program Development

May 2002-Sep 2004
Engineer - Master Plan Coordinating Team Office of the Administrator

Feb 1998-Apr 2002
Multidisciplinary Engineer Capital Investment Coordinator Department of Maritime Operations

Jun 1994-Jan 1998
Valuation Engineer in Accounting Division

Apr 1991-May 1994
Mechanical Engineer in Engineering Division

Jan 1989-Mar 1991
General Engineer in Dredging Division

Jun 1985-Dec 1990
Marine Engineer in Panama Canal Shipyard Industrial Division

Education:

2006
Northwestern University's Kellogg School of Management
Executive Development Program

1994-1996
Universidad Santa Maria la Antigua
Master's degree in Engineering Economics

1982-1985
Texas A&M University at Galveston
Bachelor of Science in Marine Engineering

1980-1982
Slippery Rock University of Pennsylvania