With over 45 years of experience, DTCC is the premier post-trade market infrastructure for the global financial services industry. From operating facilities, data centers and offices in 16 countries, DTCC, through its subsidiaries, automates, centralizes and standardizes the processing of financial transactions, mitigating risk, increasing transparency and driving efficiency for thousands of broker/dealers, custodian banks and asset managers. Industry owned and governed, the firm simplifies the complexities of clearing, settlement, asset servicing, data management, data reporting and information services across asset classes, bringing increased security and soundness to financial markets.

In 2018, DTCC’s subsidiaries processed securities transactions valued at more than U.S. $1.85 quadrillion. Its depository provides custody and asset servicing for securities issues from 170 countries and territories valued at U.S. $52.2 trillion. DTCC’s Global Trade Repository service, through locally registered, licensed, or approved trade repositories, processes over 14 billion messages annually. To learn more, please visit us at www.dtcc.com or connect with us on LinkedIn, Twitter, YouTube and Facebook.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td>2</td>
</tr>
<tr>
<td>DTCC’S MESSAGING PLATFORM AS A SOLUTION TO AN INDUSTRY ISSUE</td>
<td>3</td>
</tr>
<tr>
<td>NEXT STEPS AND CALL TO ACTION</td>
<td>5</td>
</tr>
<tr>
<td>FIGURE 1: CORPORATE ACTIONS FLOW: FROM ANNOUNCEMENT TO INSTRUCTION TO ALLOCATION</td>
<td>6</td>
</tr>
<tr>
<td>FIGURE 2: INDUSTRY ENGAGEMENT AND TIMELINE</td>
<td>7</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

DTCC has taken a leadership position on solving many industry pain points in Corporate Actions processing. DTCC’s Corporate Actions Transformation initiative has reshaped the way in which the industry processes Announcements and Allocations. The transition to real-time, standardized ISO20022 messaging in place of files and legacy platforms has enabled clients to achieve significant advances in automation. This has reduced risks and lowered costs for our clients while laying the foundation for the adoption of new technologies and modernized processes.

With industry support, DTCC is now working to complete the automation of the corporate action lifecycle by leveraging these same technologies and process solutions to streamline one of the most complex and manual areas of corporate actions processing, voluntary reorganization instructions.
DTCC’S MESSAGING PLATFORM AS A SOLUTION TO AN INDUSTRY ISSUE

The Problem: Voluntary Reorgs are risky, costly and impact all points in the processing chain

Throughout 2018, DTCC surveyed its entire client base to discuss opportunities to automate voluntary reorg instructions. Several trends and problems became clear:

• Many of the risks and costs relate to the manual nature of the aggregation and input of these instructions. Due to the complexity of the events and the risk of keystroke errors, large teams of personnel and management approvals are required. The risks are magnified by the fact that an average of 600,000 reorganization instructions are processed by DTCC each year.

• As voluntary offers become increasingly more complex, issuers and agents are seeking greater transparency into the beneficial holder, which results in a greater volume of individual manual inputs to DTCC.

• Because this critical information flows across different market segments — from the issuer / agent to DTCC to custodian bank/broker dealer to buy-side investment manager, and back — a lack of automation and standardization can lead to breaks in the chain.

The Solution: Automate Voluntary Reorg Instructions through DTCC

Building on the foundation established through the CA Transformation initiative and leveraging the ISO standard and information flow contained in the announcement, DTC will standardize the flow from DTCC Participant to DTCC (see figure 1, page 6). This involves:

• Streamlining the flow of information to reduce the costs, errors and risks that are characteristic of the current process. By eliminating manual input, relying instead on fixed data formats and a standardized set of rules, there can be systemic efficiency gains, continuous improvement, and a reduction in risk and cost.

• Leveraging the foundation that DTCC and the industry built in 2015 using ISO 20022 messaging for inbound instructions for DRIPs, Tax Relief, Foreign Currency Payments and Optional Dividends. DTCC will similarly automate voluntary reorg instructions, using those same message types which are fully tested, tried and true.
A Look Ahead: Client-Facing APIs

The modernization of its client-facing platforms has enabled DTCC to embrace new technologies and build within current, leading edge frameworks.

In addition to ISO 20022 real time messaging, client-facing APIs (Application Programming Interfaces) can offer the industry another way to communicate with DTCC and downstream counterparties. DTCC is investigating the exciting and innovative use of APIs for voluntary reorganization instruction automation, and hoping to pilot that concept as part of this initiative. API Benefits include:

• Use of modern programming languages, such as JSON

• Potential for less frequent maintenance

• Client development and implementation that is quicker to market

• Efficient integration channels

DTCC’s Leadership Position

DTCC is committed to improving corporate actions processing for the benefit of all market participants — from issuer, to custodian or broker/dealer, to beneficial owner — be it an institutional or individual investor. With a broad global customer base, technological infrastructure, expertise and reputation in the industry, DTCC is best-positioned to build and facilitate this path forward.
NEXT STEPS AND CALL TO ACTION

To date, over 50 firms have expressed interest in DTCC’s plan to bring new levels of automation to voluntary reorg processing. The input from these firms has been instrumental in driving discussions on how to model, develop, test and deploy an automated solution.

Based on those individual discussions with clients and the industry, DTCC has progressed with its development and is actively building ISO 20022 messaging and APIs. The attached timeline gives clients a high level overview of the DTCC development cycle so clients can plan their resources and testing over the next several years. At this stage, DTCC is engaging you, the client, to gauge your commitment and readiness to adopt ISO 20022 messaging and APIs.

Please reach out to CAtransformation@dtcc.com or Patrick Barthel at pbarthel@dtcc.com to communicate your firm’s commitment and individual testing timeline for this initiative.
CORPORATE ACTIONS CONCEPT PAPER

CORPORATE ACTIONS FLOW: FROM ANNOUNCEMENT TO INSTRUCTION TO ALLOCATION

NOTIFICATION ANNOUNCEMENT

Confirmation of cash and/or securities

INSTRUCTION

On behalf of Issuer

Agent online interface (ATOP, etc)

PTS/PBS

AUTOMATION

NEW ISO 20022 Standard

ISO 20022 Standard

ALLOCATION

Confirmation of cash and/or securities

ISO 20022 Standard

On behalf of the Beneficial Owner

Buyside/Investment Managers

DXM ECOSYSTEM

On behalf of the Beneficial Owner

BBox of Investment Managers

Buyside/Investment Managers

ISO 15022 • FAX • EMAIL

ISO 15022 Proprietary
DTCC is committed to engaging with the industry and providing automated solutions to create efficiencies and reduce risk in the market. Since 2018, and beyond, DTCC has been partnering with its client base and the industry to build the best solution possible.

### INDUSTRY ENGAGEMENT & TIMELINE

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2015</td>
<td>Live deployment of automated messaging for Distributions events</td>
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<tr>
<td>January–June</td>
<td>DTCC conducts 22 one-on-one meetings with clients interested in automating voluntary reorg instructions</td>
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<tr>
<td>July 2018</td>
<td>DTCC convenes a working group of 51 interested clients to share initial findings, proposed business rules and timelines</td>
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<tr>
<td>October 2018</td>
<td>DTCC hosted its first on-site working group for reorg automation, with 55 professionals from 33 client firms in attendance to help define project scope and timelines. Client feedback was overwhelmingly positive, and clients agreed to engage with DTCC in a build and test period for 2019 – 2020</td>
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<tr>
<td>November 2018</td>
<td>DTCC hosted a webex to engage service providers and the vendor community to share scope, business rules, technical considerations and high level timelines</td>
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<tr>
<td>2019</td>
<td>ISO 20022 message specs are made available to clients for mapping and construction of messages; CAIS confirmation advice message will be available for testing; DTC continues to work with the industry to define scope for automating voluntary reorg instructions</td>
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<tr>
<td>2020–21</td>
<td>Clients will have the ability to test and deploy instructions for certain PTOP, PSOP and or PUTS events</td>
</tr>
</tbody>
</table>