

#### **COLOPHON**

#### **REACH**

Curação's Foreign Economic Policy

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#### **EDITING**

AddValue editorial services Margit de Freitas MBA

#### **PHOTOGRAPHY**

Brydan Daniels

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#### CONTACT

Vanessa Toré MBA Pletterijweg 43, Amidos Building

E. info.meo@gobiernu.cw T. + (599) 9 462-1444 www.gobiernu.cw

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## Curação as a smart nation





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## **REACH OUT**



The smart nation concept emerged in Singapore in 2014, when its government decided to expand the smart city initiative to include the whole country and make use of the latest technology available to make life better for the people and more. A bold move for the island that now pays off by providing several benefits to its citizens.

Inspired by Singapore's success, Curaçao's Minister of Economic Development, Dr. Steven Martina, installed a committee to prepare a smart nation concept for Curaçao. Based on other smart city experiences and considering that Curaçao presents a favorable base for several of the necessary requirements, this step is expected to stir exciting new developments for and on the island.

Smart cities are highly advanced with regards to general infrastructure, sustainable real estate, communications and market possibilities. ICT is the principal infrastructure and the basis for offering essential services to inhabitants. Several technological platforms are involved in the initiative, including automated sensor networks and data centers. In a smart city, economic development and activity are sustainable and logically pursued.

Countries embracing the smart city concept incorporate special investment areas or economic zones with adapted regulations and tax structures to make it attractive for foreign investment. Curação's Economic Zones could play a role there. Smart cities tend to work as huge magnets for investment and economic activity, as shown in the cases of Singapore and Eindhoven.

This edition of REACH is dedicated to our smart nation initiative and the opportunities for Curaçao: the use of smart technology in music distribution, agriculture, sea water cooling, construction, health care and e-government services.

Making the smart nation initiative a nation-wide project requires a consistent and integrated approach. The goal is to support everyone – including citizens, companies, the government and environment – and as an end-result create economic growth, social cohesion and better living for the people.

## **CURAÇÃO AS A SMART NATION**



Curaçao's Minister of Economic Development, Dr. Steven Martina, has recently emphasized the relevance of smart city concepts. And he is spot on. But what does being a smart city mean and why is the concept important to the island's economic development? We asked MSc student Rocherno de Jong to share his vision on the topic.

"There are many working definitions for smart cities, but there is no precise one," he admits. One that he personally believes to be the ideal summary is by Jean Hartley, Professor of Public Leadership at The Open University (UK). A smart city is a city "connecting the physical infrastructure, the IT infrastructure, the social infrastructure, and the business infrastructure to leverage the collective intelligence of the city." Infrastructure and technology are central to a smart city. Combining and integrating the different systems and infrastructures in such a way that they all interact with each other is fundamental.

So what does a smart city look like? That truly depends on the individual interpretation, but think of smart parking — simplifying parking by sensors in parking lots to manage available parking space. Smart garbage cans — garbage cans that send signals to the garbage collection service, when cans are full. Smart street light systems — motion sensors to detect surrounding movements to turn a street light on or off. Smart agriculture can be a beneficial part of a smart city, as well. "By implementing a smart agriculture, we would find better ways to grow our own crops, vegetables or fruits, and reduce the dependency on import. Potentially, this could also enable export of our own products." To the Technical Faculty of the University of Curaçao (UoC) the idea of smart agriculture is no news.

According to the Dean of the Faculty of Engineering, Ergün Erkoçu, university students have already drafted plans and examples on how smart agriculture can be implemented in Curaçao, e.g. in combination with tourism.

On the other hand, there are also downsides to the smart city concept. Smart cities potentially require large investments. It is crucial to be aware of the sense of purpose when implementing a smart city concept rather than only for an image uplift. On top of that, the use of open data – information that anybody can easily access – is likely to cause issues, at least in the public eye and perception. People value their privacy and might be against the idea of having their personal information accessible for everyone.

Earlier this year, the island of Saint Lucia, with similar size to Curaçao, launched the Saint Lucia Open Data portal. The portal contains "digital data that is made available with the technical and legal characteristics necessary for it to be freely used, reused, and redistributed by anyone, anytime, anywhere."

The specific objectives were to "stimulate economic growth and business innovation, facilitate greater transparency, increase government efficiency and effectiveness, and improve public services provided to citizens." Saint Lucia is the first Caribbean island to prove that there ways to implement open data. "If, one day, we get to the point that we need to implement open data, we

will be able to learn from Saint Lucia's experiences and find a solution when dealing with open data," De Jong adds.

#### How to apply a smart city concept to Curação

Smart cities, like Amsterdam or Barcelona, are much larger in size and population. Therefore, a possible way of applying the concept to Curaçao – since it is a small island that is not divided in cities – is to follow the example and efforts of Singapore and turn the whole nation into a so-called smart nation.

One of the main motivations for being a smart city is to have a "strategy to mitigate the problems generated by the urban population growth and rapid urbanization". This is why smart cities around the world are cities with large populations. De Jong emphasizes, "Curaçao, due to its size, does not have an issue with population. So, although we should follow examples of cities that have already started establishing the smart city concept, in Curaçao we need to implement it around the problems and challenges we are actually facing." That will simplify recognizing the benefits of implementing the smart nation concept.

**SOURCE** 

Hartley, Jean. "Innovation in Governance and Public Services: Past and Present." Public Money and Management 25.1 (2005): 27-34. St. Lucia Open Data Policy



Rocherno de Jong is a Curação student who recently graduated at the University of Minnesota and received a Bachelor's degree in three majors, Mathematics, Statistics and Computer Science. After having received his degree in the US, he is now continuing a Master's program in Computer Science in the Netherlands. De Jong is particularly interested in the development of smart cities. Involvement and participation of students and young professionals like De Jong, is essential for the realization and continuity of the Smart Nation initiative.

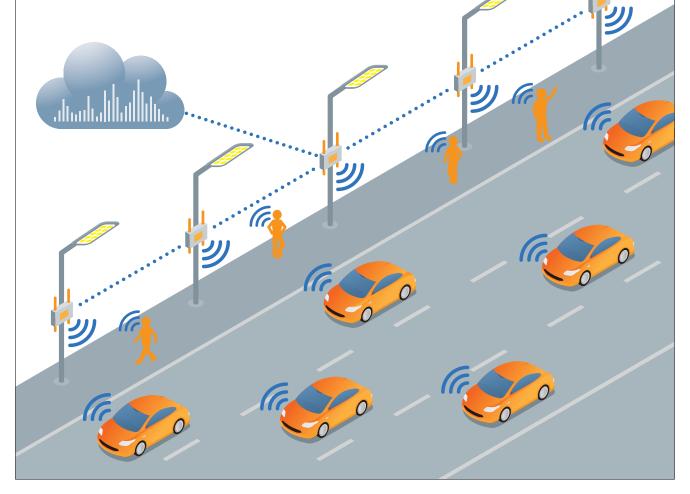


Smart nation is an initiative by the government of Singapore to couple information and communication technologies (ICT), networks and big data to create tech-enabled solutions for its people. The objective is to use technology to empower people to lead meaningful and fulfilled lives. The initiative seeks to improve living, create economic opportunities and build a closer community for all – through exploiting the power of networks, data and ICT. Unlike the more ad-hoc smart initiatives in cities, smart nation represents a careful defined government plan.

The smart nation initiative was officially launched by the government of Singapore in 2014 and aims to develop people-centric solutions to attend urban challenges. This is being done through strategic organization of technology across the nation, making use of investments in digital infrastructure, a tech savvy population and a government that can work quickly to coordinate policies and combine efforts. Various platforms empower citizens, enable them to make use of the information available and come up with their own solutions, instead of relying on the government for problem-solving.

One of the downsides of the smart nation initiative is that it requires significant investments. It typically supports technology startups by doing business with them instead of offering grants to incite innovation.

To encourage innovation and collaboration between citizens and companies, open data is made available at government portals. Some areas of focus include enhancing public transport networks, enabling successful ageing and ensuring a secure, but open data marketplace.



One example is a Smart Nation Sensor Platform that tracks and analyses data related to housing, amenities and public infrastructure. This contains hardware like lampposts and public cameras, as well as software that enables sensor data exchange or data and video analytics. Lampposts can be connected through a network with wireless sensors that will gather data that will be used for urban and operational planning, maintenance and incident response.



Another example is the use of an improved app for planning bus journeys to demonstrate how technology can make life more convenient. The idea is to automate routine things to be able to concentrate on the things that matter. Technology can also strengthen communities and aid the elderly. For example, the use of motion sensors to sense irregular behaviors of elderly inhabitants and send alerts to their caregivers can be used in housing planning. One of the benefits of being a smart nation is the ease of citizens' use and accessibility of public services through technology.

One of the methods to do this is the use of a Government-backed digital database of citizens' personal data, for commercial banking services with consent. Other services are e-payment mobile platforms that will make transacting with the Government easier. The project seems to be providing the expected results, as Singapore nowadays leads in the key areas of mobility, healthcare, public safety and productivity. Just like smart cities, the idea of a smart nation is an evolving concept. However, there are some specific characteristics that define a smart nation. The idea is to bring the different separate uses of technology into a cohesive, nationwide whole, since this will make the economy more productive, lives better and the society more responsive to peoples' needs and objectives.

One of the determinants in assessing the viability of developing a smart city or nation can be the use of smartphones and broadband access.

Other indications are how tech-savvy the population is and the level of math and science among students. In many cases, governments set the tone by introducing e-services. The Ministry of Health for instance can introduce a central database that helps doctors keep track of the patients' health records across hospitals.

The less technology-able, like senior citizens, can also benefit from that. To prevent a digital gap, those without computers can have access to online government services in community centers.



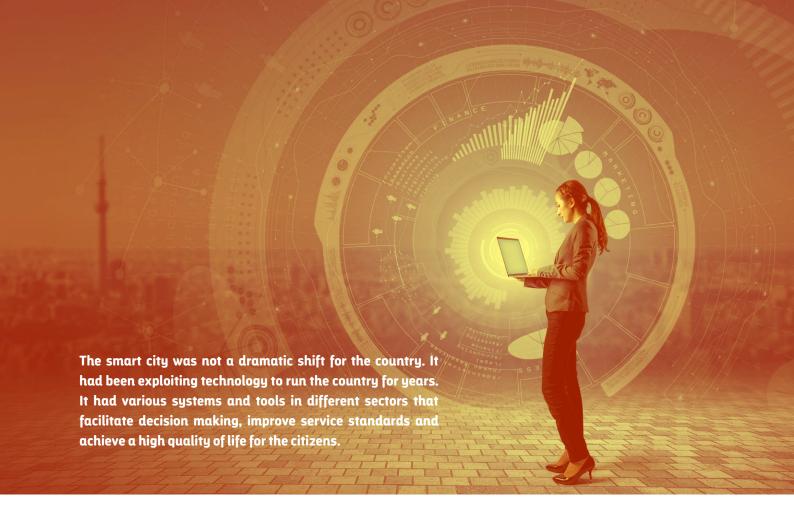
It is important to ensure proper security measures to secure sensitive information like medical data from stealing and to protect against hacker attacks. The same counts for critical sectors like telecommunications and banking. Consistency and continuity are important parts of the plan. Therefore, it is necessary to cultivate the next generation of technology experts by motivating students to learn to code and by reviewing the career paths of engineers.

A smart nation is not built by government, but by all: citizens, companies, knowledge centers and agencies. It is important to integrate all technology and possibilities into a coherent whole. It must be done in a systematic manner to make the most out of the potential. Smart nation is an opportunity to engage meaningfully with business and civic leaders, as well as the broader public to address the nation's specific future needs. The necessary ICT include sensors, high-speed broadband, smart meters, remote monitoring systems and other tools that facilitate the use of data to improve efficiency and automation. A common misconception is that the smart city is only about technology and connectivity. Instead, it is about using technology to enable citizens, government and business leaders to make decisions with better background information.

The smart city poses many challenges, because the concept is not static and does not have a set of established metrics – it is difficult to imagine a point at which a government will be able to declare definitively that they have transformed their society into a smart city (or nation).

The smart city is easily confused with a city in which everything is optimized. Autonomous vehicles would reducetraveltimes by removing inconsistencies and errors in human driving patterns; washing machines would automatically turn on during dips in electricity demand; e-government services would eliminate the need for citizens to visit physical offices. That interpretation of the smart city is like regarding sustainability as being the use of compact fluorescent light bulbs, hybrid vehicles, and compostable utensils. Both smart city and sustainability require a much broader strategy that engages the public to change behavior, norms and expectations.

Much of the curiosity about smart nation comes from its slight difference from other smart city initiatives. Because of Singapore's unique status as a city-state, it can effectively produce a smart "nation" plan. The future will show how it will differ from efforts in other smart cities.



Most importantly, the island had adopted an integrated approach in the planning of the country and subsequent implementations. Singapore's policy in the use of technology was stimulated as early as 1981. Its smart nation journey began thus long before 2014 and its technology plan has remained constant. Its vision was to transform Singapore into an intelligent island, where the use of information technology is prevalent in every aspect of the society, at work, at home and at play.

Singapore wants to be a smart nation that taps on the potential of ICT and media, and that nurtures innovative talent and enterprises. Smart nation is thus not a change from their previous technology efforts, but a natural consistent progression. New York City is also considered a smart city, although it does not have a taskforce or agency dedicated to promoting smart city initiatives, nor does it position itself on an international stage as a smart city.

Its smart initiatives are visible in smart buildings, smart energy, and smart mobility categories with a handful of unrelated projects. New York has been a pioneer in technology-driven policy and stands as a global example of how to leverage digital tools at the local government level. Other examples that illustrate its way of becoming

a smart city are the use of technology to improve city operations; publicly releasing data to build trust through transparency; and empowering nongovernmental partners to collaborate with the city in co-creating solutions. New York City has incorporated technology into its operations in a more gradual way.

Besides benefits, a smart city/nation concept can also impose challenges. Its success depends on residents, entrepreneurs and visitors becoming actively involved in, for instance, energy saving and implementation of new technologies. There are many possibilities to make residential, commercial and public spaces sustainable through technology, but a large part of the total energy use is still in the hands of end users and their behavior. The smart city initiative, furthermore, requires significant investments, which can impose challenges for countries that have trouble balancing their budget.



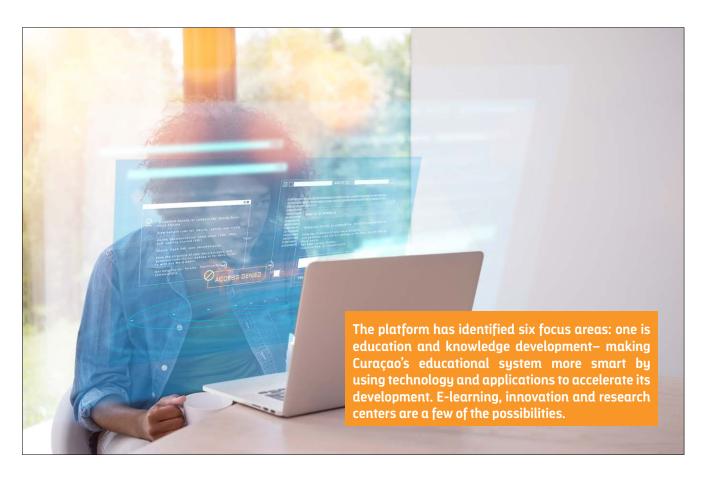
### PLATFORM LAUNCH:

# Smart Nation Curação

Curaçao recently launched the Smart Nation Platform Curaçao under leadership of the Minister of Economic Development Dr. Steven Martina. A board responsible for leading the island's smart city and smart nation initiative that will make use of technological developments and available data to make daily life of our citizens much easier.

The Smart Nation Platform has a public-private set-up and will oversee the development of applications that will simplify and improve the daily life of the citizens. It consists of a steering group which includes four Ministers; of Economic Development; of Traffic, Transport and Spatial Planning, of Governance and Public Service and of Justice. The Telecommunication and Post Bureau takes care of the secretariat, while several stakeholders of public and private entities are represented in an advisory group. Through these stakeholders, smart applications will be implemented to develop Curaçao in a smart way.

The vision document of the platform will be presented to the stakeholders shortly and gives direction on how to start with the smart development. It forms the basis for different initiatives and interesting applications



Smart

Nation

Curaçao

that will enforce Curação's smart program. It creates opportunities for various groups to come together,

collaborate and discuss, but also to visualize the developments and searches for synergy. The goal is to push Curaçao's public and private sector to come up with smart initiatives that improve

life for its inhabitants. Another focus area where smart initiatives were identified is infrastructure, including transportation-and data services. Research and analyses are conducted to improve mobility and transportation. Street lights can be used in a smart way where next to giving light, the lampposts can serve as data collectors to be used in networks. Research will be done on urban planning, energy and environmental development. The use of smart grid facilitating transportation in the form of electric cars, are other examples of the smart functions. The Deep Sea Water technology provides opportunities for energy saving and cooling, but also for agriculture and other options. Safety and security has many possibilities but also challenges in the smart arena. The use of high tech cameras is an example of how the

community can be protected against criminal threats. Curação will also position itself as a smart destination

> to advance the hospitality sector in a smart way. Another focus area with many smart possibilities is the financial sector (Fintech), traditionally one of the economic pillars of Curaçao. The smart nation development is

currently a worldwide movement and can become one of the essential elements of Curaçao's economic revival. Minister Martina explains; "The Smart Nation Platform Curaçao is a platform where Curaçao will give content to what nowadays is called Smart, Smart Nation and Smart City". The Government of Curaçao has sister agreements with Medellin in Colombia and Amsterdam in the Netherlands and participates in a the movement in the Netherlands The Future of Living which makes Curaçao a great test case for Dutch technologies that can serve as a model to the world. According to the Minister; "Through the work we do with UNOPS and TNO we have access to a wide range of expertise and technology that we can apply immediately to support our efforts and the implementation of our strategies".

#### SMART MUSIC PLATFORM SKEMPI

# CARIBBEAN MUSIC GOES GLOBAL



Recently, the locally created music platform Skempi was launched in Curaçao. Skempi is a one-of-kind music streaming platform that started almost 5 years ago. Initially, the platform focused on publishing independent Caribbean music, but now it will expand and include independent music from musicians around the world.



Skempi's mission is to revolutionize the way music is distributed online. To make a meaningful impact on top, it's crucial to make use of the best technology available: "You cannot expect to disrupt the music distribution industry if your service cannot offer the same technical rigor and sophistication as the dominant platforms out there, like Spotify, SoundCloud, and Apple Music", says co-founder and managing director of Skempi, Boudino de Jong.

For the past two years, the Curaçao-based development company, Profound Projects, together with a Siliconvalley based development company, have joined forces to develop a state-of-the-art skempi.com platform.

From a technological point of view, the launch is huge, but the actual work lies within the global expansion. As part of the vision to revolutionize the independent music industry, Skempi is working on rolling out the very first music royalty token, the Skempi Coin, which is expected to launch by the end of 2018. The Skempi Coin will be offered through a so-called ICO (Initial Coin Offering) and will be integrated with the famous Ethereum blockchain protocol, making the Skempi Coin a ERC20 token. Skempi is developing a mining process that will be tied to the streaming of music (smart streams). The intrinsic value of a royalty token will be determined by two parameters: revenue generated and total streams.

Skempi is collaborating closely with the Ministry of Economic Development in Curaçao to organize the entire ICO within the Curaçao jurisdiction, making this one of the first ICO initiatives to be expected from the island. One of the first innovations to be rolled out under the new Skempi platform will be the artists' accounts – a functionality, that allows independent artists worldwide to create and manage their own accounts on Skempi, giving them full control on which music they publish on the platform.

For now, the new Skempi website and apps for Android and iOS offer state-of-the-art performance and usability, a database of music consisting of over one hundred thousand songs; the premium account subscription plan additional functions such as offline and ad-free music listening.



One of the smart nation projects that promises to give a tremendous spin-off for Curaçao is the development of the Deep Sea Water Industry (DSWI). Deep seawater is pumped to the shore and then used in a sustainable way creating added-value while making profit at the same time: a whole new sustainable industry with several benefits for the island. The government supports the development and facilitates a group that will lead, drive and observe how the government can contribute even further to the new industry.

One of the main challenges for people living in small islands like Curaçao is the lack of natural resources and the overwhelming dependency on import of almost everything – ranging from basic goods to sophisticated technology. Being able to make use of an eco-friendly, renewable and available resource, is great news: it offers the possibility to create a self-sustaining economic sector based on innovation and sustainability. DSWI has that potential – by making use of the surrounding ocean water. Cold deep seawater of approximately 4-6° C at 800-1.000 meters depth is pumped to the shore and circulated in flowing systems to provide cooling, energy, water and food needs, before the water is returned to the ocean.



The government has recently installed a committee to work out and guide a plan under the leadership of Mr. Karel Tujeehut, a local expert with 30 years of strategic experience in the fields of energy and water production.

Tujeehut explains that this project has tremendous potential and can create a whole new industry. Some of the possibilities that have been identified are the cooling of buildings, such as the new hospital that is currently under construction. "Calculation say it will be possible to save up to 90% of electricity used and thus lower costs by using Deep Sea Water cooling technology", says Tujeehut. Besides that, the condensing effect of the air cooling systems also produces cool water that can be used for irrigation in agricultural projects and landscaping in the hotel sector. The lower temperature that can be reached even creates the possibility to experiment with the cultivation of crops that are normally grown in cooler climates.



The cultivation of fruits and vegetables through modern technologies can reduce import and, therefore, even reduce the transportation of fresh products and the need to consume conserved food. As the water derives from deep in the ocean, it is quite protected, sterile and not contaminated, making it ideal for fish farming. It contains a lot of nutrients, which can be used for growth of several types of algae that can be used in the pharmaceutical industry. The Deep Sea Water technology can also be used in different ways for the fish industry, electricity

production and energy conservation. By using the easily accessible ocean water, the complete system operates on a renewable resource that does not leave a negative impact on the environment. Curaçao is uniquely positioned to profit from the DSWI development, as it is in a zone with optimal climate and year-round stable temperatures. It has unhindered access to the ocean, which is the provider of the untapped and renewable resource.

#### DSWI is an industry that represents a combination of sectors and disciplines.

- Beneficial for the commercial and production sector, and the sector of science consisting of research & development and education.
- An industry that can create a knowledge hub in Curação: it will attract research institutes and universities.
- Will build expertise and launch a knowledge-based sector.
- Can create high skilled employment during its design, development, construction, installation, operation, maintenance and expansion processes

By creating a whole new economic pillar, the DSWI can contribute to the diversification of the island. Besides being able to improve energy, water and food security, it can even create export possibilities using naturally available resources. Entrepreneurs and investors will be attracted to the development, especially those interested in the process of commercialization of the research findings. Like many other small Caribbean islands, Curaçao faces energy, water and food supply challenges.

The island needs to create additional economic sectors to make economy less import-dependent and vulnerable to external shocks. Access to raw materials and fossil fuels are becoming more complicated, costly and unreliable to drive modern technology-based economies. What a great realization that the ocean that surrounds the island has the potential to create many solutions for a sustainable economic development.





Curaçao Mining Company started its operations in Curaçao in 1847, making it one of the oldest manufacturing companies on the island. Mr. Kurt Verbist is the CEO of the mining company and the concrete factory that are part of the Janssen de Jong consortium. He talks among other things about the use of smart building technologies in the competition race and their company strategy of improved customer service, innovation and diversity.

Janssen de Jong Holding

Curação Mining Company pertains to a holding called Janssen de Jong that includes several other businesses. Among them are the concrete factory Betonindustrie Brievengat, A&M Cement Company and Curação Calcium. Other companies are Curação Road Construction Company (CWM), Asfaltcentrale Curação (ACC), Eigen Woning Plan (EWP) and Albo Caribbean. The holding has companies on other Caribbean islands, such as the Bonairean Road Construction Company (BWM) in Bonaire or Albo Aruba and Aruba Road Construction Company (AWM) in Aruba. There is also the Windward Roads, Saba Roads & Construction, Statia Roads and Construction, Sancoro, Central Mix Concrete, Anguilla Roads & Construction, and Anguilla Concrete & Asphalt. The holding has joint ventures and other types of

alliances with other businesses in the region. Besides the phosphate mining, the Mining Company makes products to produce asphalt and the concrete industry. The company offers specialty products under the Curação Calcium brand for a niche market of plantain cultivation and water distillery. The investor group is active in Curação and abroad, and has activities in Europe, Africa and the Caribbean.

These companies offer practically everything that is needed in construction and are important actors in their sector. From a mining company that used to employ approximately 1.200 employees in the 19th century, Curaçao Mining Company (CMC) is now down to 60 employees (although this amount goes up during high season). The Mining Company still excavates phosphate from the mine at the Tafelberg and exports it to a total of 23 different countries.

Curação Phosphate has been on the market since the 19th century and is well known for its exceptional quality. CMC currently produces four different products and is developing the production of several more, as their raw material can serve 26 applications.

Besides phosphate, the production consists of minerals that are used in the production of potable water. They export to almost all the islands and countries in the Caribbean, as well as companies in Chile and the USA, for which they have a certificate of the USA National Sanitation Federation that controls the quality of potable water production.

The products of CMC are also used in the production of glass. CMC has been providing their products for more than 10 years to all the larger glass producers in the Caribbean. Their products are also used in the production of chicken feed and agriculture. Guyana, for instance, uses the limestone to regulate the acid level in the soil, especially in the cultivation of sugarcane and banana. Betonindustrie Brievengat started its activities in 1937 and became part of the Janssen de Jong consortium in the 80's. The company produces different types of concretes, concrete blocks and bricks, and sells these at different outlets. Exporting is important for these companies.





Together, the factories export between 25 to 30% of their production and are market leaders in the Caribbean. Curação Calcium exports almost 100% of its products and sells a limited amount to the water-production plant on the island. Verbist attributes their success in the Caribbean market due to their production capacity and exceptional and fast customer service. The companies always act as a solution partner for their customers.

In many cases, their customers are governments, such as Guyana, where they have been working with the government for more than 30 years. Both the mining company and the concrete factory have their own labs where they can perform several chemical, mechanic and all other kinds of tests.



#### Using innovation to become a solution partner for customers

The companies face the economic challenges on the local market with a total package strategy that entails improvement of their service to the customers, improve accessibility, increase product diversity, and help to their customers to reduce costs. They have, therefore, expanded their sales outlets and online sales to become more accessible to the clients. Customers can make use of their app and buy products through their website. The company wants to promote its online sales among its local customers. They have also restructured their sales team with an account manager for the large customers to give them a more private and tailored made service. Existing customers can place their orders through the app or phone and pay their bills later.

## Verbist is specialized in change management and explains that the company has changed a lot during the last three years:

- The blocks factory has a production capacity of 60.000 blocks per day. They can produce 144.000 bricks and 1.000 cubs of concrete per day.
- The company focuses a lot on innovation, which helps to adapt to the new situations and remain able to arow.
- The company has a recycling plant and can produce unique concrete mixes, e.g. the one used in the construction of the new hospital in Curaçao. When a mix that would dry up faster was required, the company designed it for their customer.
- The company developed a specialized mix for underwater concrete at the mega pier. One of their products is the environmental friendly concrete that has been used in the construction of a facility at the Piscadera Bay. This is a type of concrete that one can say, regulates itself. They produce concrete that flows on water, that can be used to make a pier or boat.
- Their company trucks are developed to serve the customers better: so-called extended shoot systems that allows the truck to go as far as 10 meters distance to deliver the concrete by using a remote-control system. The company bought the patent on that system from a company in Finland.



The companies always try to be a solution partner for their customers. In this endeavor, they focus on innovation, offer more diverse products and help their customers to lower their costs. Two of their cost-saving products are the so-called column block and the hollow block that create the possibility to place pipes and cables, avoiding the need to dig canals after a wall has been constructed. They also have special blocks that avoid the need to make a case in the construction of a building as the concrete can be poured directly on the block. This construction method saves costs for the customer of approximately USD 2,000 on a house of 100 m2. There is no need to rent wood to make the case. The construction of the house finishes faster and it is not necessary to scrape the wall. "Everybody needs to lower their costs in a time of crisis. The smart thing to do is to offer the client something that will help him save money".

Verbist thinks that it is important to promote several small to moderate building projects instead of focusing on one or a few large projects to stimulate the economy. The large projects tend to subtract workers from the smaller jobs, while their working conditions are not always better and there are more chances of tax evasion, which means less income for the government. Instead of growing the economy, they might pose a burden. The supplier of these large projects makes less profit, as the client has a stronger bargaining position to lower prices due to its size and the slow economic activities. In many instances, the one who makes more money with these large projects is the intermediary, while the government earns less and the workers are squeezed. Verbist knows about this, as his companies are involved in several large projects on the local market, such as the construction of the new hospital, the new Megapier, and the windmill park.

He also believes that construction should get more importance in Curação and that a long-term construction policy of the government is required. This should include innovation, sustainability and should be structured in such a way to push the economy. According to Verbist, innovation alone will not enforce a continuous growth, but construction will. The development of projects ensures

economic growth and create jobs. Whenever there is an injection in infrastructure, construction progresses and there are more construction projects. Each one impacts the economy.

Care for the environment is high on the list for the CMC and the concrete factory. The companies have a recycling plant at Brievengat, where they filter and reuse all the water used in the production of concrete. The company is constantly looking for products that will have lower negative impact on the environment, such as the recyclable cement packaging. The factory recycles all their damaged products. They recycle demolition material, as long as it does not contain asbestos. "We crush this and can use up to 30% of the material in the production of concrete." In other words, if a client wants it, he can buy recycled concrete, which has a lower price. The companies recycle hydraulic oils and motor oils of its plants. By doing that, they can reuse the oils up to 3 to 4 times.

The companies' strategy to remain successful notwithstanding the economic challenges of the local market has thus been to become extremely competitive, focus on customer service and to place itself as a solution partner for its clients due to the application of change management, strategic business development and operational excellence by Mr. Kurt Verbist. He furthermore pays close attention to their export markets.

The companies have been benefitted by the fact that they own their own harbor, have many years of experience, have a consistent high-quality production, a good company structure and sufficient capital to continue investing in innovation. Curação Mining Company and Betonindustrie Brievengat are examples of the importance of continuous improvement and innovation. Both in the production processes, products, and customer service.



An essential element of the smart nation concept is the involvement of knowledge institutions such as universities and other research bodies: Curaçao's national university Universidat Moises Da Costa Gomez (UoC) is an important stakeholder in the island's smart nation initiative.

The Dean of the Faculty of Engineering of the University of Curaçao (UoC), Prof. Ergün Erkoçu, endorses the smart nation plans of the Minister of Economic Development. The University is actively participating by collaborating with other parties on blockchain related research and development for the financial industry. UoC students of the faculty also take a look at the development of the smart grid and the role of the power supply producer Aqualectra, which could become the local power battery for Curaçao's electric cars.

Data sharing is another key component of a smart development. Open data should be available for the parties involved. Another area where universities play a major role: being the centers for research and development universities typically are at the core of collaborative, global, partnership-based research.

The data is needed to deepen the insights into how smart cities work and must be used to make better decisions. The Dean explains that to realize a consistent smart development it is important to start from a young age. "Schools should pay attention to subjects such as math, but also to coding and programming." The University has recently updated its computer lab with the acquisition of several 3D printers, making it one of the most sophisticated computer laboratories in the Caribbean region. The creation of a knowledge hub in the Caribbean will promote innovation and high paying specialized jobs that can retain well educated or highly skilled professionals from the island.

Deep sea water technology is another initiative that can create interesting new opportunities. Collaborative research can discover methods to optimize the use of domestic natural renewable resources. Partnering with the local Deep Sea Water Initiatives but also with research institute Carmabi can be considered. According to a study done by one of the faculty students, the University can save as much as ANG 5.000 per month on energy costs by using some of these advanced techniques.

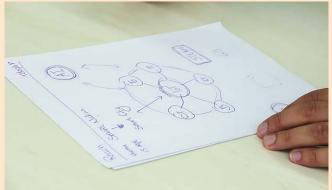


The Dean continues that one of the students of the Technical Faculty is currently exploring a spin-off of the Deep Sea cooling technology – the innovation of additional productive uses such as nursing ponds that can lead to smart agriculture and benefit tourism. "The biggest challenge for smart cities is how to manage it. It requires a good advisory team and the tools to do that." According to the Dean, a university can be a great supporter for the initiative.

#### Collaboration with the private sector

For the blockchain related research, the UoC has recently signed a Memorandum of Understanding (MoU) with the local company IBIS management. A group of talented students from the ICT department of the Faculty of Engineering of the UoC are involved in the project. Working on blockchain ideas and applications will produce research papers that will help policy makers make better decisions and create guidelines for a digital currency infrastructure. This information is instrumental for local economic development and can function as a basis and standard for the Central Bank.

Next to guidance and knowledge-sharing sessions, the students are invited to join the staff and management team of IBIS management in conferences and network sessions to gain exposure to information and professionals within the financial and business sector. Recently, the company also engaged in a project with a blockchain mobile wallet provider from Barbados to



seamlessly connect Caribbean Banks with the providers' blockchain based M-money platform through IBIS Management's payment automation platform, Alchemy. These committed collaborations will continue to drive the Caribbean region into the future – enabling access to digital wallets and the use of digital currencies as payment methods.

The collaboration between the university and the private sector is one of several key collaborative efforts to ensure that the island stays ahead as a leader in blockchain development for the financial sector in the Caribbean. Soon, involvement of the UoC can be expected in other areas as well. In that sense, it is helpful that the university maintains several international cooperation agreements with universities in other countries such as Cuba, USA (Florida), Colombia (Medellín), The Netherlands (Wageningen), Spain and Italy.

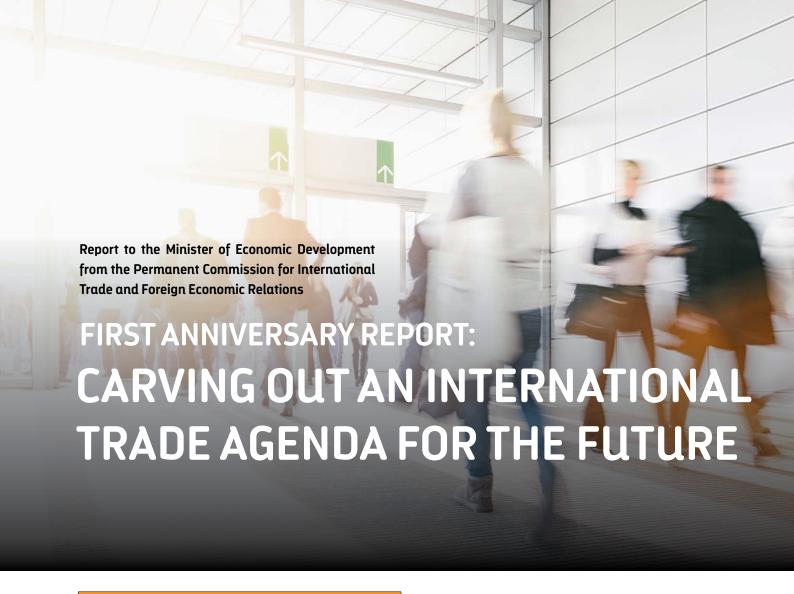


The Dutch city of Eindhoven has created new ventures and fostered the city's economic development by shifting from a dominating industry-government to a growing relationship between university-industry-government. An inevitable change after the DAF company closed and Philips moved its manufacturing to China leaving major unemployment behind. The so called Triple Helix approach has brought new opportunities for Eindhoven.

With the set-up of a stimulation fund to create new businesses, the city could transform the crisis that emerged in the early 90's: The so-called Brainport Eindhoven focuses on solving social issues, developing technologies that change live – hence, providing business and jobs. Knowledge intensive companies establish in that smart city area, connect and collaborate with designers. Empty buildings of former factories are now inhabited by mostly start-up companies creating a thriving international community. In the 'light city' of the Netherlands, so named due to the presence of the famous light bulb manufacturer and later electrical products

giant Phillips the collaboration initiative has proven to be successful. While smart technologies can improve life for its inhabitants and create interesting new opportunities, one of the downsides of the smart city concept can be the potential loss of privacy: Smart cities are likely to be confronted with data protection issues. The smart technologies usually require an open data platform to access the data. The data can be anonymized, but for people living in smart cities it can be an unwelcome burden.

On the other hand, smart cities can benefit from its effects – financially or with improved services. The smart city program might require large venture capital investments. Curaçao's Minister of Economic Development emphasizes that the island is working on the development of this concept. The example of Eindhoven shows that – with a well-thought-out plan, necessary collaboration of parties involved and proper funding – a smart city concept can create rewarding opportunities to stimulate economic development. Same counts for Curaçao, that can become an attractive investment area for knowledge investors.



The Permanent Commission for International Trade and Foreign Economic Relations (hereinafter: 'the Permanent Commission') was instituted by the Government of Curação through a national decree of September 15, 2017 (no. 17/1052).

The Permanent Commission is a multi-disciplinary government commission that consists of high-level representatives of the Ministry of Economic Development, the Department of Customs, the Directorate of Foreign Relations, the Ministry of Health, Environment & Nature, the Ministry of Labor & Social Affairs, the Bureau for Intellectual Property, the Bureau for Telecommunications & Post and the Fair-Trade Authority Curação. The Permanent Commission has an independent president, who is not a civil servant, appointed by the Governor General upon a joint proposal of the Minister of Economic Development and the Minister of General Affairs (i.e. the Prime Minister). The Permanent Commission reports to the Cabinet, through the Minister of Economic Development.

The Permanent Commission has the important mandate to prepare, negotiate and realize an independent membership of Curaçao within the World Trade Organization (hereinafter: WTO) in Geneva, Switzerland. An independent membership of the WTO will allow Curaçao to properly take care of its international trade agenda, in accordance with its status as a small island developing nation (as the Kingdom of the Netherlands is considered a developed country for which stricter rules apply).

At the beginning of 2018, the Permanent Commission was also mandated by the Government to initiate consultations with certain relevant countries and trading areas in the region with the objective to negotiate and prepare bi-lateral trade agreements. The second mandate is relevant because Curaçao doesn't have a large local market and it can therefore only expand its economic base through the conclusion of bi-lateral trade agreements and the increase of its exports of products and services to regional countries.



Even though international trade consultations and negotiations take years to complete, in its first year of existence the Permanent Commission made important steps towards creating the right environment for Curaçao to fully participate in international trade in the years to come. These steps concern both above-mentioned objectives, as well as some important policy matters relevant to all the main objectives of the Permanent Commission.

#### WORLD TRADE ORGANIZATION

Since the establishment of the WTO in 1995, the former Netherlands Antilles was not in compliance with its obligations within the WTO, among which, its obligation to bind and modify its tariffs (only) in accordance with the rules of the General Agreement on Tariffs and Trade (hereinafter: GATT). Curaçao inherited the non-compliant status of the former Netherlands Antilles within the WTO. For the last 23 years, the former Netherlands Antilles and, since October 10, 2010, the country of

Curação endeavored to remedy this situation, but has not yet succeeded. Since its institution, the Permanent Commission has evaluated the situation of noncompliance with WTO obligations, and worked diligently to submit a modified tariff schedule to the WTO as a first step towards normalizing the relationship with the WTO. The second step undertaken by the Permanent Commission is the institution of several working groups for the preparation of a Memorandum on the Foreign Trade Regime of Curação, mainly consisting of the existing regulations, administrative procedures and policies with respect to trade in goods, trade in services, intellectual property rights and trade statistics.

The working groups are currently undertaking their assessments in each of the afore-mentioned areas and their conclusions are important for both above-mentioned objectives. In the last few months, considerable work has especially been carried out by the task-unit compiling trade statistics for goods in relation with the consultations with regional countries.

The work of the other working groups is particularly important in the context of future consultations with the WTO-Secretariat. The Permanent Commission facilitated a confirmation by the Ministry of Foreign Affairs of the Kingdom of the Netherlands to the Government of Curação that there are no legal or other obstacles for Curação to become an independent member of the WTO. Currently, the Permanent Commission is waiting for the next step to be undertaken by the Ministry of Foreign Affairs to proceed with the tri-lateral consultations with the WTO-Secretariat and the Government of the Kingdom of the Netherlands on the legal modality of converting the current membership of Curação through the Kingdom of the Netherlands into an independent membership for Curação as an autonomous customs territory within the Kingdom.

#### TRADE CONSULTATIONS WITH REGIONAL COUNTRIES

Products originating from Curaçao that are exported to the Member States of the European Union or the United States of America are eligible for preferential treatment based on the so called 'OCT-Decision' and acts related to the Caribbean Basin Initiative of the USA respectively. The third mandate of the Permanent Commission is to assess the impact of these arrangements, before they are up for renewal in 2020.

Both preferential trade arrangements are however subject to unilateral change. To mitigate the possible negative effects of diminishing benefits from these trade arrangements it is necessary for Curaçao to conclude bilateral trade agreements with other countries, especially in the region. Therefore, immediately upon receiving its mandate to undertake consultations that would eventually evolve into bi-lateral trade negotiations with regional countries and trading blocks, the Permanent Commission initiated serious trade consultations with the governments of Colombia and the Dominican Republic, as well as orientation conversations with the CARICOM-Secretariat. The trade consultations with Colombia are well advanced at the technical level but have experienced some minor delays due to recent

changes in the political administration of that country. When the trade agreement with Colombia is concluded, Curaçao will have expanded the regional market for its export products to a country of 50 million inhabitants. The trade consultations with the Dominican Republic have been formally initiated and within soon a road-map will be agreed upon between the respective governments to continue the consultations. This market will deliver another 11 million inhabitants for our exporters.

CARICOM (18 million inhabitants) appears to be more complex, as the community consists of several member states that unanimously must give their 'green light' in a special ministerial committee for international trade matters (COTED), as well as in the meeting of the Heads of State, for the CARICOM-Secretariat to be able to initiate serious trade consultations. In the meantime, the Permanent Commission has facilitated for the Government of Curaçao to approach Trinidad and Tobago for discussions on a possible bi-lateral trade agreement, pending new developments within CARICOM.

Apart from the bi-lateral trade benefits for Curaçao, these consultations and negotiations also bear within them the notion of further regional integration.

#### **DEVELOPING RELIABLE TRADE STATISTICS**

Reliable trade statistics are an important instrument to facilitate international trade. Through these statistics trading partners can measure the relative importance of certain markets and products for their trade balance. In the past year, the Permanent Commission has directed considerable efforts to address trade statistics deficiencies to obtain a fair view of the import and export relationships with other countries. The results of the Commission's investigation into trade statistics indicated some deficiencies in the capture and processing of export related trade statistics. As of this month, Curação Customs is implementing the 'Export Manifest' software, a digital module of ASYCUDA for the clearance of outbound vessels and airplanes.

The expectation is that the implementation of this module will contribute to more reliable export statistics, in combination with more effective customs control on export declarations.

In addition, the Permanent Commission is evaluating with Customs the need to further clarify and improve documentation and formal administrative procedures relating the flow of goods at the border and the fees payable in that regard, as well as the transparency of rules and regulations in accordance with GATT and the Trade Facilitation Agreement (TFA) of the WTO. As the TFA should have already been implemented, this will require a fast-track procedure by Customs for which technical assistance from the UNCTAD will be requested as was the case with the implementation of ASYCUDA.

## ENGAGING IN THE WIDER TRADE CONVERSATION IN THE REGION

International trade is essential for the economic and social development, including poverty reduction, of all nations. Given their small size and market, it is important for the countries in the Caribbean to exchange ideas and information and, possibly, to work together from codesign to co-production to manufacture products at a more efficient scale. While trade may have great results for economic and social advancement, on the other hand, high dependence on trade makes small island economies vulnerable to external shocks. However, the same vulnerability can also lead to finding innovative solutions to socio-economic and other problems, which gives rise to the emergence of a new trade environment on shared prosperity within the Caribbean region.

Therefore, the Permanent Commission is of the view that Curaçao must continue to pursue further economic integration in a regional context to be part of the ongoing regional conversation and cooperation to enhance its possibilities for export and economic development, as well as benefit from regional mechanisms to tackle internal and external vulnerabilities. In line with this approach, the Commission continues to undertake the necessary

efforts to advance, bilaterally and multilaterally, in Spanish as well as English speaking jurisdictions, in the direction of regional integration by preparing Curação to reach out to the wider Caribbean to be an integral part of the positive developments in this region. The Commission's efforts to collaborate intensively with Colombia, the Dominican Republic and the member states of CARICOM and CARIFORUM are essential steps to realize the regional integration goal for Curaçao, while maintaining sufficient linkages to the European Union and the United States of America in terms of international trade and foreign economic relations. In combination with the pursuit of an independent membership of the WTO, this will provide the necessary multi-lateral and bilateral platforms to create a larger market for a small, but industrious, country to become an export nation. This is the intrinsic objective of the Permanent Commission.

#### THE FIRST ANNIVERSARY CONFERENCE

To commemorate its first anniversary, on September 28, 2018, the Permanent Commission will organize a conference on the possibilities of international trade for Curaçao. The conference will focus on the long-term trade policy objective of Curaçao as an export nation. In this context, we will present and discuss, among other things:

- The economic reality of the nation and international trade opportunities;
- the related short and medium-term policy objectives;
- the challenges and opportunities on the road ahead;
- further implementation of the export awareness strategy, export sector development and the role of the private sector;
- the need for resources and permanent capacity building;
- the development of the necessary international trade and foreign direct investment ecosystem and
- inter-institutional cooperation and the specific contributions of the various government entities that are instrumental for the Government of Curaçao to successfully implement its international trade policy and export nation agenda for the future.





Is your company planning to do business internationally? Then Curaçao has great incentives to offer: Benefiting from the Free Economic Zone facilities when establishing within one of the Free (Economic) Zone parks on the island is one of them. These Free Economic Zones are operated and managed by the Curaçao Industrial & International Trade Development Company N.V., Curinde – a semigovernment corporation that focuses on promoting industrialization and international trade in Curaçao.

Curinde provides professional support to parties interested in starting or expanding their businesses within one of the three existing business parks: The Harbor Free (Economic) Zone, the Airport Free (Economic) Zone and the Industrial Park Brievengat.

#### Starting or expanding export activities

For companies interested in starting or expanding their export activities, Curação offers interesting possibilities through its two existing Free (Economic) Zones. These Free (Economic) Zones are regulated by the economic zone law and support the development of Curação as a logistics and distribution center. The Free (Economic) Zones are fenced-in customs area with 24/7 security, where goods can be stored, displayed, packed, assembled, manufactured, or multiple services can be provided without the payment of import duties or government exercise taxes.

Companies established in the Free (Economic) Zone receive the following incentives:

- 0% import duties
- 0% turnover tax
- 2% profit tax on profits generated from export Business focus on local industries

The Industrial Park Brievengat is a fence-in business park with 24/7 security. Companies established in the Industrial Park Brievengat cater to the local market. The companies engage in storage, distribution, manufacturing, assembling and processing. The Industrial Park Brievengat in not a Free (Economic) Zone, therefore, companies have no export requirements. At the same time, incentives are not automatically provided. If the activity consists of selling to the local market of Curaçao, then it is recommended to establish here.

#### Following latest developments

Currently, the tax regime of Curaçao is going through changes that will partly have an impact on the Free (Economic) Zone regulations. Based on that, Curaçao's E-Zones are implementing changes in their business environment that aim to secure trust and professional credibility. Curinde is following the new developments to ensure the best outcome for companies already established and those who plan to establish in one of the business parks. Curinde recently launched an e-commerce platform EZShop Curaçao, a smart way of doing business. Visit **ezshopcuracao.com.** 

**Check out REACH for updates** concerning Curaçao's Free Economic Zones. In the meantime, feel free to contact Curinde at +599 9 737 6000, visit www.curinde.com or e-mail Mr. Daniel Oleana at d.oleana@curinde.com for more information.









# **TRADE MISSIONS**

## A practical approach with great impact!

Trade missions represent one of the best ways for companies to gain a foothold in foreign markets. Because of its practical approach it is the most effective way for an entrepreneur to explore a new market. It can offer the entrepreneur the possibility to do the exploration at a cost effective way.

Trade Missions are geared at individual contacts between the entrepreneur and potential trade partners (business to business). It is focused on countries that are of interest to the entrepreneur and therefore offers the opportunity to both the participating entrepreneur and the organizers to get to know the new market and make relevant contact for future activities. Generically, a trade mission is composed of individuals who are taken as a group to meet with prospective customers overseas. Missions visit specific individuals or places with no specific stage setting other than appointments. Appointments are made with government and/or commercial customers, or with

individuals who may be a stepping stone to customers. Trade Missions can be organized with or without the participation of a high-level government official being a Minister. Going on a trade mission headed by a Minister is not only interesting for large established companies, but also the Small and Medium enterprise could benefit from trade missions to have access to a new market. Companies will have instant exposure in the country visited. Through political contacts and diplomatic representations, relevant topics for the company can be included on the agenda of the political counterparts in the country visited by the trade mission.

The missions typically last from three to five days, and consist of a packed program with briefings, seminars or trade shows, one-on-one business meetings, factory and site visits, official receptions and dinners, cultural events and some sightseeing.



The briefings and one-on-one meetings are often tailored and prearranged for the individual delegates to match their business interests.

#### Why go on a trade mission?

Trade missions play an important role in the toolbox of any company or organization involved with international commerce. With good preparation and follow-up, trade missions can be great door openers, and participants benefit in many ways, including:

- Obtain sales and contracts as a direct outcome of the mission
- Find personal contacts for future follow-up
- Sign partnerships and cooperative agreements for further business development
- Get hands on and up-to-date market information and research
- Assess overseas opportunities, culture, infrastructure and potential demand
- Initiate new vendor relationships
- Learn about the culture, customs, business and operating environments of the target countries

In short, positive effects of missions include higher sales revenues, lower procurement costs and better sourcing, education, cultural/international business savvy, preparedness, professional development, visibility/goodwill and perspective. An additional benefit is that the trade mission participants develop close friendships among themselves and a useful, professional network. Steps before, during and after the trade mission

#### Step 1 Before the Trade Mission

The matchmaking program is the most important aspect of a Trade Mission for the participating companies. The Match Making program consists of one-on-one meetings with companies in the visiting country. The matchmaking form is an important vehicle through which the objective of the company is indicated.

Thorough completion of the match making form is therefore important as it will be used to identify the counterparts. Based on the information on the Match Making form an agenda will be setup. It is also important to meet the other members of the delegation prior to travelling. In some cases companies that complement each other can agree to work together during the Trade Mission in order to achieve better results.

#### **Step 2 Networking**

The costs involved for participating in a trade mission consist of a participation fee, travel and accommodation expenses. The participation fee is most of the times subsidized to make it attractive and affordable for the participant. The participant will receive in return a great exposure in a market. Besides the match making appointments there will be ample networking opportunities during cocktail parties, dinners and the daily briefings and evaluation sessions with all participants. Also during informal conversations, at the hotel bar or during breakfast among participants result in fruitful business contacts.

Seminars about doing business or a specific sector also offer networking opportunities. A mission booklet containing the profiles of the participants to the Trade Mission will pave the way to valuable contacts during plenary public sessions and will continue doing the work in the market after the delegation returned home. In some cases, can a website with information on the Trade Mission and the Profile of the participants complement the role of the trade mission booklet.



#### **Step 3 The Trade Mission**

During the actual Trade Mission valuable contacts are made with local companies. If problems or obstacles are encountered in previous attempts to enter a market, the traveling Minister or High-level government official can discuss about possible solutions with its counterpart in the Visiting market. It can even be possible for the company with the specific problem to be present at the meeting to give information. This is a proven ideal way to resolve a trade problem at a high-level.

#### Step 4 After the Trade Mission

Most of the participants will maintain long term contacts resulting from a Trade Mission. These contacts could have originated from the appointments during the Trade Mission or through the mission booklet that was left behind in the country. It could surprise some companies, long after returning home from a trade mission, receiving their best contact after the Trade Mission, by someone that they haven't even met when visiting the country that have read their profile and decided that they are the business partner they were looking for. A Trade Mission

could be considered a successful one in the sense that the participating companies were able to make important contacts. The most important part of a trade mission is though the follow-up. It is worth investing in trade missions. Official trade missions provide the participants with unique access to high quality information, people and officials that would virtually be impossible to garner on their own.

Trade Missions organized by the Ministry of Economic Development of Curacao and the Curaçao Chamber of Commerce and Industry are received at the highest levels of governments, corporations and associations, and the fact that they are headed by a high ranking state official gives us unique priority and access.

## Trade missions held recently and led by the Minister of Economic Development:

Trade Mission to Colombia in February 2018

Trade Mission to the Netherlands "Curação, Bon biní for business" in June 2018

Trade Mission to Trinidad and Tobago and Participation at Trade and Investment Convention in July 2018

Trade Mission to the Dominican Republic in and participation at ALES, October 2018

Trade Mission to Cuba and Participation at Fihav in October – November 2018

Upcoming
TRADE MISSIONS

Trade Mission to Colombia, visiting Bogota and Medellin November 25 – 30, 2018

Trade Mission to the Dominican Republic December 2-4, 2018



