Data Transfers Across Industrial and Business Sectors

Submitted by: Global Data Alliance
ABOUT DATA & DATA TRANSFERS

• What is a Data Transfer?
  – “Cross-border data transfers” refer to the movement or transfer of information across IT networks.
  – Companies of all sizes rely on data transfers.
  – This includes companies with int’l customers or operations.
    • Any communication to a person / device across a border
    • Financial transactions
    • R&D collaboration
    • M2M and IOT transactions
  • In all sectors — from farming, fisheries, and mining; to aviation, hospitality and other services; to the manufacturing industries, data transfers are critical to innovation, job creation, and productivity, safety, and environmental responsibility.

Source: OECD
DATA TRANSFERS IN DIFFERENT SECTORS (1)

Data Transfers are Critical to:

• Each economy’s connectivity and its access to the global marketplace and supply chains;
• The ability of companies of all sizes to use new technologies, including the industrial cloud computing and data analytics, to create jobs, boost productivity, and reach new markets; and
• The workforce’s ability to remain productive through teleworking, virtual collaboration and online training, as well as remotely delivered healthcare and other services

The protection of privacy, security, and regulatory compliance.
• In finance, the ability to transfer and analyze data in real-time across borders is critical to efforts to combat financial fraud, money laundering, or other illicit financial transactions.
• In cybersecurity, global access to real-time data are necessary to monitor traffic patterns, identify anomalies, and divert of potential threats.
• In IP and other criminal enforcement, data transfers are critical to developing insights on sources, distribution hubs and networks, and end-user markets, implicated in the distribution of dangerous or adulterated counterfeit products, commercial scale piracy, and other illicit activities.
Data Transfers are Critical to:

- **Research and development (R&D)**, which depends upon access to globally sourced research data from laboratories across the world, as well as collaboration, joint research, and the exchange of ideas and knowledge among teams of inventors, designers, authors, and other creators and innovators across borders.

- **Artificial intelligence-based innovation**, which depends upon analysis of data sets consolidated across borders to identify insights and patterns that can aid R&D teams in the development of novel solutions to scientific and technical challenges.

- **Safety testing and licensing approvals** for new aircraft, vehicles, medical devices, machine tools, and robotics, etc.

- **Precision farming techniques** that use cloud-based analytics to help producers to maximize crop yields, while improving insights into weather, soil, and other relevant environmental conditions. These technologies can also help mitigate environmental impacts by minimizing water, fertilizer and pesticide use, and by reducing the carbon footprint of agricultural activities.

- **Cross-border access to climate data and green technologies**, especially via environmental data analytics and AI-driven energy solutions, can help reduce carbon footprints in energy generation, distribution, and consumption.

- **Supply chain logistics**, in which cross-border data helps optimize sourcing, freight scheduling, and inventory management; promotes the fight against counterfeiting; increases efficiency and resilience; reduces costs; and minimizes disruption.
DATA TRANSFERS – FACTS & FIGURES

Growing the Global Economy

2.5 quintillion data bytes are generated every day

60% of global GDP will be digitized by 2022, with growth in every industry driven by data flows and digital technology

Connecting People to Economic Opportunities

Data transfers contributed $2.8 trillion to global GDP, growing 45x every ten years

6 billion connected consumers
25 billion connected devices

by 2025

Benefitting All Sectors

75% of the value of data transfers accrues to industries like agriculture, logistics, and manufacturing

For SMEs in Asia–digital tools reduce export costs by 82%, and transaction times by 29

Building International Consensus

Sharp increase in regional negotiations on cross-border data transfers

164 economies have WTO services commitments, often covering cross-border supply of digital services

DATA TRANSFERS ACROSS REGIONS

Internet-Connected Population (by Region, 2023 estimate)

- C./E. Eur., 388,000,000
- W. Eur., 370,000,000
- N. Am., 345,000,000
- LATAM, 470,000,000
- Africa & ME, 611,000,000
- APAC, 3,100,000,000

DATA TRANSFERS AT EVERY STAGE OF THE BUSINESS VALUE CHAIN

R&D
R&D teams collaborate across borders to develop new products, cures, and other advances using cloud-based software solutions and research data produced globally.

Market Forecasting
AI tools analyze data from around the world to identify patterns that can help predict market demand, customer design preferences, and risk factors relevant to global investment decisions.

Safety and Productivity
Real-time analytics of data gathered from sensors embedded in global production facilities, machinery, and other assets can alert operators before hazards or breakdowns can occur—allowing for predictive maintenance and safe, productive working conditions.

Sales
From order fulfillment, to invoicing, to responding to customer feedbacks—businesses can meet global customer needs only if they can receive and respond to customer queries transmitted across borders.

Regulatory Compliance
Legal compliance teams gather data from global operations to demonstrate that products and services meet regulatory requirements for transparency, safety, and effectiveness.

Inventory Control
Data analytics and AI can be used to adjust global inventories—avoiding shortages and freeing up resources for more productive uses.

Supply Chain
Real-time electronic data exchange allows companies to authenticate documents seamlessly, optimize shipping routes, and manage transportation assets for purposes of time, cost, and energy efficiency.

Post-Sale Service
Cross-border data transfer allows manufacturers to trace and recall products, and address service requests, transparently, safely, and quickly.
DATA TRANSFERS & MANUFACTURING

Manufacturers rely on data transfers to stay competitive in an era of cloud-enabled digital transformation.

The top technologies helping manufacturers meet their goals include:

<table>
<thead>
<tr>
<th>Technology</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Cybersecurity</td>
<td>92%</td>
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<tr>
<td>Advanced data analytics</td>
<td>90%</td>
</tr>
<tr>
<td>Automation/robotics</td>
<td>85%</td>
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<tr>
<td>IoT data from devices</td>
<td>83%</td>
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<tr>
<td>AI and machine learning</td>
<td>77%</td>
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<tr>
<td>Computer vision</td>
<td>77%</td>
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<tr>
<td>Autonomous systems</td>
<td>73%</td>
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<tr>
<td>Augmented/virtual/mixed reality</td>
<td>71%</td>
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<tr>
<td>Next generation ERP systems</td>
<td>67%</td>
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<tr>
<td>Track and trace for supply chain visibility</td>
<td>67%</td>
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<tr>
<td>Digital twins</td>
<td>65%</td>
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<tr>
<td>Additive manufacturing/3D printing</td>
<td>60%</td>
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<tr>
<td>High performance computing (HPC)</td>
<td>56%</td>
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<tr>
<td>Edge computing/Edge intelligence</td>
<td>56%</td>
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<tr>
<td>5G communications</td>
<td>48%</td>
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</tbody>
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DATA TRANSFERS & AUTOMOTIVE SECTOR

• Global automotive engineering. Data transfers are essential to:
  – Industrial lifecycle management and virtualized engineering (e.g., digital twins) in global design.
  – The ability of engineering teams to collaborate across borders at every stage of the product development cycle.

• Cross-border industrial cloud. Data transfers improve:
  – End-to-end visibility across a supply chain comprising thousands of global facilities delivering millions of parts on a daily basis.
  – Smart factories also rely on Internet of Things (IoT) sensors and robots to improve control over the manufacturing process from data centers across the world.

• Cross-border enhanced safety and maintenance. Data transfers can facilitate:
  – Remote, digitally-enabled predictive maintenance, with 200+ million vehicles having Over-the-Air (OTA) update capability.
  – Allows manufacturers to seamlessly address energy efficiency, safety, or other performance issues via satellite- and cloud-enabled software updates.

• Cross-border automotive connectivity. Data transfers and AV’s / connected vehicles
  – Connected vehicles generate some 30 terabytes of data each day / Highly automated vehicles 10 times that.
  – Sensors throughout the vehicle allow for on-the-road monitoring and predictive maintenance via cloud-enabled analysis of traffic and weather conditions, anonymized performance information from sensors, etc.
Multi-Industry Statement for WTO JSI

• Urges WTO negotiators to
  ‒ Prohibit unnecessary or discriminatory data localization mandates and data transfer restrictions
  ‒ Support interoperability and transparency among legal frameworks
  ‒ Apply rules across all economic sectors
  ‒ Adopt frameworks to protect personal information

“To enhance certainty and economic opportunity, any agreement should discipline unnecessary or discriminatory data localization mandates and data transfer restrictions. Any agreement should also be guided by principles of transparency and interoperability among legal frameworks; should apply across all economic sectors; and should require all economies to adopt or maintain legal frameworks to protect personal information.”
GLOBAL DATA ALLIANCE
TRUST ACROSS BORDERS

Please direct any questions to gdainfo@bsa.org