Learn How to Automate Corporate Action Processes through Digitalization

Table of Contents

An Introduction to Corporate Action

A corporate action (CA) is an event initiated by a public limited company that will bring an actual change to securities—equity or debt—issued by a company. CA is typically agreed upon by the board of directors and is authorized by shareholders.
Some of the common corporate actions are dividends, stock splits, mergers and acquisitions, rights issues, and spin-offs. As an after-effect of a CA, there can be an increase in the position holder's securities or cash position, without altering the underlying security. An example of such an event would be issuance of bonuses. Some CAs reshape or restructure the beneficial owner's underlying securities position, which sometimes also results in a cash payout, for example; rights issue, subscriptions, etc.

There are three types of CAs: voluntary, mandatory, and mandatory with a choice.

Mandatory CA: Mandatory CA is an event initiated by the board of directors of a corporation that affects all shareholders. Participation of shareholders is mandatory for these CAs. An example of a mandatory CA is cash dividend where the shareholder does not need to act to receive the dividend, and the shareholder is just a passive beneficiary.

Voluntary CA: Voluntary CA is an action where shareholders elect to participate in the action taken. A response is required for corporations to process the action. An example of voluntary corporate action is a DRIP (Dividend Reinvestment Plan). The shareholder may or may not participate in the offer. Shareholders send their responses to the corporation's agents, and the corporation will send the proceeds of this action to the shareholders, who elect to participate. Other types of voluntary actions include rights issue, making buyback offers to the shareholders while delisting the company from the stock exchange.

Mandatory with choice CA: This corporate action stands mandatory, where shareholders are given a chance to choose among several options. An example is a cash or stock dividend option with one as default. Shareholders may or may not submit their elections. In case a shareholder does not submit the election, the default option will be applied.

Purpose of CAs: Some of the reasons for companies to use corporate action is:

- Return profits to shareholders: E.g.: Cash dividends and Bonuses, where the shareholder is rewarded.
- Influence of the share price: If the price of a stock is too high or too low, the liquidity of the stock suffers such as, stock splits or reverse stock splits, increase or decrease the number of outstanding shares to decrease or increase the stock price respectively.
- Corporate restructuring: With mergers and acquisitions or spin-offs, corporates look to increasing profitability or in some cases pay debt.

Figure 1 depicts a typical CA process flow.

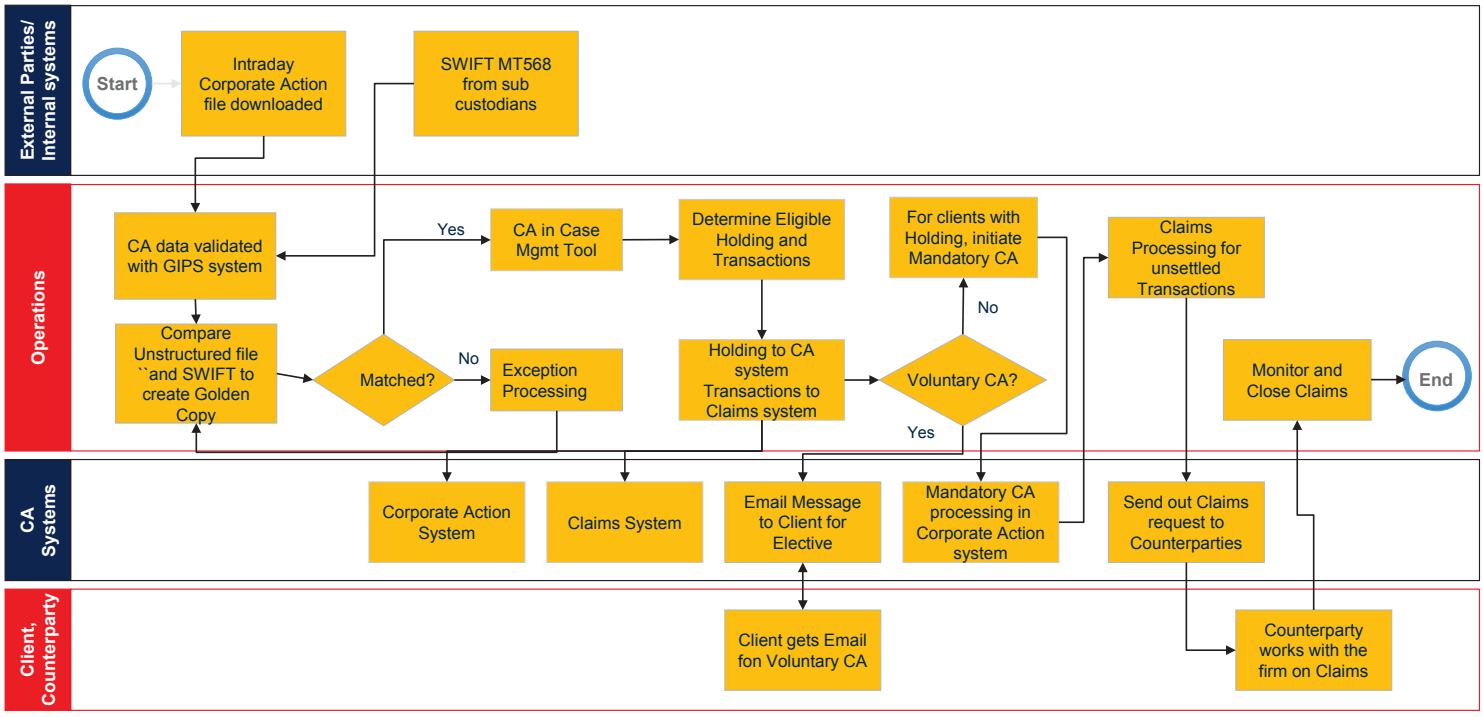

Figure 1. CA Process Flow

Figure 2 is the systems-view of the CA process.

The major functions in CA processing are:

Event Management: the CA announcements sent by data vendors or custodians are captured, validated and verified to create the CA event in the systems.

Determining Holdings & Entitlements: Determining the impact of the clients' holdings and transactions due to the CA security.
Election Management: in case of the voluntary CA, a response is required from the client. The notification is sent to the client on the election options and the response is captured.

Entitlement Calculation: Calculations of Resultant cash or security entitlements and reconciliation of the resultant entitlements are carried out.
Claims Processing & Payments: Applying monetary/non-monetary impact collection or disbursement, fees and settlements of claims and write-offs.

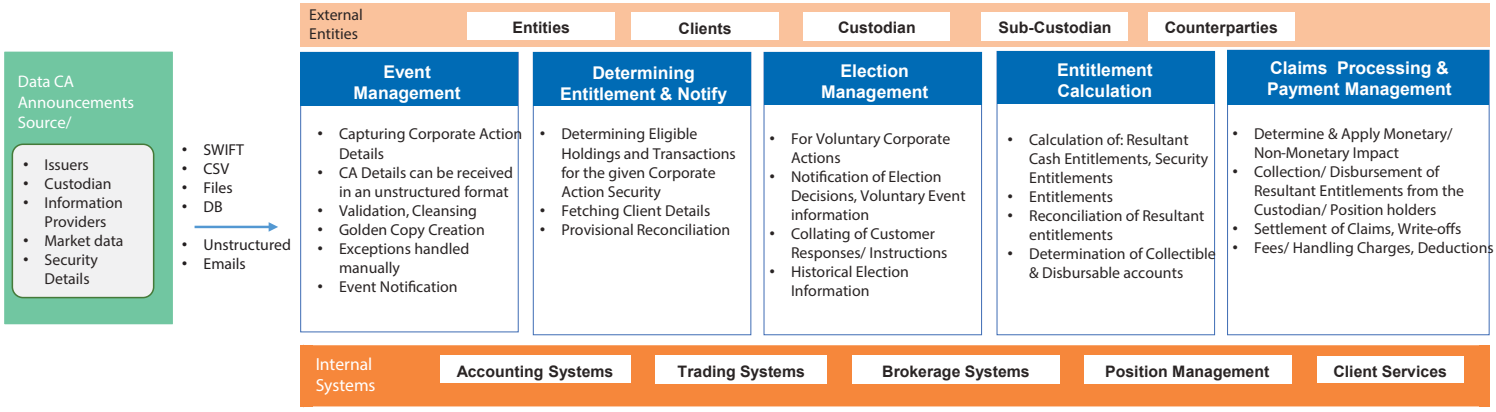

Figure 2. CA Systems Landscape

Interfaces to source CA with supporting data and functions like event management, entitlements, claims processing and payment management have been automated, for simple CA events. However, very little automation on voluntary events and complex mandatory events have been achieved. The magnitude of manual activities and inefficiencies hinders the organization's goal of an enterprise-wide digital transformation.

Industry Challenges in CA Process

- CA announcement data is not always standardized and structured, often causing manual efforts to further investigate and verify.
- Notifications, reconciliations with external parties are iterative and mostly manual.
- Recurring reconciliation issues with external parties is a norm. E.g. claims processing at times takes 90 days in case of disputes.
- Incorrect or untimely processing potentially causes operational problems and financial exposure.

Size of the Market

The extrapolated results from the DTCC/SWIFT corporate action survey, estimate the volume of messages communicated based on the number of events and associated updates. According to the survey, intermediaries on an average processed over 277,000 mandatory events per year. With an average of three updates to the original issuer message, this resulted in about 3.3 million messages. Combined with choice/voluntary and other events, the surveyed intermediaries handled over 4.5 million separate messages per year. A similar analysis for surveyed investment managers indicates that they deal with more than 4.4 million messages per year
With the growth in the financial markets and the number of companies listed on stock exchanges that have gone up by over 41% in the last decade. The volume of corporate actions events is likely to grow. Statistics around CA shows data is growing by 12% per year on an average, resulting in an overwhelming growth in the influx of manual processes. There is a strong case for rethinking the CA process automation. The question is how.

Digitalization component framework (DCF)

Hexaware's digital service offering - Digitalization Component Framework (DCF), takes an inside-out approach, while addressing the common pitfalls of a digital transformation program. DCF is an enterprise enabler that looks beyond hype and empowers clients to adopt fast-evolving solutions and technologies.
DCF emphasizes on five key ingredients essential for a successful transformation program: Collaborate, Strategize, Automate, Sustain, and Innovate. With a holistic viewpoint, DCF comprises of methodologies, recommendations, assessment enablers and automation levers.

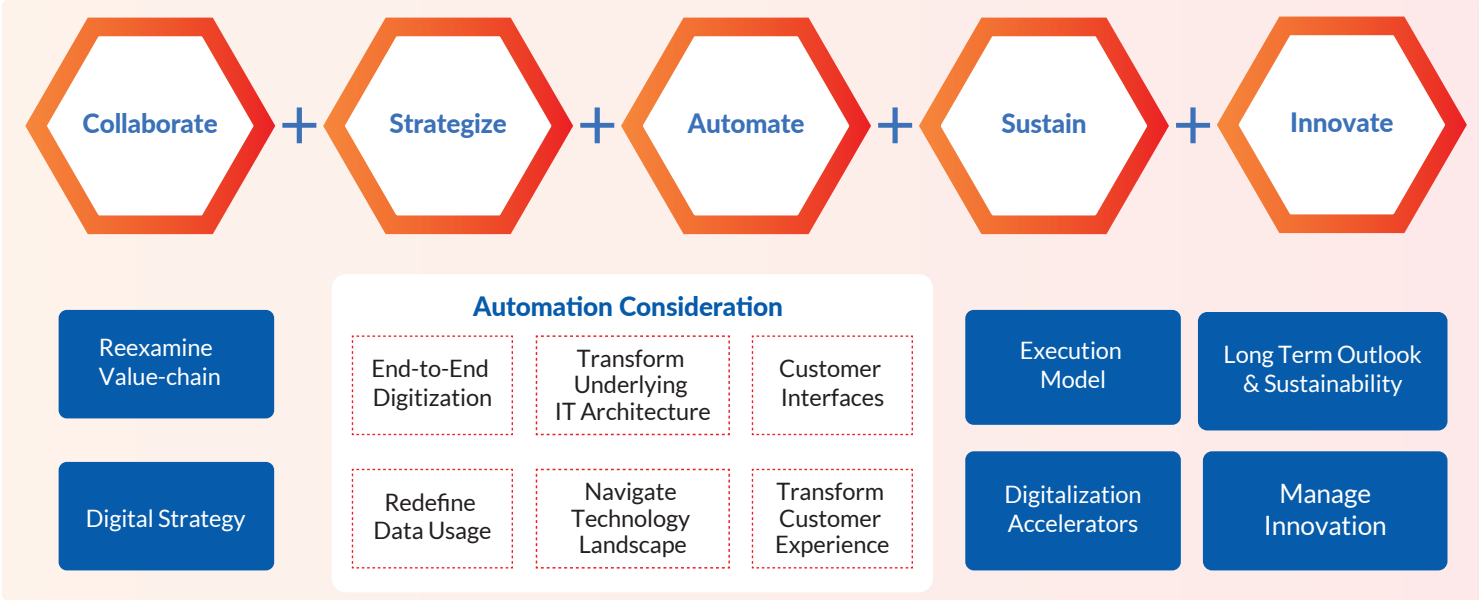

Figure 3. Digitalization Component Framework

DCF does not look to replace existing systems, rather it is built with an objective to supplement the existing systems by implanting digitalization accelerators in the value chain. DCF also facilitates in discovering new areas, which can be automated using digital technology solutions.

Corporate Action Process Automation

Applying DCF to CA ensures reexamination of the current corporate action lifecycle in its entirety. The following sections describe how Digitalization Component Framework (DCF) can be leveraged to systematically digitalize various functions of the CA process.
For an effective digital strategy formulation, it is worth revisiting the value chain, analyzing and identifying potential areas, where either a change or an enhancement is required.

Process	Activity	Structured Input (H/M/L)	Unstructured Data	Data Mode	Level of Digitization Possible (H, M, L)	Process (Auto/ Manual)	Process (Non-Standard)	Level of Decision Making	Notifications Mode (Auto/ Manual)	Key Pain Point	Probability of Digitalization Adding Value (H/M/L)
Event Management	Receiving & Capturing Corporate Action Details	M	Y	Scanned Copies, Fax, Email, Audio, Video	H	Auto	Partial	M	Manual	Voluntary CA Data Unstructured	H
	Golden Copy Creation (Validation, Cleansing, Matching)	H	Y	Database	L	Auto	Partial	M	Manual	Voluntary CA not Integrated	H
	Exception Handling Workflow	M	Y	Database	L	Manual		H	Manual	Labor intensive, error prone	H
	Event Notification		Y	Email	M	Manual		M	Manual	Manual Email	H
Determining Entitlement & Notify	Determining Eligible Holdings & Transactions	H	N	Database	L	Auto		M	Manual		
	Fetching Client Details	H	N	Database	L	Auto		L	Manual		
	Provisional Reconciliation	H	N	Database	L	Auto		L	Manual		
Election Management	Voluntary Corporate Actions Details	L	Y	Unstructured File	H	Manual	Partial	H	Manual	Labor intensive, error prone	H
	Notification of Election Decisions	L	Y	Email	M	Manual	Partial	H	Manual	Labor intensive, error prone	H
	Voluntary Event information	L	Y	Email	M	Manual	Partial	H	Manual	Labor intensive, error prone	H
	Collating of Customer Responses/ Instructions	L	Y	Email, Phone	H	Manual	Partial	H	Manual	Labor intensive, error prone	H
	Historical Election Information	L	Y	Email, Excel	H	Manual	Partial	H	Manual	Labor intensive, error prone	H
Entitlement Calculation	Calculation of Resultant Cash & Security Entitlements	H	N	Database	L	Auto		L	Manual		
	Reconciliation of Resultant entitlements	M	N	Database	L	Auto		M	Manual		
	Determination of Collectible & Disbursable account	H	N	Database	L	Auto		M	Manual		
Claims Processing & Payment Management	Determine & Apply Monetary/ Non-Monetary Impact	M	N	Database	L	Auto		M	Manual		
	Collection/ Disbursement of Resultant Entitlements from the Custodian/ Position holders	M	N	Database	L	Auto		M	Manual		M
	Settlement of Claims, Write-offs	H	N	Database, Excel	L	Auto		M	Manual		M
	Fees/ Handling Charges, Deductions		N	Database	L	Auto		L	Manual		

Figure 4. Value Stream Mapping Template

The value chain template, for example, is a good tool to identify potential areas for digitalization. All the processes can be broken down into activities, and against each activity, parameters value can be set as listed in Figure 4. As a result, the process flow can be componentized. Figure 5 identifies four components where digitalization can add value.

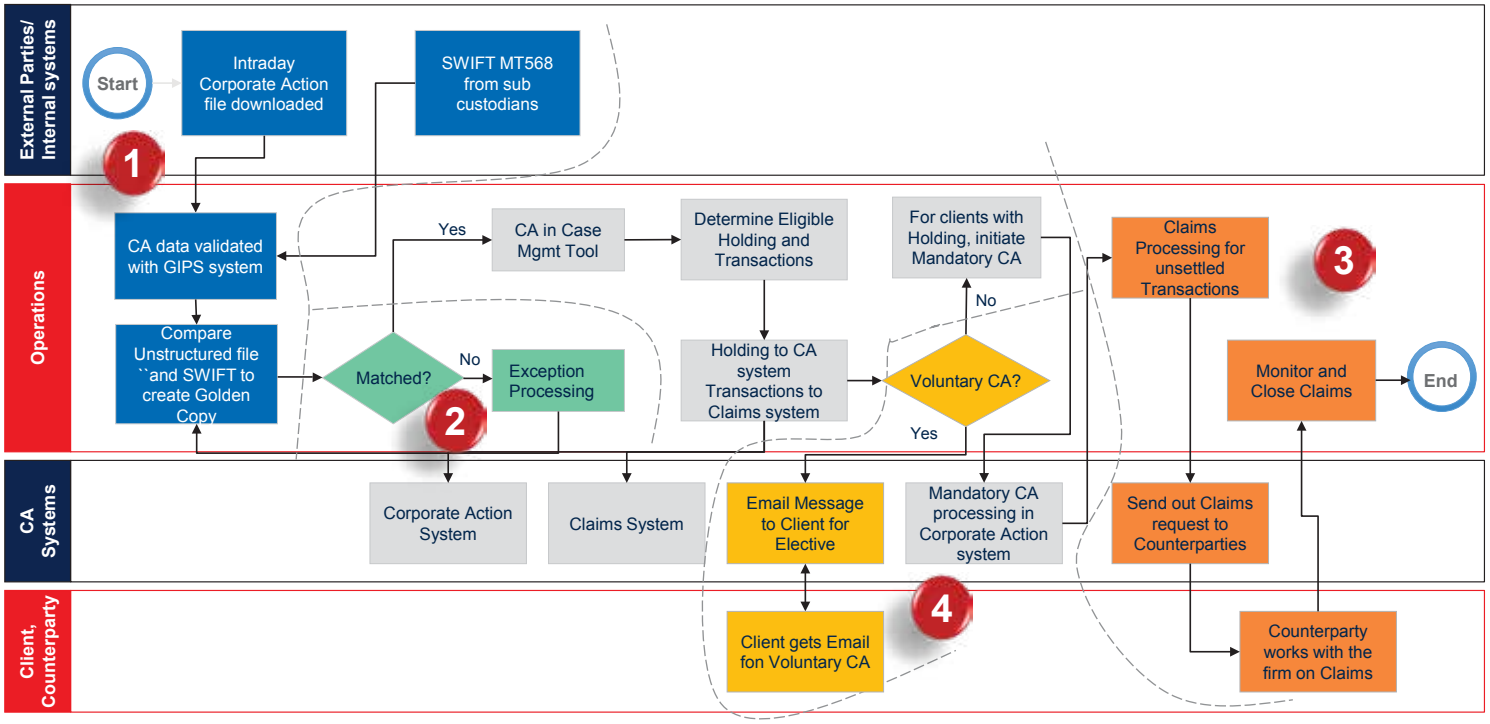

Figure 5. Componentization of Corporate Action Process Flow

1. Managing an Unstructured CA file and Integrating it with the Event Creation Process

A digital accelerator solution uses NLP (Natural Language Processing) & Machine Learning (ML) to read, process and compare unstructured corporate action data with the corresponding SWIFT data. It will determine if the data is accurate, based on matching rules, while a UI will display the match results. If differences are found beyond acceptable levels, the CA event will go in the exception queue. If the match is acceptable then CA event will be created through a maker-checker process.

Component Feature	Potential Tools/ Technologies utilized for Automation
Unstructured Data received as Scanned Copies	OCR/ ICR NLP
Data is in Foreign language	Google Translator
Values to be read from Unstructured files based on Tags and Keywords	NLP Define and Configure - Business Dictionary, Taxonomy
Some fields (e.g.: Corporate Action Type) are Free Flowing text	ML Algorithm to Identify Corporate Action Type/ Category
To be compared with SWIFT File	Rules Engine with Predefined Configurable rules
Match Results	Workflow UI to View, Approve/ Reject

2. Automating Equity Research

Unmatched data is often the result of incorrect or incomplete data. The manual verification process involves communication with the data vendors and often conducting research on CA news, related to security in contention. A digital accelerator solution on automating equity research can drastically cut down on the time to obtain accurate and complete data.

Component Feature	Potential Tools/ Technologies utilized for Automation
Exception due to Unmatched Data. Manual intervention needed to research and investigate more on Corporate Action Details for a given Security. In some cases, there is a need to supplement the existing data .	Python, RPA can be used to automatically read news website, based on relevant keywords NLP (Natural Language Processing) used for • Text Classification, • Text Matching, • Noise Removal, • Lexicon Normalization, • Object Standardization - acronyms, hashtags with attached words, and colloquial slangs, • Syntactic Parsing, and • Word Cloud. ML algorithms can be used to train machines to fine tune search and accuracy.

3. Using Intuitive ChatBots and Machine Learning to enhance customer experience

Often client communication is not fully automated. Emails sent to the client are specific to situations, hence, prepared manually. To provide live data to queries raised is a part of the problem. A digital accelerator solution offers communication center features, that is integrated with their internal systems, email server through a secure API (application programming interface) layer and can facilitate effective customer communication.

Component Feature	Potential Tools/ Technologies utilized for Automation
Claims processing is automated however, notifications are manual. Manually prepared email with necessary details sent to the clients	For automated customer interactions, Chatbots can be built using Google DialogFlow Further it can be integrated with Email server
Client cannot get more details or query resolution automatically.	Chatbots integrated with the Internals Databases/ applications through secured APIs Scripts specific to customer query topics provided to chatbot Chatbots historical data used to train the machine and making it more precise in query resolution

4. Automating Voluntary Corporate Action Response and Predicting customer response

In a voluntary corporate action event, the shareholders elect to participate in the action. A response is required for the corporation to process the action. Examples of a voluntary corporate action are Dividend Reinvestment Plan and Buy-back program.
Voluntary Corporate Action requires the investment manager to await the electives/elections to come in from the investors, before taking corresponding positions. This creates a gap from an investment management perspective, during the intervening period.
Notifications, reconciliations with external parties are iterative and mostly manual. These manual processes are prone to be risky due to faulty trading decisions and execution errors or failures.
A digital accelerator solution to provide an end-to-end communication process and predicting the customer's election response will bring efficiency and speed to the voluntary corporate action process automation.

Component Feature	Potential Tools/ Technologies utilized for Automation
Election management process for voluntary corporate action is manual	AI/ ML used to Predict the customer's likely response
Customer is notified manually on the election options	Notifications to the customer can be automated through auto-generated emails with the necessary content/ details
Customer election is recorded manually in the systems	Using RPA to automate and integrate the customer response with the internal application Providing this information as a feedback to ML algorithm to improve the prediction

Conclusion

Hexaware's recommended approach is to keep digital investments focused on areas that will help in reducing operating costs, enable faster response to market and client needs. Organizations need to avoid big bets on unproven technologies and market structure. Corporate Action Process Automation can be a vital part of an enterprise's digital transformation initiatives. Committing to a systematic approach and incorporating dynamic frameworks like Digitalization Component Framework (DCF) can take the automation capabilities and customer experience to the next level.

About Author

Amit Kadam currently drives the BFS practice unit at Hexaware; building digital transformation solutions like Digitalization Component Framework and accelerators using technologies like Predictive Analytics, Machine Learning (ML), Chatbots and Robotics Process Automation (RPA).

Having been a part of the IT industry for most part of the last two decades, Amit has been abreast with its functioning and rapid changes. The last 16 years for him have been an exclusive insight into the Banking and Capital Markets, rubbing shoulders with clients and gaining invaluable experience in building and leading teams; conceptualizing and executing BFS practice service offerings, consulting and leading successful Enterprise Data Management (EDM) implementations for some of the leading investment banks, tier-1 banks, asset management and custodian based in US, UK, Australia and Canada. Amit is endowed with an excellent understanding in problem solving avenues, which makes him a favorite among his clients. He also brings a unique perspective that delivers instant value to his clientele.

NA Headquarters
Metro 101, Suite 600,101 Wood Avenue South, Iselin,
New Jersey - 08830
Tel: +001-609-409-6950
Fax: +001-609-409-6910

India Headquarters
152, Sector – 3
Millennium Business Park
'A' Block, TTC Industrial Area
Mahape, Navi Mumbai – 400 710
Tel : +91-22-67919595
Fax : +91-22-67919500

EU Headquarters
Level 19, 40 Bank Street,
Canary Wharf,
London - E14 5NR
Tel: +44-020-77154100
Fax: +44-020-77154101

APAC Headquarters
180 Cecil Street,
#11-02, Bangkok Bank Building,
Singapore - 069546
Tel : +65-63253020
Fax : +65-6222728

© 2019 Hexaware Technologies limited. All rights reserved.