



Responsible Sourcing: Navigating Conflict Minerals and Responsible Minerals

Chuck LePard, IMDS & CDX Americas Representative
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Speaker Introduction

Chuck Lepard

Executive Consultant, IMDS & CDX Americas Representative

Chuck.Lepard@dxc.com [LinkedIn Profile](#)

- **Degrees in Electrical & Computer Engineering and Computer Science**
- **Honorable Discharge, United States Navy**
- **39+ Years EDS/General Motors/Hewlett Packard/HPE / EntServ / DXC**
- **Decades of plant floor and engineering experience in related areas**
- **Advisor to multiple manufacturing industry groups**
 - Automotive Industry Action Group, International Aerospace Environmental Group
 - Association of Equipment Manufacturers, Responsible Materials Initiative
- **Leader in Standards Development organizations**
 - American National Standards Institute (ANSI), International Standards Organization (ISO) Technical Committee TC-111 on Environmental Sustainability Data Exchange
 - IPC E-31 175x family for Product Declaration and Compliance reporting

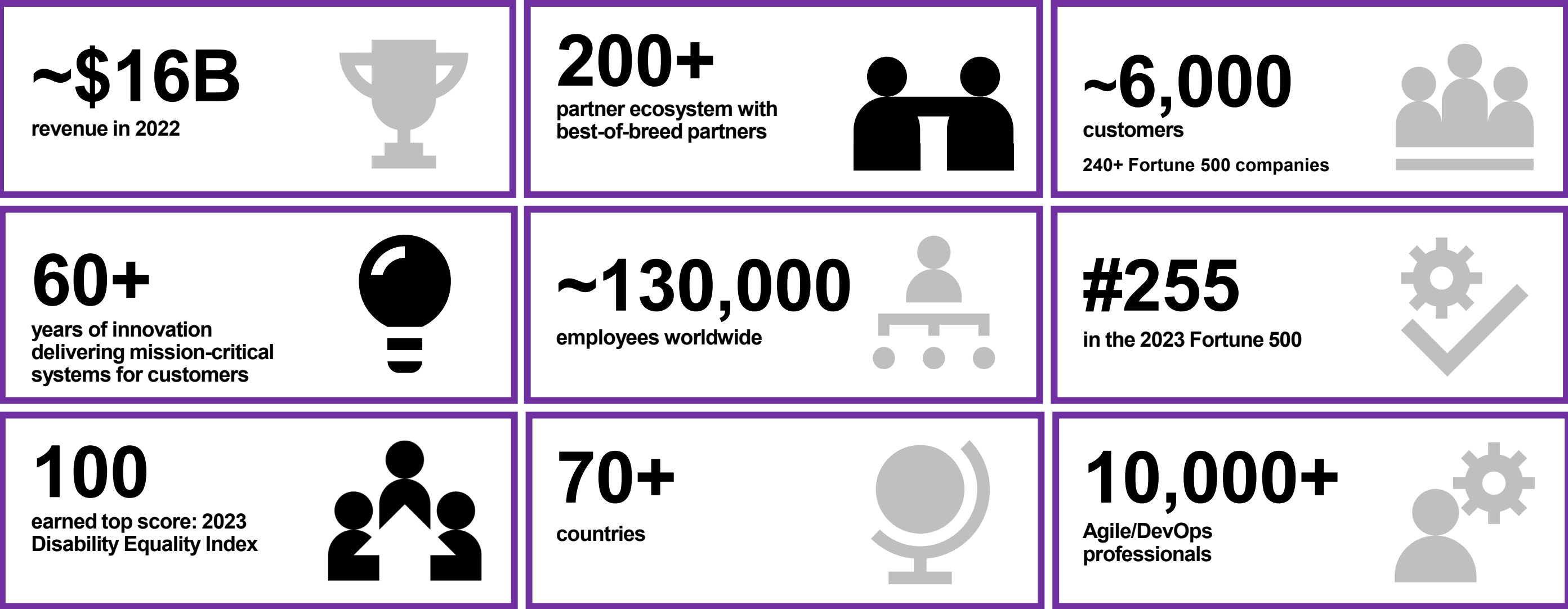


Webinar Agenda

- Why you must know what is in your products
- Challenges Companies Face Today
- Growing Number of Compliance Regulations
- Brief Background of CDX
- Benefits of CDX
- Latest Enhancements
- CDX RMD Manager Demonstration
- CDX Pricing Structure
- Q & A

DXC – World Leader in IT Business

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Customers and Industries We Serve



6,000+

Customers around the world
across a variety of industries



Insurance



Healthcare &
Life Sciences



Travel,
Transportation
& Hospitality



Banking &
Capital Markets



Aerospace &
Defense



Consumer &
Retail



Energy, Utilities,
Oil & Gas



Manufacturing &
Automotive

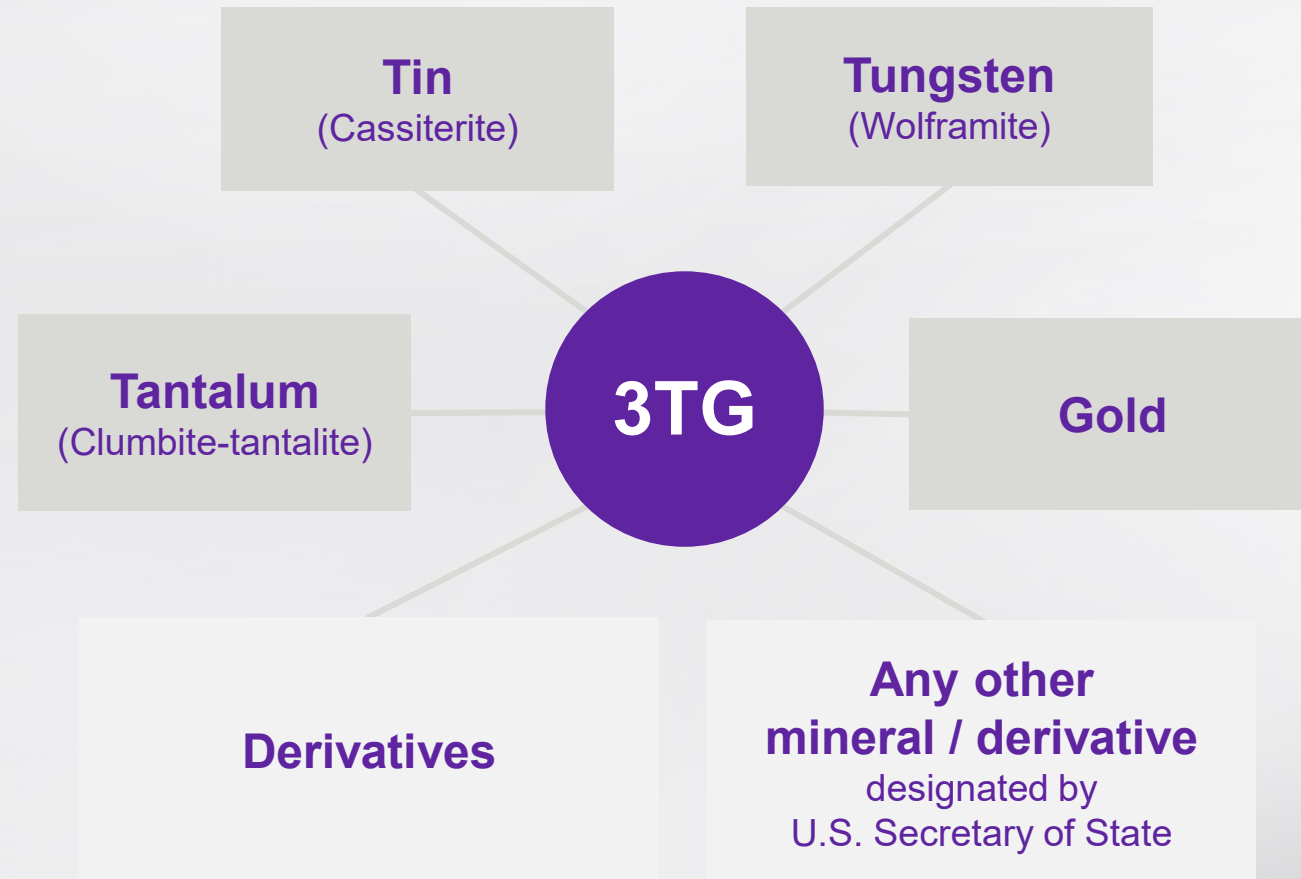


Public Sector



Technology, Media &
Telecommunications

What are Conflict Minerals and Concerns for Their Use



The 3TG minerals have been linked with funding

- killings,
- violence,
- rape,
- and other human rights abuses

in the Democratic Republic of Congo and other conflict zones.

Regardless of source, the 4 3TG minerals and their derivatives are known as "Conflict Minerals", as defined by US Legislation (Dodd-Frank Section 1502).



Cassiterite (Tin) Mine in Kivu, DRC



U. S. Legislative Background

- Wall Street Reform & Consumer Protection Act, Section 1502
- Sponsors: U.S. Senator Christopher J. Dodd and U.S. Representative Barney Frank
- Passed in 2010 and into effect August 2012 for CY 2013
- Requires sources of all Tin, Tungsten, Tantalum, or Gold (3TG)
- Confusingly identifies all 3TG as “Conflict Minerals”
- Reserves the right to add more minerals to scope as specified by Congress
- Requires “Due Diligence” in accordance with “a recognized global standard”
 - The EU OECD due diligence guidelines are the only known recognized global standard
 - The OECD specifies that reporting only 3TG is not in conformance with due diligence

Increasingly, Non-Governmental Organizations (NGOs) and other social rights monitors are campaigning for an expansion of scope to incorporate Cobalt, Mica, and about 20 other materials known to fund violence and human rights violations globally.

E.U. Legislative Background

- In effect January 1, 2021
- Reporting for all Tin, Tungsten, Tantalum, or Gold (3TG), wherever produced
- Reporters required to identify “Conflict Afflicted High Risk Areas” (CAHRAs)
- Initially, mandatory only for EU producers / importers of 3TG
- Voluntary for downstream users until at least 2024
- Will transition to mandatory for all users in 2024 if not enough participation

CDX supports the full provisions of the EU Conflict Minerals legislation requirements, for both the mandatory and the voluntary reporters.

What is Responsible Materials sourcing?

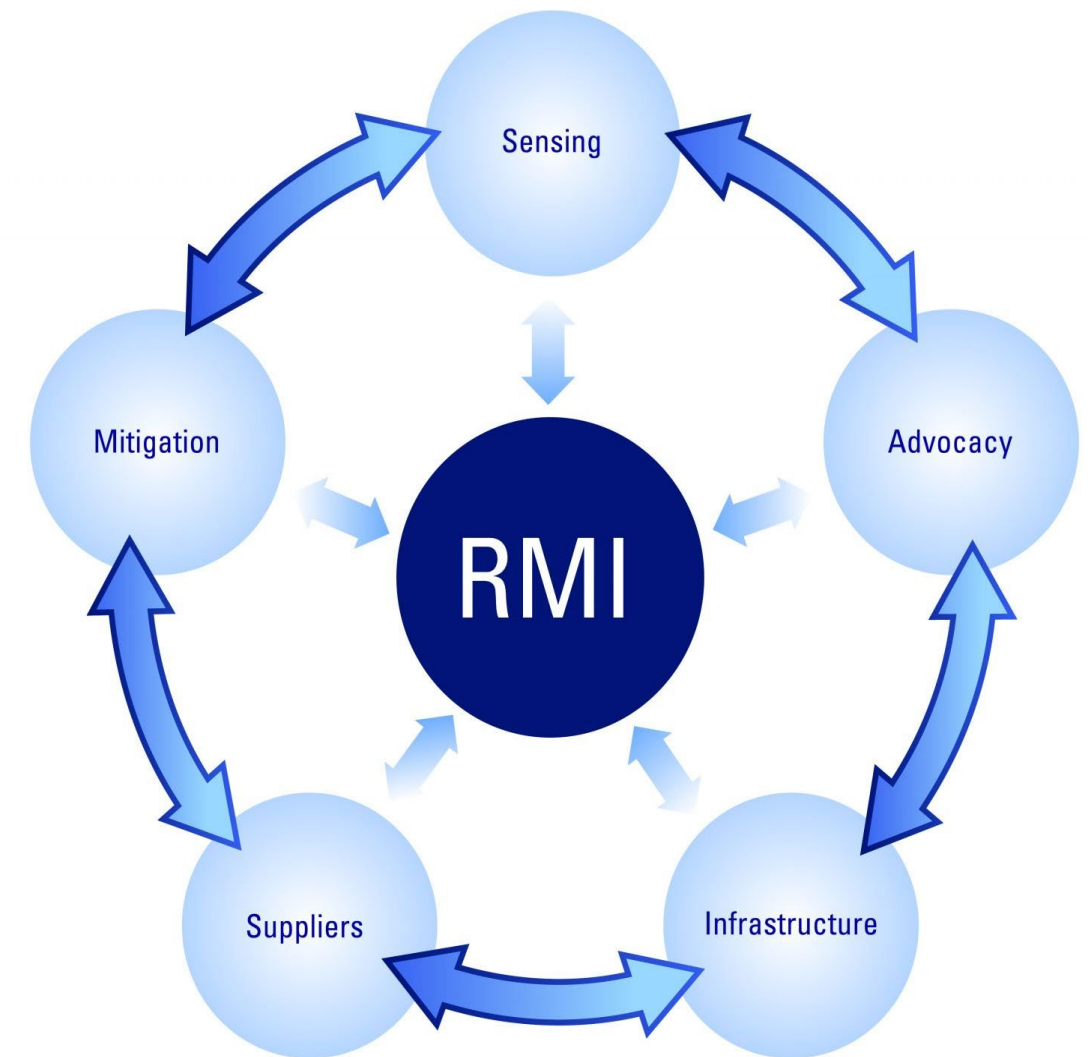
Mining is an intensive process involving potential social and environmental risks that, if not properly managed, can cause lasting negative impacts.

A growing body of research suggests that these risks are associated with a variety of metals and minerals that extend beyond tin, tungsten, tantalum and gold (3TG).

Governments, non-governmental organizations (NGOs), investors, customers and other industry stakeholders have increasing expectations on the private sector to drive responsible behavior deep into their supply chains.

Responsible Minerals Initiative

Cobalt Gold Mica Tantalum Tin Tungsten Other Materials



Where the Responsible Materials expansion originated

U.S. Dodd-Frank Section 1502 specifications

- Requires “Due Diligence” in accordance with “a recognized global standard”
 - The EU OECD due diligence guidelines are the only known recognized global standard
 - The OECD specifies that reporting only 3TG is not in conformance with due diligence

E.U. Conflict Minerals

- OECD Risks associated with extracting, trading, handling and exporting minerals, especially from conflict-affected and high-risk areas. OECD Due Diligence Guidance Annex II, a.k.a. Annex II Risks.
- **OECD Annex II Risks**
 - Serious abuses associated with the extraction, transport or trade of minerals
 - Direct or indirect support to non-state armed groups
 - Public or private security forces
 - Bribery and fraudulent misrepresentation of the origin of minerals
 - Money laundering
 - Payment of taxes, fees and royalties due to governments

Environmental, Social and Governance (ESG) Scoring

- Investors, investment management organizations and investment advisors now report ESG as a sustainability metric
- Non-Governmental Organizations (NGOs) assess corporate sustainability in conjunction with well-respected companies

Is Responsible Materials reporting a Legal Obligation?

No, not directly.

- A few jurisdictions are looking at Cobalt, yet few have active legal obligations
- Historically, there has been limited legal enforcement of Conflict Mineral reporting
- Most companies provide 3TG declarations because of customer requirements

To some degree, the Market has become the driver for most reporting obligations

- Investor & consumer studies indicate growth in corporate responsibility consideration

However, there is a small but growing number of legal obligations which expand reporting

In an April 2015 Survey of 2000 U.S. adult consumers:

- 70% reported that a company's social or environmental responsibility is usually a consideration when making a major purchase
- 56% reported rejecting a major product for purchase consideration based upon reports of a company failure in social or environmental responsibility
- 35% reported discouraging others from purchasing from these companies
- 26% reported selecting a product based upon a company's reputation for good social or environmental responsibility

Source: Mintel and Lightspeed GMI

2015 Conclusion

A majority of U.S. adult consumers do not reward for responsible conduct, but will penalize for irresponsible conduct.

Recent events with responsible sourcing Relevance

U.S. bans imports from China’s Xinjiang region, citing Uyghur human rights abuses (Dec. 2021)



Russia Sanctions & Export Controls (Feb. 24, 2022)

The U.S. Government responded to the situation on the Russian-Ukrainian border by imposing new sanctions and export controls.



European Green Deal

Striving to be the first climate-neutral continent

Climate change and environmental degradation are an existential threat to Europe and the world. To overcome these challenges, Europe needs a new growth strategy that will transform the Union into a modern, resource-efficient & competitive economy, where:

- There are no net emissions of greenhouse gases by 2050
- Economic growth is decoupled from resource use
- No person and no place is left behind

The European Green Deal provides an action plan to:

- Boost efficient resource use via to a clean, circular economy
- Restore biodiversity and cut pollution
- The plan outlines investments needed and financing tools available. It explains how to ensure a just and inclusive transition.
- The EU aims to be climate neutral in 2050. Proposed European Climate Law turns this political commitment into a legal obligation.

Source: European Commission https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en



Reaching these targets requires action by all sectors of our economy, including:

- Investing in environmentally-friendly technologies
- Supporting industry to innovate
- Rolling out cleaner, cheaper & healthier forms of private & public transport
- Decarbonizing the energy sector
- Ensuring buildings are more energy efficient
- Working with international partners to improve global environmental standards

New Circular Economy



A regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing energy and material loops; this can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, recycling, and upcycling.”

- Wikipedia

Other Materials of concern

Known current importance to industry



1. Aluminum (Bauxite)

2. Antimony

3. Beryllium

4. Bismuth

5. Chrome & Chromium

6. Cobalt

7. Copper

8. Gallium

9. Germanium

10. Gold

11. Graphite (natural)

12. Indium

13. Lead

14. Leather

15. Lithium

16. Magnesium

17. Manganese

18. Mica

19. Molybdenum

20. Nickel
21. Niobium

22. Palladium

23. Platinum

24. Plastics

25. Rare Earth Elements

26. Rhodium

27. Ruthenium

28. Rubber (natural)

29. Silica

30. Silver

31. Steel / Iron

32. Tantalum

33. Tin

34. Titanium

35. Tungsten

36. Vanadium

37. Zinc

Mineral /Material	Industry consumption		Function criticality		Residual end of life waste		Virgin material consumption		Estimated rate of depletion		Mineral /Material
	Automotive	Electronic	Automotive	Electronic	Automotive	Electronic	Automotive	Electronic	Automotive	Electronic	
Aluminium / Bauxite											Aluminium / Bauxite
Antimony											Antimony
Beryllium											Beryllium
Bismuth											Bismuth
Chrome & Chromium		MD			MD				MD	MD	Chrome & Chromium
Cobalt											Cobalt
Copper											Copper
Gallium											Gallium
Germanium											Germanium
Glass (silica sand)						MD			MD	MD	Glass (silica sand)
Gold											Gold
Graphite (natural)											Graphite (natural)
Indium	MD										Indium
Lead											Lead
Leather*		N/A		N/A		N/A	MD	N/A	N/A	N/A	Leather*
Lithium											Lithium
Magnesium					MD						Magnesium
Manganese											Manganese
Mica	MD	MD					MD	MD	MD	MD	Mica
Molybdenum											Molybdenum
Nickel											Nickel
Niobium					MD						Niobium
Palladium											Palladium
Plastics			MD	MD	MD		MD	MD	MD	MD	Plastics
Platinum											Platinum
Rare earth elements**											Rare earth elements**
Rhodium											Rhodium
Rubber (natural)*		N/A		N/A		N/A		N/A	N/A	N/A	Rubber (natural)*
Ruthenium			MD	MD	MD						Ruthenium
Silver											Silver
Steel / Iron											Steel / Iron
Tantalum	MD										Tantalum
Tin											Tin
Titanium											Titanium
Tungsten											Tungsten
Vanadium	MD	N/A		N/A		N/A		N/A		N/A	Vanadium
Zinc											Zinc

Source: <https://www.responsiblemineralsinitiative.org/minerals-due-diligence/other-minerals/> Minerals Change Report

Environmental, Social & Governance (ESG)



Primary Motives for ESG Metrics Reporting

Increasing liability



Economic Viability

Create competitive advantage

- Minimize Costs (Mfg. process, product lifecycle, recycling)
- Resource Management



Society

Corporate image - reputation impact

- Investor relations and economic success
- Sustainability as business objective



Laws & Regulations

Compliance

- A multitude of regulations per region / market
- Regulation volume is rapidly increasing trend



Every industry is faced with environmental legislation, and every global company finds it a bit overwhelming



Inadequate reporting / missing information may result in:

- Ban from market
- Legal prosecution
- Loss of positive market perception



Provisioning compliance data

- Keep it safe and consistent throughout the product lifecycle
 - Involve the whole supply chain and utilize a global approach
- Worth cost and effort up front to avoid lengthy and time-consuming processes
 - Easier with standardized data, tools and processes



Most regulations require product substance composition

Compliance considerations

Business case for Compliance: Sustainability

Sustainability and Responsible sourcing (Socially Responsible Sourcing) are often linked when discussing the integration of environmental, social, ethical, and economic factors.

Sustainability posits that “an organization [is responsible] for the impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that... takes into account the expectations of stakeholders [and integrates these] throughout the organization and... its relationships.”

- ISO 26000 Guidance on Social Responsibility

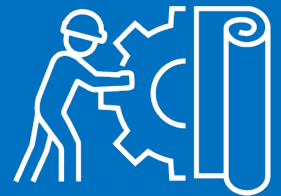
Environment

- Energy efficiency
- Water
- Waste & material use
- Product end-of-life



Social

- Health and safety
- Worker conditions



Supply chain

- Sustainable sourcing

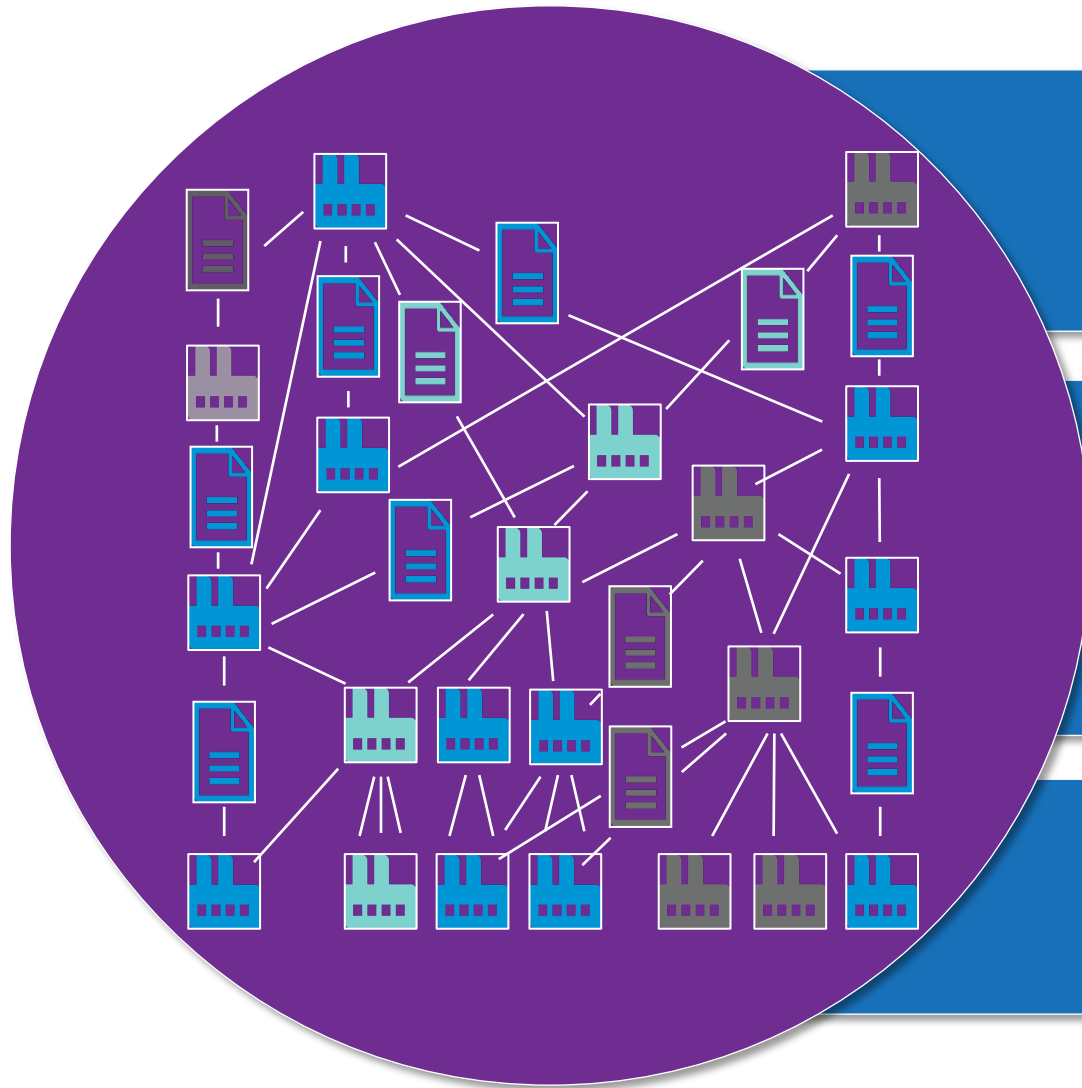


Ethics

- Corruption and bribery
- Intellectual property



Challenge: Disparate Information Distributed throughout Your Supply Chain



Inconsistency in information sharing:

- Information exists in many different places and in different forms, therefore, companies need various systems to receive the information

Data Security Risk:

- E-mail method exposes proprietary business information to interception
- Data collection throughout the supply chain is mostly arbitrary, sometimes even for same downstream consumer, depending on segment / scheme
- Risk of inaccurate data – each supplier reports the same information in many different formats due to lack of standard forms

Data Analysis Inconsistency Across the Industries:

- Consumers at downstream end have their own means of analysis, while upstream suppliers possess the knowledge

The Answer is CDX

DXC's Proven Solution for Responsible Materials Reporting

Expertise in
Data Analytics

CDX leverages the proven functionality of DXC's International Material Data System (IMDS)

Expertise in
Cloud and IT

CDX provides manufacturers a secure, centralized web application to accurately gather and analyze material content data throughout the entire global supply chain

Global Data
Reporting

Uses an established, common framework that provides quality global reporting to various legal requirements whether you manufacture, assemble or sell

★ DXC Technology is the global leader in cloud security services per Gartner group 2020 evaluation

Benefits of Using CDX

CDX provides the following advantages to its customers:

Saves Effort, Time, and Money

Streamlines processes, reducing manual effort and costs associated with compliance reporting.

Faster Access to Information

Enables faster access to information for compliance reporting, enhancing operational efficiency.

Meets Global Industry Requirements

Globally meets industry requirements for reporting and analysis, ensuring compliance across various sectors.

Flexible Usage with Pay-Per-Use Approach

Utilizes services in a flexible manner, based on a "pay per use" model, reducing upfront investment requirements.

No Hardware or Software Investment

Eliminates the need for hardware or software investment, avoiding costly and time-consuming implementation projects.

Better Overview and Quality Data

Provides a clearer overview and higher quality data, enhancing decision-making capabilities.

Aggregates Information with High-Level Security

Ensures high-level security and confidentiality while aggregating information for reporting purposes.

Data Security Included

Ensures data security at no additional cost, maintaining the confidentiality of sensitive information.

Benefits of Using CDX

Automation

- Saves manual effort, time and money while gaining a better overview, higher quality data and faster access to information for compliance reporting
- Aggregates information while providing high-level security and confidentiality

Cost Model

- Uses services in a flexible manner, based on a “pay per use” approach
- Requires no investment for hardware or software, or costly, time-consuming implementation projects

Cross Industry Solution

- Globally, meets industry requirements for reporting and analysis and Works well within all industries
- Data efficiency, provides only the information related to a company’s products, and requests material information for components and materials from that company’s suppliers, resulting in the most efficient data collection

Security

- Data Security at no additional cost

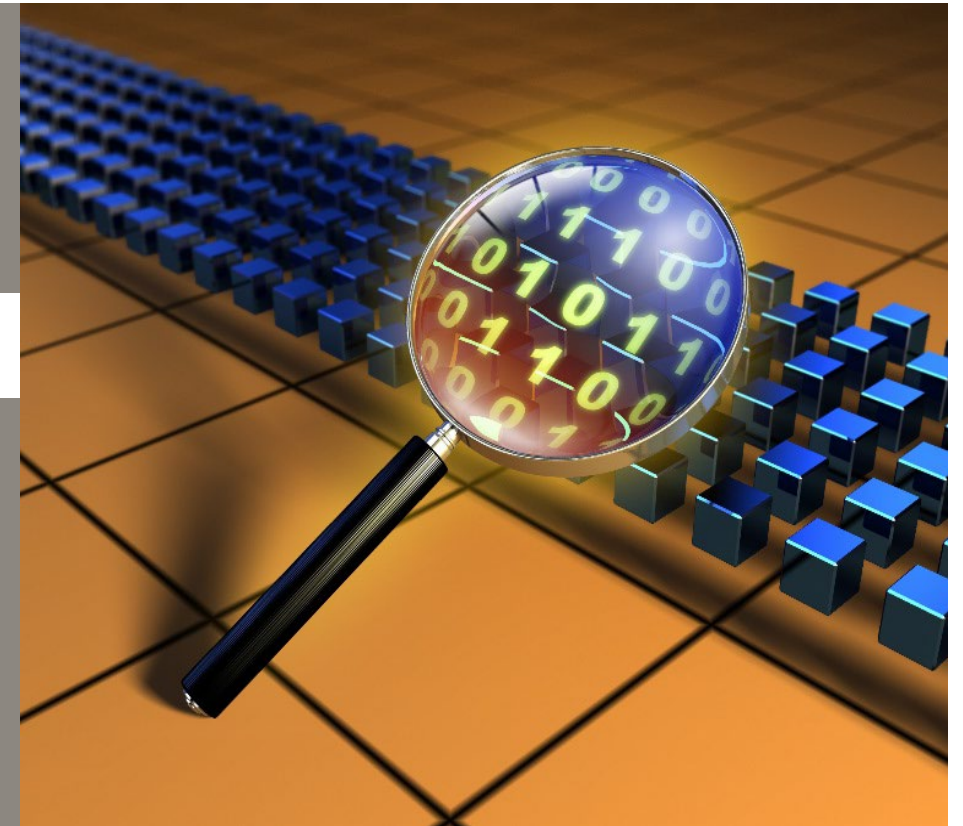
CDX Significantly Improves the Quality of Information

The email or file submissions received from suppliers generally contain erroneous data

Improved Data Integrity & Accuracy: CDX automatically conducts more than 100 validation checks

Difficult to ensure data accuracy, even when using industry standard formats

More Reliable Data: with CDX higher quality Material Data Sheet (MDS) supplier submissions, which saves you and your suppliers time and money, while improving your MDS quality



Is Responsible Materials Really the Only Concern?

Filter: REACH Annex XIV

REACH

Printed Circuit Board Assembly

0.01 - 0.05% PCB-Capacitor surface (8c)

100.0% PCB-e-plate SnPb3 (electrodeposited Tin-Lead Coatings)

0.01 - 0.2% Carbon

0.0 - 0.04% Sulphur

2.0 - 5.0% Lead

Rest 96.375% Tin

0.1 - 0.5% PCB-Ceramic capacitors <125 V AC, <250 V DC (10c), High Component Load

100.0% PCB-ceramics with lead (10c), High Comp Load

0.0 - 0.5% Diboron-trioxide

Rest 75.2% Barium-titanium-trioxide

2.0 - 5.0% Bismuth titanium oxide

0.0 - 0.5% Lead titanium zirconium oxide

8.0 - 10.0% Neodymium Titanate

0.1 - 1.0% Lead-monoxide

0.5 - 3.0% Lead-titanium-trioxide

0.0 - 0.5% Ruthenium(IV)oxide

4.0 - 8.0% Silica, vitreous

0.5 - 2.0% Miscellaneous

1.0 - 3.0% Zinc oxide

0.01 - 0.05% PCB-High Temp solder (8e)

Carbon Steel (1010)

Rest 99.405% Iron

0.595% Confidential Substances

2.0 - 5.0% PCB-Solder S-Sn96Ag3Cu1(Sn96,5Ag3Cu0.5)

100.0% PCB-Solder S-Sn96Ag3Cu1(Sn96,5Ag3Cu0.5)

Rest 95.744% Tin

0.0 - 0.1% Lead

0.0 - 0.1% Antimony

0.0 - 0.1% Bismuth

0.0 - 0.1% Cadmium

0.3 - 0.7% Copper

0.3 - 0.7% Indium

2.8 - 3.2% Silver

0.0 - 0.001% Aluminium (metal)

0.0 - 0.03% Arsenic

0.0 - 0.02% Iron

0.0 - 0.001% Zinc (metal)

Filter: RoHS

RoHS

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Filter: Conflict Minerals

CMD

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& Others!

DXC Enhances CDX Several Times Each Year

DXC Experience

CDX Enhancements

- 20+ Years in Compliance Management
- DXC – A world class IT company
- Up-to-date on new and changing compliance regulations across all industries

Client Diversity

Experienced and New

- Our clients are sometimes new as well as experienced
- Needs of existing and new customers are the center of everything we do
- We develop partnership with our clients to help them be successful

Value Proposition

Long Term Partnership

- Many CDX enhancements come from ongoing dialogue with our customers
- Ongoing enhancements and refinements ensure that CDX best serves our customers' compliance requirements, both today and in the future.
- Everyone using CDX sees changes simultaneously eliminating the lag in supply chain updates that plague other solutions



Importing Your Company's Own CMRT

When importing a CMRT, CDX determines if it is owned (belongs to) by your company or it is from a supplier. The process is exacting and causes issues for users who do not understand it.

To import an Owned CMRT:

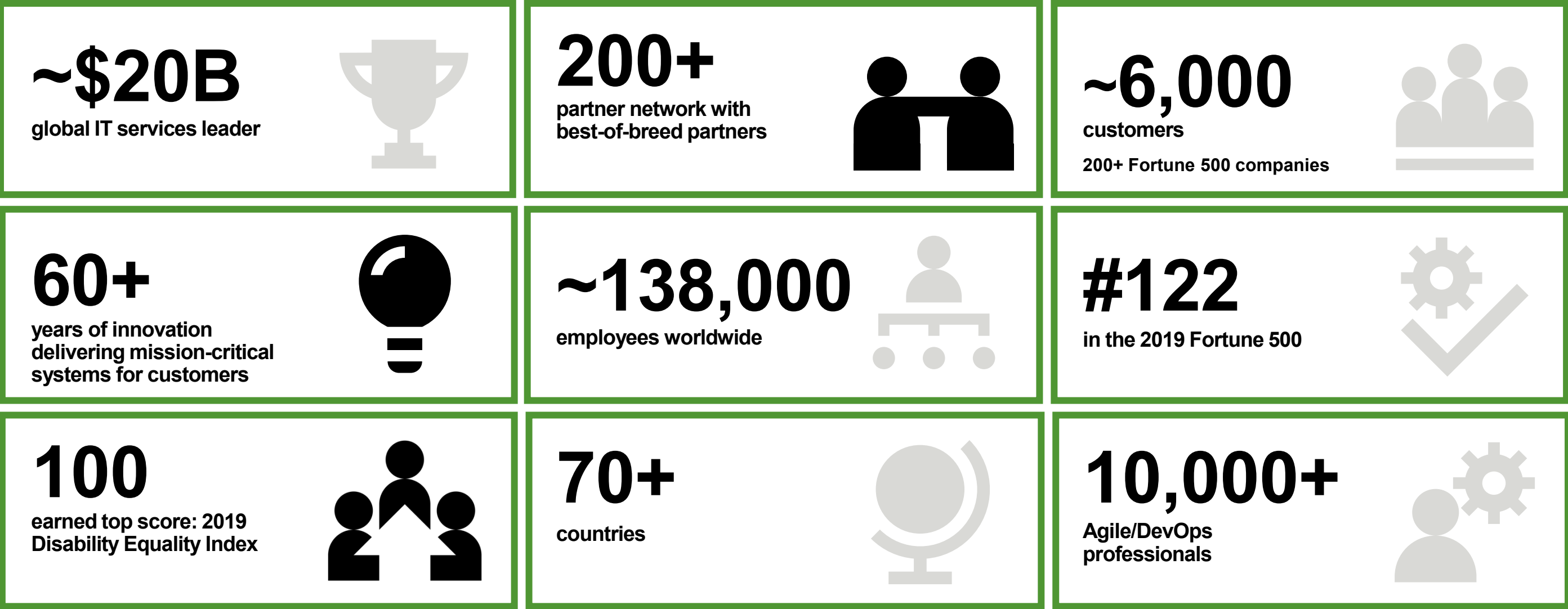
1. The Company Name on the CMRT Declaration tab must be a character-by-character (case insensitive) match for the CDX Company Name in Administration... Company.
2. If the CMRT company unique identifier is not blank, it must be an exact match for the company DUNS number in CDX Administration... Company.
3. The "Contact Name" in the CMRT Declarations tab must be a "CMD Contact" Person in Administration... User.
 - A. CMRT Contact name must contain (case insensitive) CDX User CMD Contact First Name and Last Name.
 - B. CMRT Contact must be listed as a CDX CMD Contact.
 - C. CMRT Email - Contact" must match (case insensitive) same CDX CMD Contact User email.
 - If either of 1 or 2 do not match, CDX will identify the CMRT as coming from a supplier.
 - If 3 A, B, or C do not match, CDX will display an error, and the import will be interrupted.
4. The "Contact" and the Authorizer must grant permission to use the " Person in Administration... User.

This is for GDPR
Compliance
Reasons

Accepting imported supplier CMRTs requires a CDX CMD Manager license. Companies without a license will be able to import a supplier CMRT but will not be able to use it.

DXC – World Leader in IT Business

DXC
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CDX – Backed by the Strength of DXC Technology New, But Not Born Yesterday



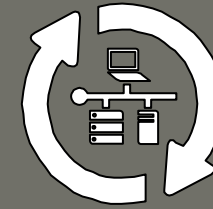
**Customer
experience**



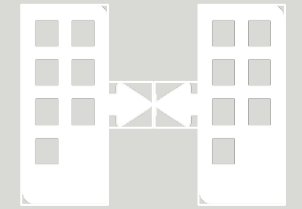
**Citizen
engagement**



**Employee
empowerment**

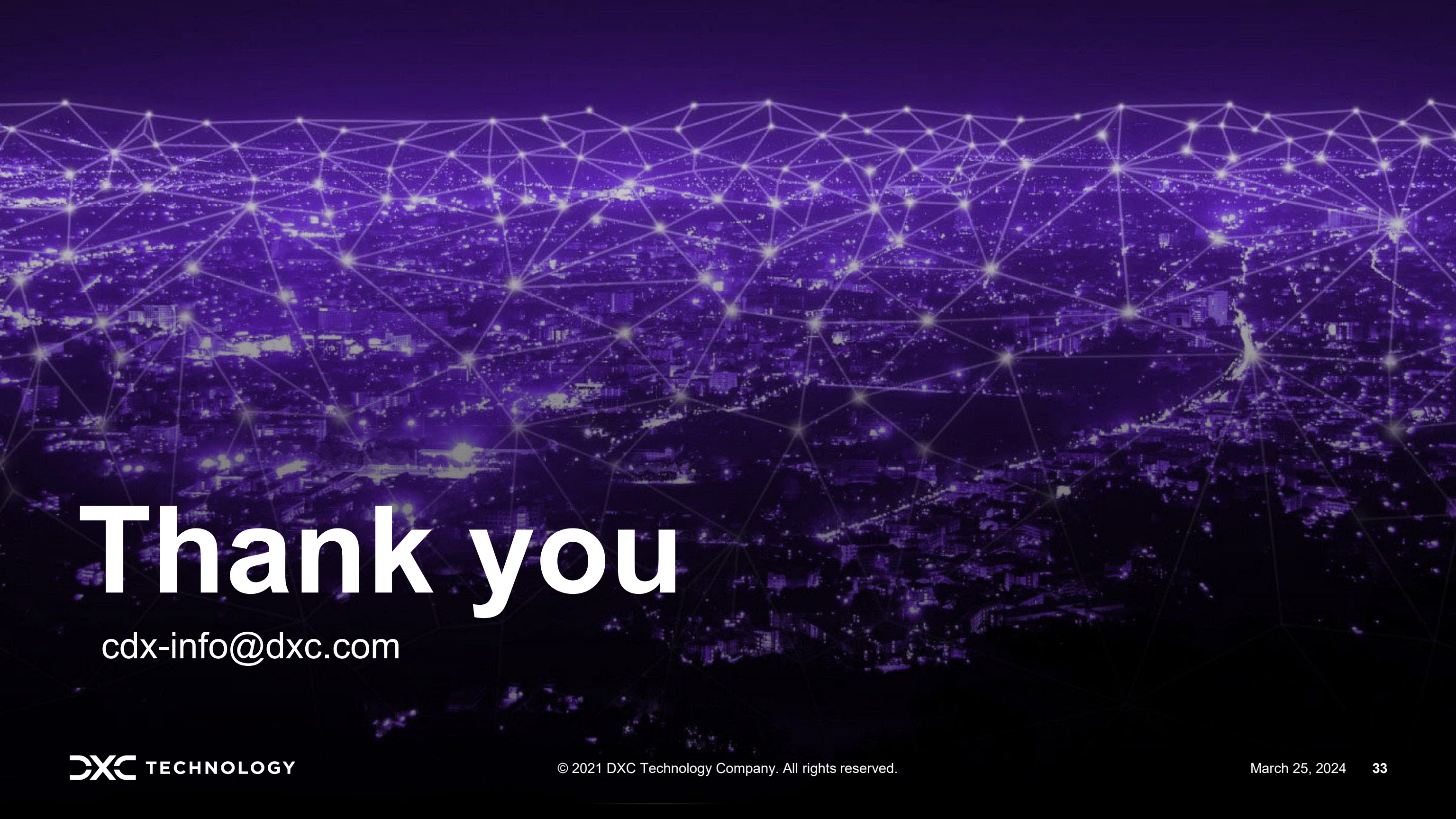


**IT-enabled
transformation**



**Acquisitions,
divestitures**

From the leading pure-play supplier in cloud services,
material compliance solutions, and
secure supply chain submissions
for almost 20 years

The background of the slide is a dark purple aerial view of a city at night, with lights from buildings and streets visible. Overlaid on this is a complex network of white lines and dots, resembling a digital or data network, which covers the entire scene.

Thank you

cdx-info@dxcc.com

