

Chapter 1

KNIGHTFOX

{Overview]

KnightFox App Design Ltd. is a Caribbean-based business process outsourcer and global service provider of web applications and customized software solutions. We offer highly skilled services in mobile, cloud and content management system development.

Our local and international management team has over 15 years experience in new media management and development, programming and application design.

Knightfox App Design is part of the DIGICEL Group of companies.

Areas of Expertise

CLOUD APPLICATIONS



MOBILE DEVICE APPLICATIONS



STREAMING SERVICES



Even though this is a broad topic, we are offering customized solutions for our clients based on their individual needs. We have been early adopters of cloud architecture and have been accredited as tech partners for AMAZON AWS in the Caribbean. Besides redundant website hosting we offer advanced cloud applications that include tools such as image & speech recognition, deep learning (AI), utilizing the ALEXA API. Our latest exploration in this field is blockchain technology and the efficient use of cloud for decentralized blockchain applications.

We believe in providing our clients with the best experience a mobile device can offer. Over the years we have learned and listened to what is possible and available in terms of technology and architecture. We have successfully deployed native and hybrid application for several of our clients. Depending on the specification and budget we are capable to deliver simple content management application to native technology. Our latest explorations in the mobile app field include Augmented Reality (AR).

We have extensive knowledge in live and on-demand video streaming at broadcast quality. Through AWS and additional tech partners, we are able to provide a full suite of streaming products that can be integrated in any cloud or mobile application.

Achievements

AMAZON PARTNER NETWORK



After 3 years of building out our platforms and technologies based on the Amazon Cloud infrastructure, Knightfox App Design has gained all necessary qualifications to be accredited by Amazon as an official technology partner.

This achievement allows Knightfox App Design to be showcased on the Amazon Partner Portal.

It also makes Knightfox App Design the very first company in the entire Caribbean to fulfill the set requirements by Amazon.

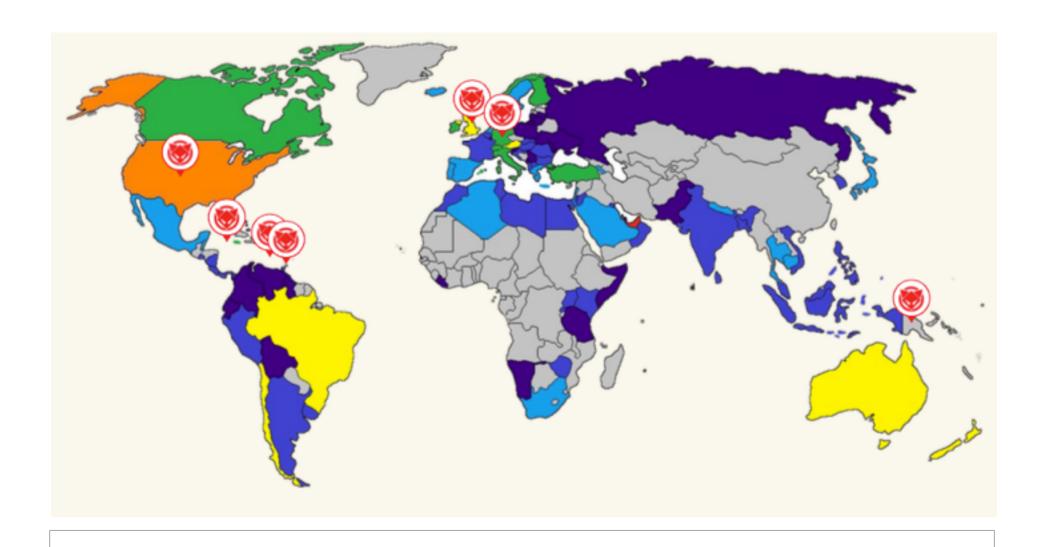
Knightfox has partnered with the Computer Science department at Northern Caribbean University (NCU) to strengthen their program and include hands on experience to students on cloud computing technology through workshops and lecture notes.

BPIAJ MEMBERSHIP

Knightfox App Design joined the Business Process Industry Association of Jamaica (BPIAJ) as the first software development BPO.

While Call Centers still dominate the BPO sector in Jamaica, Knightfox is playing an integral role in developing a framework that will expand the industry's offering into higher value chains.

Our Clients



Over the years, we have focused our energy at building partnerships with clients across the globe. The ability to provide high-end services on an international standard has been the driving force behind our innovative team.

Our Top Clients





Hosting Services

AMAZON CLOUD INFRASTRUCTURE



All hosting services are provided on the global network from Amazon Cloud Services.

Knightfox determines the most robust and cost effective delivery method based on the traffic demands of our clients web applications.

Depending on the Service Level Agreement (SLA), we provide dedicated support staff who monitor servers and network performance via the use of AWS CloudWatch. All CloudWatch notifications are setup in accordance with the SLA agreement, tailored to each client.

We provide a detailed monthly report 7 days after the end of a service month on the cost breakdown, itemized by services rendered. The breakdown also includes any abnormalities such as traffic spikes or service outages and what fault resolution was applied to prevent the same cause in the future.

Our cloud hosting SLA service fees are all priced on a fixed monthly fee that is calculated based on the SLA requirements.

Agile Management

SCRUM METHODOLOGY



Agile Devops

HOURLY BLOCK RATES

Blocks	Cost per Block
200	90USD
400	80USD
800	70USD

Over the last 2 years, we have perfected our internal project management structure, which is completely agile, following SCRUM methodologies to allow for continuous integration (CI) using Git repositories, code review and deployment via Jenkins or AWS CodeDeploy.

Our project managers are trained to act as SCRUM masters and keep teams on track while providing clients with sprint reports and version release burn-down charts for transparency.

Job requests are submitted via our only support ticket platform, which is linked directly to our SLA performance KPIs for transparent resolution tracking.

Our Agile Management is a mandatory feature of all our web and app development projects. Yet, we also provide our agile team on a block rate. This means you can utilize our developers on an hourly basis to assist and fill shortfalls in your development team. These hours are purchased as blocks. You tell us what type of developer resources and blocks of time you require and we ensure you have access to our team members.

Cloud Architecture

CERTIFIED ARCHITECTS



Providing hosting solutions for clients has long become an art form. The extensive possibilities of Cloud infrastructure has only added a new layer of complexity to network design. Knightfox provides extensive knowledge and expertise when it comes to Cloud.

The ever growing arsenal of Cloud tools that are provided by AWS is astonishing and we believe that the current capabilities absolutely outweigh any conventional server architecture. Our network architects understand all different tools that AWS has to offer, so that a holistic approach yields the most robust results. We pride ourselves in designing system architectures that are cost effective, scalable and expandable.

Cloud Architecture is a mandatory aspect of all our web and app development projects and hosting services.

Web Development

FULL STACK DEVELOPERS



Our team of developers has a wide range of skills to support all types of web based applications.

CMS Systems

CMS systems are in high demand and many different options are available. Our team has gathered experience over the last 3 years in developing applications based on Drupal, Wordpress and NEOS, as well as high-end CMS systems such as Adobe Experience Manager (AEM 6.3+).

Server-side Development

Server-side code written in PHP, NodeJS, Python, SQL, JSON and API development are all part of our daily vocabulary. All our programs are written for the Linux Operating System.

Frontend Development

Frontend developers in our team are focusing on a few core areas, such as responsive HTML5 using the bootstrap framework and AngularJS for hybrid mobile application. Anything from CSS to Javascript and jQuery for a perfect UI and UX can be developed and integrated with a number of CMS platforms.

App Development

FROM NATIVE TO HYBRID



Over the years, our team has focused on perfecting native development and keeping up with the changes of the frameworks. We have paid particular attention to iOS and Android. We stopped supporting Windows Mobile development a year ago when we saw that the platform was not able to gain any traction.

We are advocates of native development as it allows for a much better user experience. However, Hybrid frameworks such as Ionic, have made some vast improvements to their code base. This has lead us to use Hybrid frameworks more ofter, especially in cases where there are budget constrains and limited need for hardware functionality of the devices.

We have been exploring many different areas and capabilities in our mobile app development, such as:

- · Geo-fencing
- User segmented push notifications
- Content delivery in high latency regions
- Media streaming and manipulation
- Google Advertising

eCommerce

ECOMMERCE INTEGRATIONS



The Caribbean has fallen behind on eCommerce integration due to banking regulations and high risk management practices.

A few banks have now opened up to more advanced payment gateway providers from the USA, which allows us to offer a much better user experience to our clients' customers.

We successfully integrated eCommerce solutions with our existing white label platforms for a full end-2-end solution.

As an alternative to integrating with Jamaican banks, we are able to offer a unique service to manage the payment gateway process for you and route the eCommerce revenue to your bank accounts anywhere in the world via our intermediary partner in the US.

Blockchain Technology

BLOCKCHAIN TECHNOLOGY

BLOCKCHAIN APPLICATIONS

FACILITATING AN ICO

Blockchain provides an incorruptible digital ledger which can record an type of transaction and is applicable beyond the financial markets. By design all information is stored securely without a single point of failure on a decentralized network of nodes. Knight

Knightfox App Design can design different applications that utilize blockchain technology. Depending on the application requirements we either utilize the Ethereum blockchain and smart contracts or the Hyperledger Framework for business solutions such as supply chain auditing.

Based on our years of experience with Amazon Cloud, we also continue this trend by utilizing secure serverless functionality, which helps us to design cost effective blockchain applications in an agnostic environment.

Knightfox App Design has been actively involved in the cryptocurrency community in the Caribbean. Recent works include the design of a local cryptocurrency ecosystem for Jamaica, based on the Ethereum blockchain, using smart contracts for added services and automated payment distribution.

Our capabilities include the creation of crypto currencies, wallets, smart contracts and serverless API functionality to interact with the blockchain for various business applications.

Big Data & Al

BIG DATA

MACHINE LEARNING

Over the last decade, the term Big Data has be used to coin everything to do with large collection of data in various business scenarios. Furthermore, the big answer to Big Data starts with the knowledge of organizing the vast amount of data and utilize database specific applications that help query large data blocks.

This has been challenging to many SME businesses as these tools have been rather costly but with the opportunity of Cloud Computing, the solutions are now accessible to more companies than ever.

Knightfox App Design assists companies in developing their Big Data strategies. This starts with easy dashboard systems for visual representation of Databases that are on-premises or cloud based or can be as advanced as utilizing Machine Learning to extract future predictions.

Machine Learning (ML) provides companies with the opportunity to use artificial intelligence to find patterns and design ML models so that the system can provide future predictions of business outcomes. This can be applied to any industry and sector. So far, we have gained experience in offering these types of products to the financial sector but these applications can also be implemented for manufacturing, logistics, media and agriculture. Our team consists of qualified data scientists with a Masters Degree in Data Science.

CONTENT DELIVERY PLATFORM AND APP

The last 3 years we have been developing a highly scalable content delivery platform and mobile app code that is written in native for iOS and Android. We have recently deployed the platform on a Google cloud infrastructure, which boosts performance and allows for greater insight to user demographics and sessions behavior.

The application is programmed via Drupal CMS backend, which deploys the content to a Google Firebase Real-time Database.

All content types are published on a unique multi-layer filter. This means that the application can be used to display categories and content in one or multiple regions. With detailed control over what content is to be displayed in any region, it makes the perfect international content delivery system.

Videos can also be displayed as part of the content mix.

REAL TIME GEO LOCATION PLATFORM

We developed a mobile phone application that allows the user to quickly find predefined locations nearby and display these on a map. The platform can easily be integrated in any mobile application that needs to display multiple locations such as stores, restaurants, ATM machines etc. Anything that is required to be quickly searchable and is geo-tagged can be identified.

The system comes with an algorithm that calculates the distances between all locations and the users GPS location to instantly present a ranking that begins with the closest location.

TICKETING/ COUPON PLATFORM



The Ticket and coupon platform is designed to quickly setup campaigns of selling tickets or store coupons via unique QR codes that are verifiable at any time by the store owner. The system is currently extended to also allow for SMS verification by Q1 2018.

Codes can be redeemed via any connected device due to the robust API interface. This allows us to implement this solution with any of our clients' existing hardware terminals and tablets.

Voucher codes are either provided by our clients' existing POS systems or generated automatically when a coupon is issued. All codes are unique and user specific to prevent fraud and duplication.

CUSTOMER LOYALTY PLATFORM

Our Customer Loyalty platform allows a corporation to quickly deploy a customercentric loyalty system that has predetermined ingestion points for collecting store data and pair it with customers' purchase history.

Administrators have real-time analytics access to filter customer data by different filter criteria.

Once filtered, the system can automatically create contact lists and create automation for targeted customer notifications based on an individual customer's demographic and history.

Customers can login to the platform to see their loyalty point balance and purchase history. When the platform is integrated with our voucher solution, the customer can issue store vouchers by trading loyalty points at the fingertips, eliminating the manual process of transferring loyalty points to pre-set cash-back/voucher values. Hence, providing a complete self-service experience.

CALL ANALYTICS PLATFORM



Vocalytics(TM) is our latest turn-key solution designed for quantitative call recording quality assurance.

The platform is capable of analyzing a phone call voice recording and transcribe the audio into text, while determining the number of speakers.

In the second step the platform utilizes Artificial Intelligence to comprehend the context of the conversation and accurately label the content by category, sentiment, quantities and locations.

The extracted data can now be analyzed and presented in a visual matrix to provide decision makers with Key Indicators.

Our platform has been successfully integrated with leaders in the Caribbean BPO sector.

The Company

We currently have a team of 13 developers with a fairly flat business structure. This young, dynamic group ranges in age from twenty-four to thirty-five.

All of us have different areas of expertise. We make it a key factor in the hiring process that all team members must compliment each other in strength so that a continuous transfer of knowledge is fostered to enable us to tackle any task.

We believe that there is a fine balance between the attitude and academic knowledge of developers. It is important to us that the team can mold together and form a culture that enables growth for all.



Our Company

COMPANY HISTORY

The company started to attract its first clients that were looking for solutions and adaptation of cloud driven content deliveries.

2014

Knightfox App Design continues to grow and attract more international clients in Europe and South Pacific.

2016

Digicel

2013

Knightfox App Design was founded by its CEO and CTO in 2013. In the early days the company focused on developing unique platforms and applications that can be used as universal modules for different applications.

2015

Digicel Group took interest in Knightfox App Design and saw the potential in investing in a locally based cloud architecture and design company.

<u>2017</u>

The company has streamlined operations and focuses on scaling the business.

Supporting BPO Development

SOFTWARE MADE IN THE CARIBBEAN

An eco-system that is still in its infant stages requires companies with vision, dedication and motivation.

Knightfox has been operating in this space for 3 years and has identified the need for an increase in human capital in the field of Computer Science in the region. We have developed a 12 months program that allows high-school graduates and university students to become employable by the software development and BPO sector.

Starting with software methodology, students learn the foundations before being exposed to any particular language or framework. Students are employable for writing simple web applications after the first 6 months, but specialization classes deepen the knowledge to increase the capabilities all the way to native mobile application development, augmented reality applications (AR) and deep learning cloud applications (AI).

We are also working together with the Northern Caribbean University's Computer Science department to identify shortcomings in their curriculum and enhance the knowledge base of their students.

We have recognized that, in order to grow the software outsourcing sector in the Caribbean, the private sector must play an integral role in shaping its future. This is particularly true when it comes to education.

Our Founders

EGBERT VON FRANKENBERG

CEO & FOUNDER

Originally from Berlin, Germany, Egbert von Frankenberg has lived and worked in Jamaica for over 10 years. He has a degree in International Business from the European Business School in London and has worked in several industries for companies like Universal, Ernst & Young and Sandals Resorts.

Even though Egbert has an academic background in business, he always managed the operations for creative departments and the aspects of efficiency and productivity by applying his management culture, team building and technical understanding of many systems like Cloud, TV Broadcast, Mobile Device and various forms of product development.

Egbert founded Knightfox App Design Ltd. together with its CTO Robert Ainsworth in 2013 out of the need to provide quality software to the Caribbean. His believe is to deliver a quality code as it is a product like any other that needs to differentiate by quality, sustainability and ethics of the trade. Clients cannot evaluate if code is written well or not. Therefore developers must follow a "freedom of passion" to deliver a quality product like any other brand.

Egbert has lived in several countries, including Alaska, Qatar, Tokyo, Cambridge and London and was awarded a John Payne Scholarship from the European Business School in London for writing the most innovative business plan.

Our Founders

ROBERT AINSWORTH

CTO & CO-FOUNDER

Robert has his origins in Canada but has lived in Jamaica the majority of his life. Even though he has been writing code since he was fourteen and has an extensive knowledge in the field, he cemented that knowledge with a degree in Computer Science from Seneca College in Canada and Multimedia degree from the University of the West Indies.

Robert has a unique ability to quickly grasp a computer language and apply his knowledge to any situation. He is able to write programs in no less than 5 computer languages. He is passionate about and skillful in transferring knowledge to the team and maintaining the company's high quality control standards. Robert is ensuring that all team members practice "clean code" and this is controlled by peer code review sessions.

Robert also implemented our strict use of agile software engineering methodology, which ensures timely project management. Our company depends on strict, ontime and on budget development, hence the agile team structure and SCRUM methods are constantly enforced by him.

Robert enjoys traveling and learning new languages. He taught himself German in his down time.

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