



The Digital Trade Revolution:

How U.S. Workers and Companies Benefit from Digital Trade



U.S. Chamber of Commerce

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Executive Summary

The digital economy has become critical to the U.S. economy, driving growth, prosperity, and dynamism across every state. A diverse range of firms not traditionally seen as actors in the digital economy are producing and benefiting from digital goods and services, including businesses in transportation and warehousing, arts and entertainment, and even agriculture and mining. Nearly two-thirds of the digital economy consists of digital services, not digital goods. The digital economy is expanding nearly three times as rapidly as the economy writ large. In short, digitally enabled products and services are not confined to a handful of “big” companies, let alone the “tech” sector.

Digital economy jobs are proliferating in the United States. Jobs tied to the digital economy can be found in nearly every sector, and their number has grown at a faster rate than that of overall job growth over the last decade. These jobs pay well, and compensation growth for digital jobs exceeds that for all jobs generally.

Trade is key to the U.S. digital economy’s growth. The bulk of U.S. services exports are digitally tradeable, but the potential for expansion of the digital delivery of services exports remains largely untapped.¹ Developed economies—and particularly Europe—are the top markets for U.S. exports of digitally tradeable services. These exports, coming from every U.S. state, supported more than 3 million direct and indirect U.S. jobs in 2022. America’s small business exporters are among those with the most to gain from digital technologies that have the potential to overcome the longstanding hurdles to exporting they face.

Global competition is real. Foreign competitors also see opportunities to increase exports of digitally tradeable services. Leading competitors in international markets include companies based in the European Union, India, and China.

Our competitiveness is being undermined. Unfortunately, global barriers to U.S. digitally tradeable services exports are on the rise. The proliferation of these trade barriers threatens to deprive American workers and companies of the potential benefits of exporting digitally tradeable services.

Equally, if not even more concerning, is the hesitation—or outright failure—of the United States to tackle these trade barriers head-on. The administration needs to work with like-minded partners to secure policies that guarantee the ability to move data across international borders, prohibit forced localization of data or restrictions based on nationality of ownership, and protect source codes, among other objectives. However, U.S. leadership on digital trade is being undermined as the administration increasingly kowtows to radical, fringe views.

The United States finds itself at a moment of promise and peril on digital trade. Export opportunities for digitally tradeable services are expanding rapidly, and the United States is well positioned to build on its formidable advantages in these areas. However, these opportunities are endangered by the spread of digital protectionism and the accumulation of discriminatory digital rules that often target American firms. Here at home, the U.S. failure to address these challenges or recognize the consequences to U.S. companies and workers is compounding the problem.

It is not too late to change course and restore U.S. leadership on digital trade policy. The case for American leadership on digital trade is strong: The administration must recognize these benefits and push forward a vision for digital trade that secures these opportunities for American workers, consumers—and U.S. companies of all sectors and sizes.

¹ “Digitally tradeable services” includes exports tied directly to information technologies and the movement of data (e.g., telecommunications services, computer software services, cloud computing and data storage, and other computer services) as well as services that have the potential to be traded digitally: architectural, engineering, project management, and specialized design services; accounting, bookkeeping, auditing, and payroll services; legal services; consulting; research services; advertising; audiovisual and photographic services; banking, insurance, and other financial services; travel arrangement and reservation services; and waste management. The United States is home to world-beating firms in all of these growing industries.

Introduction

The digital economy is critical to the U.S. economy, driving growth, prosperity, and dynamism across every state. The digital economy is generating good jobs for a growing number of American workers in nearly every sector of the U.S. economy. International trade is playing a central role in the U.S. digital economy's growth: Export opportunities for digitally tradeable services are expanding rapidly, particularly for small businesses and in services sectors that employ millions of Americans.

However, foreign competitors see the same opportunities to increase exports of digitally tradeable services and are moving ahead rapidly. At the same time, global barriers to U.S. digitally tradeable services exports are on the rise. Left unchecked, the proliferation of these trade barriers threatens to deprive American workers and companies of the potential benefits of exporting digitally tradeable services. Advancing

digital trade rules would enable the United States to take the lead in fostering digital commerce and push back against the trade barriers that threaten to deprive American workers and companies of the benefits and dynamism of the digital trade era.

Unfortunately, current U.S. policy risks abandoning America's leadership in developing and defending the strong digital trade rules needed to spur growth and innovation at home and around the world. Instead, the Office of the U.S. Trade Representative (USTR) is allowing a faction of fringe interests that have long opposed trade and pro-growth policies to define the U.S. approach to digital trade, undermining the future success of businesses of all sizes and across sectors, from autos, agriculture, pharmaceuticals, medical devices, and aerospace to services like energy, finance, IT, and telecommunications. Now more than ever, the U.S. government needs to advance policies that support the digital trade revolution.

Value Added by the Digital Economy, 2022 (Billions of Dollars, and Percent)

	Value Added	Share of Total Sector Value Added
All Industries	\$2,569.5	10.0%
Private non-agricultural industries	2,559.1	11.4%
Information	1,024.2	73.5%
Professional and business services	575.9	17.4%
Wholesale trade	502.2	32.5%
Manufacturing	219.3	8.3%
Retail trade	193.3	11.9%
Educational services, health care, and social assistance	16.1	0.8%
Transportation and warehousing	11.5	1.2%
Finance, insurance, real estate, rental, and leasing	7.0	0.1%
Other services, except government	7.0	1.3%
Arts, entertainment, rec., accommodation, & food services	0.8	0.1%
Utilities	0.7	0.2%
Mining	0.5	0.1%
Construction	0.4	nil
Government	10.4	0.4%

Source: Bureau of Economic Analysis. Data are not available for the agriculture sector.

2 2022 American Community Survey, U.S. Census Bureau, <https://data.census.gov/table/ACSST1Y2022.B28011?q=with%20internet%20subscription> and <https://data.census.gov/table/ACSST1Y2022.B28004?q=with%20internet%20subscription>.

U.S. Value Added in the Digital Economy by Type of Good or Service, 2022 (Billions of dollars and Percent)

	Value Added	Share of Total, Subtotal
Total digital economy	\$2,569.5	100.0%
Digital goods (hardware and software)	901.1	35.1
Digital services	1,668.2	64.9
E-commerce	599.7	35.9
Cloud services	191.9	11.5
Telecommunications services	464.8	27.9
Internet and data services	154.3	9.3
All other priced digital services	257.5	15.4
Federal nondefense digital services	0.3	nil

Source: Bureau of Economic Analysis. Data are not available for the agriculture sector.

The digital economy is critical to the U.S. economy

The digital economy has emerged as a critical driver of growth, prosperity, and dynamism for every state and sector across the United States. According to the U.S. Census Bureau, in 2022 91% of American households had internet subscriptions, including 79% of households earning under \$35,000 annually.² In 2019, according to the Commerce Department's Bureau of Economic Analysis (BEA), the U.S. digital economy's output surpassed \$2 trillion or 10% of total U.S. economic output.³ It is not surprising that sectors that produce semiconductors, computers and software, or provide internet services and e-commerce sales have a large stake in the digital economy. However, the production of digital goods and services also takes place among a host of firms not traditionally seen as actors in the digital economy, including businesses in transportation and warehousing, arts and entertainment, and even mining. New digital technologies enable firms, workers, and consumers across the economic spectrum to offer new services (e.g., telemedicine in health care) and make ever more sophisticated goods (e.g., GPS-enabled cars).

The importance of the digital economy has also been growing. Digital value-added output increased from \$1.8 trillion in 2017 to \$2.6 trillion in 2022. The digital economy's share of the total economy expanded from

9.4% to 10.0% in that same period. The value of the digital economy, adjusted for inflation, has grown at an average annual rate of 7.1%, compared to just 2.2% for the economy generally. In other words, the digital economy is expanding more than three times as rapidly as the economy writ large. Even as overall economic output declined in 2020 as a result of pandemic disruptions, output in the digital economy grew.

Nearly two-thirds of the digital economy is digital services as opposed to digital goods (such as hardware and software sold on physical media). Digital services include e-commerce, cloud services, telecommunications services, internet and data services, and other digital services. E-commerce and telecommunications services account for most of these digital services. Cloud services have been a particular benefit to small and medium-sized businesses, enabling them to access the same information and computing power as large firms.⁴

Digital economy jobs are proliferating in the United States

Millions of people work in the digital economy. As expected, a large number of these jobs are related to computer systems design and related to services, e-commerce, software and data processing. However, many digital economy jobs are in sectors such as the manufacturing of machinery and parts and

3 BEA includes in its definition of the digital economy four major types of goods and services: Infrastructure, or the basic physical materials and organizational arrangements that support the existence and use of computer networks and the digital economy, primarily information and communications technology (ICT) goods and services; e-commerce, or the remote sale of goods and services over computer networks; priced digital services, or services related to computing and communication that are performed for a fee charged to the consumer, and federal nondefense digital services, which is the annual budget for federal nondefense government agencies whose services are directly related to supporting the digital economy. See: Bureau of Economic Analysis, U.S.. Department of Commerce, "Digital Economy," <https://www.bea.gov/data/special-topics/digital-economy>.

4 Congressional Research Service, "Digital Trade and U.S. Trade Policy," December 9, 2021, p. 8, <https://sgp.fas.org/crs/misc/R44565.pdf>.

Full-and Part-time Employment in the Digital Economy, 2022 (Thousands, and Percent)

	Jobs	Share of total Industry
All Industries	8,857	5.7%
Private non-agricultural industries	8,808	6.6%
Professional and business services	3,044	13.4%
Wholesale trade	1,981	33.0%
Information	1,977	64.8%
Manufacturing	798	6.2%
Retail trade	675	4.3%
Educational services, health care, and social assistance	156	0.6%
Other services, except government	91	1.3%
Transportation and warehousing	61	0.9%
Finance, insurance, real estate, rental, and leasing	15	0.2%
Arts, entertainment, rec., accommodation, & food services	7	nil
Mining	1	0.2%
Construction	1	nil
Utilities	1	0.2%
Government	48	0.2%

Source: Bureau of Economic Analysis. Data are not available for the agriculture sector.

(truck) transportation and warehousing. One study estimates that the “tech-ecommerce ecosystem” (which includes some tech manufacturing as well as some services tech-related sectors) was the “main job producer” in 40 states from 2017-2021.⁵

The digital economy is a growing source of employment in the United States. The number of jobs tied to the digital economy has increased from 7.6 million in 2017 to 8.9 million in 2022, or at an annual average rate of 3.2% over the decade. This compares to comparable overall job growth of 1.1% per year over this period.

Jobs supporting the digital economy generally pay well. According to BEA data, total compensation paid to workers in the digital economy reached \$1.3 trillion in 2022, up from \$875 billion in 2017. Compensation has been growing at an average annual rate of 7.7% since 2017, compared to a 5.2% growth rate for all jobs generally.

Because digital services play such a vital role in the U.S. digital economy and are the source of much of its growth, the balance of this report focuses on global markets for U.S. digital services output and employment and the role U.S. exporters play in those markets.

Trade is key to the U.S. digital economy’s growth

Currently, digital exports play a smaller role in U.S. services output than exports of goods do for manufacturing. But because the digital economy has become such an important generator of both economic and job growth, pursuing an expansion of digital trade opportunities in global markets presents an opportunity to support that growth with feedback effects that are no less important than those sought from goods exports.

The United States exported nearly \$1 trillion in non-government services in 2022. Most of these exports were delivered digitally: 10% were information and communications technology (ICT) services, 61% were potentially ICT-enabled services, and the balance were non-digitally delivered services. All of these exports contribute to the health of the digital economy and the jobs tied to it.

5 Michael Mandel, “Tech-Ecommerce Drives Job Growth in Most States,” Progressive Policy Institute, October 18, 2021, <https://www.progressivepolicy.org/blogs/tech-ecommerce-drives-job-growth-in-most-states/>.

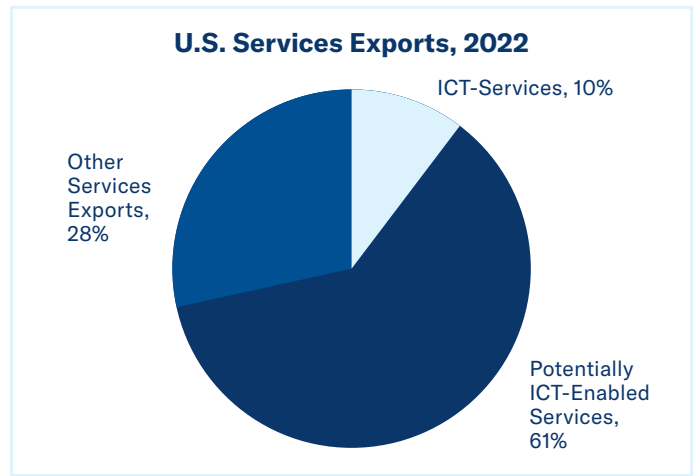
U.S. exports of ICT services are significant

ICT services are those tied directly to information technologies and the movement of data, such as telecommunications services, computer software services, cloud computing and data storage, and other computer services. The United States exported \$93 billion in ICT services to the world in 2022.

U.S. exports of ICT services are significant—more than U.S. exports of key manufactured goods including basic chemicals (\$86 billion), semiconductors (\$75 billion), motor vehicles (\$68 billion), or agricultural crops (\$66 billion).

U.S. exports of potentially ICT-enabled services are even greater

The total value of exports of ICT services pales in comparison to the total value of services exports that could be traded digitally. U.S. government agencies refer to these as “potentially ICT-enabled services,” and they include architectural, engineering, project management, and specialized design services; accounting, bookkeeping, auditing, and payroll services; legal services; consulting services; research services; advertising; audiovisual and photographic services; banking, insurance, and other financial services; travel arrangement and reservation services; and certain waste treatment and de-pollution services. The United States is home to world-beating firms in all of these growing industries. In 2022, exports of potentially-ICT enabled services totaled \$553 billion. Some of the value of these services were delivered in person in foreign markets; others were delivered digitally, via the internet.

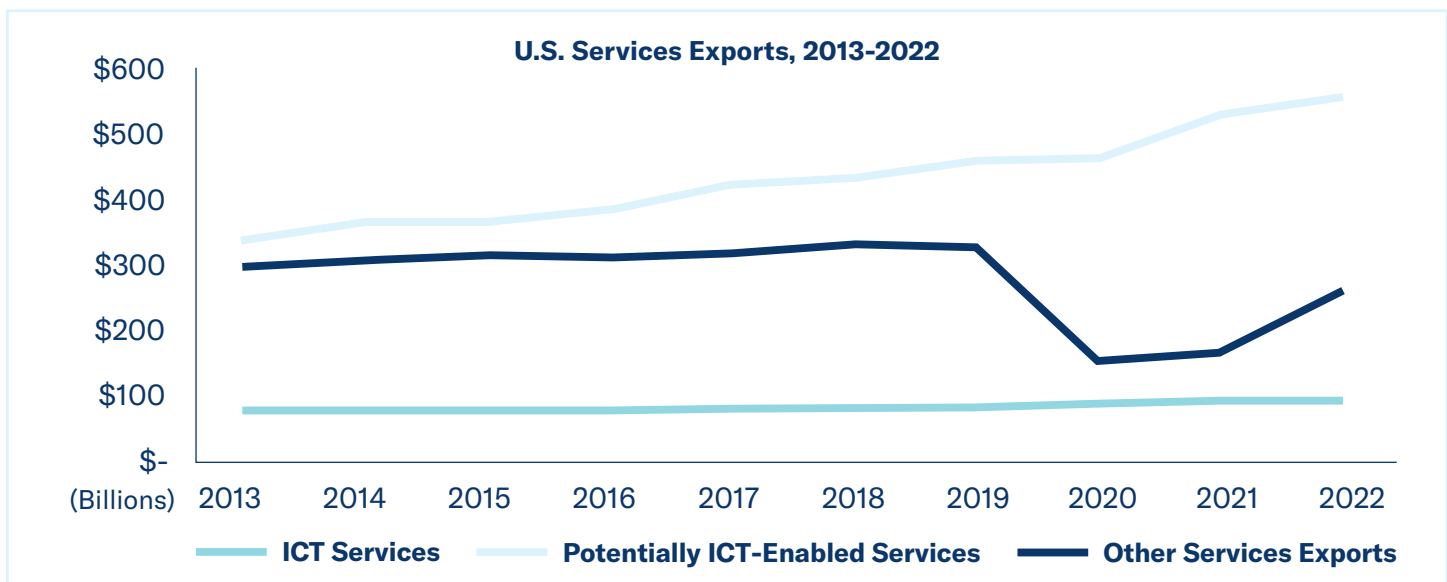


Source: Estimated by Trade Partnership Worldwide

This paper will refer to the full array of these ICT services and potentially ICT-enabled services together as digitally tradeable services.

U.S. exports of digitally tradeable services are a consistent “bright spot” for American services providers

U.S. exports of digitally tradeable services have been steadily growing over the last decade—even when the pandemic reduced U.S. exports of non-digital services exports by half. Overall, U.S. services exports increased by 29% over the past decade, primarily due to the strength in growth in digital trade exports. Since 2013, U.S. ICT exports have grown by 29%. Potentially ICT-enabled exports increased by 66%. Over the decade, exports of other services declined by 13%.



Source: Estimated by Trade Partnership Worldwide

The make up of ICT exports has been shifting over the decade

The steady increase in overall export growth of ICT services masks some important shifts in the services that make up this group. While still the largest component, the value of royalties from computer software paid by foreign customers has dropped 12% over the decade. Similarly, exports of telecommunications services have declined, by 46%. But these declines have been more than offset by strong increases in exports of cloud computing and data storage services (up 794% from 2013-2022), and computer software services (up 240% over the period).

The export of many potentially ICT-enabled services is increasingly digital

The pandemic had an important impact on the delivery of potentially ICT-enabled services. When in-person delivery of these services was not universally possible with the global Covid-19 reductions in travel, many

providers figured out how to deliver their services digitally. This transition happened both domestically and internationally, and the delivery of services to foreign customers became increasingly digital.

The ability to deliver these services digitally likely contributed to the increase in export growth experienced by several potentially ICT-enabled services. For example, from 2013-2019, business management and consulting services exports grew at an average annual rate of 10%; from 2020 to 2022, that annual rate of growth increased to 17%. Similarly, exports of insurance services grew at an average annual rate of 8% pre-pandemic and 33% post-pandemic; legal services were up 6% per year pre-pandemic and 10% post-pandemic, and architectural, engineering and miscellaneous technical services exports fell at an average annual rate of 4% pre-pandemic, then grew 10% per year beginning in 2020.

The diversity of sectors within the potentially ICT-enabled services category shows why digital trade matters so much for industries that are

U.S. Exports of Potentially ICT-Enabled Services, by Type (Millions, and Percent)

Sector	2013	2022	Change (\$)	Change (%)
Business Management and Consulting Services	\$36,346	\$101,594	\$65,248	180%
Financial Management and Advisory Services	51,798	71,066	19,268	37%
Royalties from Industrial Processes	45,969	59,631	13,662	30%
Research and Development and Testing Services	30,113	57,754	27,641	92%
Credit-Related Services	18,142	32,850	14,708	81%
Misc. Financial Services	18,213	30,348	12,135	67%
Insurance Services	15,651	22,668	7,017	45%
Implicit Financial Services	10,427	22,594	12,167	117%
Advertising	10,043	22,237	12,194	121%
Misc. Business, Professional, and Technical Services	4,956	20,670	15,714	317%
Payments for Trademarks	16,268	19,834	3,566	22%
A/V Services (Personal)	17,150	19,751	2,601	15%
Legal Services	9,251	16,426	7,175	78%
Architectural, Engineering, and Misc. Tech. Services	16,453	12,233	(4,220)	-26%
Securities Transactions	11,218	10,865	(353)	-3%
Database and Other Information Services	6,563	10,485	3,922	60%
Misc. Personal, Cultural, and Recreational Services	3,029	6,544	3,515	116%
Franchise Fees	6,132	6,117	(15)	0%
Accounting, Auditing, and Bookkeeping	1,399	3,308	1,909	136%
Trade-Related Services	1,129	2,135	1,006	89%
A/V Services (Books and Tapes)	623	1,869	1,246	200%
A/V Services (Live Events)	934	1,827	893	96%
News Agency Services	331	273	(58)	-18%
A/V Services (Movies and TV)	1,077	236	(841)	-78%

Source: Estimated by Trade Partnership Worldwide

not generally associated with “information technology.” For example, business, management and consulting services have overtaken financial management and advisory services as the leading potentially ICT-enabled services export sector.

U.S. exports are concentrated in 10 markets

Ten countries accounted for 70% of total U.S. digitally tradeable exports in 2022. Developed economies are the top markets for U.S. exports of digitally tradeable services. In 2022, Ireland was the top export market for both ICT services (\$13 billion) and potentially ICT-enabled services (\$70 billion). Canada, China, Germany, Japan, Switzerland, and the UK were among the top 10 individual markets for digitally tradeable services. Hong Kong, Brazil, and Australia were among the top 10 markets for ICT services, while the UK’s Caribbean Islands (largely financial services), Singapore, and the Netherlands were among the top 10 markets for potentially ICT-enabled services. Collectively, EU countries accounted for \$29 billion (31%) of U.S. exports of ICT services exports and \$163 billion (29%) of potentially ICT-enabled services exports in 2022.

As a region, Europe is the top destination for U.S. exports of digitally tradeable services, particularly potentially ICT-enabled services exports. For this reason, the U.S. business community has urged the administration to prioritize implementation of the EU-U.S. Data Privacy Framework (the successor agreement to Privacy Shield) and to ensure that EU initiatives such as the Digital Markets Act and the Digital Services Act do not discriminate against U.S. firms.

Asia and the Pacific are the second largest regional market for U.S. digital trade. Exports of ICT services are currently strong, but potentially ICT-enabled services remains a much larger category, suggesting untapped potential that could be unlocked through the implementation of strong digital trade rules.

Digitally tradeable services exports support millions of jobs

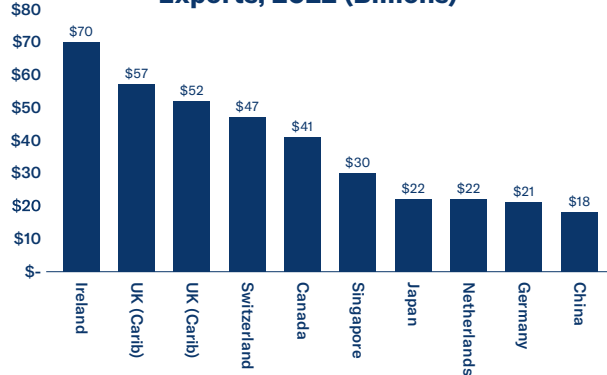
Exports of digitally tradeable services support millions of American jobs. In 2022, just over 3 million U.S. jobs were supported by digital trade. U.S. exports of ICT services supported an estimated 358,000 U.S. jobs,

Top Markets for U.S. ICT Services Exports, 2022 (Billions)



Source: Estimated by Trade Partnership Worldwide

Top Markets for U.S. Potentially ICT-Enabled Exports, 2022 (Billions)



Source: Estimated by Trade Partnership Worldwide

U.S. Digitally Tradeable Services Exports, by Region and Type, 2022 (Millions, and Percent)

Region	ICT Services		Potentially ICT-Enabled Services	
	Exports	Export Share	Exports	Export Share
Europe	\$41,483	44%	\$316,215	50%
Asia & Pacific	\$29,105	31%	\$147,498	21%
Central & South America	\$9,807	11%	\$95,392	16%
North America	\$11,039	12%	\$65,751	10%
Middle East & Africa	\$1,904	2%	\$21,527	4%

Source: Estimated by Trade Partnership Worldwide

more than the number of jobs supported by U.S. petroleum product exports (340,000). Exports of potentially ICT-enabled services supported nearly 2.7 million U.S. jobs, more than the combined number of U.S. jobs supported by exports of primary metals, fabricated metal products, machinery, and computers and electronics.

Jobs supported by exports of digitally tradeable services grew over the last decade. More than 955,000 U.S. jobs were added as a result of the increase in U.S. digital trade from 2013-2022. These jobs are found in every sector of the economy, not just those directly related to exporting. As the companies exporting digital services grow, the ripple effects of that growth are felt throughout the economy, supporting still more jobs in still more sectors (e.g., restaurants, schools, entertainment venues).

Digital trade matters to American small businesses

America's small business exporters are among those with the most to gain from digital trade. While U.S. small and medium-sized businesses generate about two-thirds of all new U.S. jobs, it is often overlooked that 97% of the nearly 300,000 American companies that export are small and medium-sized businesses. These firms account for about one-third of U.S. merchandise exports, according to data from the U.S. Department of Commerce. However, only about one in every 100 of America's 30 million small businesses export. In countries such as Germany and Switzerland, the share of small or medium-sized firms that sell their products abroad is approximately five to ten times larger on a per capita or per firm basis.

In this context, the digital trade revolution offers impressive new opportunities for America's small businesses. New digital technologies have the potential to overcome longstanding hurdles facing small exporters.

A U.S. Chamber report entitled *Growing Small Business Exports: How Technology Strengthens American Trade* uncovered some surprising findings. Based on a national survey of more than 3,800 small businesses and a related economic analysis, the report produced a new estimate that 9% of U.S. small businesses currently export goods or services, a figure considerably higher than indicated by official statistics. The report estimated that small business exports generated \$541 billion in output in 2017 and supported more than 6 million U.S. jobs. Small businesses that export have been expanding the overseas markets they serve, the report found, from an average of seven countries in 2016 to 10 countries in 2018.

These larger-than-the-official-statistics results indicate that digital trade is already contributing to the expansion of U.S. small business exports and job creation. The Chamber's study found digital trade's boost to small business exporters is especially pronounced in the following three areas:

1. Digital advertising plays an overlooked but critical role in allowing U.S. small businesses to economically reach potential foreign customers in a targeted fashion. Small businesses simply had no such tools in the pre-internet era: print advertising in newspapers or direct mail were never feasible options for U.S. small businesses trying to tap even nearby and familiar markets such as Canada or Europe.
2. Modern digital tools are revolutionizing payment collection, cited by small business exporters as a top challenge. Uncertainty around international payment collection was a principal brake on small business exports even a few years ago, but such risks and foreign exchange complexities can now be managed in a cost-effective manner by digital payment services.
3. International shipment firms, including express delivery companies, today provide comprehensive services that handle customs clearance procedures and costs for small business owners who lack the expertise and time to tackle the minutiae of such matters. The evidence supports the view that online channels reduce transaction costs associated with international trade significantly.

One takeaway is that digital trade allows small business exporters and larger firms to prosper together. Some of the services mentioned above in areas such as digital advertising (e.g., Google's Market Finder) are fostering new trade ecosystems of mutual benefit.

The cumulative effect of these digital technologies is that more small business exporters are able to reach more international markets. The Chamber's findings are supported by an earlier study which found that 94% of the smallest 10% of commercial sellers on eBay engage in exporting, not far behind the largest 10% (99%). Only 5% of commercial sellers in that study were single country exporters, with a remarkable 81% selling to five or more foreign countries.

The Chamber report found that the digital trade revolution nonetheless remains a work in progress for U.S. small business exporters. While 92% of small businesses that export use digital tools, a large majority flagged ongoing concerns. Small

State Services Exports, by Type, 2022 (Millions, and Percent)

State	Value				Share		
	ICT	Potentially ICT-Enabled	Not ICT-Enabled	Total	ICT	Potentially ICT-Enabled	Not ICT-Enabled
AK	\$0.5	\$185.9	\$1,821.0	\$2,007.4	0%	9%	91%
AL	179.7	2,936.7	1,778.0	4,894.3	4%	60%	36%
AR	146.5	1,169.1	946.9	2,262.5	6%	52%	42%
AZ	1,175.1	8,403.1	4,678.4	14,256.6	8%	59%	33%
CA	27,927.3	114,748.6	35,959.2	178,635.1	16%	64%	20%
CO	3,467.4	8,472.6	4,533.8	16,473.9	21%	51%	28%
CT	637.7	11,230.7	1,718.9	13,587.2	5%	83%	13%
DC	802.7	5,684.7	1,178.4	7,665.9	10%	74%	15%
DE	14.0	3,542.2	537.7	4,093.8	0%	87%	13%
FL	2,450.7	22,240.7	22,258.9	46,950.4	5%	47%	47%
GA	3,607.1	14,335.5	8,753.1	26,695.8	14%	54%	33%
HI	21.4	573.7	2,242.7	2,837.8	1%	20%	79%
IA	74.7	3,429.7	865.0	4,369.4	2%	78%	20%
ID	55.6	1,262.9	752.9	2,071.3	3%	61%	36%
IL	1,536.8	26,716.5	14,513.1	42,766.4	4%	62%	34%
IN	132.9	6,174.7	2,790.6	9,098.2	1%	68%	31%
KS	162.1	2,692.2	1,043.0	3,897.4	4%	69%	27%
KY	60.1	1,929.8	1,989.1	3,978.9	2%	48%	50%
LA	26.5	2,647.7	6,246.7	8,920.9	0%	30%	70%
MA	5,121.0	26,991.5	7,177.2	39,289.7	13%	69%	18%
MD	1,900.0	10,234.8	4,106.7	16,241.5	12%	63%	25%
ME	45.8	977.3	1,008.6	2,031.7	2%	48%	50%
MI	520.9	7,233.3	5,920.3	13,674.4	4%	53%	43%
MN	853.9	8,465.3	2,666.9	11,986.1	7%	71%	22%
MO	1,114.8	6,419.9	3,071.5	10,606.2	11%	61%	29%
MS	7.6	775.4	1,045.4	1,828.4	0%	42%	57%
MT	33.3	562.0	653.9	1,249.2	3%	45%	52%
NC	2,579.5	18,119.5	5,790.9	26,489.9	10%	68%	22%
ND	30.8	347.8	593.1	971.7	3%	36%	61%
NE	272.2	1,541.8	512.8	2,326.8	12%	66%	22%
NH	515.9	2,203.6	894.4	3,613.9	14%	61%	25%
NJ	2,155.6	16,813.5	7,918.5	26,887.6	8%	63%	29%
NM	14.0	1,364.5	1,004.0	2,382.5	1%	57%	42%
NV	117.1	1,936.9	4,341.1	6,395.1	2%	30%	68%
NY	6,822.3	88,205.3	24,472.2	119,499.7	6%	74%	20%
OH	513.2	14,942.0	7,770.4	23,225.6	2%	513.2	33%
OK	36.8	1,218.9	2,009.4	3,265.1	1%	36.8	62%
OR	1,350.8	4,198.0	2,717.1	8,265.9	16%	1,350.8	33%
PA	1,383.0	16,199.0	6,884.5	24,466.5	6%	1,383.0	28%
RI	112.8	961.7	806.4	1,880.9	6%	112.8	43%
SC	167.7	2,957.8	3,553.1	6,678.6	3%	167.7	53%
SD	8.0	1,310.7	301.7	1,620.3	0%	8.0	19%
TN	417.1	7,459.2	4,340.6	12,217.0	3%	417.1	36%
TX	5,485.3	37,836.4	22,201.2	65,522.9	8%	5,485.3	34%
UT	1,626.2	4,931.4	2,192.9	8,750.5	19%	1,626.2	25%
VA	3,544.3	12,948.5	6,929.0	23,421.8	15%	3,544.3	30%
VT	86.0	582.5	512.7	1,181.2	7%	86.0	43%
WA	12,758.5	12,626.9	6,387.6	31,773.1	40%	12,758.5	20%
WI	1,255.3	3,947.3	2,140.9	7,343.4	17%	1,255.3	29%
WV	8.9	450.2	567.1	1,026.3	1%	8.9	55%
WY	0.5	175.0	325.5	501.0	0%	0.5	65%
US	\$93,338.0	\$553,315.0	\$255,424.6	\$902,077.6	10%	\$93,338.0	28%

Source: Estimated by Trade Partnership Worldwide

businesses surveyed noted the challenge posed by foreign regulations such as data localization requirements, privacy rules, and liability risks, as well as taxes. However, with further progress on these fronts and further steps to take advantage of digital trade, the small businesses surveyed projected a 14% increase in sales, which would increase U.S. economic output by \$81 billion and add 900,000 jobs.

Every U.S. state exports digitally tradeable services

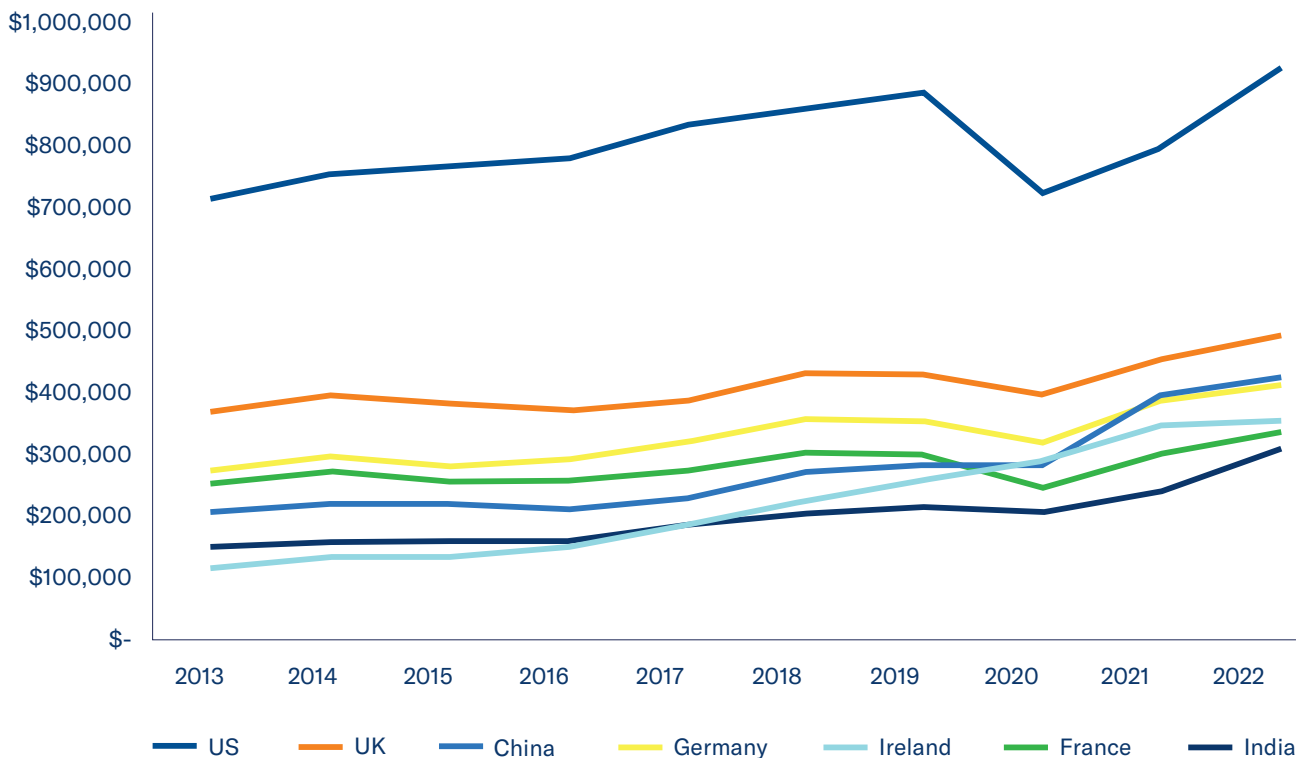
Every U.S. state exports digitally tradeable services. Digital services trade accounts for most of the services exports of 40 states plus the District of Columbia. ICT services accounted for 40% of Washington’s total services exports in 2022, the highest share of any state. Potentially ICT-enabled services exports accounted for 80% or more of the total services exports of Delaware (87%), Connecticut (83%) and South Dakota (81%).

In all, potentially ICT-enabled services accounted for greater shares of total exports than the national average (61%) for 18 states plus the District. These states have particularly large stakes in securing strong digital trade rules that opens new markets for these services.

Foreign competitors are also keen to increase exports of digitally tradeable services

U.S. services exporters do not operate in a vacuum, and they face growing competition from foreign competitors similarly trying to increase exports of digitally tradeable services. While not quite apples-to-apples,⁶ data from the World Trade Organization (WTO) allows comparisons between export trends for the United States and other top exporters.

7 Largest World Exporters of Digitally Tradeable Services, 2013-2022



Source: WTO Data

6 The World Trade Organization (WTO) data for ICT services differs slightly from the classification used by the U.S. Bureau of Economic Analysis. The WTO data includes the entire “Telecommunications, computer, and information services” (BOP6-SI), while the United States classifies some of the information services subsectors as potentially ICT-enabled. Additionally, the United States includes “Royalties from Computer Software” among its ICT services sectors, which falls under “Licenses to reproduce and/or distribute computer software” (BOP6-SH3) in the WTO data. Unfortunately, only a limited number of countries report data in BOP6-SH3, so it is not possible to aggregate the various WTO data and better approximate the U.S. definition.

Global exports of digitally tradeable services have been growing. In 2022, the value of these exports exceeded \$7 trillion, nearly double the \$4.9 trillion exported in 2013. Seven countries accounted for nearly half world exports of digitally tradeable services in 2022. The United States strongly leads, followed by the United Kingdom, China, Germany, Ireland, France and India.

While the United States has a strong lead, other countries are growing their digitally tradeable services exports by nearly the same value. Between 2013 and 2022, WTO data show the total value of U.S. digitally tradeable services exports increased by \$209 billion. However, Ireland increased its digitally tradeable services exports by \$239 billion over the same period, and China by \$217 billion. India's exports increased by \$160 billion.

As other countries have competed for and won sales of these important services in international markets, the U.S. share of world digitally tradeable services exports has fallen over the last decade, from 15% in 2013 to 13% in 2022, as these other growing suppliers make inroads into new markets.

Global barriers to U.S. digital exports are on the rise

Even though there are significant opportunities for American workers and companies to increase digital trade, the outlook for their ability to increase sales to foreign markets is uncertain. Barriers to digital trade exist and in many cases have been proliferating.⁷ While tariffs on digital goods exports largely have been tamed by plurilateral and bilateral trade agreements, this is not the case for digital services trade. Barriers affecting digitally tradeable services include data localization requirements, cross-border data flow limitations, infringement of intellectual property rights, forced technology transfer, measures that violate the WTO's national treatment obligations by discriminating against partially foreign-owned firms, strictures on government procurement that violate the WTO Government Procurement Agreement, and a host of regulatory barriers. In some cases, these measures are crafted to target American firms exclusively.

Multilateral and many bilateral and regional trade agreements address some—but not all—of these barriers, and often in different ways. Additionally, a policy tool that is not updated to reflect new technologies can very quickly become a barrier

to digital exports. Left unchecked, the proliferation of these trade barriers threatens to deprive American workers and companies of the potential benefits of exporting digitally tradeable services.

To illustrate the extent of digital trade barriers, the European Centre for International Political Economy published several years ago its Digital Trade Restrictiveness Index (DTRI), which “measures how 64 countries in the world restrict digital trade.” The index “reveals that many leading economies put significant restrictions on digital trade. These restrictions drive up costs for businesses as well as for consumers.”

This index indicates that China maintains the most restrictive digital trade policies, followed by Russia, India, Indonesia, Vietnam, Brazil, and Turkey. The appearance on this list of large emerging markets of significant commercial interest to American business underscores the significant scope of the harm digital protectionism can inflict. But ECIPE also makes a point of noting that France and Germany are of concern as well (and noteworthy given their place as top global exporters of digitally tradeable services: “It is worth repeating that the DTRI shows that two European countries—France and Germany—are among the 15 most restrictive countries in digital trade policy. Their restrictive culture is very different from the digital openness of a country like Ireland. Their restrictive stand has often prevented the EU from making fast progress to create a Digital Single Market (DSM).”

The ongoing proliferation of these barriers to digitally tradeable services trade has been further documented in a recent study by the Information Technology & Innovation Foundation, entitled *How Barriers to Cross-Border Data Flows Are Spreading Globally, What They Cost, and How to Address Them*. It found that “the number of data-localization measures in force around the world has more than doubled in four years. In 2017, 35 countries had implemented 67 such barriers. Now, 62 countries have imposed 144 restrictions—and dozens more are under consideration.” The experience of Chamber member companies affirms this trend and its widespread nature.

Not only does the spread of barriers to digital services trade threaten to block the opportunities described above, it threatens to consign economies to a low-productivity path of slower growth. The ITIF study found that “a 1point increase in a nation's

⁷ An excellent overview of these barriers can be found in Congressional Research Service, op. cit., pp. 14-23.

data restrictiveness cuts its gross trade output 7 percent, slows its productivity 2.9 percent, and hikes downstream prices 1.5 percent over five years.” The result is that the economic prospects of major emerging markets will be dampened even in areas not directly touched by digital trade.

The case for strong U.S. leadership on digital trade rules

For decades, through Democratic and Republican administrations, the United States has been the leader in developing and defending digital trade rules that have spurred growth and innovation in the United States and around the world. These rules secure the ability to move data across international borders, prohibit forced localization of data or restrictions based on nationality of ownership, and protect source codes, among other objectives. Now more than ever, the U.S. government needs to work with like-minded partners to secure policies that achieve these goals.

However, current U.S. policy seems poised to snatch defeat from the jaws of victory for American workers and companies engaged in digital trade. USTR decided in October 2023 to withdraw its support for strong digital trade rules—proposed earlier by the United States—in the context of negotiations at the World Trade Organization (WTO) for an agreement on e-commerce (known as the Joint Statement Initiative on e-commerce). USTR took a similar, fumbling approach to digital trade in negotiations for the Indo-Pacific Economic Framework’s trade pillar, which was aimed at offering the region an alternative to China’s growing economic influence. Rather than secure strong digital provisions that aligned with many framework partners’ aspirations, the U.S. paused discussions in this space, abandoning policies that large, bipartisan majorities in Congress had enshrined in U.S. law. This is an unforced error that will have enormous consequences.

These haphazard decisions are being driven by a faction of fringe interests that have long opposed trade and pro-growth policies. They are attempting to hijack sound trade policy by arguing that Congress is tying its hands to regulate in the future, ignoring the fact that Congress has long ensured trade agreements leave appropriate breathing room for future policy considerations. Yet, these fringe groups argue that it’s in the U.S. national interest to cut off data flows and allow countries around the world to discriminate against and force leading American companies to turn over intellectual property.

The United States has long opposed such an agenda. Instead, policymakers have supported digital trade because they understood that data flows are critical to businesses of all sizes and across sectors, from autos, agriculture, pharmaceuticals, medical devices, and aerospace to services like energy, finance, IT, and telecommunications. USTR has defended American companies against discrimination and has pushed back on tech transfer. It is not too late to change course. The annexed “Global Digital Policy Declaration” offers widely supported principles to guide this process.

Congress has made clear its understanding that the “U.S. can regulate companies within our borders without giving foreign countries, including our adversaries, the impression that the United States will no longer protect our industries and workers against discrimination.”⁸ A broad range of stakeholders across the business community and civil society have demonstrated that the current U.S. approach is ill-devised and short-sighted. U.S. allies are looking to the U.S. to return to a position of leadership on digital trade because they know that abandoning such an approach will leave their economies vulnerable to reduced investment and their companies exposed to the same harmful practices that are increasingly targeting American companies.

It is incumbent upon the administration to urgently heed these calls for a return to U.S. leadership.

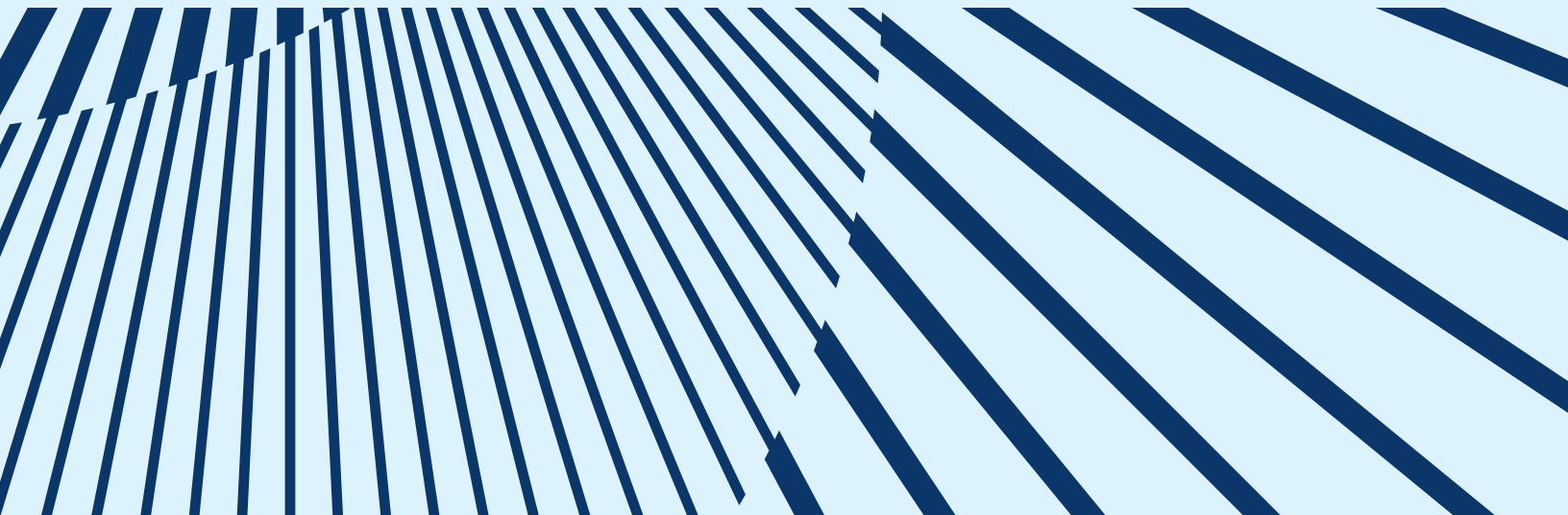
In sum, the United States finds itself at a moment of promise and peril on digital trade. Export opportunities for digitally tradeable services are expanding rapidly, and the United States is well-positioned to build on its formidable advantages in these areas. However, these opportunities are endangered by the spread of digital protectionism and the accumulation of discriminatory digital rules that often target American firms. Failure to address these challenges or recognize the consequences to U.S. companies and workers has compounded the problem.

The United States must change course and resume its position of leadership on digital trade. The case for American leadership on digital trade is strong: It is imperative that the United States push forward a vision for digital trade that secures these opportunities for American workers and consumers—and U.S. companies of all sectors and sizes.

8 Digital Trade Caucus letter to Ambassador Tai, November 16, 2023

Appendix I

Global Digital Policy Declaration





Global Digital Policy Declaration

1. Cross-Border Data Flows

The ability to move data across borders—and access information across borders—is essential to the 21st century economy. No company, regardless of sector, can do business, let alone engage in international trade, without the ability to transfer data. The free flow of data is essential to the creation of global value chains that increase efficiency and permit companies of all sizes to access the global market. The worrisome proliferation of data localization measures around the globe is counterproductive to data protection and poses a threat to economic growth and new market opportunities. To counter the spread of digital trade barriers, policymakers need to commit to support the free flow of data internationally.

2. Data Protection

The need to protect data and respect privacy is not in dispute. Privacy protection means different things to different people in different contexts. Prioritizing protection of personal data at the expense of legitimate uses of those data only serves to harm consumers and limit innovation. An optimal regulatory model avoids a one-size-fits-all approach to data protection in favor of a more nuanced approach that recognizes differences among industries in their use of data, enables legitimate business uses of personal data, empowers consumers to make informed choices, and enables cross-border data flows.

3. Data Governance & Innovation

Data is central to the digital economy—and so are the laws, regulations, and standards that govern how data is collected and used. Data drives innovation, which in turn promotes economic growth and rising incomes. It is imperative that governments recognize that data is a resource companies create through substantial investments—it is made, not found—and it enhances competition in the marketplace. Governments should refrain from imposing onerous data sharing, access, ownership, and other policies to regulate non-personal data.

4. Promote Trust and Innovation in Artificial Intelligence

Artificial intelligence is an important contributor to the global digital economy, and fostering public trust and trustworthiness in AI technologies is necessary to advance its responsible development, deployment, and use. Governments should work together in this rapidly evolving sector and commit to flexible, risk-based frameworks that encourage AI innovation and collaborate across borders to advance sound and interoperable practices. When appropriately regulated, AI has the potential to act as a force for good, tackling challenges and spurring economic growth for the benefit of consumers, businesses, and society.

5. Foster Sound Regulatory Environments

Regulation in response to the digital transformation of the economy is a given—industries recognize this, and society demands it. However, careful deliberation is essential to well-informed regulatory decisions. New regulations, designed with flexibility to account for new opportunities and challenges, might be necessary as the digital economy develops. However, it is equally possible that existing regulatory frameworks will remain effective in mitigating potential risks or, conversely, hinder



Global Digital Policy Declaration

incumbent economic actors, spurring the need for less regulation due to increased competition. In all cases, rulemaking can only be adopted after a deliberative and consultative process governed by good regulatory practices that allow businesses and workers to trade, invest, and innovate with confidence.

6. Non-Discrimination

The principle of non-discrimination is foundational to any trade agreement—digital or otherwise. Companies from countries with a demonstrated commitment to open markets and nondiscriminatory rules have made greater strides in the creation and development of new digital products than other countries. Companies that have succeeded in bringing outstanding products to market should not be unfairly placed at a competitive disadvantage as punishment for their success; nor should countries whose policy environment fosters such success be subject to discriminatory treatment.

7. Ban Forced Technology Transfers and Ensure Technology Choice

Forced localization, local content requirements, and compelling technology transfer as conditions of market access are discriminatory in nature and violate the standards of the global rules-based trading system. These policies deter investment, stifle innovation, and deprive an economy of the transformative benefits of digital products and services. Further, companies should not be forced to transfer their technology—including source code and proprietary algorithms—to competitors or governments. Companies should be able to rely upon technologies they deem optimal for their business operations and not be limited to local and at times less competitive technologies.

8. Advance Risk-Based Industry Solutions to Cybersecurity

Cyberattacks undermine trust in an economy that is increasingly reliant on technology. Governments and business agree that international law applies to cyberspace, and applying that law is essential to an open, interoperable, secure, and reliable information and communications infrastructure that supports international commerce, strengthens international security, and fosters free expression and innovation. Governments that view the private sector as a valued partner and engage in deep collaboration across borders are best positioned to safeguard their citizens and their economies. To respond to the fast-changing threat landscape, policies need to focus on flexible, risk-based approaches to cybersecurity that leverage international standards and frameworks, enabling the private sector to develop solutions that address specific cyber needs and scale them across national borders. Encryption is increasingly seen as a valuable tool to enhance privacy and security in the digital ecosystem, and policies need to support it. Encryption policies and procedures should be technology neutral, reasonable, and fully capture views across multiple sectors of the business community.

9. Abide by Market-Driven International Standards

Standards are at the heart of digital products and play a growing role in digital services. Far too often, government policies fail to recognize the trade facilitating, self-regulatory attributes of a private-sector market approach to standards development in recognized international standards bodies and consortia. Governments should advance standards policies that support open and competitive markets where companies can compete on the merits. Standards development led by the private sector is the best way to promote common, technically sound approaches that deliver technology solutions and achieve policy objectives. Such standards should be voluntary, open, transparent, globally recognized, consensus-based, and technology-neutral.



Global Digital Policy Declaration

10. Prioritize Internet Access, Consumer Choice, and Good Governance

Governments around the world are making increased investments in digital infrastructure. While more investment is needed, unencumbered access to the Internet and a competitive, interoperable, and inclusive online environment is critical to economic and social development. The Internet is the modern marketplace, and an open Internet allows companies and customers to reach one another on a global scale. Government limitations that restrict barriers to legitimate commerce only serve to constrain the power of the Internet to support sustainable and inclusive economic growth. At the same time, safeguards need to be in place to ensure that online platforms and marketplaces can operate at scale to host a wide range of lawful speech and commerce.

11. Protect Intellectual Property

The digital economy is home to creative minds that bring forth amazing products and services. Innovation and creativity drive growth, investment, and competition. In our rapidly evolving digital age, protection for cutting-edge digital products and services is critical. Patents, copyrights, trademarks, and trade secrets (including proprietary algorithms) all play central roles in technological competitiveness, protecting jobs and encouraging growth as businesses of all sizes can engage in trade in digital goods and services. This enables private sector investment in long-term, high-risk, resource intensive projects that advance the state of the art.

12. Modernize Customs for the Digital Era

Small business and e-commerce are huge drivers of economic growth and job creation for every economy. Antiquated, burdensome, complex, and costly customs procedures make it difficult for businesses to compete by slowing delivery times and raising transaction costs. Modern approaches to customs that address this problem by raising de minimis thresholds, providing more efficient clearance for low value shipments, and streamlining customs procedures will support supply chains that increase economic competitiveness. Trade agreements should continue to prohibit customs duties on digital products, which is especially useful to small and mid-sized businesses that would not be able to compete on a global scale if they were required to pay those duties.

13. Improve Trade Facilitation with Digital Technology

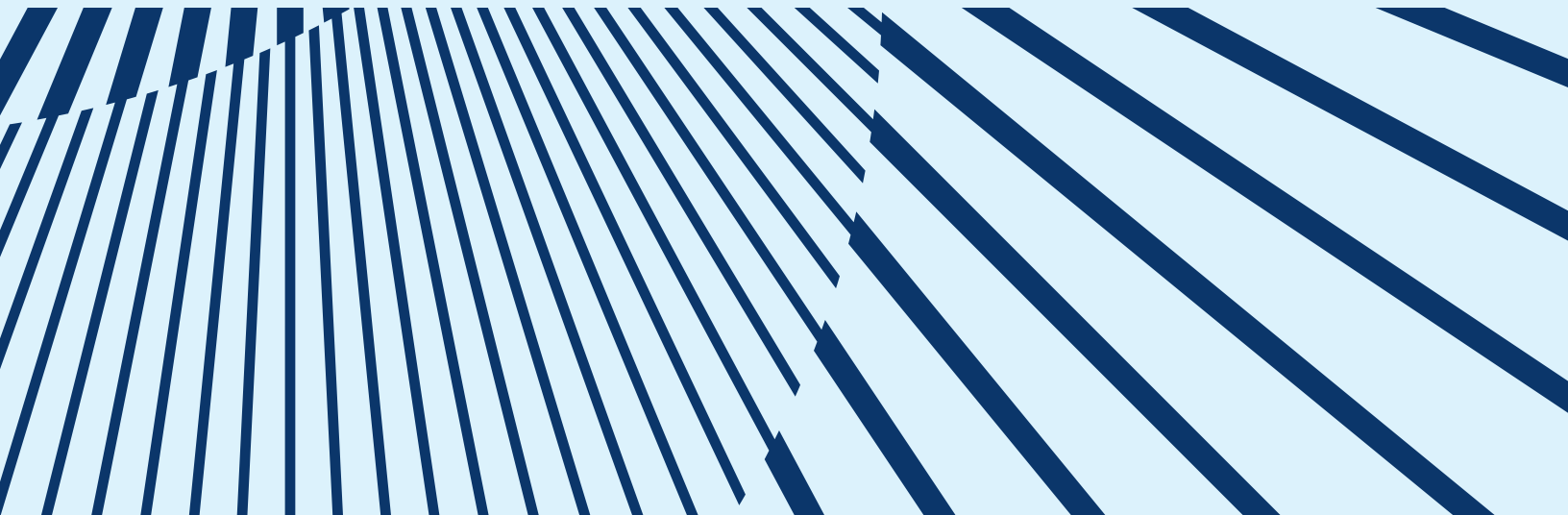
Digital trade is only possible with the advent of paperless trade, interoperable payment systems, and secure authentication methods. Digital trade agreements should embrace paperless trade since it reduces administrative barriers across borders, which maximizes the benefits of trade and foreign investment for all parties. Similarly, countries should work to improve e-invoicing and e-payment systems to ensure that they are interoperable so that the processing of payments remains efficient and reliable. Lastly, parties must agree on standards for electronic signature and authentication methods to protect consumers as well as transactions in the e-marketplace.

14. Seek Intergovernmental Cooperation and Accountability

Connectivity is at the heart of the digital economic revolution. This connectivity is a key ingredient in the rising tide of international trade and investment that is boosting incomes and the creation of good jobs. In this context, policy leadership within governments and among governments is essential to securing our shared prosperity. From international forums to bilateral dialogues and trade agreements, governments must make high-standard commitments and agree to be held accountable to them.

Appendix II

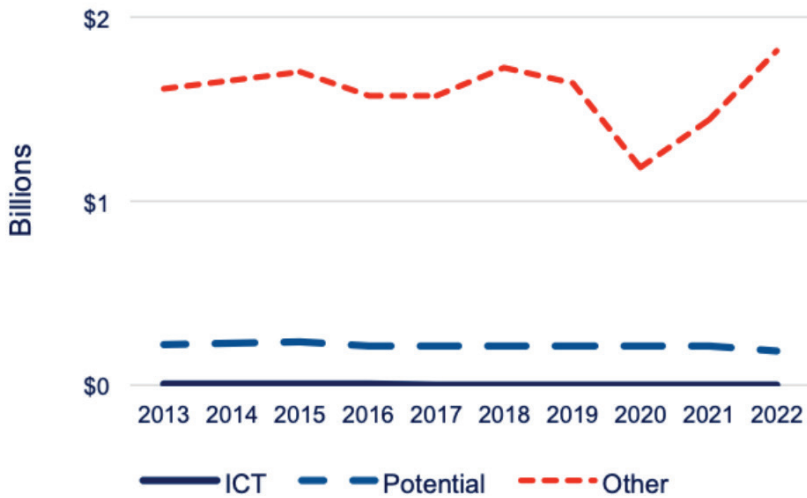
State Digital Trade One-Pagers





Alaska and Digital Trade

Alaska Services Exports, 2013-2022



Potentially ICT-enabled services exports fell from \$224 million to \$186 million (-17%), but still supported 654 direct and 422 indirect jobs in 2022.

ICT services exports from Alaska are negligible.

Exports of other services grew from \$1.62 billion in 2013 to \$1.65 billion in 2019 (2%). They fell sharply due to Covid-19, but Alaska is the only state where exports of non-digitally tradeable services are above their 2019 level.

Alaska's digitally tradeable services exports supported 654 direct and 422 indirect American jobs in 2022.

Top Markets for Alaska Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$0.1	\$82	\$83
Asia & Pacific (ex. China)	\$0.0	\$36	\$36
North America	\$0.1	\$29	\$29
Central & South America	\$0.3	\$17	\$17
China	\$0.0	\$11	\$11
Middle East & Africa	\$0.0	\$10	\$10

Europe was Alaska's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Alaska exports of potentially ICT-enabled services to Ireland grew from \$7.6 million in 2013 to \$19 million (+144%) in 2022.

The "Digital Dozen" accounted for \$77 million out of Alaska's \$186 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Alaska, 2022 (\$M)

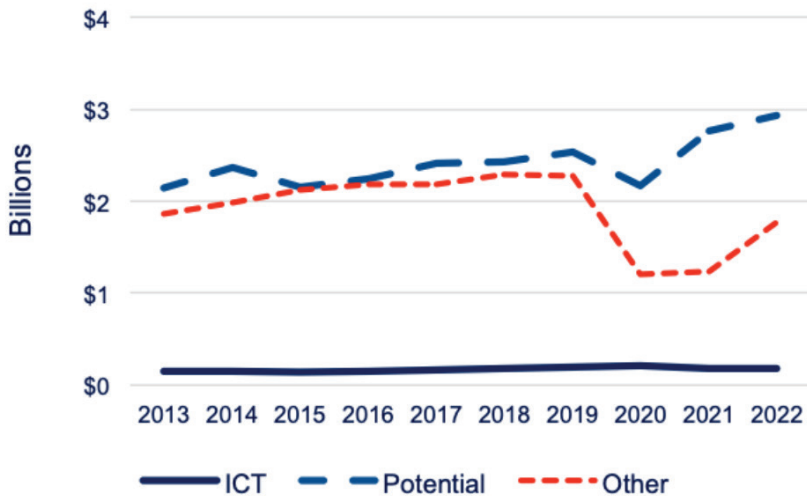
Type (ICT in bold)	Total
Business Management and Consulting Services	\$43
Payments for Trademarks	\$40
Architectural, Engineering, and Misc. Technical Services	\$34
Implicit Financial Services	\$24
Misc. Personal, Cultural, and Recreational Services	\$20
Other	\$26

Business management and consulting services are Alaska's top potentially ICT-enabled services export, but fell from \$50 million in 2013 to \$43 million in 2022 (-14%).



Alabama and Digital Trade

Alabama Services Exports, 2013-2022



ICT services exports grew from \$145 million in 2013 to \$180 million in 2022 (24%), supporting 510 direct and 370 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$2.1 billion to \$2.9 billion (37%), supporting 7,908 direct and 4,985 indirect jobs in 2022.

Exports of other services grew from \$1.9 billion in 2013 to \$2.3 billion in 2019 (22%), before falling sharply due to Covid-19. They have not yet fully recovered.

Alabama's digitally tradeable services exports supported 8,418 direct and 5,355 indirect American jobs in 2022.

Top Markets for Alabama Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$72	\$1,391	\$1,463
Asia & Pacific (ex. China)	\$45	\$575	\$621
North America	\$29	\$353	\$383
Central & South America	\$21	\$347	\$368
Middle East & Africa	\$3.7	\$142	\$146
China	\$8.2	\$125	\$133

Europe was Alabama's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Alabama exports of potentially ICT-enabled services to India grew from \$23 million in 2013 to \$53 million (+132%) in 2022.

The "Digital Dozen" accounted for \$1.3 billion out of Alabama's \$3.1 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Alabama, 2022 (\$M)

Type (ICT in bold)	Total
Credit-Related Services	\$440
Misc. Financial Services	\$417
Implicit Financial Services	\$380
Royalties from Industrial Processes	\$351
Payments for Trademarks	\$203
Other	\$1,326

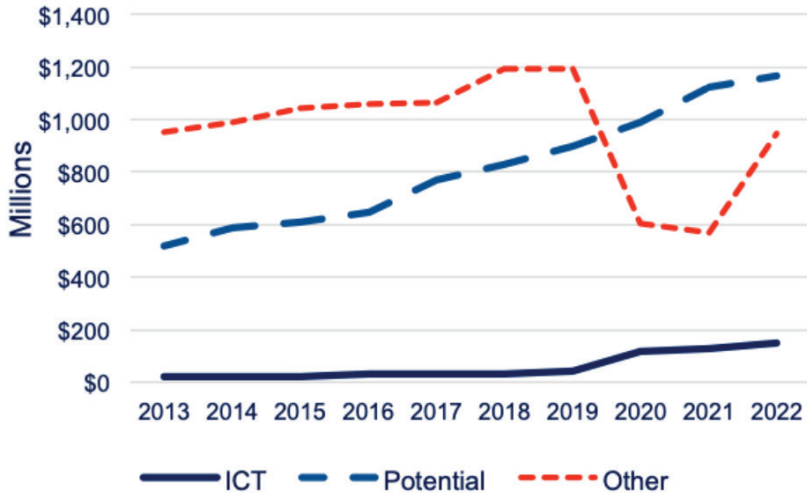
Computer software services are the top ICT services export, growing from \$103 million in 2013 to \$138 million in 2022 (34%).

Credit-related services are Alabama's top potentially ICT-enabled services export, growing from \$312 million in 2013 to \$440 million in 2022 (41%).



Arkansas and Digital Trade

Arkansas Services Exports, 2013-2022



ICT services exports grew from \$22 million in 2013 to \$147 million in 2022 (573%), supporting 226 direct and 420 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$517 million to \$1.2 billion (126%), supporting 3,018 direct and 2,200 indirect jobs in 2022.

Exports of other services grew from \$953 million in 2013 to \$1.2 billion in 2019 (25%), before falling sharply due to Covid-19. They have not yet fully recovered.

Arkansas' digitally tradeable services exports supported 3,244 direct and 2,619 indirect American jobs in 2022.

Top Markets for Arkansas Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$72	\$563	\$635
Asia & Pacific (ex. China)	\$30	\$212	\$242
North America	\$22	\$159	\$181
Central & South America	\$13	\$149	\$162
China	\$4.5	\$48	\$52
Middle East & Africa	\$4.2	\$37	\$41

Europe was Alaska's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Alaska exports of potentially ICT-enabled services to Ireland grew from \$7.6 million in 2013 to \$19 million (+144%) in 2022.

The "Digital Dozen" accounted for \$77 million out of Alaska's \$186 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Arkansas, 2022 (\$M)

Type (ICT in bold)	Total
Misc. Financial Services	\$232
Implicit Financial Services	\$213
Royalties from Industrial Processes	\$151
Payments for Trademarks	\$125
Insurance Services	\$99
Other	\$496

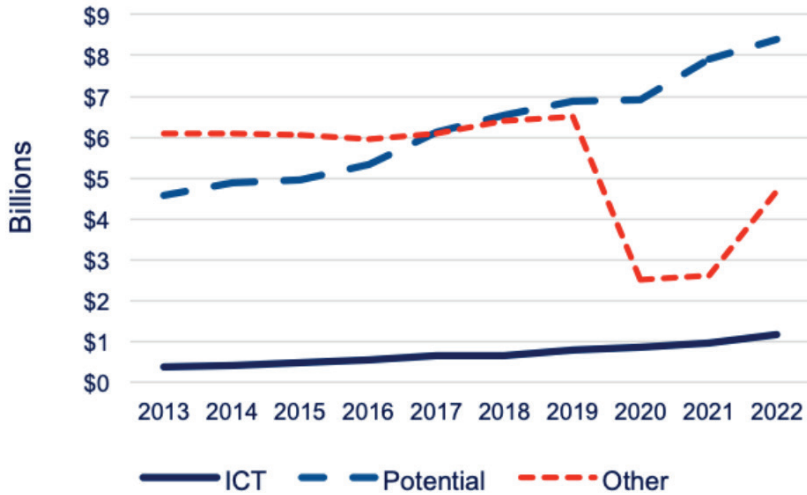
Misc. computer services are the top ICT services export, growing from \$3.6 million in 2013 to \$73 million in 2022 (1,901%).

Misc. financial services are Arkansas' top potentially ICT-enabled services export, growing from \$96 million in 2013 to \$232 million in 2022 (141%).



Arizona and Digital Trade

Arizona Services Exports, 2013-2022



ICT services exports grew from \$366 million in 2013 to \$1.2 billion in 2022 (221%), supporting 2,203 direct and 2,411 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$4.6 billion to \$8.4 billion (84%), supporting 25,508 direct and 16,281 indirect jobs in 2022.

Exports of other services grew from \$6.1 billion in 2013 to \$6.5 billion in 2019 (7%), before falling sharply due to Covid-19. They have not yet fully recovered.

Arizona's digitally tradeable services exports supported 27,710 direct and 18,692 indirect American jobs in 2022.

Top Markets for Arizona Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$510	\$4,553	\$5,062
Asia & Pacific (ex. China)	\$270	\$1,607	\$1,877
North America	\$159	\$819	\$978
Central & South America	\$161	\$746	\$907
Middle East & Africa	\$45	\$332	\$377
China	\$30	\$342	\$372

Europe was Arizona's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Arizona exports of potentially ICT-enabled services to Ireland grew from \$343 million in 2013 to \$1.2 billion (+241%) in 2022.

The "Digital Dozen" accounted for \$3.6 billion out of Arizona's \$10 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Arizona, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$1,991
Royalties from Industrial Processes	\$1,421
Credit-Related Services	\$995
Misc. Financial Services	\$884
Research and Development and Testing Services	\$729
Other	\$3,558

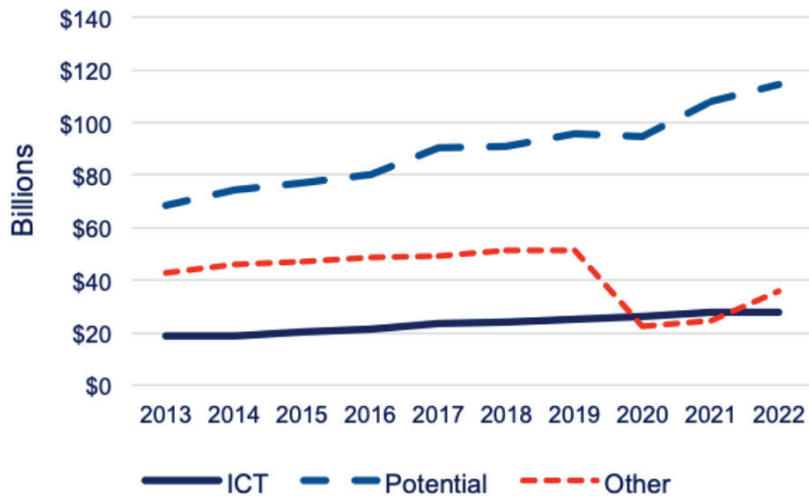
Computer software services are the top ICT services export, growing from \$69 million in 2013 to \$341 million in 2022 (393%).

Business management and consulting services are Arizona's top potentially ICT-enabled services export, growing from \$826 million in 2013 to \$2.0 billion in 2022 (141%).



California and Digital Trade

California Services Exports, 2013-2022



ICT services exports grew from \$19 billion in 2013 to \$28 billion in 2022 (49%), supporting 54,630 direct and 51,772 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$68 billion to \$115 billion (68%), supporting 304,677 direct and 244,048 indirect jobs in 2022.

Exports of other services grew from \$43 billion in 2013 to \$51 billion in 2019 (20%), before falling sharply due to Covid-19. They have not yet fully recovered.

California's digitally tradeable services exports supported 359,307 direct and 295,820 indirect American jobs in 2022.

Top Markets for California Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$12,549	\$60,977	\$73,526
Asia & Pacific (ex. China)	\$7,450	\$21,030	\$28,480
Central & South America	\$2,797	\$15,065	\$17,861
North America	\$3,220	\$10,601	\$13,821
China	\$1,344	\$3,536	\$4,880
Middle East & Africa	\$568	\$3,519	\$4,087

Europe was California's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

California exports of potentially ICT-enabled services to Singapore grew from \$1.5 billion in 2013 to \$7.4 billion (+381%) in 2022.

The "Digital Dozen" accounted for \$52 billion out of California's \$143 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from California, 2022 (\$M)

Type (ICT in bold)	Total
Research and Development and Testing Services	\$19,158
Business Management and Consulting Services	\$18,641
Royalties from Industrial Processes	\$16,599
Financial Management and Advisory Services	\$14,606
Royalties from Computer Software	\$11,945
Other	\$61,728

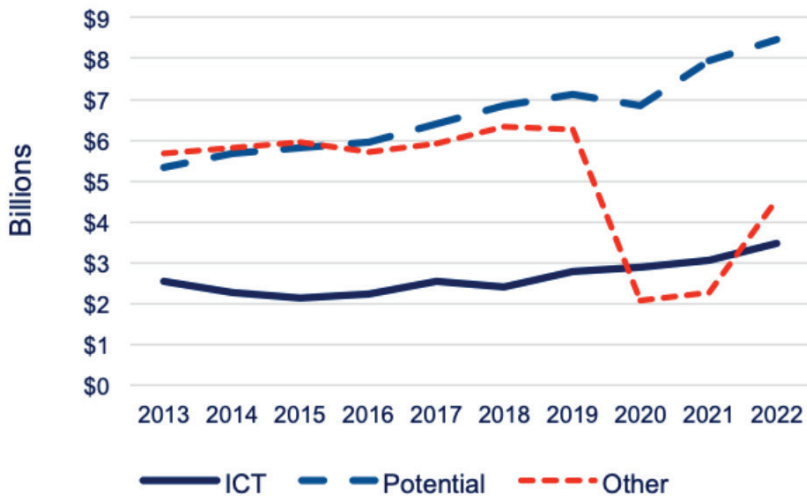
Royalties from computer software are the top ICT services export, but fell from \$13 billion in 2013 to \$12 billion in 2022 (-5%).

Research and development and testing services are California's top potentially ICT-enabled services export, growing from \$8.2 billion in 2013 to \$19 billion in 2022 (134%).



Colorado and Digital Trade

Colorado Services Exports, 2013-2022



ICT services exports grew from \$2.6 billion in 2013 to \$3.5 billion in 2022 (36%), supporting 7,346 direct and 6,825 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$5.3 billion to \$8.5 billion (59%), supporting 27,624 direct and 19,180 indirect jobs in 2022.

Exports of other services grew from \$5.7 billion in 2013 to \$6.2 billion in 2019 (10%), before falling sharply due to Covid-19. They have not yet fully recovered.

Colorado's digitally tradeable services exports supported 34,970 direct and 26,005 indirect American jobs in 2022.

Top Markets for Colorado Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$1,570	\$4,337	\$5,907
Asia & Pacific (ex. China)	\$941	\$1,656	\$2,597
North America	\$420	\$863	\$1,284
Central & South America	\$296	\$968	\$1,264
China	\$170	\$291	\$461
Middle East & Africa	\$70	\$356	\$426

Europe was Colorado's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Colorado exports of potentially ICT-enabled services to Ireland grew from \$367 million in 2013 to \$1.3 billion (+243%) in 2022.

The "Digital Dozen" accounted for \$4.4 billion out of Colorado's \$12 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Colorado, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Service	\$2,433
Royalties from Computer Software	\$1,350
Computer Software Services	\$1,337
Research and Development and Testing Services	\$1,195
Financial Management and Advisory Services	\$693
Other	\$4,933

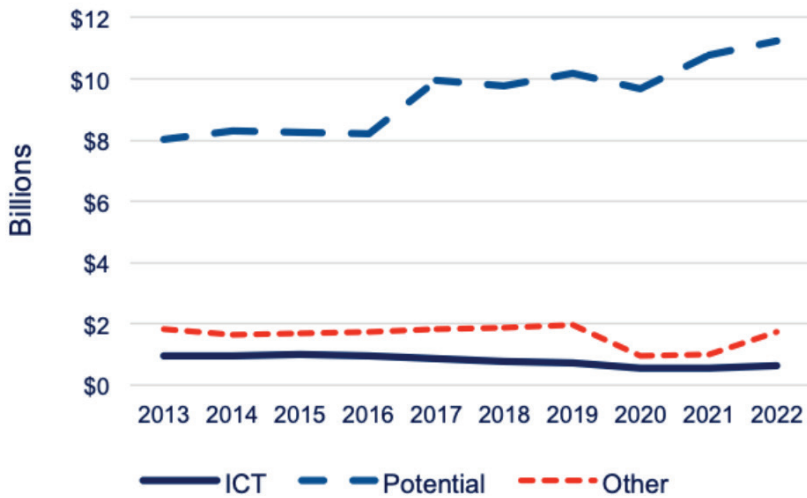
Royalties from computer software are the top ICT services export, but fell from \$1.7 billion in 2013 to \$1.3 billion in 2022 (-21%).

Business management and consulting services are Colorado's top potentially ICT-enabled services export, growing from \$497 million in 2013 to \$2.4 billion in 2022 (389%).



Connecticut and Digital Trade

Connecticut Services Exports, 2013-2022



ICT services exports fell from \$937 million in 2013 to \$638 million in 2022 (-32%), supporting 1,060 direct and 957 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$8.0 billion to \$11 billion (40%), supporting 25,078 direct and 25,274 indirect jobs in 2022.

Exports of other services grew from \$1.8 billion in 2013 to \$2.0 billion in 2019 (8%), before falling due to Covid-19. They have not yet fully recovered.

Connecticut's digitally tradeable services exports supported 26,137 direct and 26,231 indirect American jobs in 2022.

Top Markets for Connecticut Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$237	\$4,442	\$4,679
Central & South America	\$152	\$3,605	\$3,756
Asia & Pacific (ex. China)	\$124	\$1,762	\$1,886
North America	\$87	\$898	\$985
Middle East & Africa	\$17	\$286	\$303
China	\$20	\$234	\$255

Europe was Connecticut's top market for digitally tradeable services, followed by Central & South America.

Connecticut exports of potentially ICT-enabled services to Singapore grew from \$137 million in 2013 to \$509 million (+272%) in 2022.

The "Digital Dozen" accounted for \$3.9 billion out of Connecticut's \$12 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Connecticut, 2022 (\$M)

Type (ICT in bold)	Total
Financial Management and Advisory Services	\$4,826
Research and Development and Testing Services	\$1,076
Business Management and Consulting Services	\$1,049
Insurance Services	\$922
Royalties from Industrial Processes	\$646
Other	\$3,349

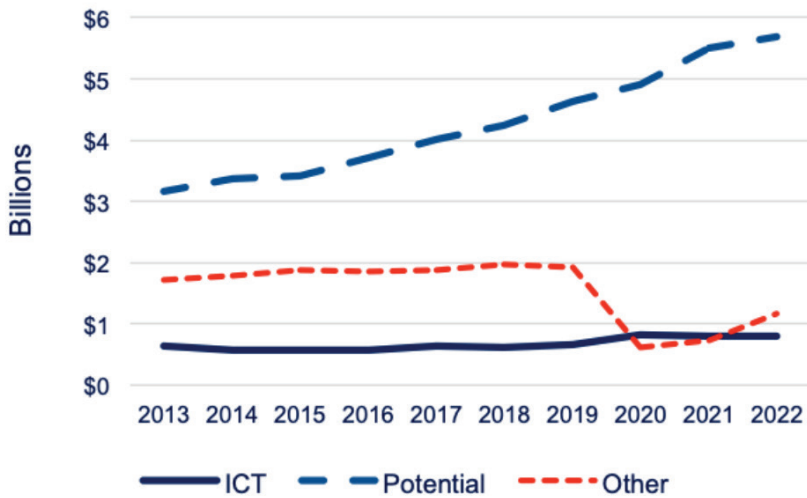
Telecommunications services are the top ICT services export, but fell from \$497 million in 2013 to \$302 million in 2022 (-39%).

Financial management and advisory services are Connecticut's top potentially ICT-enabled services export, growing from \$3.3 billion in 2013 to \$4.8 billion in 2022 (46%).



District of Columbia and Digital Trade

District of Columbia Services Exports, 2013-2022



ICT services exports grew from \$631 million in 2013 to \$803 million in 2022 (27%), supporting 1,655 direct and 1,322 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$3.2 billion to \$5.7 billion (80%), supporting 17,223 direct and 13,560 indirect jobs in 2022.

Exports of other services grew from \$1.7 billion in 2013 to \$1.9 billion in 2019 (12%), before falling sharply due to Covid-19. They have not yet fully recovered.

Washington's digitally tradeable services exports supported 18,878 direct and 14,882 indirect American jobs in 2022.

Top Markets for District of Columbia Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$314	\$2,870	\$3,184
Asia & Pacific (ex. China)	\$184	\$1,015	\$1,199
Central & South America	\$144	\$795	\$940
North America	\$110	\$663	\$773
Middle East & Africa	\$19	\$215	\$234
China	\$32	\$125	\$157

Europe was Washington's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

District of Columbia exports of potentially ICT-enabled services to Ireland grew from \$240 million in 2013 to \$839 million (+249%) in 2022.

The "Digital Dozen" accounted for \$2.5 billion out of Washington's \$6.5 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from District of Columbia, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$2,166
Legal Services	\$818
Financial Management and Advisory Services	\$683
Advertising	\$642
Research and Development and Testing Services	\$388
Other	\$1,791

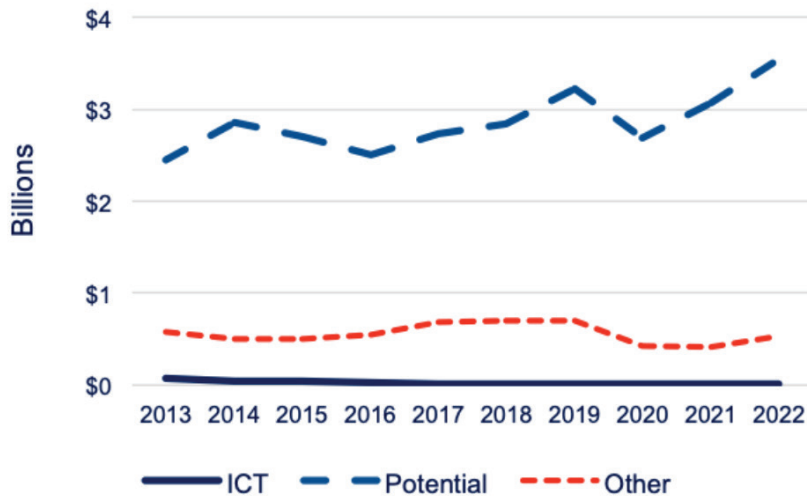
Computer software services are the top ICT services export, growing from \$119 million in 2013 to \$334 million in 2022 (180%).

Business management and consulting services are Washington's top potentially ICT-enabled services export, growing from \$886 million in 2013 to \$2.2 billion in 2022 (145%).



Delaware and Digital Trade

Delaware Services Exports, 2013-2022



ICT services exports fell from \$76 million in 2013 to \$14 million in 2022 (-82%), supporting 43 direct and 32 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$2.5 billion to \$3.5 billion (44%), supporting 8,743 direct and 4,443 indirect jobs in 2022.

Exports of other services grew from \$578 million in 2013 to \$704 million in 2019 (22%), before falling sharply due to Covid-19. They have not yet fully recovered.

Delaware's digitally tradeable services exports supported 8,786 direct and 4,475 indirect American jobs in 2022.

Top Markets for Delaware Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$6.2	\$1,403	\$1,409
Asia & Pacific (ex. China)	\$3.3	\$782	\$785
Central & South America	\$0.9	\$544	\$545
North America	\$2.8	\$354	\$357
Middle East & Africa	\$0.1	\$298	\$298
China	\$0.7	\$160	\$160

Europe was Delaware's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Delaware exports of potentially ICT-enabled services to India grew from \$27 million in 2013 to \$79 million (+194%) in 2022.

The "Digital Dozen" accounted for \$1.5 billion out of Delaware's \$3.6 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Delaware, 2022 (\$M)

Type (ICT in bold)	Total
Credit-Related Services	\$2,135
Misc. Financial Services	\$312
Implicit Financial Services	\$234
Business Management and Consulting Services	\$152
Insurance Services	\$145
Other	\$579

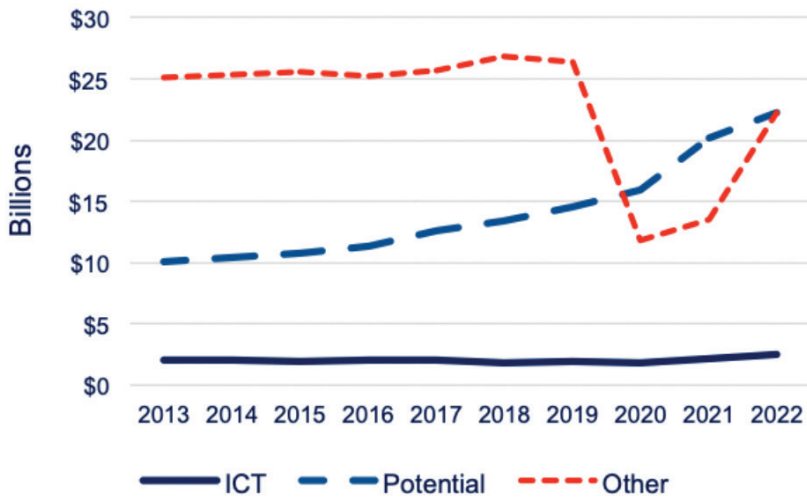
Computer software services are the top ICT services export, growing from \$7.4 million in 2013 to \$12 million in 2022 (68%).

Credit-related services are Delaware's top potentially ICT-enabled services export, growing from \$1.2 billion in 2013 to \$2.1 billion in 2022 (82%).



Florida and Digital Trade

Florida Services Exports, 2013-2022



ICT services exports grew from \$2.0 billion in 2013 to \$2.5 billion in 2022 (21%), supporting 5,063 direct and 4,953 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$10 billion to \$22 billion (122%), supporting 79,717 direct and 54,559 indirect jobs in 2022.

Exports of other services grew slightly from \$25 billion in 2013 to \$26 billion in 2019 (5%), before falling sharply due to Covid-19. They have not yet fully recovered.

Florida's digitally tradeable services exports supported 84,780 direct and 59,512 indirect American jobs in 2022.

Top Markets for Florida Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$1,062	\$11,204	\$12,266
Asia & Pacific (ex. China)	\$596	\$4,090	\$4,686
Central & South America	\$301	\$2,890	\$3,191
North America	\$330	\$2,401	\$2,732
Middle East & Africa	\$59	\$892	\$951
China	\$103	\$759	\$861

Europe was Florida's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Florida exports of potentially ICT-enabled services to Ireland grew from \$580 million in 2013 to \$2.9 billion (+398%) in 2022.

The "Digital Dozen" accounted for \$9.3 billion out of Florida's \$25 billion in exports of digitally tradeable services in 2022.

Top Markets for Florida Digitally Tradeable Services, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$8,285
Financial Management and Advisory Services	\$1,865
Insurance Services	\$1,755
Misc. Business, Professional, and Technical Services	\$1,570
Legal Services	\$1,463
Other	\$9,754

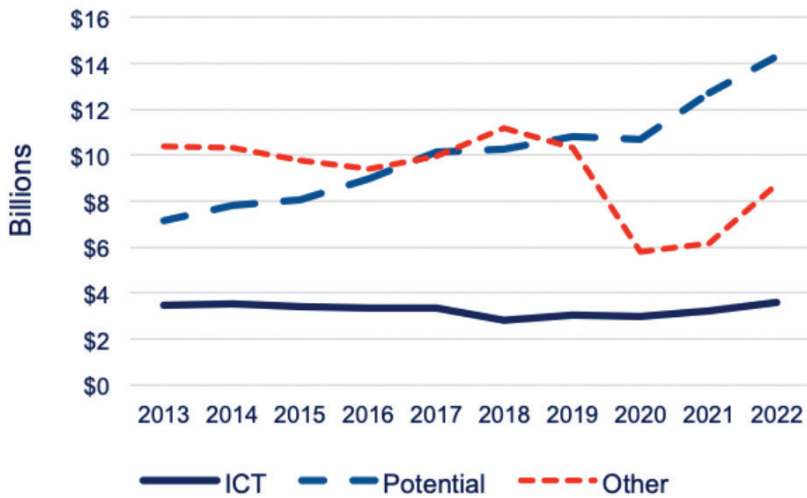
Computer software services are the top ICT services export, growing from \$209 million in 2013 to \$930 million in 2022 (346%).

Business management and consulting services are Florida's top potentially ICT-enabled services export, growing from \$2.5 billion in 2013 to \$8.3 billion in 2022 (232%).



Georgia and Digital Trade

Georgia Services Exports, 2013-2022



ICT services exports grew from \$3.5 billion in 2013 to \$3.6 billion in 2022 (3%), supporting 6,220 direct and 6,742 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$7.2 billion to \$14 billion (100%), supporting 42,668 direct and 28,756 indirect jobs in 2022.

Exports of other services were mostly flat from 2013 to 2019 before falling sharply due to Covid-19. They have not yet fully recovered.

Georgia's digitally tradeable services exports supported 48,889 direct and 35,498 indirect American jobs in 2022.

Top Markets for Georgia Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$1,554	\$6,942	\$8,497
Asia & Pacific (ex. China)	\$836	\$2,671	\$3,507
Central & South America	\$535	\$1,835	\$2,370
North America	\$451	\$1,790	\$2,242
Middle East & Africa	\$88	\$612	\$700
China	\$142	\$473	\$616

Europe was Georgia's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Georgia exports of potentially ICT-enabled services to Singapore grew from \$169 million in 2013 to \$594 million (+251%) in 2022.

The "Digital Dozen" accounted for \$7.5 billion out of Georgia's \$18 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Georgia, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$2,925
Credit-Related Services	\$1,947
Misc. Financial Services	\$1,592
A/V Services (Personal)	\$1,137
Royalties from Computer Software	\$1,055
Other	\$9,286

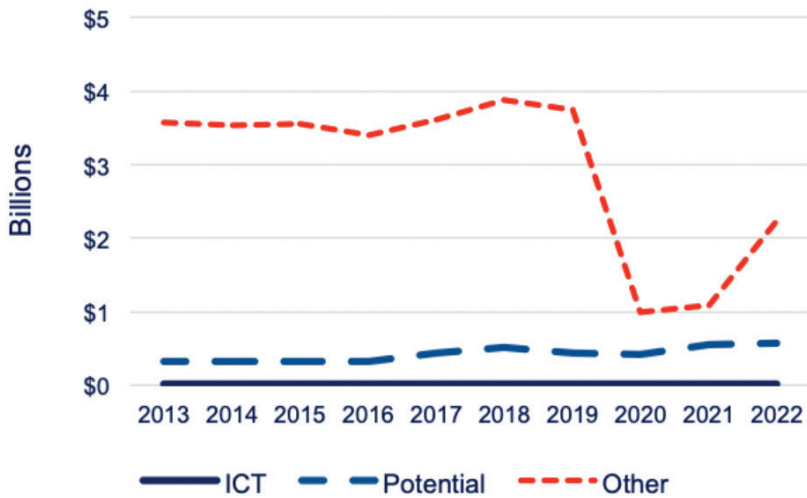
Royalties from computer software are the top ICT services export, but fell from \$1.9 billion in 2013 to \$1.1 billion in 2022 (-44%).

Business management and consulting services are Georgia's top potentially ICT-enabled services export, growing from \$1.1 billion in 2013 to \$2.9 billion in 2022 (176%).



Hawaii and Digital Trade

Hawaii Services Exports, 2013-2022



ICT services exports grew from \$12 million in 2013 to \$21 million in 2022 (77%), supporting 59 direct and 49 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$318 million to \$574 million (81%), supporting 2,024 direct and 1,313 indirect jobs in 2022.

Exports of other services grew slightly from \$3.6 billion in 2013 to \$3.7 billion in 2019 (5%), before falling sharply due to Covid-19. They have not yet fully recovered.

Hawaii's digitally tradeable services exports supported 2,083 direct and 1,362 indirect American jobs in 2022.

Top Markets for Hawaii Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$9.0	\$245	\$254
Asia & Pacific (ex. China)	\$4.8	\$118	\$123
North America	\$4.2	\$91	\$95
China	\$2.4	\$60	\$63
Central & South America	\$0.9	\$30	\$31
Middle East & Africa	\$0.1	\$28	\$28

Europe was Hawaii's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Hawaii exports of potentially ICT-enabled services to United Kingdom grew from \$33 million in 2013 to \$88 million (+164%) in 2022.

The "Digital Dozen" accounted for \$287 million out of Hawaii's \$595 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Hawaii, 2022 (\$M)

Type (ICT in bold)	Total
A/V Services (Personal)	\$86
Payments for Trademarks	\$68
Misc. Business, Professional, and Technical Services	\$61
Implicit Financial Services	\$56
Insurance Services	\$55
Other	\$268

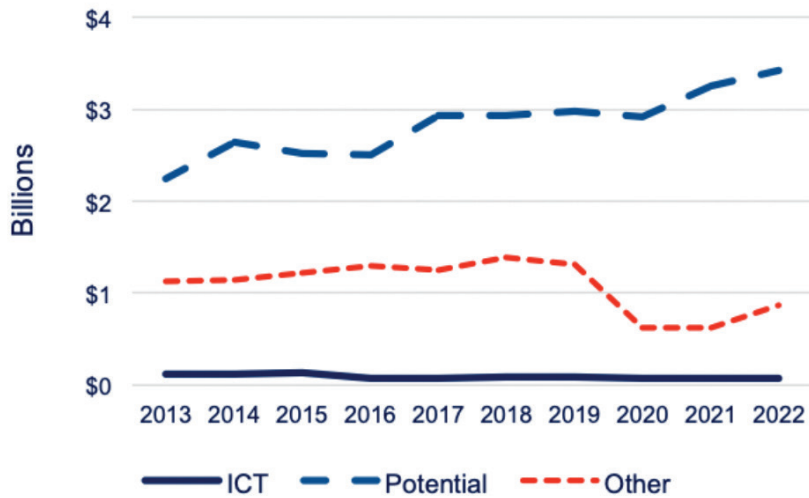
Computer software services are the top ICT services export, growing from \$8.5 million in 2013 to \$15 million in 2022 (78%).

A/V services (personal) are Hawaii's top potentially ICT-enabled services export, growing from \$22 million in 2013 to \$86 million in 2022 (289%).



Iowa and Digital Trade

Iowa Services Exports, 2013-2022



ICT services exports fell from \$125 million in 2013 to \$75 million in 2022 (-40%), but still supported 148 direct and 190 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$2.2 billion to \$3.4 billion (53%), supporting 9,307 direct and 5,123 indirect jobs in 2022.

Exports of other services grew from \$1.1 billion in 2013 to \$1.3 billion in 2019 (16%), before falling sharply due to Covid-19. They have not yet fully recovered.

Iowa's digitally tradeable services exports supported 9,455 direct and 5,312 indirect American jobs in 2022.

Top Markets for Iowa Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$35	\$1,635	\$1,669
Asia & Pacific (ex. China)	\$17	\$711	\$728
Central & South America	\$6.7	\$470	\$476
North America	\$12	\$356	\$368
China	\$2.8	\$139	\$141
Middle East & Africa	\$1.6	\$116	\$118

Europe was Iowa's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Iowa exports of potentially ICT-enabled services to United Kingdom grew from \$216 million in 2013 to \$464 million (+115%) in 2022.

The "Digital Dozen" accounted for \$1.5 billion out of Iowa's \$3.5 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Iowa, 2022 (\$M)

Type (ICT in bold)	Total
Insurance Services	\$900
Royalties from Industrial Processes	\$645
Misc. Financial Services	\$460
Implicit Financial Services	\$387
Credit-Related Services	\$287
Other	\$827

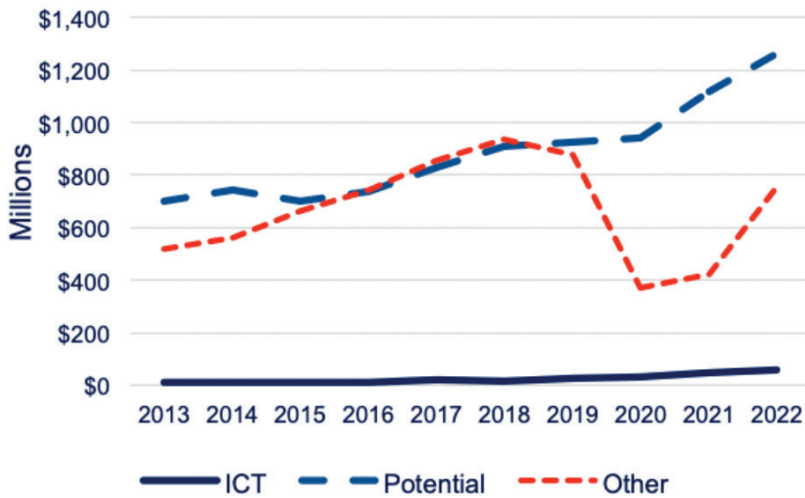
Misc. computer services are the top ICT services export, but fell from \$63 million in 2013 to \$24 million in 2022 (-62%).

Insurance services are Iowa's top potentially ICT-enabled services export, growing from \$458 million in 2013 to \$900 million in 2022 (96%).



Idaho and Digital Trade

Idaho Services Exports, 2013-2022



ICT services exports grew from \$11 million in 2013 to \$56 million in 2022 (420%), supporting 153 direct and 121 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$703 million to \$1.3 billion (80%), supporting 3,802 direct and 2,564 indirect jobs in 2022.

Exports of other services grew from \$521 million in 2013 to \$875 million in 2019 (68%), before falling sharply due to Covid-19. They have not yet fully recovered.

Idaho's digitally tradeable services exports supported 3,955 direct and 2,686 indirect American jobs in 2022.

Top Markets for Idaho Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$23	\$661	\$684
Asia & Pacific (ex. China)	\$14	\$247	\$261
North America	\$10	\$128	\$137
Central & South America	\$5.7	\$119	\$125
China	\$2.5	\$59	\$62
Middle East & Africa	\$1.0	\$48	\$49

Europe was Idaho's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Idaho exports of potentially ICT-enabled services to India grew from \$5.2 million in 2013 to \$22 million (+329%) in 2022.

The "Digital Dozen" accounted for \$483 million out of Idaho's \$1.3 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Idaho, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$285
Business Management and Consulting Services	\$158
Research and Development and Testing Services	\$158
Misc. Business, Professional, and Technical Services	\$98
Implicit Financial Services	\$85
Other	\$534

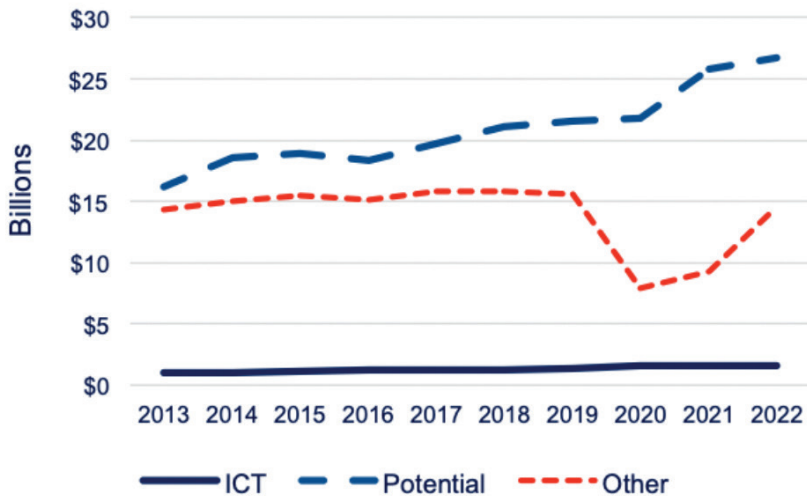
Computer software services are the top ICT services export, growing from \$1.2 million in 2013 to \$40 million in 2022 (3,214%).

Royalties from industrial processes are Idaho's top potentially ICT-enabled services export, growing from \$225 million in 2013 to \$285 million in 2022 (27%).



Illinois and Digital Trade

Illinois Services Exports, 2013-2022



ICT services exports grew from \$970 million in 2013 to \$1.5 billion in 2022 (58%), supporting 3,592 direct and 3,544 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$16 billion to \$27 billion (65%), supporting 77,275 direct and 57,213 indirect jobs in 2022.

Exports of other services grew from \$14 billion in 2013 to \$16 billion in 2019 (9%), before falling sharply due to Covid-19. They have not yet fully recovered.

Illinois' digitally tradeable services exports supported 80,867 direct and 60,757 indirect American jobs in 2022.

Top Markets for Illinois Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$671	\$13,314	\$13,985
Asia & Pacific (ex. China)	\$371	\$4,817	\$5,188
Central & South America	\$160	\$4,003	\$4,164
North America	\$232	\$2,810	\$3,042
Middle East & Africa	\$40	\$898	\$938
China	\$63	\$859	\$921

Europe was Illinois' top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Illinois exports of potentially ICT-enabled services to Singapore grew from \$397 million in 2013 to \$1.4 billion (+255%) in 2022.

The "Digital Dozen" accounted for \$11 billion out of Illinois' \$28 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Illinois, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$6,103
Royalties from Industrial Processes	\$3,157
Financial Management and Advisory Services	\$2,806
Insurance Services	\$1,835
Research and Development and Testing Services	\$1,785
Other	\$12,567

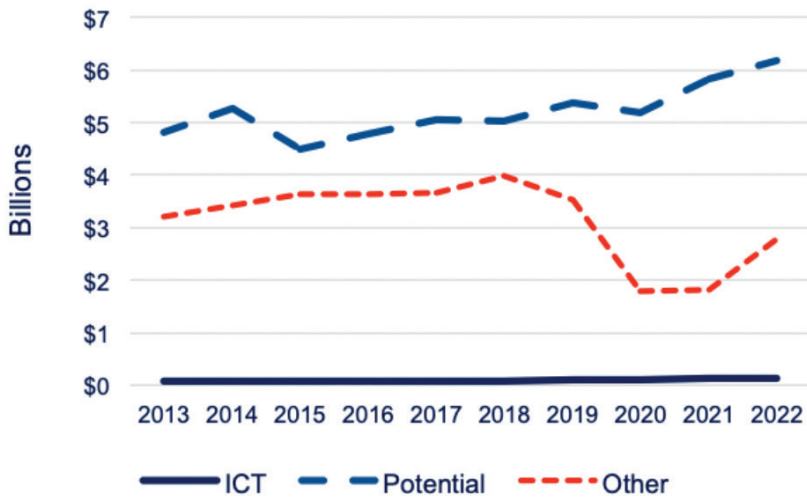
Computer software services are the top ICT services export, growing from \$365 million in 2013 to \$772 million in 2022 (111%).

Business management and consulting services are Illinois' top potentially ICT-enabled services export, growing from \$2.3 billion in 2013 to \$6.1 billion in 2022 (167%).



Indiana and Digital Trade

Indiana Services Exports, 2013-2022



ICT services exports grew from \$83 million in 2013 to \$133 million in 2022 (60%), supporting 410 direct and 287 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$4.8 billion to \$6.2 billion (28%), supporting 17,329 direct and 11,412 indirect jobs in 2022.

Exports of other services grew from \$3.2 billion in 2013 to \$3.5 billion in 2019 (10%), before falling sharply due to Covid-19. They have not yet fully recovered.

Indiana's digitally tradeable services exports supported 17,739 direct and 11,698 indirect American jobs in 2022.

Top Markets for Indiana Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$52	\$3,579	\$3,631
Asia & Pacific (ex. China)	\$34	\$1,329	\$1,362
North America	\$23	\$447	\$470
Central & South America	\$15	\$380	\$395
China	\$6.0	\$281	\$287
Middle East & Africa	\$3.1	\$159	\$162

Europe was Indiana's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Indiana exports of potentially ICT-enabled services to India grew from \$25 million in 2013 to \$85 million (+233%) in 2022.

The "Digital Dozen" accounted for \$2.1 billion out of Indiana's \$6.3 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Indiana, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$2,124
Research and Development and Testing Services	\$1,642
Insurance Services	\$625
Business Management and Consulting Services	\$479
Payments for Trademarks	\$358
Other	\$1,080

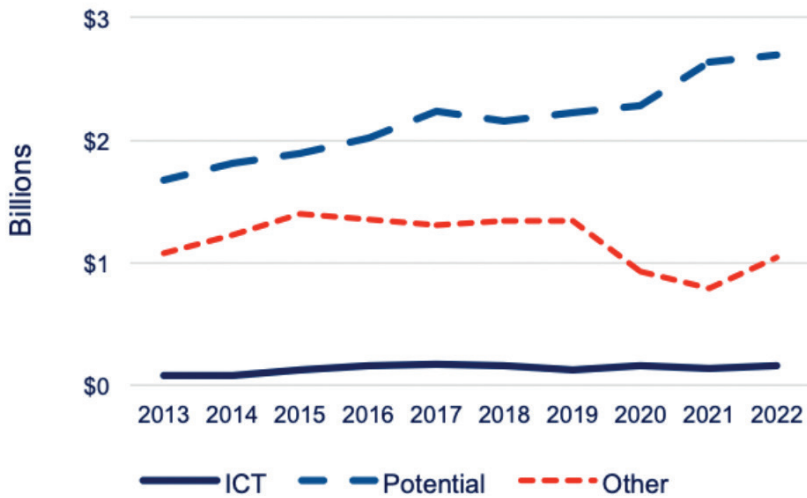
Computer software services are the top ICT services export, growing from \$38 million in 2013 to \$118 million in 2022 (215%).

Royalties from industrial processes are Indiana's top potentially ICT-enabled services export, but fell from \$2.2 billion in 2013 to \$2.1 billion in 2022 (-4%).



Kansas and Digital Trade

Kansas Services Exports, 2013-2022



ICT services exports grew from \$83 million in 2013 to \$162 million in 2022 (95%), supporting 426 direct and 340 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$1.7 billion to \$2.7 billion (61%), supporting 8,794 direct and 5,890 indirect jobs in 2022.

Exports of other services grew from \$1.1 billion in 2013 to \$1.3 billion in 2019 (25%), before falling sharply due to Covid-19. They have not yet fully recovered.

Kansas' digitally tradeable services exports supported 9,221 direct and 6,230 indirect American jobs in 2022.

Top Markets for Kansas Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$65	\$1,527	\$1,592
Asia & Pacific (ex. China)	\$38	\$528	\$567
Central & South America	\$22	\$249	\$271
North America	\$27	\$235	\$262
China	\$6.7	\$79	\$85
Middle East & Africa	\$3.5	\$74	\$77

Europe was Kansas' top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Kansas exports of potentially ICT-enabled services to Ireland grew from \$133 million in 2013 to \$490 million (+269%) in 2022.

The "Digital Dozen" accounted for \$1.0 billion out of Kansas' \$2.9 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Kansas, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$960
Research and Development and Testing Services	\$476
Royalties from Industrial Processes	\$320
Insurance Services	\$203
Payments for Trademarks	\$155
Other	\$739

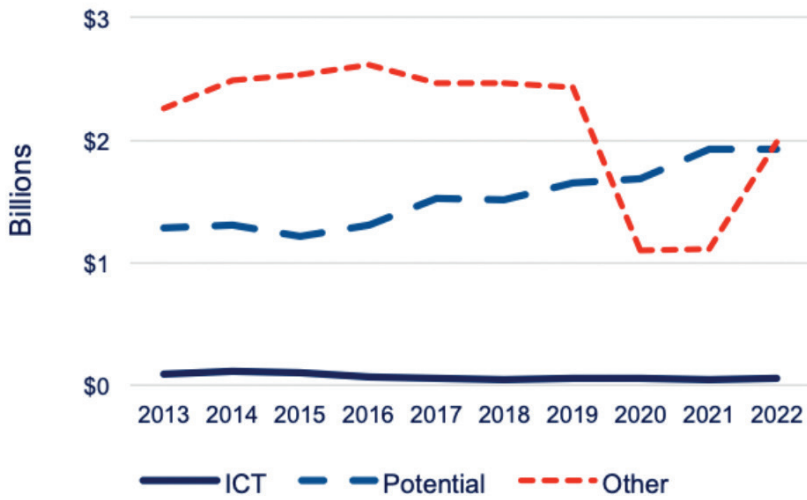
Computer software services are the top ICT services export, growing from \$27 million in 2013 to \$109 million in 2022 (300%).

Business management and consulting services are Kansas' top potentially ICT-enabled services export, growing from \$464 million in 2013 to \$960 million in 2022 (107%).



Kentucky and Digital Trade

Kentucky Services Exports, 2013-2022



ICT services exports declined from \$91 million in 2013 to \$60 million in 2022 (-34%), but still supported 124 direct and 137 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$1.3 billion to \$1.9 billion (51%), supporting 5,676 direct and 3,974 indirect jobs in 2022.

Exports of other services grew from \$2.3 billion in 2013 to \$2.4 billion in 2019 (8%), before falling sharply due to Covid-19. They have not yet fully recovered.

Kentucky's digitally tradeable services exports supported 5,801 direct and 4,111 indirect American jobs in 2022.

Top Markets for Kentucky Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$26	\$996	\$1,022
Asia & Pacific (ex. China)	\$13	\$375	\$388
North America	\$10	\$214	\$225
Central & South America	\$8.1	\$196	\$205
China	\$2.2	\$89	\$91
Middle East & Africa	\$1.0	\$57	\$58

Europe was Kentucky's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Kentucky exports of potentially ICT-enabled services to the Netherlands grew from \$48 million in 2013 to \$100 million (+109%) in 2022.

The "Digital Dozen" accounted for \$785 million out of Kentucky's \$2.0 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Kentucky, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$481
Insurance Services	\$284
Business Management and Consulting Services	\$257
Misc. Business, Professional, and Technical Services	\$202
Payments for Trademarks	\$196
Other	\$568

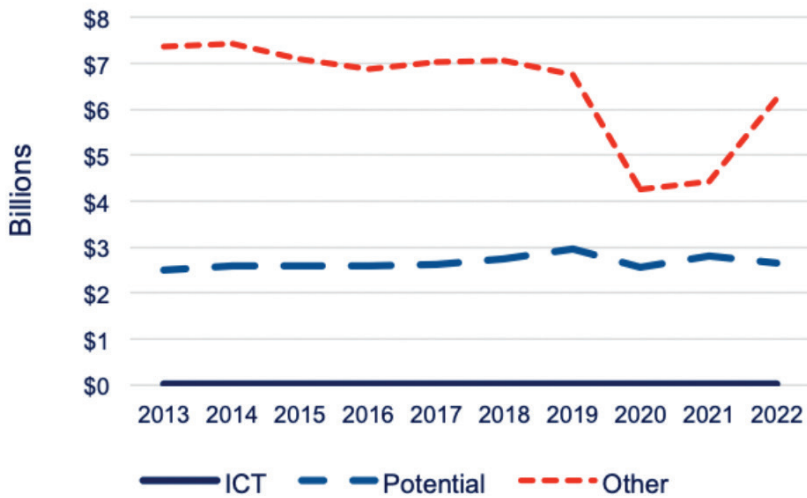
Computer software services are the top ICT services export, growing from \$11 million in 2013 to \$23 million in 2022 (115%).

Royalties from industrial processes are Kentucky's top potentially ICT-enabled services export, growing from \$432 million in 2013 to \$481 million in 2022 (11%).



Louisiana and Digital Trade

Louisiana Services Exports, 2013-2022



ICT services exports grew from \$23 million in 2013 to \$27 million in 2022 (17%), supporting 44 direct and 51 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$2.5 billion to \$2.6 billion (6%), supporting 7,615 direct and 4,971 indirect jobs in 2022.

Exports of other services declined from \$7.4 billion in 2013 to \$6.7 billion in 2019 (-8%), and then fell sharply due to Covid-19. They have not yet fully recovered.

Louisiana's digitally tradeable services exports supported 7,659 direct and 5,022 indirect American jobs in 2022.

Top Markets for Louisiana Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$11	\$1,436	\$1,446
Asia & Pacific (ex. China)	\$4.3	\$487	\$492
North America	\$4.9	\$281	\$286
Central & South America	\$5.5	\$201	\$206
China	\$0.8	\$151	\$152
Middle East & Africa	\$0.3	\$91	\$91

Europe was Louisiana's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Louisiana exports of potentially ICT-enabled services to India grew from \$20 million in 2013 to \$51 million (+162%) in 2022.

The "Digital Dozen" accounted for \$972 million out of Louisiana's \$2.7 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Louisiana, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$1,023
Business Management and Consulting Services	\$247
Payments for Trademarks	\$220
Insurance Services	\$201
Legal Services	\$196
Other	\$787

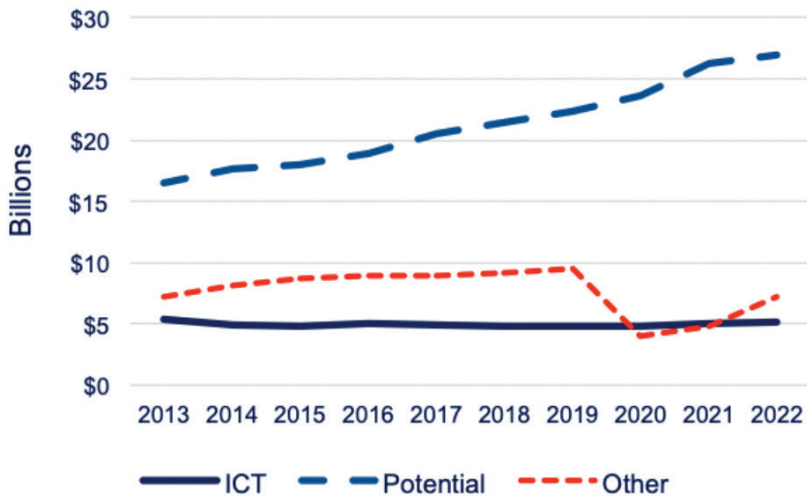
Telecommunications services are the top ICT services export, but fell from \$22 million in 2013 to \$11 million in 2022 (-50%).

Royalties from industrial processes are Louisiana's top potentially ICT-enabled services export, growing from \$976 million in 2013 to \$1.0 billion in 2022 (5%).



Massachusetts and Digital Trade

Massachusetts Services Exports, 2013-2022



ICT services exports declined from \$5.4 billion in 2013 to \$5.1 billion in 2022 (-5%), but still supported 10,344 direct and 8,781 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$16 billion to \$27 billion (64%), supporting 68,683 direct and 57,732 indirect jobs in 2022.

Exports of other services grew from \$7.2 billion in 2013 to \$9.5 billion in 2019 (32%), before falling sharply due to Covid-19. They have not yet fully recovered.

Massachusetts' digitally tradeable services exports supported 79,027 direct and 66,514 indirect American jobs in 2022.

Top Markets for Massachusetts Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$2,353	\$13,036	\$15,388
Central & South America	\$380	\$5,882	\$6,262
Asia & Pacific (ex. China)	\$1,501	\$4,657	\$6,157
North America	\$523	\$2,038	\$2,561
China	\$282	\$626	\$908
Middle East & Africa	\$83	\$740	\$823

Europe was Massachusetts' top market for digitally tradeable services, followed by Central & South America.

Massachusetts exports of potentially ICT-enabled services to Ireland grew from \$1.2 billion in 2013 to \$3.9 billion (+233%) in 2022.

The "Digital Dozen" accounted for \$10 billion out of Massachusetts' \$32 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Massachusetts, 2022 (\$M)

Type (ICT in bold)	Total
Financial Management and Advisory Services	\$7,128
Research and Development and Testing Services	\$5,114
Business Management and Consulting Services	\$5,052
Royalties from Computer Software	\$2,973
Royalties from Industrial Processes	\$2,458
Other	\$9,388

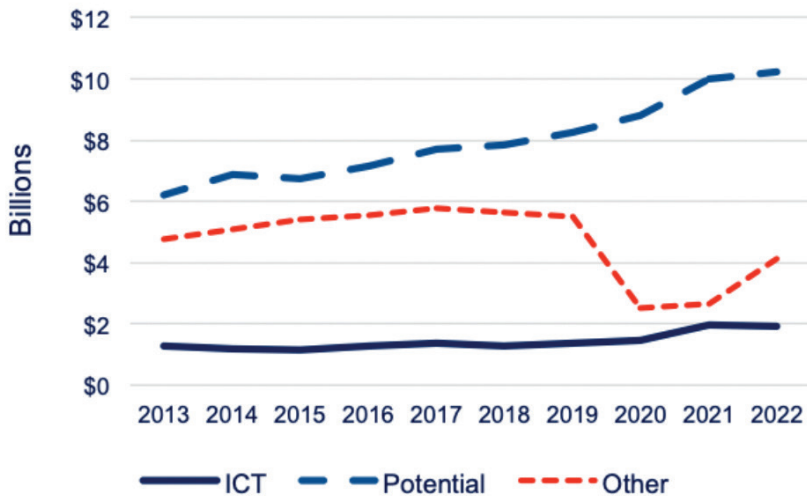
Royalties from computer software are the top ICT services export, but fell from \$4.6 billion in 2013 to \$3.0 billion in 2022 (-35%).

Financial management and advisory services are Massachusetts' top potentially ICT-enabled services export, growing from \$5.6 billion in 2013 to \$7.1 billion in 2022 (28%).



Maryland and Digital Trade

Maryland Services Exports, 2013-2022



ICT services exports grew from \$1.3 billion in 2013 to \$1.9 billion in 2022 (51%), supporting 4,779 direct and 3,515 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$6.2 billion to \$10 billion (65%), supporting 32,164 direct and 22,620 indirect jobs in 2022.

Exports of other services grew from \$4.8 billion in 2013 to \$5.5 billion in 2019 (15%), before falling sharply due to Covid-19. They have not yet fully recovered.

Maryland's digitally tradeable services exports supported 36,944 direct and 26,135 indirect American jobs in 2022.

Top Markets for Maryland Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$799	\$5,486	\$6,285
Asia & Pacific (ex. China)	\$517	\$1,904	\$2,421
Central & South America	\$196	\$1,412	\$1,608
North America	\$255	\$800	\$1,054
China	\$95	\$302	\$397
Middle East & Africa	\$39	\$330	\$368

Europe was Maryland's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Maryland exports of potentially ICT-enabled services to Singapore grew from \$165 million in 2013 to \$717 million (+335%) in 2022.

The "Digital Dozen" accounted for \$4.1 billion out of Maryland's \$12 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Maryland, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$3,216
Research and Development and Testing Services	\$1,805
Financial Management and Advisory Services	\$1,405
Royalties from Industrial Processes	\$1,152
Computer Software Services	\$1,138
Other	\$3,419

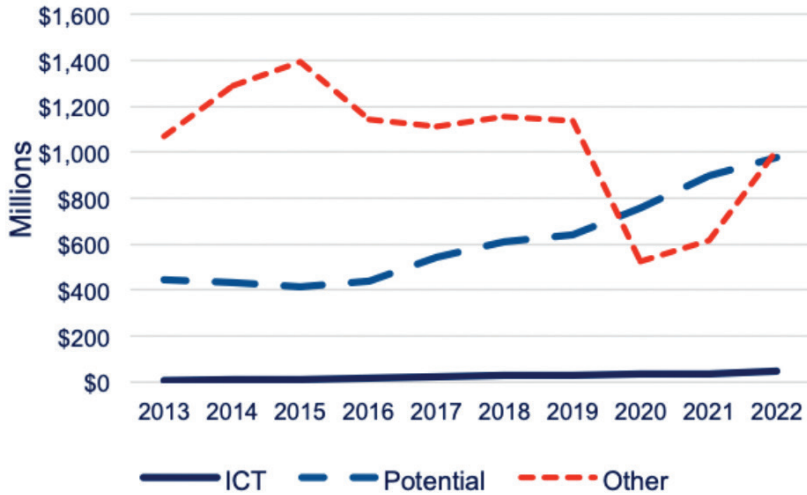
Computer software services are the top ICT services export, growing from \$462 million in 2013 to \$1.1 billion in 2022 (146%).

Business management and consulting services are Maryland's top potentially ICT-enabled services export, growing from \$1.3 billion in 2013 to \$3.2 billion in 2022 (141%).



Maine and Digital Trade

Maine Services Exports, 2013-2022



ICT services exports grew from \$7.2 million in 2013 to \$46 million in 2022 (537%), supporting 141 direct and 102 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$447 million to \$977 million (119%), supporting 3,036 direct and 1,907 indirect jobs in 2022.

Exports of other services grew slightly from \$1.07 billion in 2013 to \$1.14 billion in 2019 (6%), before falling sharply due to Covid-19. They have not yet fully recovered.

Maine's digitally tradeable services exports supported 3,177 direct and 2,009 indirect American jobs in 2022.

Top Markets for Maine Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$19	\$481	\$499
Asia & Pacific (ex. China)	\$12	\$195	\$207
North America	\$8.1	\$113	\$121
Central & South America	\$4.4	\$110	\$114
China	\$2.1	\$39	\$42
Middle East & Africa	\$0.9	\$38	\$39

Europe was Maine's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Maine exports of potentially ICT-enabled services to Ireland grew from \$26 million in 2013 to \$108 million (+312%) in 2022.

The "Digital Dozen" accounted for \$427 million out of Maine's \$1.0 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Maine, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$147
Misc. Financial Services	\$137
Insurance Services	\$102
Implicit Financial Services	\$98
Research and Development and Testing Services	\$92
Other	\$447

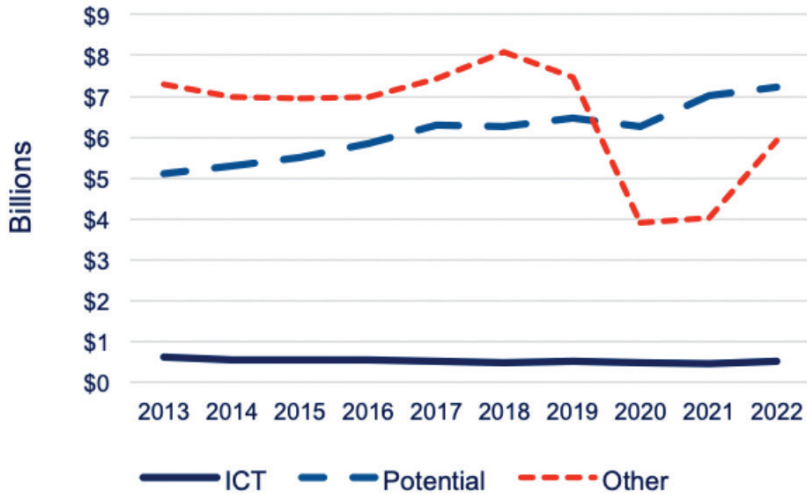
Computer software services are the top ICT services export, growing from \$4.9 million in 2013 to \$40 million in 2022 (720%).

Business management and consulting services are Maine's top potentially ICT-enabled services export, growing from \$34 million in 2013 to \$147 million in 2022 (332%).



Michigan and Digital Trade

Michigan Services Exports, 2013-2022



ICT services exports declined from \$617 million in 2013 to \$521 million in 2022 (-16%), but still supported 1,172 direct and 1,214 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$5.1 billion to \$7.2 billion (42%), supporting 21,686 direct and 16,193 indirect jobs in 2022.

Exports of other services grew slightly from \$7.3 billion in 2013 to \$7.5 billion in 2019 (2%), before falling sharply due to Covid-19. They have not yet fully recovered.

Michigan's digitally tradeable services exports supported 22,858 direct and 17,408 indirect American jobs in 2022.

Top Markets for Michigan Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$231	\$3,793	\$4,024
Asia & Pacific (ex. China)	\$125	\$1,429	\$1,554
North America	\$78	\$885	\$963
Central & South America	\$53	\$523	\$575
China	\$21	\$329	\$350
Middle East & Africa	\$13	\$274	\$286

Europe was Michigan's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Michigan exports of potentially ICT-enabled services to Singapore grew from \$147 million in 2013 to \$455 million (+210%) in 2022.

The "Digital Dozen" accounted for \$3.0 billion out of Michigan's \$7.8 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Michigan, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$1,816
Business Management and Consulting Services	\$1,085
Architectural, Engineering, and Misc. Technical Services	\$718
Research and Development and Testing Services	\$668
Misc. Business, Professional, and Technical Services	\$636
Other	\$2,831

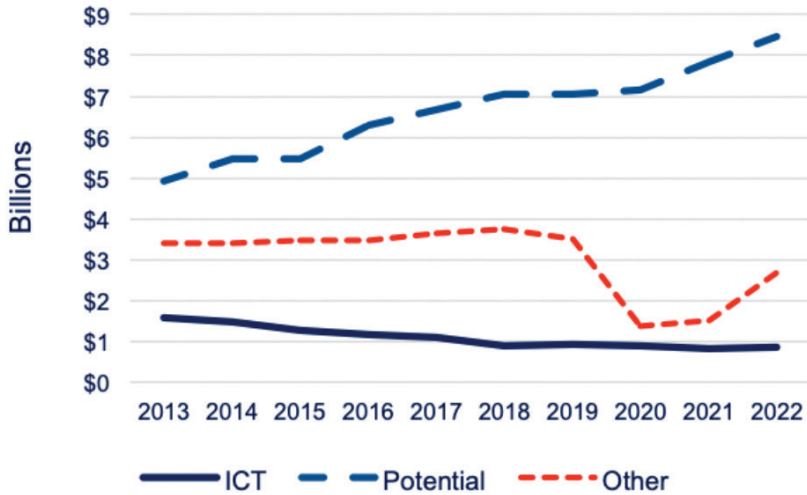
Computer software services are the top ICT services export, growing from \$184 million in 2013 to \$238 million in 2022 (29%).

Royalties from industrial processes are Michigan's top potentially ICT-enabled services export, growing from \$1.1 billion in 2013 to \$1.8 billion in 2022 (59%).



Minnesota and Digital Trade

Minnesota Services Exports, 2013-2022



ICT services exports declined from \$1.6 billion in 2013 to \$854 million in 2022 (-46%), but still supported 1,920 direct and 1,622 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$4.9 billion to \$8.5 billion (72%), supporting 24,055 direct and 16,796 indirect jobs in 2022.

Exports of other services grew slightly from \$3.4 billion in 2013 to \$3.5 billion in 2019 (3%), before falling sharply due to Covid-19. They have not yet fully recovered.

Minnesota's digitally tradeable services exports supported 25,975 direct and 18,417 indirect American jobs in 2022.

Top Markets for Minnesota Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$373	\$4,344	\$4,717
Asia & Pacific (ex. China)	\$230	\$1,514	\$1,744
Central & South America	\$84	\$1,079	\$1,162
North America	\$104	\$956	\$1,064
China	\$42	\$297	\$339
Middle East & Africa	\$17	\$269	\$286

Europe was Minnesota's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Minnesota exports of potentially ICT-enabled services to Ireland grew from \$371 million in 2013 to \$1.1 billion (+197%) in 2022.

The "Digital Dozen" accounted for \$3.6 billion out of Minnesota's \$9.3 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Minnesota, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$1,780
Royalties from Industrial Processes	\$1,410
Misc. Financial Services	\$782
Insurance Services	\$743
Implicit Financial Services	\$724
Other	\$3,881

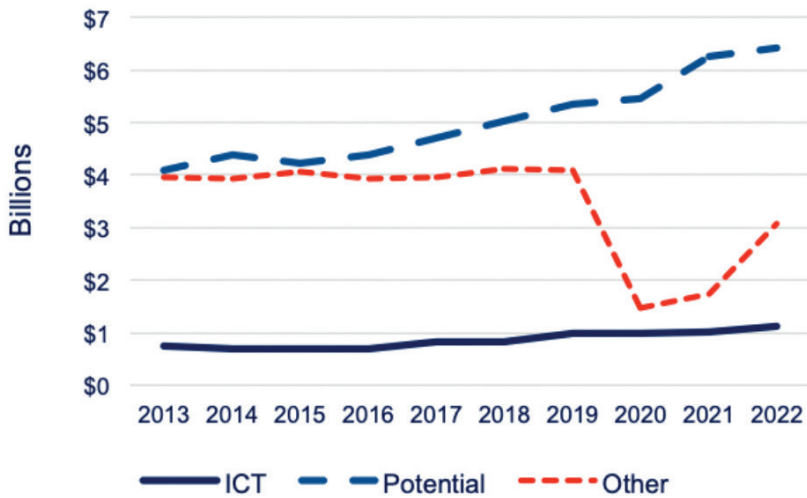
Computer software services are the top ICT services export, growing from \$191 million in 2013 to \$393 million in 2022 (105%).

Business management and consulting services are Minnesota's top potentially ICT-enabled services export, growing from \$421 million in 2013 to \$1.8 billion in 2022 (322%).



Missouri and Digital Trade

Missouri Services Exports, 2013-2022



ICT services exports grew from \$753 million in 2013 to \$1.1 billion in 2022 (48%), supporting 2,660 direct and 2,772 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$4.1 billion to \$6.4 billion (57%), supporting 16,810 direct and 12,685 indirect jobs in 2022.

Exports of other services grew slightly from \$4.0 billion in 2013 to \$4.1 billion in 2019 (3%), before falling sharply due to Covid-19. They have not yet fully recovered.

Missouri's digitally tradeable services exports supported 19,469 direct and 15,457 indirect American jobs in 2022.

Top Markets for Missouri Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$494	\$2,954	\$3,448
Asia & Pacific (ex. China)	\$263	\$1,203	\$1,466
Central & South America	\$108	\$996	\$1,103
North America	\$177	\$743	\$920
Middle East & Africa	\$30	\$268	\$298
China	\$43	\$251	\$294

Europe was Missouri's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Missouri exports of potentially ICT-enabled services to India grew from \$36 million in 2013 to \$104 million (+185%) in 2022.

The "Digital Dozen" accounted for \$3.1 billion out of Missouri's \$7.5 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Missouri, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$824
Credit-Related Services	\$657
Misc. Financial Services	\$609
Computer Software Services	\$580
Business Management and Consulting Services	\$557
Other	\$4,307

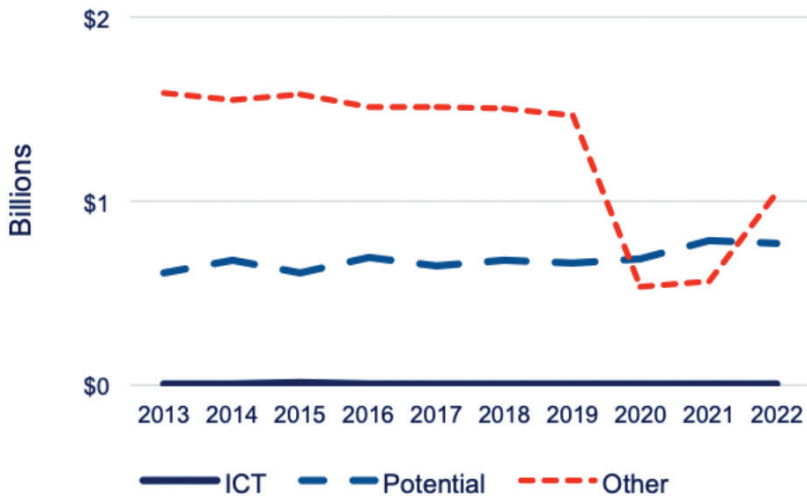
Computer software services are the top ICT services export, growing from \$202 million in 2013 to \$580 million in 2022 (187%).

Royalties from industrial processes are Missouri's top potentially ICT-enabled services export, growing from \$663 million in 2013 to \$824 million in 2022 (24%).



Mississippi and Digital Trade

Mississippi Services Exports, 2013-2022



ICT services exports declined from \$1.6 billion in 2013 to \$854 million in 2022 (-46%), but still supported 1,920 direct and 1,622 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$4.9 billion to \$8.5 billion (72%), supporting 24,055 direct and 16,796 indirect jobs in 2022.

Exports of other services grew slightly from \$3.4 billion in 2013 to \$3.5 billion in 2019 (3%), before falling sharply due to Covid-19. They have not yet fully recovered.

Mississippi's digitally tradeable services exports supported 2,101 direct and 1,419 indirect American jobs in 2022.

Top Markets for Mississippi Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$2.4	\$346	\$349
Asia & Pacific (ex. China)	\$1.5	\$155	\$156
Central & South America	\$1.6	\$102	\$104
North America	\$1.7	\$99	\$100
China	\$0.3	\$36	\$37
Middle East & Africa	\$0.0	\$36	\$36

Europe was Mississippi's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Mississippi exports of potentially ICT-enabled services to United Kingdom grew from \$67 million in 2013 to \$104 million (+55%) in 2022.

The "Digital Dozen" accounted for \$344 million out of Mississippi's \$783 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Mississippi, 2022 (\$M)

Type (ICT in bold)	Total
Implicit Financial Services	\$143
Credit-Related Services	\$127
Misc. Financial Services	\$115
Payments for Trademarks	\$100
Misc. Business, Professional, and Technical Services	\$89
Other	\$208

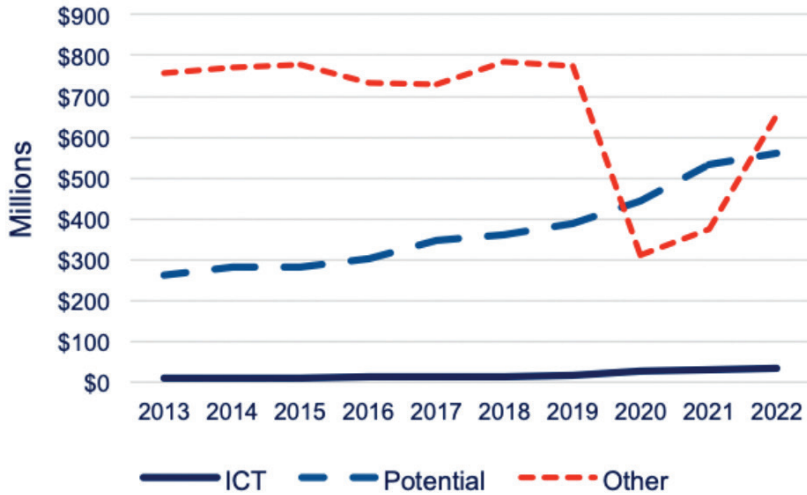
Computer software services are the top ICT services export, growing from \$0.4 million in 2013 to \$5.3 million in 2022 (1,177%).

Implicit financial services are Mississippi's top potentially ICT-enabled services export, growing from \$48 million in 2013 to \$143 million in 2022 (201%).



Montana and Digital Trade

Montana Services Exports, 2013-2022



ICT services exports grew from \$10 million in 2013 to \$33 million in 2022 (233%), supporting 101 direct and 71 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$262 million to \$562 million (114%), supporting 1,858 direct and 1,125 indirect jobs in 2022.

Exports of other services grew slightly from \$756 million in 2013 to \$774 million in 2019 (2%), before falling sharply due to Covid-19. They have not yet fully recovered.

Montana's digitally tradeable services exports supported 1,959 direct and 1,196 indirect American jobs in 2022.

Top Markets for Montana Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$13	\$263	\$276
Asia & Pacific (ex. China)	\$8.7	\$103	\$112
North America	\$5.8	\$76	\$81
Central & South America	\$3.2	\$69	\$72
China	\$1.6	\$26	\$27
Middle East & Africa	\$0.7	\$25	\$26

Europe was Montana's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Montana exports of potentially ICT-enabled services to United Kingdom grew from \$31 million in 2013 to \$78 million (+148%) in 2022.

The "Digital Dozen" accounted for \$256 million out of Montana's \$595 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Montana, 2022 (\$M)

Type (ICT in bold)	Total
Misc. Financial Services	\$114
Implicit Financial Services	\$101
Business Management and Consulting Services	\$100
Payments for Trademarks	\$47
Architectural, Engineering, and Misc. Technical Services	\$35
Other	\$198

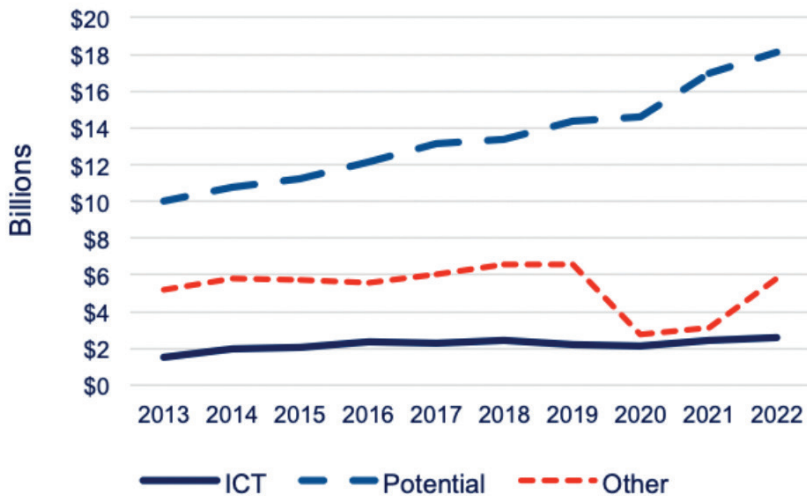
Computer software services are the top ICT services export, growing from \$3.2 million in 2013 to \$29 million in 2022 (804%).

Misc. financial services are Montana's top potentially ICT-enabled services export, growing from \$55 million in 2013 to \$114 million in 2022 (107%).



North Carolina and Digital Trade

North Carolina Services Exports, 2013-2022



ICT services exports grew from \$1.5 billion in 2013 to \$2.6 billion in 2022 (72%), supporting 5,196 direct and 4,411 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$10 billion to \$18 billion (81%), supporting 51,382 direct and 33,199 indirect jobs in 2022.

Exports of other services grew from \$5.2 billion in 2013 to \$6.6 billion in 2019 (28%), before falling sharply due to Covid-19. They have not yet fully recovered.

North Carolina's digitally tradeable services exports supported 56,578 direct and 37,609 indirect American jobs in 2022.

Top Markets for North Carolina Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$1,181	\$9,747	\$10,928
Asia & Pacific (ex. China)	\$752	\$3,383	\$4,134
Central & South America	\$199	\$2,020	\$2,219
North America	\$265	\$1,689	\$1,954
China	\$141	\$607	\$748
Middle East & Africa	\$42	\$656	\$697

Europe was North Carolina's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

North Carolina exports of potentially ICT-enabled services to Denmark grew from \$56 million in 2013 to \$213 million (+279%) in 2022.

The "Digital Dozen" accounted for \$7.5 billion out of North Carolina's \$21 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from North Carolina, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$3,814
Research and Development and Testing Services	\$2,731
Royalties from Industrial Processes	\$2,468
Misc. Financial Services	\$2,120
Implicit Financial Services	\$1,888
Other	\$7,677

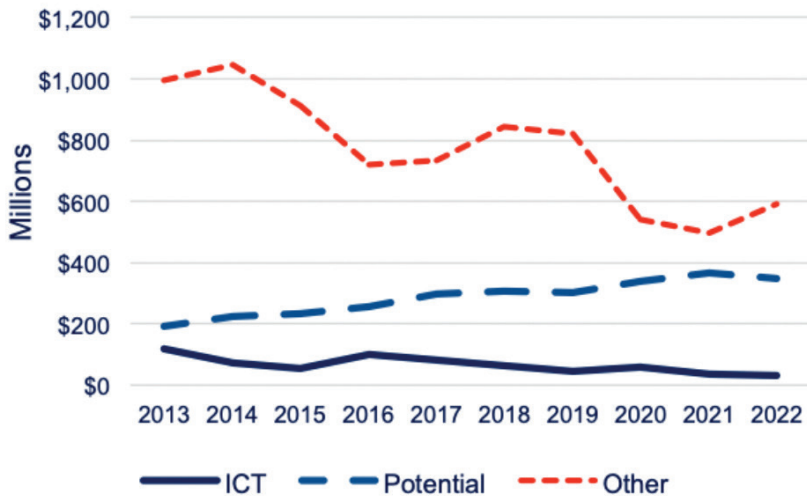
Royalties from computer software are the top ICT services export, growing from \$962 million in 2013 to \$1.5 billion in 2022 (54%).

Business management and consulting services are North Carolina's top potentially ICT-enabled services export, growing from \$1.0 billion in 2013 to \$3.8 billion in 2022 (272%).



North Dakota and Digital Trade

North Dakota Services Exports, 2013-2022



ICT services exports declined from \$121 million in 2013 to \$31 million in 2022 (-74%), but still supported 45 direct and 40 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$191 million to \$348 million (82%), supporting 781 direct and 496 indirect jobs in 2022.

Exports of other services declined from \$997 million in 2013 to \$823 million in 2019 (-17%), and then fell further due to Covid-19. They have not yet fully recovered.

North Dakota's digitally tradeable services exports supported 826 direct and 536 indirect American jobs in 2022.

Top Markets for North Dakota Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$15	\$166	\$181
Asia & Pacific (ex. China)	\$10	\$60	\$70
Central & South America	\$1.9	\$49	\$51
North America	\$2.2	\$46	\$48
China	\$2.0	\$14	\$16
Middle East & Africa	\$0.0	\$11	\$11

Europe was North Dakota's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

North Dakota exports of potentially ICT-enabled services to United Kingdom grew from \$19 million in 2013 to \$56 million (+201%) in 2022.

The "Digital Dozen" accounted for \$164 million out of North Dakota's \$379 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from North Dakota, 2022 (\$M)

Type (ICT in bold)	Total
Misc. Financial Services	\$115
Implicit Financial Services	\$90
Payments for Trademarks	\$54
Royalties from Computer Software	\$29
Insurance Services	\$21
Other	\$70

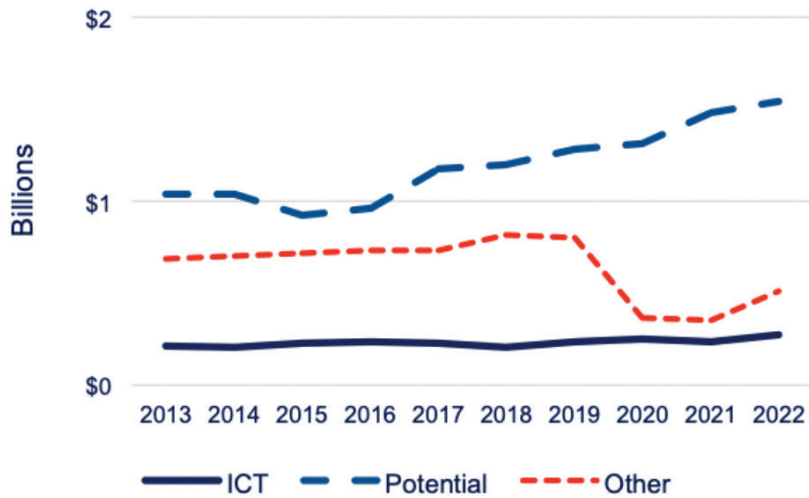
Royalties from computer software are the top ICT services export, but fell from \$117 million in 2013 to \$29 million in 2022 (-76%).

Misc. financial services are North Dakota's top potentially ICT-enabled services export, growing from \$23 million in 2013 to \$115 million in 2022 (407%).



Nebraska and Digital Trade

Nebraska Services Exports, 2013-2022



ICT services exports grew from \$215 million in 2013 to \$272 million in 2022 (27%), supporting 467 direct and 561 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$1.0 billion to \$1.5 billion (49%), supporting 4,509 direct and 2,742 indirect jobs in 2022.

Exports of other services grew from \$686 million in 2013 to \$802 million in 2019 (17%), before falling sharply due to Covid-19. They have not yet fully recovered.

Nebraska's digitally tradeable services exports supported 4,975 direct and 3,302 indirect American jobs in 2022.

Top Markets for Nebraska Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$127	\$741	\$868
Asia & Pacific (ex. China)	\$70	\$332	\$402
Central & South America	\$25	\$190	\$215
North America	\$32	\$172	\$205
China	\$12	\$59	\$72
Middle East & Africa	\$5.5	\$46	\$52

Europe was Nebraska's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Nebraska exports of potentially ICT-enabled services to United Kingdom grew from \$108 million in 2013 to \$206 million (+90%) in 2022.

The "Digital Dozen" accounted for \$789 million out of Nebraska's \$1.8 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Nebraska, 2022 (\$M)

Type (ICT in bold)	Total
Insurance Services	\$471
Royalties from Industrial Processes	\$254
Business Management and Consulting Services	\$131
Misc. Financial Services	\$122
Payments for Trademarks	\$112
Other	\$723

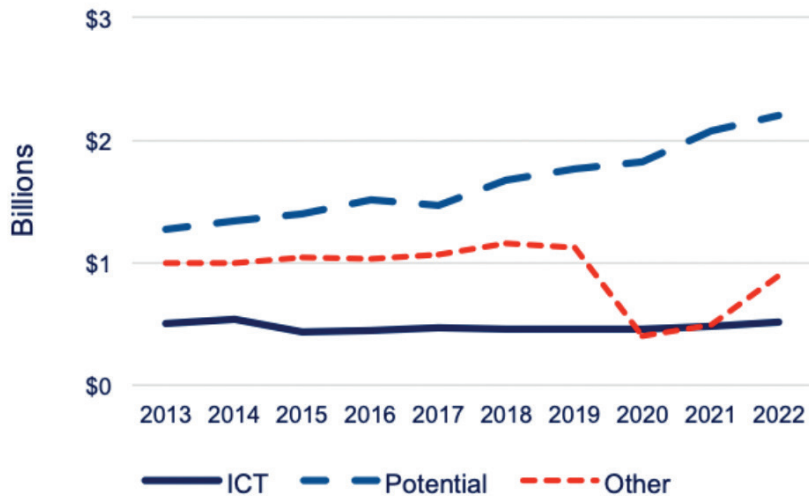
Royalties from computer software are the top ICT services export, growing from \$11 million in 2013 to \$103 million in 2022 (798%).

Insurance services are Nebraska's top potentially ICT-enabled services export, growing from \$228 million in 2013 to \$471 million in 2022 (106%).



New Hampshire and Digital Trade

New Hampshire Services Exports, 2013-2022



ICT services exports grew slightly from \$499 million in 2013 to \$516 million in 2022 (3%), supporting 1,150 direct and 912 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$1.3 billion to \$2.2 billion (74%), supporting 7,182 direct and 4,993 indirect jobs in 2022.

Exports of other services grew from \$996 million in 2013 to \$1.1 billion in 2019 (12%), before falling sharply due to Covid-19. They have not yet fully recovered.

New Hampshire's digitally tradeable services exports supported 8,332 direct and 5,905 indirect American jobs in 2022.

Top Markets for New Hampshire Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$233	\$1,156	\$1,389
Asia & Pacific (ex. China)	\$151	\$424	\$575
Central & South America	\$38	\$260	\$297
North America	\$58	\$206	\$264
China	\$28	\$81	\$110
Middle East & Africa	\$7.9	\$76	\$84

Europe was New Hampshire's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

New Hampshire exports of potentially ICT-enabled services to Singapore grew from \$34 million in 2013 to \$142 million (+312%) in 2022.

The "Digital Dozen" accounted for \$975 million out of New Hampshire's \$2.7 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from New Hampshire, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$601
Royalties from Industrial Processes	\$319
Research and Development and Testing Services	\$297
Royalties from Computer Software	\$265
Computer Software Services	\$226
Other	\$1,011

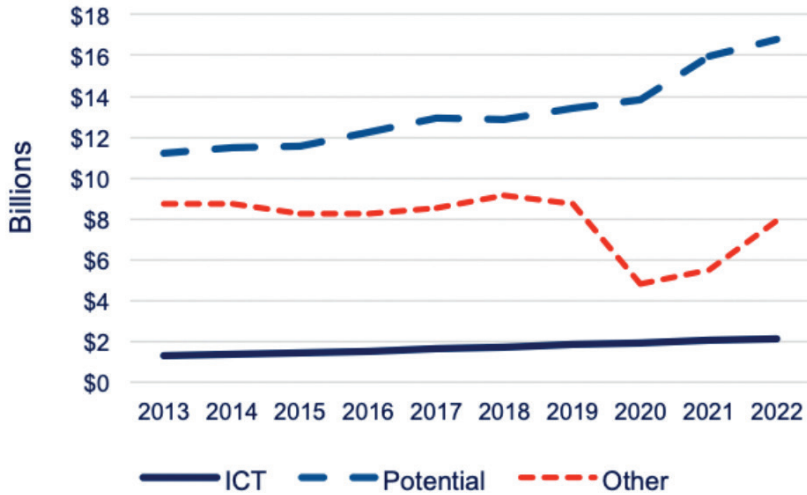
Royalties from computer software are the top ICT services export, but fell from \$412 million in 2013 to \$265 million in 2022 (-36%).

Business management and consulting services are New Hampshire's top potentially ICT-enabled services export, growing from \$186 million in 2013 to \$601 million in 2022 (223%).



New Jersey and Digital Trade

New Jersey Services Exports, 2013-2022



ICT services exports grew from \$1.3 billion in 2013 to \$2.2 billion in 2022 (70%), supporting 5,344 direct and 5,113 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$11 billion to \$17 billion (50%), supporting 51,987 direct and 37,260 indirect jobs in 2022.

Exports of other services were around \$8.8 billion in both 2013 and 2019, before falling sharply due to Covid-19. They have not yet fully recovered.

New Jersey's digitally tradeable services exports supported 57,332 direct and 42,372 indirect American jobs in 2022.

Top Markets for New Jersey Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$948	\$9,291	\$10,240
Asia & Pacific (ex. China)	\$533	\$3,267	\$3,800
North America	\$332	\$1,636	\$1,968
Central & South America	\$196	\$1,550	\$1,746
China	\$91	\$550	\$641
Middle East & Africa	\$55	\$516	\$571

Europe was New Jersey's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

New Jersey exports of potentially ICT-enabled services to Ireland grew from \$908 million in 2013 to \$2.8 billion (+213%) in 2022.

The "Digital Dozen" accounted for \$7 billion out of New Jersey's \$19 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from New Jersey, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$4,732
Royalties from Industrial Processes	\$2,692
Research and Development and Testing Services	\$2,655
Computer Software Services	\$1,220
Advertising	\$928
Other	\$6,742

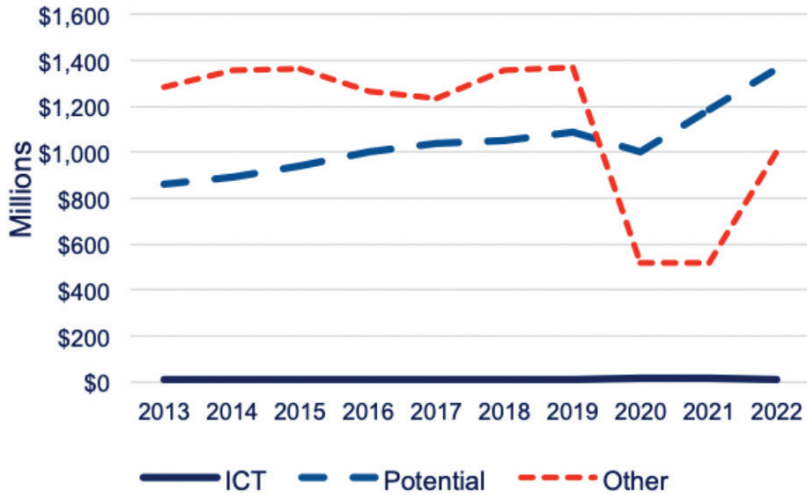
Computer software services are the top ICT services export, growing from \$498 million in 2013 to \$1.2 billion in 2022 (145%).

Business management and consulting services are New Jersey's top potentially ICT-enabled services export, growing from \$1.7 billion in 2013 to \$4.7 billion in 2022 (180%).



New Mexico and Digital Trade

New Mexico Services Exports, 2013-2022



ICT services exports grew slightly from \$499 million in 2013 to \$516 million in 2022 (3%), supporting 1,150 direct and 912 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$1.3 billion to \$2.2 billion (74%), supporting 7,182 direct and 4,993 indirect jobs in 2022.

Exports of other services grew from \$996 million in 2013 to \$1.1 billion in 2019 (12%), before falling sharply due to Covid-19. They have not yet fully recovered.

New Mexico's digitally tradeable services exports supported 4,151 direct and 2,760 indirect American jobs in 2022.

Top Markets for New Mexico Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$6.1	\$745	\$751
Asia & Pacific (ex. China)	\$2.9	\$318	\$321
North America	\$2.8	\$140	\$143
Central & South America	\$1.6	\$83	\$85
China	\$0.6	\$39	\$39
Middle East & Africa	\$0.0	\$39	\$39

Europe was New Mexico's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

New Mexico exports of potentially ICT-enabled services to Singapore grew from \$22 million in 2013 to \$134 million (+519%) in 2022.

The "Digital Dozen" accounted for \$591 million out of New Mexico's \$1.4 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from New Mexico, 2022 (\$M)

Type (ICT in bold)	Total
Research and Development and Testing Services	\$523
A/V Services (Personal)	\$232
Business Management and Consulting Services	\$95
Payments for Trademarks	\$84
Misc. Business, Professional, and Technical Services	\$81
Other	\$364

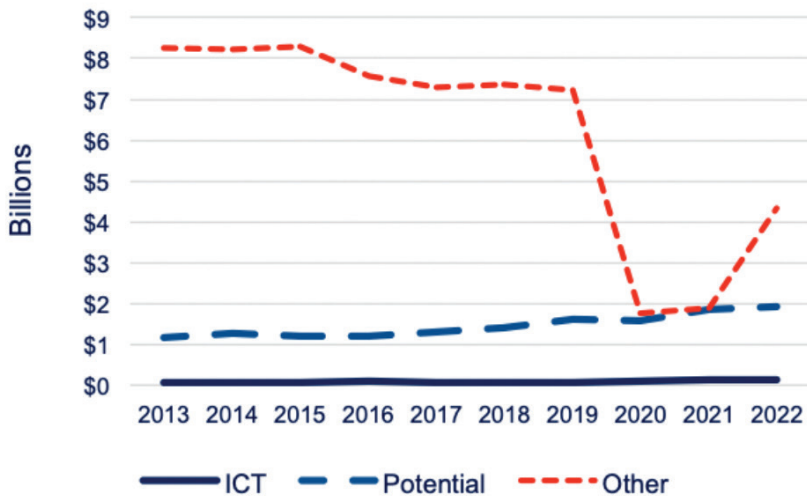
Computer software services are the top ICT services export, growing from \$3.2 million in 2013 to \$11 million in 2022 (246%).

Research and development and testing services are New Mexico's top potentially ICT-enabled services export, growing from \$291 million in 2013 to \$523 million in 2022 (80%).



Nevada and Digital Trade

Nevada Services Exports, 2013-2022



ICT services exports grew from \$63 million in 2013 to \$117 million in 2022 (85%), supporting 211 direct and 262 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$1.1 billion to \$1.9 billion (68%), supporting 6,706 direct and 4,116 indirect jobs in 2022.

Exports of other services declined from \$8.3 billion in 2013 to \$7.2 billion in 2019 (-12%), and then fell sharply due to Covid-19. They have not yet fully recovered.

Nevada's digitally tradeable services exports supported 6,917 direct and 4,378 indirect American jobs in 2022.

Top Markets for Nevada Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$52	\$750	\$803
Asia & Pacific (ex. China)	\$26	\$458	\$484
North America	\$17	\$251	\$269
Central & South America	\$15	\$201	\$216
Middle East & Africa	\$2.6	\$155	\$157
China	\$4.3	\$121	\$126

Europe was Nevada's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Nevada exports of potentially ICT-enabled services to India grew from \$14 million in 2013 to \$62 million (+328%) in 2022.

The "Digital Dozen" accounted for \$892 million out of Nevada's \$2.1 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Nevada, 2022 (\$M)

Type (ICT in bold)	Total
Credit-Related Services	\$634
Misc. Business, Professional, and Technical Services	\$211
Misc. Personal, Cultural, and Recreational Services	\$199
Payments for Trademarks	\$176
Insurance Services	\$166
Other	\$670

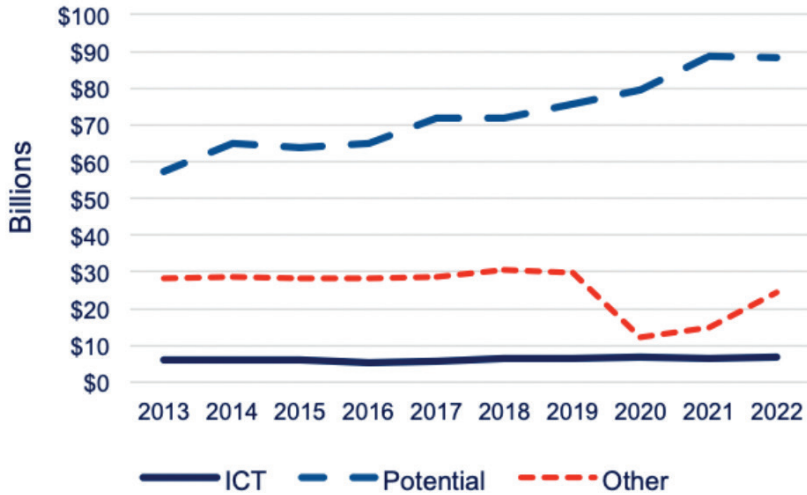
Misc. computer services are the top ICT services export, but fell from \$33 million in 2013 to \$30 million in 2022 (-9%).

Credit-related services are Nevada's top potentially ICT-enabled services export, growing from \$340 million in 2013 to \$634 million in 2022 (86%).



New York and Digital Trade

New York Services Exports, 2013-2022



ICT services exports grew from \$5.9 billion in 2013 to \$6.8 billion in 2022 (15%), supporting 10,590 direct and 10,281 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$57 billion to \$88 billion (54%), supporting 190,560 direct and 181,304 indirect jobs in 2022.

Exports of other services grew slightly from \$28 billion in 2013 to \$30 billion in 2019 (5%), before falling sharply due to Covid-19. They have not yet fully recovered.

New York's digitally tradeable services exports supported 201,150 direct and 191,585 indirect American jobs in 2022.

Top Markets for New York Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$2,688	\$35,600	\$38,287
Central & South America	\$1,438	\$23,935	\$25,373
Asia & Pacific (ex. China)	\$1,440	\$13,831	\$15,271
North America	\$841	\$9,476	\$10,316
Middle East & Africa	\$175	\$3,137	\$3,311
China	\$242	\$2,143	\$2,385

Europe was New York's top market for digitally tradeable services, followed by Central & South America.

New York exports of potentially ICT-enabled services to Singapore grew from \$831 million in 2013 to \$2.8 billion (+239%) in 2022.

The "Digital Dozen" accounted for \$36 billion out of New York's \$95 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from New York, 2022 (\$M)

Type (ICT in bold)	Total
Financial Management and Advisory Services	\$25,460
Misc. Financial Services	\$10,249
Implicit Financial Services	\$7,559
Credit-Related Services	\$6,405
Business Management and Consulting Services	\$5,931
Other	\$39,424

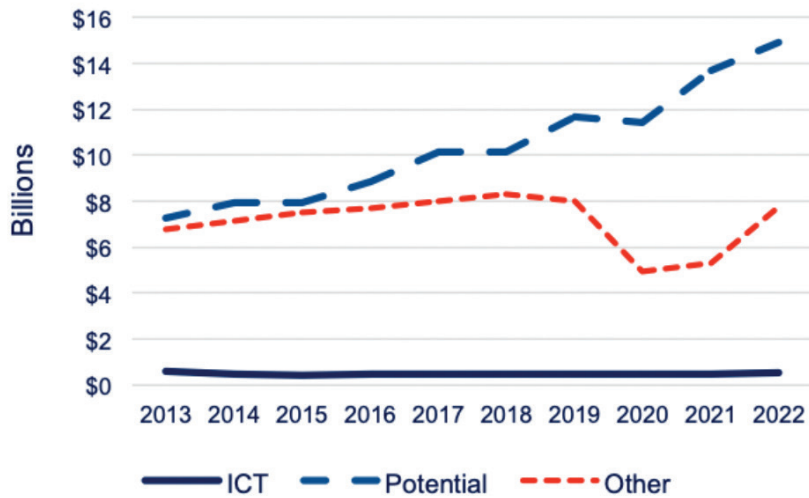
Telecommunications services are the top ICT services export, but fell from \$4.6 billion in 2013 to \$2.7 billion in 2022 (-40%).

Financial management and advisory services are New York's top potentially ICT-enabled services export, growing from \$19 billion in 2013 to \$25 billion in 2022 (37%).



Ohio and Digital Trade

Ohio Services Exports, 2013-2022



ICT services exports declined from \$627 million in 2013 to \$513 million in 2022 (-18%), but still supported 1,339 direct and 1,071 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$7.3 billion to \$15 billion (105%), supporting 41,066 direct and 23,428 indirect jobs in 2022.

Exports of other services grew from \$6.8 billion in 2013 to \$8.0 billion in 2019 (18%), before falling sharply due to Covid-19. They have not yet fully recovered.

Ohio's digitally tradeable services exports supported 42,405 direct and 24,499 indirect American jobs in 2022.

Top Markets for Ohio Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$217	\$7,015	\$7,232
Asia & Pacific (ex. China)	\$134	\$2,874	\$3,009
Central & South America	\$50	\$2,030	\$2,081
North America	\$76	\$1,601	\$1,676
Middle East & Africa	\$11	\$738	\$749
China	\$24	\$665	\$689

Europe was Ohio's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Ohio exports of potentially ICT-enabled services to United Kingdom grew from \$823 million in 2013 to \$1.9 billion (+130%) in 2022.

The "Digital Dozen" accounted for \$6.3 billion out of Ohio's \$15 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Ohio, 2022 (\$M)

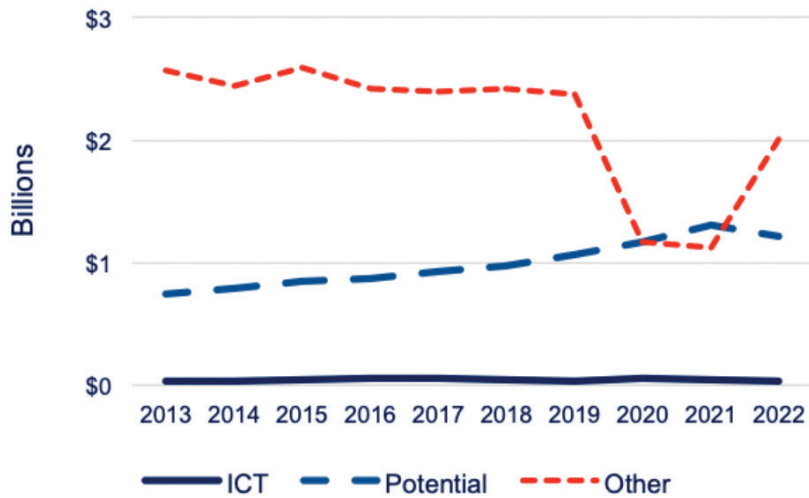
Type (ICT in bold)	Total
Misc. Financial Services	\$2,761
Credit-Related Services	\$2,757
Implicit Financial Services	\$1,995
Royalties from Industrial Processes	\$1,991
Insurance Services	\$1,338
Other	\$4,613

Computer software services are the top ICT services export, growing from \$168 million in 2013 to \$329 million in 2022 (96%).

Misc. financial services are Ohio's top potentially ICT-enabled services export, growing from \$1.0 billion in 2013 to \$2.8 billion in 2022 (164%).



Oklahoma and Digital Trade



ICT services exports grew from \$29 million in 2013 to \$37 million in 2022 (27%), supporting 57 direct and 49 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$743 million to \$1.2 billion (64%), supporting 3,923 direct and 2,830 indirect jobs in 2022.

Exports of other services declined from \$2.6 billion in 2013 to \$2.4 billion in 2019 (-8%), and then fell sharply due to Covid-19. They have not yet fully recovered.

Oklahoma's digitally tradeable services exports supported 3,980 direct and 2,879 indirect American jobs in 2022.

Top Markets for Oklahoma Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$14	\$574	\$587
Asia & Pacific (ex. China)	\$6.8	\$246	\$253
North America	\$5.5	\$157	\$163
Central & South America	\$9.2	\$136	\$145
China	\$1.3	\$55	\$57
Middle East & Africa	\$0.5	\$48	\$49

Europe was Oklahoma's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Oklahoma exports of potentially ICT-enabled services to Ireland grew from \$32 million in 2013 to \$103 million (+224%) in 2022.

The "Digital Dozen" accounted for \$525 million out of Oklahoma's \$1.3 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Oklahoma, 2022 (\$M)

Type (ICT in bold)	Total
Misc. Business, Professional, and Technical Services	\$211
Payments for Trademarks	\$174
Implicit Financial Services	\$170
Business Management and Consulting Services	\$135
Misc. Financial Services	\$124
Other	\$442

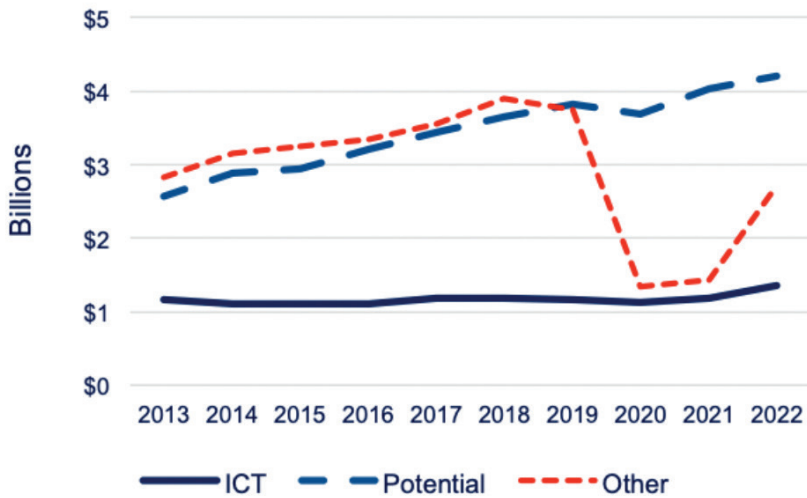
Telecommunications services are the top ICT services export, but fell from \$25 million in 2013 to \$20 million in 2022 (-20%).

Misc. business, professional, and technical services are Oklahoma's top potentially ICT-enabled services export, growing from \$58 million in 2013 to \$211 million in 2022 (266%).



Oregon and Digital Trade

Oregon Services Exports, 2013-2022



ICT services exports grew from \$1.2 billion in 2013 to \$1.4 billion in 2022 (16%), supporting 2,023 direct and 2,439 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$2.6 billion to \$4.2 billion (63%), supporting 11,769 direct and 8,606 indirect jobs in 2022.

Exports of other services grew from \$2.8 billion in 2013 to \$3.7 billion in 2019 (32%), before falling sharply due to Covid-19. They have not yet fully recovered.

Oregon's digitally tradeable services exports supported 13,792 direct and 11,044 indirect American jobs in 2022.

Top Markets for Oregon Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$660	\$2,359	\$3,019
Asia & Pacific (ex. China)	\$384	\$877	\$1,261
North America	\$120	\$387	\$508
Central & South America	\$94	\$279	\$373
China	\$70	\$174	\$244
Middle East & Africa	\$22	\$122	\$144

Europe was Oregon's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Oregon exports of potentially ICT-enabled services to Singapore grew from \$80 million in 2013 to \$363 million (+353%) in 2022.

The "Digital Dozen" accounted for \$1.9 billion out of Oregon's \$5.5 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Oregon, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$1,118
Research and Development and Testing Services	\$1,046
Royalties from Computer Software	\$865
Business Management and Consulting Services	\$459
Misc. Business, Professional, and Technical Services	\$273
Other	\$1,788

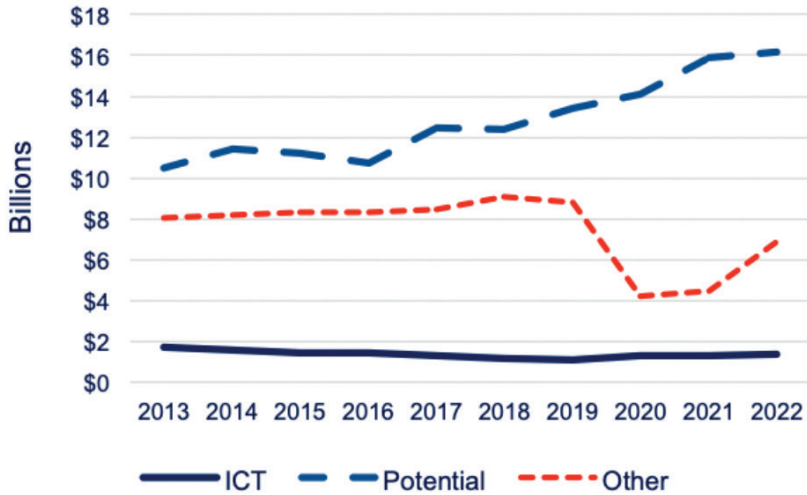
Royalties from computer software are the top ICT services export, but declined from \$1.0 billion in 2013 to \$865 million in 2022 (-15%).

Royalties from industrial processes are Oregon's top potentially ICT-enabled services export, growing from \$986 million in 2013 to \$1.1 billion in 2022 (13%).



Pennsylvania and Digital Trade

Pennsylvania Services Exports, 2013-2022



ICT services exports declined from \$1.7 billion in 2013 to \$1.4 billion in 2022 (-20%), but still supported 2,718 direct and 2,412 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$10 billion to \$16 billion (54%), supporting 41,503 direct and 34,480 indirect jobs in 2022.

Exports of other services grew from \$8.0 billion in 2013 to \$8.8 billion in 2019 (10%), before falling sharply due to Covid-19. They have not yet fully recovered.

Pennsylvania's digitally tradeable services exports supported 44,221 direct and 36,892 indirect American jobs in 2022.

Top Markets for Pennsylvania Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$560	\$7,464	\$8,024
Central & South America	\$232	\$3,273	\$3,505
Asia & Pacific (ex. China)	\$318	\$2,967	\$3,285
North America	\$184	\$1,478	\$1,662
China	\$55	\$502	\$557
Middle East & Africa	\$34	\$509	\$543

Europe was Pennsylvania's top market for digitally tradeable services, followed by Central & South America.

Pennsylvania exports of potentially ICT-enabled services to Ireland grew from \$643 million in 2013 to \$2.0 billion (+207%) in 2022.

The "Digital Dozen" accounted for \$6.2 billion out of Pennsylvania's \$18 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Pennsylvania, 2022 (\$M)

Type (ICT in bold)	Total
Financial Management and Advisory Services	\$3,746
Research and Development and Testing Services	\$2,463
Royalties from Industrial Processes	\$2,085
Business Management and Consulting Services	\$1,576
Insurance Services	\$1,123
Other	\$6,616

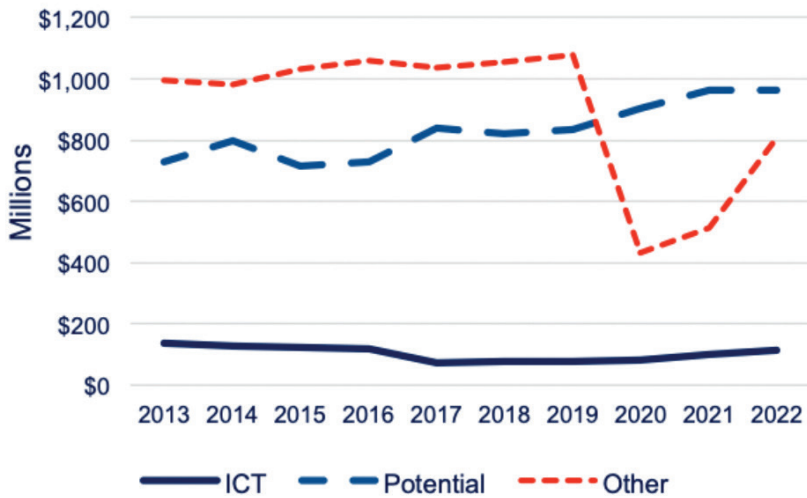
Computer software services are the top ICT services export, growing from \$288 million in 2013 to \$495 million in 2022 (72%).

Financial management and advisory services are Pennsylvania's top potentially ICT-enabled services export, growing from \$3.1 billion in 2013 to \$3.7 billion in 2022 (22%).



Rhode Island and Digital Trade

Rhode Island Services Exports, 2013-2022



ICT services exports fell from \$138 million in 2013 to \$113 million in 2022 (-18%), but still supported 351 direct and 245 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$730 million to \$962 million (32%), supporting 2,841 direct and 1,836 indirect jobs in 2022.

Exports of other services grew from \$997 million in 2013 to \$1.1 billion in 2019 (8%), before falling sharply due to Covid-19. They have not yet fully recovered.

Rhode Island's digitally tradeable services exports supported 3,192 direct and 2,081 indirect American jobs in 2022.

Top Markets for Rhode Island Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$45	\$464	\$509
Asia & Pacific (ex. China)	\$29	\$182	\$211
Central & South America	\$12	\$129	\$141
North America	\$19	\$116	\$135
China	\$5.1	\$37	\$42
Middle East & Africa	\$2.6	\$33	\$35

Europe was Rhode Island's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Rhode Island exports of potentially ICT-enabled services to Ireland grew from \$30 million in 2013 to \$88 million (+195%) in 2022.

The "Digital Dozen" accounted for \$469 million out of Rhode Island's \$1.1 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Rhode Island, 2022 (\$M)

Type (ICT in bold)	Total
Misc. Financial Services	\$129
Business Management and Consulting Services	\$126
Insurance Services	\$123
Implicit Financial Services	\$110
Computer Software Services	\$102
Other	\$486

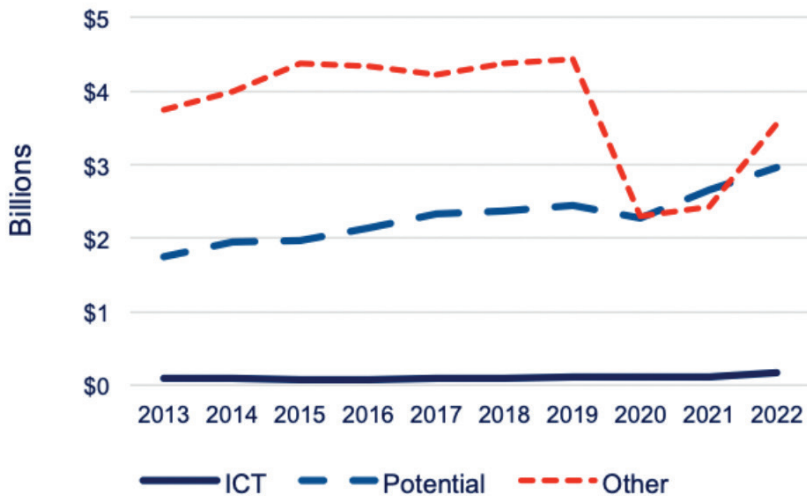
Computer software services are the top ICT services export, growing from \$26 million in 2013 to \$102 million in 2022 (296%).

Misc. financial services are Rhode Island's top potentially ICT-enabled services export, growing from \$73 million in 2013 to \$129 million in 2022 (77%).



South Carolina and Digital Trade

South Carolina Services Exports, 2013-2022



ICT services exports grew from \$96 million in 2013 to \$168 million in 2022 (75%), supporting 366 direct and 322 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$1.7 billion to \$3.0 billion (69%), supporting 9,332 direct and 6,530 indirect jobs in 2022.

Exports of other services grew from \$3.7 billion in 2013 to \$4.4 billion in 2019 (18%), before falling sharply due to Covid-19. They have not yet fully recovered.

South Carolina's digitally tradeable services exports supported 9,698 direct and 6,852 indirect American jobs in 2022.

Top Markets for South Carolina Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$73	\$1,505	\$1,578
Asia & Pacific (ex. China)	\$43	\$595	\$639
North America	\$23	\$352	\$375
Central & South America	\$18	\$243	\$261
China	\$7.9	\$135	\$143
Middle East & Africa	\$2.8	\$128	\$131

Europe was South Carolina's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

South Carolina exports of potentially ICT-enabled services to Ireland grew from \$110 million in 2013 to \$368 million (+235%) in 2022.

The "Digital Dozen" accounted for \$1.2 billion out of South Carolina's \$3.1 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from South Carolina, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$563
Royalties from Industrial Processes	\$548
Credit-Related Services	\$301
Misc. Business, Professional, and Technical Services	\$290
Payments for Trademarks	\$224
Other	\$1,199

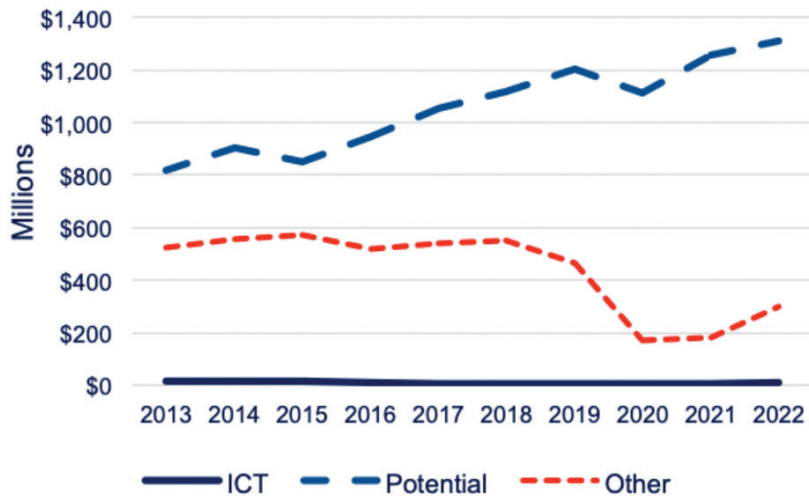
Computer software services are the top ICT services export, growing from \$13 million in 2013 to \$73 million in 2022 (452%).

Business management and consulting services are South Carolina's top potentially ICT-enabled services export, growing from \$198 million in 2013 to \$563 million in 2022 (185%).



South Dakota and Digital Trade

South Dakota Services Exports, 2013-2022



ICT services exports fell from \$14 million in 2013 to \$8.0 million in 2022 (-43%), but still supported 22 direct and 15 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$818 million to \$1.3 billion (60%), supporting 3,231 direct and 1,533 indirect jobs in 2022.

Exports of other services declined from \$524 million in 2013 to \$466 million in 2019 (-11%), and then fell sharply due to Covid-19. They have not yet fully recovered.

South Dakota's digitally tradeable services exports supported 3,253 direct and 1,548 indirect American jobs in 2022.

Top Markets for South Dakota Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$2.6	\$576	\$578
Asia & Pacific (ex. China)	\$1.7	\$246	\$248
Central & South America	\$1.5	\$202	\$203
North America	\$1.8	\$148	\$150
Middle East & Africa	\$0.0	\$80	\$80
China	\$0.4	\$57	\$57

Europe was South Dakota's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

South Dakota exports of potentially ICT-enabled services to India grew from \$11 million in 2013 to \$30 million (+180%) in 2022.

The "Digital Dozen" accounted for \$570 million out of South Dakota's \$1.3 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from South Dakota, 2022 (\$M)

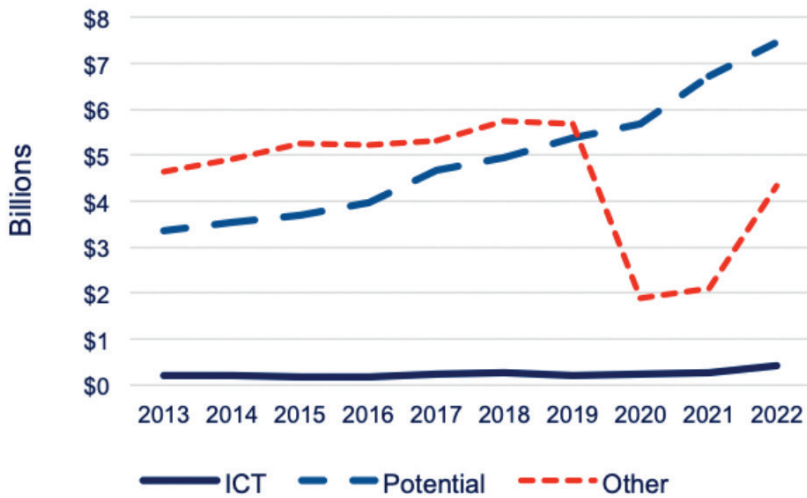
Type (ICT in bold)	Total
Misc. Financial Services	\$439
Credit-Related Services	\$410
Implicit Financial Services	\$264
Payments for Trademarks	\$47
Insurance Services	\$42
Other	\$116

Misc. financial services are South Dakota's top potentially ICT-enabled services export, growing from \$236 million in 2013 to \$439 million in 2022 (86%).



Tennessee and Digital Trade

Tennessee Services Exports, 2013-2022



ICT services exports grew from \$196 million in 2013 to \$417 million in 2022 (113%), supporting 666 direct and 850 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$3.4 billion to \$7.5 billion (122%), supporting 26,349 direct and 16,758 indirect jobs in 2022.

Exports of other services grew from \$4.7 billion in 2013 to \$5.7 billion in 2019 (22%), before falling sharply due to Covid-19. They have not yet fully recovered.

Tennessee's digitally tradeable services exports supported 27,014 direct and 17,608 indirect American jobs in 2022.

Top Markets for Tennessee Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$191	\$3,981	\$4,171
Asia & Pacific (ex. China)	\$100	\$1,378	\$1,478
North America	\$51	\$864	\$915
Central & South America	\$49	\$697	\$746
Middle East & Africa	\$10	\$272	\$282
China	\$17	\$265	\$282

Europe was Tennessee's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Tennessee exports of potentially ICT-enabled services to Ireland grew from \$202 million in 2013 to \$929 million (+360%) in 2022.

The "Digital Dozen" accounted for \$3.1 billion out of Tennessee's \$7.9 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Tennessee, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$2,463
Royalties from Industrial Processes	\$673
A/V Services (Personal)	\$671
Credit-Related Services	\$610
Insurance Services	\$531
Other	\$2,928

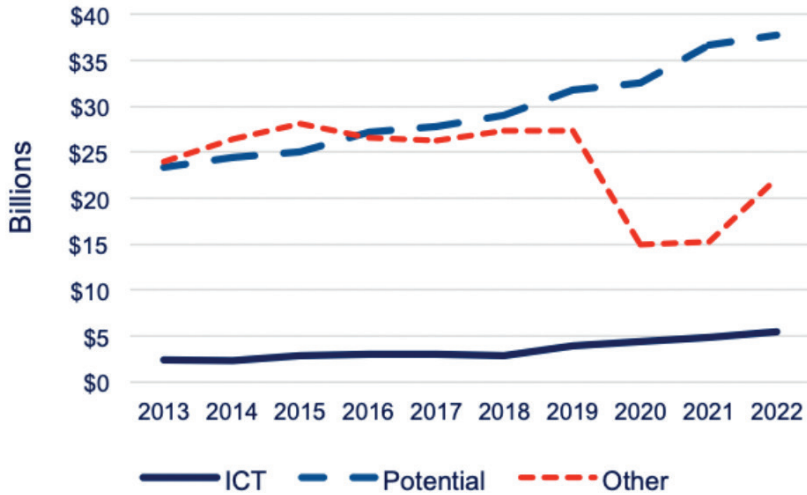
Royalties from computer software are the top ICT services export, growing from \$12 million in 2013 to \$135 million in 2022 (1,057%).

Business management and consulting services are Tennessee's top potentially ICT-enabled services export, growing from \$595 million in 2013 to \$2.5 billion in 2022 (314%).



Texas and Digital Trade

Texas Services Exports, 2013-2022



ICT services exports grew from \$2.4 billion in 2013 to \$5.5 billion in 2022 (128%), supporting 14,974 direct and 12,386 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$23 billion to \$38 billion (62%), supporting 119,445 direct and 81,424 indirect jobs in 2022.

Exports of other services grew from \$24 billion in 2013 to \$27 billion in 2019 (14%), before falling sharply due to Covid-19. They have not yet fully recovered.

Texas' digitally tradeable services exports supported 134,418 direct and 93,810 indirect American jobs in 2022.

Top Markets for Texas Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$2,301	\$20,766	\$23,067
Asia & Pacific (ex. China)	\$1,378	\$6,624	\$8,002
Central & South America	\$553	\$4,243	\$4,797
North America	\$874	\$3,464	\$4,338
China	\$239	\$1,395	\$1,634
Middle East & Africa	\$141	\$1,336	\$1,476

Europe was Texas' top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Texas exports of ICT services to Canada grew from \$210 million in 2013 to \$654 million (+211%) in 2022.

The "Digital Dozen" accounted for \$15 billion out of Texas' \$43 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Texas, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$13,105
Royalties from Industrial Processes	\$7,458
Computer Software Services	\$3,842
Financial Management and Advisory Services	\$2,748
Credit-Related Services	\$2,492
Other	\$13,677

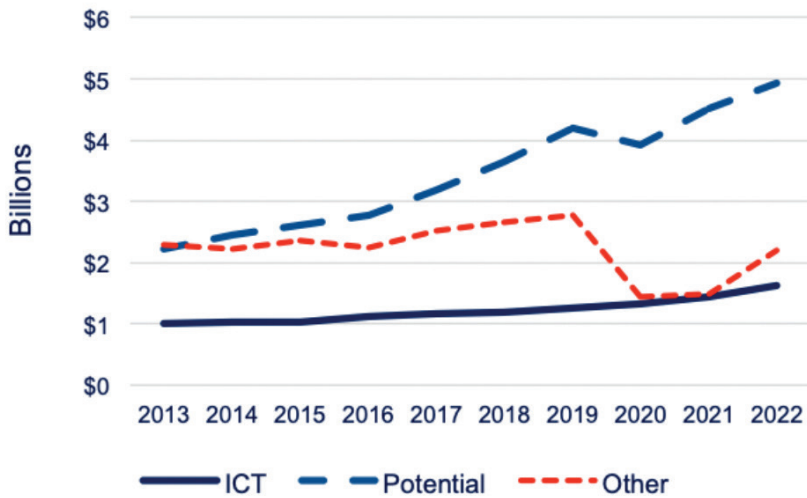
Computer software services are the top ICT services export, growing from \$635 million in 2013 to \$3.8 billion in 2022 (505%).

Business management and consulting services are Texas' top potentially ICT-enabled services export, growing from \$4.6 billion in 2013 to \$13 billion in 2022 (182%).



Utah and Digital Trade

Utah Services Exports, 2013-2022



ICT services exports grew from \$1.0 billion in 2013 to \$1.6 billion in 2022 (62%), supporting 3,022 direct and 2,803 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$2.2 billion to \$4.9 billion (123%), supporting 14,129 direct and 8,397 indirect jobs in 2022.

Exports of other services grew from \$2.3 billion in 2013 to \$2.8 billion in 2019 (21%), before falling sharply due to Covid-19. They have not yet fully recovered.

Utah's digitally tradeable services exports supported 17,150 direct and 11,200 indirect American jobs in 2022.

Top Markets for Utah Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$752	\$2,455	\$3,207
Asia & Pacific (ex. China)	\$464	\$1,045	\$1,510
North America	\$163	\$483	\$647
Central & South America	\$133	\$495	\$629
Middle East & Africa	\$27	\$270	\$297
China	\$86	\$180	\$266

Europe was Utah's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Utah exports of potentially ICT-enabled services to Singapore grew from \$47 million in 2013 to \$289 million (+517%) in 2022.

The "Digital Dozen" accounted for \$2.5 billion out of Utah's \$6.6 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Utah, 2022 (\$M)

Type (ICT in bold)	Total
Credit-Related Services	\$1,277
Royalties from Computer Software	\$938
Business Management and Consulting Services	\$820
Research and Development and Testing Services	\$759
Misc. Financial Services	\$514
Other	\$2,249

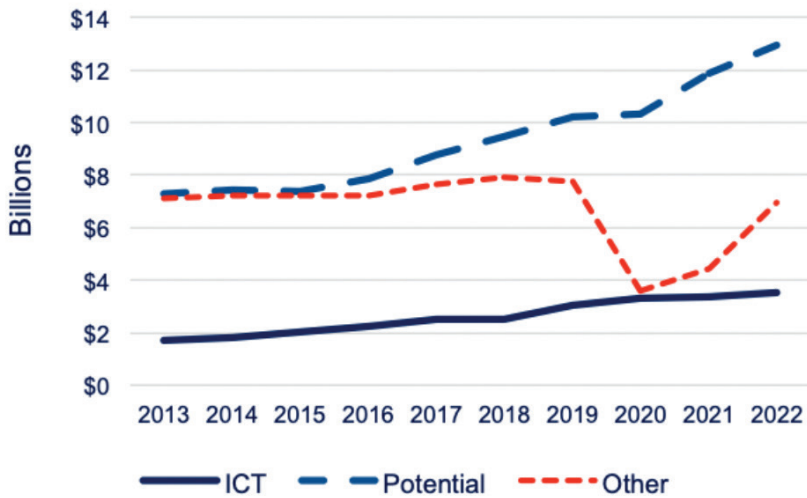
Royalties from computer software are the top ICT services export, growing from \$767 million in 2013 to \$938 million in 2022 (22%).

Credit-related services are Utah's top potentially ICT-enabled services export, growing from \$555 million in 2013 to \$1.3 billion in 2022 (130%).



Virginia and Digital Trade

Virginia Services Exports, 2013-2022



ICT services exports grew from \$1.7 billion in 2013 to \$3.5 billion in 2022 (109%), supporting 9,799 direct and 8,290 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$7.3 billion to \$13 billion (78%), supporting 45,307 direct and 29,126 indirect jobs in 2022.

Exports of other services grew from \$7.1 billion in 2013 to \$7.8 billion in 2019 (9%), before falling sharply due to Covid-19. They have not yet fully recovered.

Virginia's digitally tradeable services exports supported 55,106 direct and 37,416 indirect American jobs in 2022.

Top Markets for Virginia Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$1,495	\$6,742	\$8,237
Asia & Pacific (ex. China)	\$883	\$2,485	\$3,368
North America	\$578	\$1,382	\$1,960
Central & South America	\$343	\$1,294	\$1,637
Middle East & Africa	\$93	\$644	\$737
China	\$152	\$399	\$551

Europe was Virginia's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Virginia exports of potentially ICT-enabled services to Ireland grew from \$530 million in 2013 to \$1.9 billion (+259%) in 2022.

The "Digital Dozen" accounted for \$6.5 billion out of Virginia's \$16 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Virginia, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$5,635
Computer Software Services	\$2,533
Credit-Related Services	\$2,220
Misc. Business, Professional, and Technical Services	\$708
Research and Development and Testing Services	\$695
Other	\$4,702

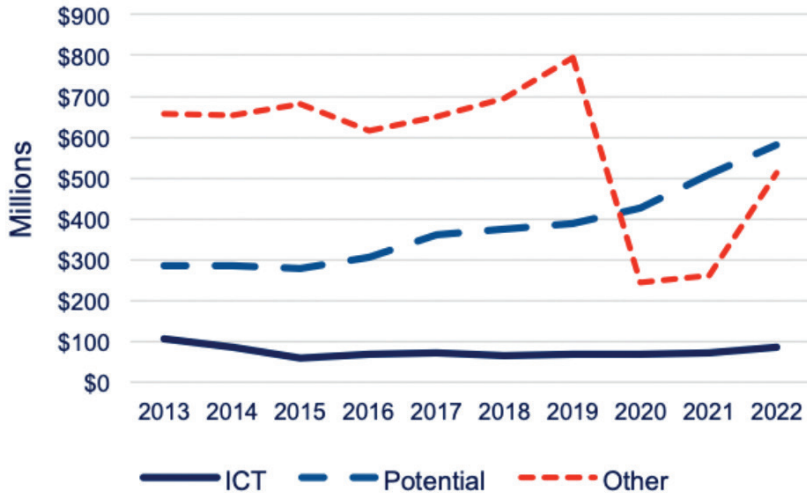
Computer software services are the top ICT services export, growing from \$1.0 billion in 2013 to \$2.5 billion in 2022 (150%).

Business management and consulting services are Virginia's top potentially ICT-enabled services export, growing from \$2.3 billion in 2013 to \$5.6 billion in 2022 (143%).



Vermont and Digital Trade

Vermont Services Exports, 2013-2022



ICT services exports fell from \$105 million in 2013 to \$86 million in 2022 (-18%), but still supported 258 direct and 185 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$286 million to \$583 million (104%), supporting 2,108 direct and 1,364 indirect jobs in 2022.

Exports of other services grew from \$656 million in 2013 to \$795 million in 2019 (21%), before falling sharply due to Covid-19. They have not yet fully recovered.

Vermont's digitally tradeable services exports supported 2,366 direct and 1,550 indirect American jobs in 2022.

Top Markets for Vermont Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$35	\$318	\$352
Asia & Pacific (ex. China)	\$23	\$108	\$131
North America	\$14	\$65	\$80
Central & South America	\$8.1	\$52	\$60
China	\$4.2	\$20	\$24
Middle East & Africa	\$1.7	\$19	\$21

Europe was Vermont's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Vermont exports of potentially ICT-enabled services to Ireland grew from \$22 million in 2013 to \$96 million (+329%) in 2022.

The "Digital Dozen" accounted for \$259 million out of Vermont's \$669 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Vermont, 2022 (\$M)

Type (ICT in bold)	Total
Business Management and Consulting Services	\$249
Computer Software Services	\$72
Royalties from Industrial Processes	\$50
Insurance Services	\$45
Research and Development and Testing Services	\$37
Other	\$216

Computer software services are the top ICT services export, growing from \$19 million in 2013 to \$72 million in 2022 (271%).

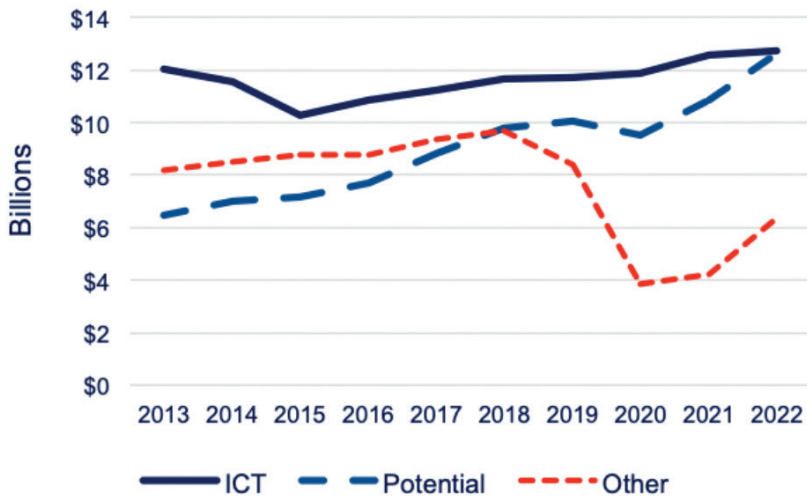
Business management and consulting services are Vermont's top potentially ICT-enabled services export, growing from \$78 million in 2013 to \$249 million in 2022 (220%).

Source for all data: Trade Partnership Worldwide's CDxports database



Washington and Digital Trade

Washington Services Exports, 2013-2022



ICT services exports grew from \$12 billion in 2013 to \$13 billion in 2022 (6%), supporting 20,224 direct and 19,318 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$6.5 billion to \$13 billion (96%), supporting 32,721 direct and 24,953 indirect jobs in 2022.

Exports of other services grew slightly from \$8.2 billion in 2013 to \$8.4 billion in 2019 (3%), before falling sharply due to Covid-19. They have not yet fully recovered.

Washington's digitally tradeable services exports supported 52,945 direct and 44,271 indirect American jobs in 2022.

Top Markets for Washington Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$6,155	\$7,219	\$13,374
Asia & Pacific (ex. China)	\$3,910	\$2,889	\$6,799
North America	\$962	\$907	\$1,869
Central & South America	\$821	\$816	\$1,637
China	\$748	\$299	\$1,047
Middle East & Africa	\$162	\$495	\$657

Europe was Washington's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Washington exports of ICT services to India grew from \$123 million in 2013 to \$609 million (+396%) in 2022.

The "Digital Dozen" accounted for \$8.7 billion out of Washington's \$25 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Washington, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Computer Software	\$10,190
Research and Development and Testing Services	\$5,552
Business Management and Consulting Services	\$1,656
Computer Software Services	\$1,393
Database and Other Information Services	\$1,332
Other	\$5,262

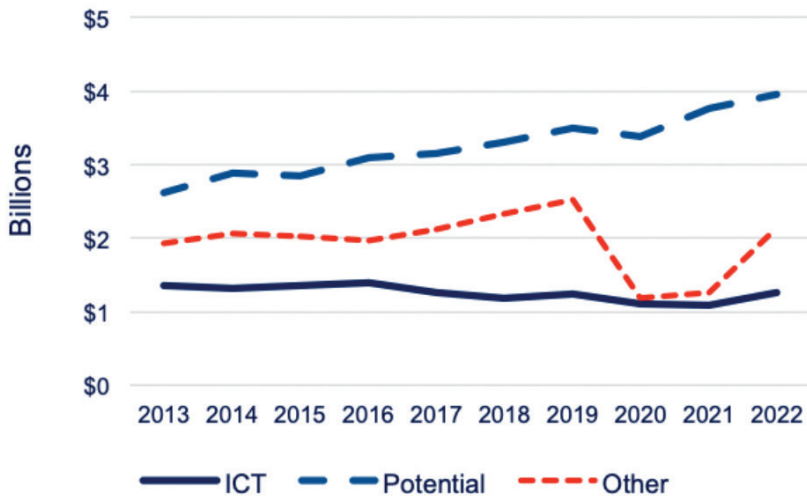
Royalties from computer software are the top ICT services export, but fell from \$12 billion in 2013 to \$10 billion in 2022 (-13%).

Research and development and testing services are Washington's top potentially ICT-enabled services export, growing from \$2.9 billion in 2013 to \$5.6 billion in 2022 (91%).



Wisconsin and Digital Trade

Wisconsin Services Exports, 2013-2022



ICT services exports fell from \$1.35 billion in 2013 to \$1.26 billion in 2022 (-7%), but still supported 1,889 direct and 2,045 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$2.6 billion to \$3.9 billion (51%), supporting 10,396 direct and 7,345 indirect jobs in 2022.

Exports of other services grew from \$1.9 billion in 2013 to \$2.5 billion in 2019 (31%), before falling sharply due to Covid-19. They have not yet fully recovered.

Wisconsin's digitally tradeable services exports supported 12,285 direct and 9,390 indirect American jobs in 2022.

Top Markets for Wisconsin Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$607	\$1,922	\$2,530
Asia & Pacific (ex. China)	\$369	\$817	\$1,186
Central & South America	\$90	\$540	\$630
North America	\$102	\$416	\$519
China	\$69	\$140	\$209
Middle East & Africa	\$18	\$110	\$127

Europe was Wisconsin's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Wisconsin exports of potentially ICT-enabled services to Ireland grew from \$196 million in 2013 to \$470 million (+139%) in 2022.

The "Digital Dozen" accounted for \$2.0 billion out of Wisconsin's \$5.2 billion in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Wisconsin, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Computer Software	\$910
Insurance Services	\$823
Royalties from Industrial Processes	\$712
Research and Development and Testing Services	\$531
Payments for Trademarks	\$312
Other	\$1,914

Royalties from computer software are the top ICT services export, but fell from \$1.1 billion in 2013 to \$910 million in 2022 (-20%).

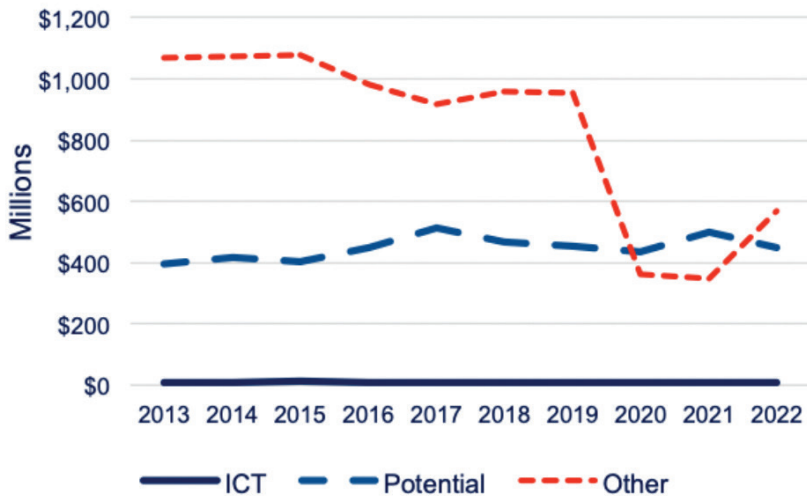
Insurance services are Wisconsin's top potentially ICT-enabled services export, growing from \$531 million in 2013 to \$823 million in 2022 (55%).

Source for all data: Trade Partnership Worldwide's CDxports database



West Virginia and Digital Trade

West Virginia Services Exports, 2013-2022



ICT services exports fell from \$11 million in 2013 to \$8.9 million in 2022 (-17%), but still supported 21 direct and 18 indirect jobs in 2022.

Potentially ICT-enabled services exports grew from \$396 million to \$450 million (14%), supporting 1,363 direct and 935 indirect jobs in 2022.

Exports of other services declined from \$1.1 billion in 2013 to \$956 million in 2019 (-11%), and then sharply due to Covid-19. They have not yet fully recovered.

West Virginia's digitally tradeable services exports supported 1,385 direct and 953 indirect American jobs in 2022.

Top Markets for West Virginia Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$3.5	\$240	\$243
Asia & Pacific (ex. China)	\$1.5	\$86	\$88
North America	\$2.0	\$49	\$51
Central & South America	\$1.6	\$34	\$36
China	\$0.3	\$26	\$27
Middle East & Africa	\$0.0	\$14	\$14

Europe was West Virginia's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

West Virginia exports of potentially ICT-enabled services to Ireland grew from \$28 million in 2013 to \$58 million (+106%) in 2022.

The "Digital Dozen" accounted for \$172 million out of West Virginia's \$459 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from West Virginia, 2022 (\$M)

Type (ICT in bold)	Total
Royalties from Industrial Processes	\$123
Payments for Trademarks	\$72
Business Management and Consulting Services	\$65
Insurance Services	\$35
Misc. Business, Professional, and Technical Services	\$35
Other	\$128

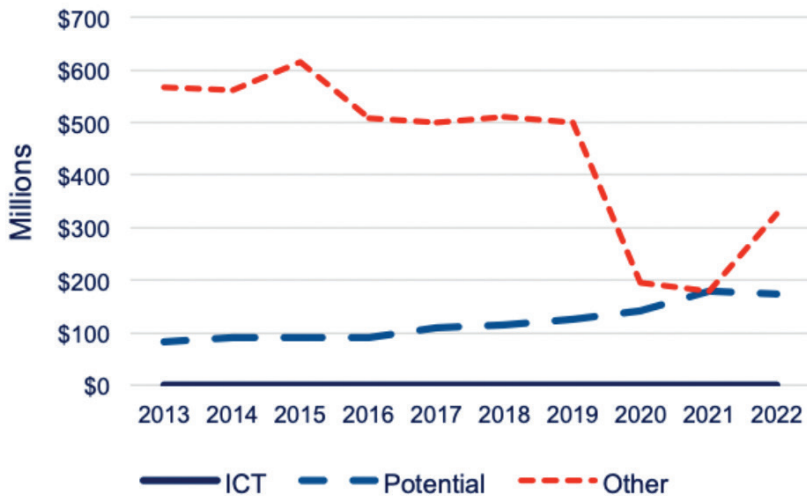
Computer software services are the top ICT services export, growing from \$1.2 million in 2013 to \$5.1 million in 2022 (340%).

Royalties from industrial processes are West Virginia's top potentially ICT-enabled services export, but fell from \$151 million in 2013 to \$123 million in 2022 (-19%).



Wyoming and Digital Trade

Wyoming Services Exports, 2013-2022



ICT services exports from Wyoming are negligible.

Potentially ICT-enabled services exports grew from \$82 million to \$175 million (113%), supporting 557 direct and 371 indirect jobs in 2022.

Exports of other services declined from \$566 million in 2013 to \$500 million in 2019 (-12%), and then fell sharply due to Covid-19. They have not yet fully recovered.

Wyoming's digitally tradeable services exports supported 559 direct and 372 indirect American jobs in 2022.

Top Markets for Wyoming Digitally Tradeable Services, 2022 (\$M)

Country	ICT	Potential	Total
Europe	\$0.2	\$80	\$80
Asia & Pacific (ex. China)	\$0.1	\$31	\$32
North America	\$0.2	\$23	\$23
Central & South America	\$0.0	\$22	\$22
China	\$0.0	\$11	\$11
Middle East & Africa	\$0.0	\$7.3	\$7.3

Europe was Wyoming's top market for digitally tradeable services, followed by Asia & Pacific (ex. China).

Wyoming exports of potentially ICT-enabled services to United Kingdom grew from \$7.5 million in 2013 to \$22 million (+197%) in 2022.

The "Digital Dozen" accounted for \$71 million out of Wyoming's \$175 million in exports of digitally tradeable services in 2022.

Top Digitally Tradeable Services Exports from Wyoming, 2022 (\$M)

Type (ICT in bold)	Total
Implicit Financial Services	\$36
Payments for Trademarks	\$33
Misc. Financial Services	\$24
Business Management and Consulting Services	\$21
Misc. Personal, Cultural, and Recreational Services	\$17
Other	\$44

Implicit financial services are Wyoming's top potentially ICT-enabled services export, growing from \$2.2 million in 2013 to \$36 million in 2022 (1,494%).



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