

When Regulators become Innovators: Industries of the Future and the Future of Industries

A speech by
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Regulatory Technologies
& *The Future of Digital Transformation*

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Bon dia damas y cabayeronan

Den nomber di Banco Central di Aruba un cordial bon bini na un y tur, en particular, na nos miembronan di Hunta di Comisario di Banco Central di Aruba y nos distingido invitadonan.

Ladies and gentlemen, distinguished guests, welcome to the CBA's second annual conference on *Regulatory Technologies and the Future of Digital Transformation*. Yes, you heard that right! A conference on regulation and transformation, *when regulators become innovators*.

In the spirit of the late economist, Joseph Schumpeter: the gales of creative disruption are upon us. And it is up to us, every single one of us, as captains, as a community, and as a country to rise to the occasion and seize the opportunities. Do not be riddled by the winds of ambiguity, but rather, ride the waves of digital transformation innovatively, and with integrity, I will add.

What is past is prologue

"Study the past if you would define the future."

- Confucius

During last year's conference on *Financial Technologies and The Future of Money*, we explored and discussed many exciting and new developments in the fields of FinTech, blockchain, electronic commerce, and digital payments. We even ventured into the future of digital money and so-called cryptocurrencies.

Over the past year, many of these developments have accelerated and intensified as financial industries and monetary authorities explore future digital possibilities. But let me state, unequivocally, that while the CBA is "open to business", and eager to foster digital transformation, our primary mandate is to maintain and safeguard the stability of, and the confidence in our Aruban Florin. Now, whether the Florin is physical or digital in the future is a matter of time, understanding, learning, and prudence. We should not throw away the baby with the bathwater, nor should we jump into the bathwater without assessing its depths and currents.

In realizing our mandate and pursuing our goals, we have experienced several exciting developments, which I can only summarize as "transforming-while-performing". By analogy, imagine trying to re-engineer an airplane in mid-flight. And as if that isn't challenging enough, add some turbulent wind draughts with an occasional passenger going into panic

mode. Maintaining a sense of strategic direction and flexibility in tandem with operational stability and efficiency sounds almost like a paradox.

Resolving this paradox requires a different type of understanding. In fact, the need for stability in disruptive environments requires a “dynamically stable” architecture...one that is fit for purpose and resilient in adaptation. The notion of stability thus echoes a sense of resiliency, not only to block and buffer shocks, but more important, to boldly envision and proactively build the future.

Since our previous conference, the CBA has made several strides in digitally transforming our internal business processes and external relationships. Underscoring the importance of evidence-based policy, the CBA earlier this year ventured into the world of big data analytics. Currently, we are in the final stages of implementing a web-based enterprise-wide data architecture, which will enable the digitization of data compilation and analysis. This data architecture will facilitate automated reporting, agile forecasting, and dynamic (close to real-time) modelling of economic and financial developments. We are set to go live in January 2018.

Our next advancement will be in the areas of machine learning and artificial intelligence, exploring the possibilities of enhancing and deepening our insights and intelligence in research, supervision, and operations.

On the topic of operations, and especially banking operations, earlier this year, the CBA completed a fact-finding mission with the Dutch Central Bank on the current state of our national payments system. While the findings revealed no major surprises, the results of the study do underscore the importance and urgency of modernizing and digitizing our payments systems.

Modernizing Payments

In a transformative digital world, wherein real time is the new normal, users expect processing of payments to be as instant as sending a message via a mobile device. Due to existing legacy systems and complex interdependencies in our current payments landscape, the implementation of a new, faster, and secure payment infrastructure is challenging, yet nevertheless pivotal to financial stability and economic development.

Today, I have the privilege and honor to present to you a position paper by the CBA on a modern payment infrastructure in Aruba. The goal of this position paper is to combine the views and positions of the various stakeholders in Aruba with respect to the current

payment infrastructure, and more important, provide a forward-looking value proposition for transforming Aruba's payment infrastructure towards the future.

The discipline of innovation leaders in payment systems resides at the intersection of three core value propositions, namely, *operational excellence*, *product leadership*, and *customer experience*.

The roadmap presented provides an outline of the Aruban payment infrastructure requirements including a standardization, a simplified clearing and settlement solution, increased transparency, openness, and reduced costs for all users. More important, this infrastructure will enable electronic business and e-commerce, and create a state-of-the-art payment platform, which will facilitate Aruba's payment needs for the future.

Digitization of Regulation

"The electric light did not come from the continuous improvement of candles."

– Oren Harari

Beyond our recent ventures into big data analytics and digital payments, we are exploring yet another area. Beyond our responsibilities as a monetary authority, regulation is an integral part of our core business. Indeed, we are regulators! Compliance, supervision, macroprudential policy, integrity, security, and increasingly, cyber resilience are at the heart of what the CBA does.

But what happens *when regulators become innovators*?

What happens when we add some DLT with a pinch of AI to CDD for KYC in SIFI?

This is not a rap, this is the reality of RegTech!

Enter regulatory technologies and the digital transformation of regulation.

Heralded as the twin sister of "FinTech", the digitization of regulation is rapidly rising to prominence. But what exactly is RegTech? And are we already seeing the emergence of RegTech 2.0?

At the risk of sounding simplistic, RegTech is pretty much what it says: the use of new digital technologies to facilitate the delivery of regulatory requirements. In other words, RegTech includes digital platforms and applications that enable "accurate, analytical, and agile"

regulatory solutions to questions of compliance, supervision, risk management, integrity, and stability, to name just a few.

While the marriage of regulation and technology certainly is not new, it is becoming increasingly crucial as regulatory dynamics increase, caused in part by FinTech. Imagine, for instance, using distributed ledger technologies for regulatory reporting, or applying artificial intelligence to the conduct of integrity. The application of biometrics for identification and authentication already is reality. And what if we applied the “Internet of Things” to on-site inspections of financial institutions? Yes, we are limited only by our imaginations and the power to question new possibilities.

The essence of RegTech is the use of real-time intelligence and the incorporation of complex algorithms for regulatory analytics. Beyond the automation of reporting, the benefits of RegTech are found in:

- *Agility*: Cluttered and intertwined data sets can be de-coupled and re-coupled through digital platforms;
- *Speed*: Reports can be configured and generated in a “just-in-time” (if not real-time) fashion; and
- *Analytics*: RegTech uses analytic tools to intelligently mine existing “big data” sets and unlock their true potential.

The key benefit of RegTech will be its ability to enable innovation while enhancing trust and confidence through better intelligence and experience. The value proposition of *RegTech 2.0*, therefore, lies in moving **beyond the automation of compliance towards the digitization of intelligence**. While this may sound like science fiction, today’s conference and our distinguished guest speakers will illustrate how these practices already are shaping our ecosystem.

Industries of the Future

"There is every indication that the period ahead will be an innovative one, one of rapid change in technology, society, economy, and institutions."

- Peter Drucker

In his book, *The Industries of the Future*, Alec Ross eloquently describes the digital transformations awaiting us in the coming decade, highlighting the opportunities for progress and explaining why countries thrive as nations. *The Industries of the Future* examines several fields that are shaping our economic future, including robotics, cybersecurity, biometrics, artificial intelligence, digital currencies, and the codification of trust.

Emerging digital ecosystems already are eclipsing existing industries, and it is merely a matter of time before these waves hit our shores. Beyond any doubt, thriving economies must embrace technology and transformation with tenacity and trust.

As digital transformation and decentralized technologies continue to evolve, they will force a rethinking and rewriting of institutional relationships involving transparency, integrity, and trust between citizen, commerce, and government. In venturing deeper into the 21st century, I invite you not only to read *The Industries of the Future*, but more important, also reflect on the implications for your business, your industry, and our society.

Which brings me to 'Isla Innovativo'

Isla Innovativo

It should be no surprise that the need for framing innovation is critical with the acceleration of digital transformation. Instead of assuming a 'business-as-usual' mindset, and rather than experience a "Kodak moment", we need to embrace an "innovate-by-design" mindshift. This includes the collaborative design of a strategic framework and roadmap that will enable our desired future state.

As part of its strategy 2020, the CBA recently launched a program called "*Isla Innovativo*", or Innovation Island. Isla Innovativo focuses on building the (creative institutional) capital and capabilities for:

- Financial inclusion and inclusive economic growth,
- Accelerating digital transformation,

- Encouraging entrepreneurship and grit,
- And engaging and empowering citizens
- To create a values-driven innovation economy.

In the national survey currently being conducted, we are exploring questions relating to talent leadership and the future workforce, the mobilization of innovation, the design of new ecosystems, and the required mechanisms for governance to foster collaboration, transparency, integrity, and accountability. If you haven't taken the survey yet, I invite you to please go to our CBA homepage and be part of Isla Innovativo. During our conference program later today, we will have a special guest to share some highlights of "Isla Innovativo".

The Future of Industries

Just in case you need a gentle reminder, let me state this again:

We are at the dawn of an extraordinary technological revolution, and it is transforming every part of our society. Yesterday's expertise will not guarantee tomorrow's economic wins. Past competencies may well create future inabilities, as our biggest challenge to digital transformation is not necessarily the learning of something 'new', but perhaps more a matter of unlearning the 'old', and therein learning new habits of thinking and tinkering.

The digital transformation of our economy is and will continue to have a profound impact on the employment landscape for the coming decade. Many of the major drivers of digital transformation currently affecting global industries are expected to have a significant impact on jobs, ranging from significant job creation to job displacement, and from heightened labor productivity to widening skills gaps.

In such a rapidly evolving employment landscape, the ability to anticipate and prepare for future skills requirements and professional capabilities is increasingly critical for businesses, governments, and individuals in order to fully seize the opportunities presented by these trends and mitigate undesirable outcomes and systemic risks.

Not anticipating and addressing these trends in a timely and prudent manner will come at an enormous economic and social cost for businesses, government, and our society as a whole.

For a talent revolution to take place, governments and businesses will need to profoundly change their thinking of education, skills, and employment, and how they partner to innovate and transform. Businesses will need to put talent development and future

workforce strategy front and center to their growth. The private sector can no longer be passive consumers of ready-made human capital. The private sector needs a new mindset to meet its talent needs and optimize social outcomes.

The government will need to fundamentally reconsider the education models of today. As the issue becomes more urgent, and also in light of a scarce and aging workforce, the government will need to show bolder leadership in rethinking and redesigning educational and labor market policies that are already overdue.

Yes, ladies and gentlemen, we have our work cut out for us. Our challenges are great. Yet, if we muster the right collaborative spirit with a touch of “creatividad crioyo”, we can make these changes happen. We can transform our economy and society for future prosperity.

Conclusion

In conclusion, as captains of industry and community leaders, we stand at the helm of our future. While the winds may shift and the tides transform, we have a genuine responsibility to govern our own destiny. In leading this paradigmatic shift, several important elements must be considered along the journey, and they may serve as an initial roadmap:

- Imagine a new future that includes history, where technological possibility intersects with cultural assets and the unique strengths of our people;
- Focus beyond established industries to include new digitally-enabled ecosystems of startups, businesses, university, NGOs, and government; and
- Work collaboratively and proactively toward a new governing framework that intertwines regulation with digital transformation, and integrity with ingenuity.

And along this journey, always remember, “*what lies behind us and what lies before us are tiny matters compared to what lies within us...*” (Ralph Waldo Emerson).

Finally, I would like to thank the CBA’s staff for organizing this second annual conference. I hope you will engage with us during the conference as we explore the future of digital transformation. I thank you your attention and wish you a “creatively disruptive” and inspiring day.