

Pexip's Private Cloud:

A Game-Changer for
Digital Collaboration,
Video Conferencing, and
Team Meeting Solutions

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INTRODUCTION

The acceleration of digital collaboration, video conferencing, and team meeting solutions adoption

Fueled by the realities of a global pandemic, the acceleration of digital collaboration, video conferencing, and team meeting solutions adoption has been inevitable. With both fully remote and distributed workforces, distance learning, telehealth, and video conferencing stepping in when in person events aren't possible, there are blue skies ahead for all things related to collaboration. The video conferencing market in particular, which was worth \$3.62 billion in 2019, is projected to reach \$10.46 billion by the end of 2027. The global team collaboration software market, which was worth \$13.4 billion in 2019, is projected to reach \$35.7 billion by the end of 2027.

The trend toward broad business adoption of ubiquitous, portable, digitally enabled collaboration and team meeting solutions to help distributed teams and coworkers connect anywhere, anytime, was already accelerating before the advent of the COVID-19 pandemic, but the pandemic undoubtedly increased the pace of change. According to [Gartner Research](#), as many as 74% of companies plan to permanently shift to more remote work post COVID-19.

The benefits organizations enjoyed from integrating video conferencing and digital team meeting tools into their daily operations have been obvious from the start, including improvements in productivity, time management, project velocity, cost savings, and operational efficiency. But the growth of advanced collaboration practices has also created a number of challenges for organizations, among them inconsistent connectivity, inadequate bandwidth, interoperability hurdles, inconsistent and often poor UX, limited document-sharing capabilities, and uncertainty around data security. While these

challenges collectively restrain the growth of advanced collaboration practices at scale across the enterprise, concerns about data security weigh even more heavily on organizations working in industries requiring additional security around data, such as finance and banking, healthcare, and government services. Both service and solutions providers have been addressing these needs at a pace that has closely matched the rate of adoption of these advanced digital collaboration practices, which has more or less coincided with the overall [pace of broader digital transformation](#) efforts in key regions around the world.

The need for scalable, feature-rich, agile, secure remote collaboration solutions

The sudden onslaught of the COVID-19 pandemic, however, disrupted the trajectory of digital transformation for most organizations. Virtually overnight, lockdown orders and the establishment of remote work became, at scale, the new operating principle for millions of businesses, large and small, across the world, and the very digital technologies that they had been experimenting with and slowly integrating into business models for the last few years became essential to business survival. One of the most critical technology categories that organizations quickly became especially dependent on as soon as workers began to work from home were those that enable digital collaboration, facilitated video conferencing, and improved the quality and value of team-meetings.

While service providers worked to increase bandwidth and reliability, solutions providers rushed to scale, improve UX, broaden their solutions' features, and enhance security. An already healthy cloud services infrastructure made the scalability of these solutions the fastest challenge to overcome.

It took a little while longer to fine-tune UX enhancements, but with smooth intuitive features already making their way into team collaboration products, leaders in the space already had a solid UX foundation upon which to build. This, in turn, has helped accelerate improvements in must-have features that make remote work at scale possible, like greater participant capacity, more document sharing options, more reliable streaming, and simpler recording features.

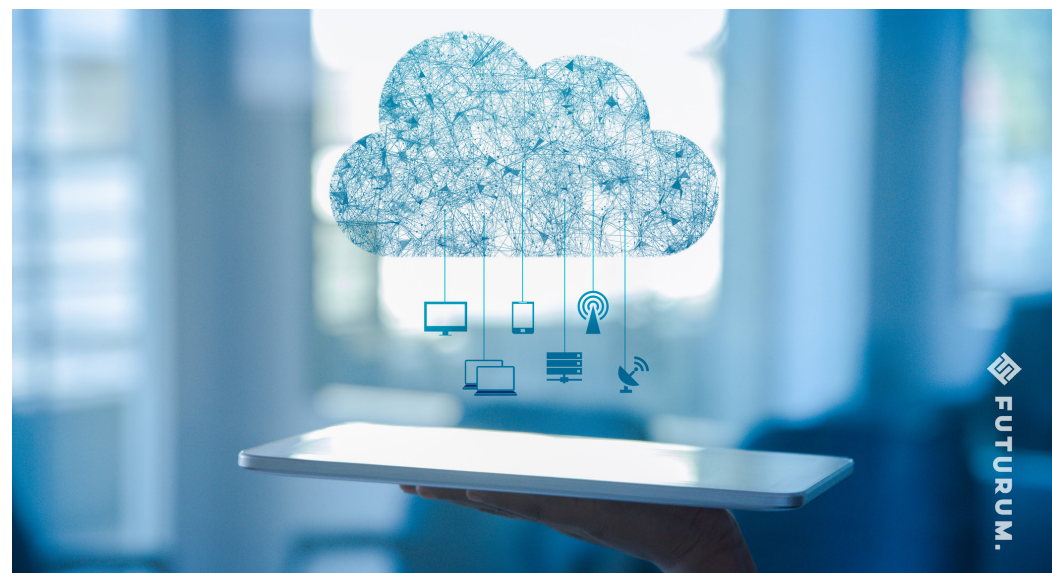
The need for reliable data security and frictionless portability

The most complex challenge organizations have to overcome has been, and continues to be, data security. Solutions providers must deliver enterprise-class security features to address unwanted access to live video, audio, text, and document-sharing during team meetings and daily communications, while also satisfying a plethora of stringent industry-specific compliance requirements (e.g. HIPAA, ISO, JITC, and FIPS). They must also work across a multitude of variable IT environments ranging from public clouds to private clouds and all manners of hybrid combinations of both, all while balancing the interoperability needs of dozens of adjacent solutions and software platforms across hundreds of different devices. To add to the complexity, all of this must often be achieved while operating across different geographic regions, each with their own unique ecosystems of legal, technical, and operational requirements.

Operating across unique, segmented geographies introduces a new complication to the security and operational agility equation that solutions providers must address, and that's portability. And not just portability, but frictionless portability — the type of portability that allows organizations to store data anywhere they choose, move it anytime they choose, and take it with them wherever they please. This becomes particularly important as organizations increasingly need to store some of their data in the countries and regions in which they operate, either for their

own operational reasons or because they are required to do so by law. The ability to inject geographic specificity into a solutions or service offering and do so in a way that gives organizations complete freedom and control over this capability, is one of the more exciting new aspects of data security management, and certain to become a critical differentiator in the next few years.

All said, solutions providers that can scale fast and well; design painless UX and broad interoperability between platforms, software and hardware; offer valuable mission-optimizing features; deliver flexible and robust security features, work across a broad spectrum of IT models, and inject geographic specificity to their offering, have the ability to create for themselves an undeniable advantage that can be capitalized upon much faster than they ever could have pre-pandemic. In this white paper, the Futurum team set out to explore digital collaboration, video conferencing, and team collaboration, the role security plays in those solutions, and the value of a private cloud solution offering frictionless videoconferencing such as that offered by Pexip delivers.



Pexip and the Unified Theory of Secure and Frictionless Video Conferencing

Based in Oslo, Norway, Pexip is a leading international Unified Communications software company. Established in 2011, the company quickly became a disruptive force in the video conferencing and collaboration space with its 2013 launch of Pexip Infinity — a virtualized cloud-scale platform based on an agile Multipoint Control Unit (MCU) architecture.

The [company's merger with Videxio in 2018](#) helped expand its offering to the market with a robust and flexible SaaS solution that helped address security and scale, with software-based, super scalable architecture that would enable transcoding of media to adopt to any type of environment, running and integrating natively in cloud platforms. Pexip's approach helped address an interoperability challenge that, at the time, still created some degree of unnecessary friction between voice and video conferencing software, as well as hardware from vendors including Cisco, Polycom, Microsoft, and Huawei. As its Infinity platform evolved, Pexip quickly expanded its interoperability to add support for popular web-based video conferencing platforms like Skype for Business (adding the ability to have Skype for Business clients join Pexip meetings as well as APIs to integrate with workflows), Google Meet, and Microsoft Teams, in addition to supporting access to large-scale cloud-based solutions like Microsoft Azure, Google Cloud Platform (GCP), and Amazon Web Services (AWS).

Although still a relatively new company, we find it impressive that Pexip is currently working with some of the world's largest and most complex organizations. Customers range from massive government agencies like NASA, the U.S. Department of the Treasury and the U.S. Department of Veterans Affairs, to equally large global professional services firms like Accenture, iconic healthcare providers like McLeod Health, and a growing roster of organizations of all sizes stretching across dozens of industries.

What we find especially appealing is Pexip's ability to reliably create smooth, scalable, secure, and customizable enterprise-class conferencing experiences for their users no matter their location or devices used — and do this fast and at scale. Already on an impressive growth trajectory before the start of the 2020 pandemic, Pexip was uniquely positioned to help assist service providers and businesses of all sizes simplify the operationalization of remote work collaboration software while also optimizing their video conferencing and digital collaboration practices with intuitive, interoperable, reliable, scalable and secure solutions. Equally impressive, when demand for their services grew exponentially virtually overnight, Pexip was among the few companies in the video conferencing, digital collaboration, and team meeting space with precisely the right tools, the right approach, and the right capabilities to properly scale and help their ecosystem do the same.



Pexip's New Addition: The Pexip Private Cloud



PEXIP PRIVATE CLOUD

Cloud-based conferencing in a new way

-  Ownership and control of data to ensure compliance and privacy
-  Easy, reliable, dedicated and secure deployments in regions on choice
-  Customize workflows for any video-based services or applications

Pexip's newest addition to its solutions ecosystem, the [Pexip Private Cloud](#), is a flexible new deployment option for its video conferencing platform, and one that simultaneously addresses some of the security, geographic specificity, and portability challenges that organizations have been looking to solve for the better part of a year. Designed to provide the ease and scalability of a shared cloud service with the control, security, and privacy of a self-hosted solution, the [Pexip Private Cloud](#) will also provide organizations in industries with strict regulatory compliance regimes (finance, healthcare, and government services) a greater range of data security and privacy options to facilitate compliance.

It's clear that Pexip's Private Cloud offering is a natural fit for Pexip's existing menu of flexible deployment options, which already included self-hosted on-prem or cloud options, and full SaaS options. Another valuable aspect of this offering is that it could considerably speed up customers' time-to-deployment compared to on-premise solutions. This is especially important in a pandemic and post-pandemic economy, when operational needs, including the need to scale up or scale down quickly, cannot always be anticipated and planned for in advance. Most organizations now need to have the capability to turn on expanded video conferencing services and capacity at will.

Through this private cloud solution, Pexip aims to provide organizations with the security and geographic specificity of on-premise solutions, and the agility, speed, ease of use, and scale of a public cloud service. This will allow organizations to more easily manage their cloud migration, and do so relatively quickly, while providing enterprise-class security and the kind of dashboard-enabled configuration that large organizations have grown accustomed to. In essence, Pexip's Private Cloud combines the same degree of data ownership and transparency already provided by its self-hosted deployment option, but with the ease and scalability of a SaaS solution. Customers are given the power to manage every aspect of their data including how long it is retained,

whose possession it's in, and who within an organization has access. Under this type of private cloud deployment, conference management and meeting data is under full control of the organization, but the compute power needed to manage call capacity is handled on the Pexip side in a secure, private customer-dedicated environment.

In researching this white paper, we noted that during beta trials in the fall of 2020, customers immediately reported up to 10x time-to-deployment improvements and IT management cost reductions of roughly 60-80 percent, so there appears to be a strong case to be made for the offering's ROI.

In short, Pexip's slick new private cloud adds entirely new layers of value for its customers: The scalability and speed of a public cloud but with the security, control, and data ownership of an on-premise solution. Additionally, thanks to the geographic specificity and complete data portability enabled by this solution, organizations can decide where their data is processed and stored — a useful option whether an organization's objective is to conform to a country's specific data privacy rules, leverage a region's most reliable network infrastructure, or keep sensitive meeting data out of countries with inadequate data privacy protections. This is a significant value proposition. Organizations are no longer forced to choose between imperfect and often restrictive solutions in order to address their unique data privacy and security requirements.

Note that because private clouds can be customized into virtual private clouds that are only accessible to predetermined individuals and accessed through private internal networks, organizations can ensure that their data is protected from exposure to unauthorized third parties or intermediate network operators (ASNs).

This solution is particularly timely as hybridized IT models designed to both facilitate and enhance operational flexibility have already prepared large organizations to look for this type of customizable deployment option and understand its value.

A private cloud of this type also makes it much easier for organizations to comply with the regulatory requirements of their individual industries, particularly banking and financial institutions, healthcare and telecare service providers, and government agencies. Lastly, the fact that Pexip's Private Cloud will initially be hosted on the Google Cloud Platform and then expanded to Microsoft Azure starting in 2021 bodes extremely well for its back-end security, as both platforms are as solid as they come.



A Breakdown of Pexip's Private Cloud

A wide range of implementation options. Pexip has long operated under the belief that one-size-fits-all solutions don't work in the real world, and that every organization should enjoy the flexibility to choose how to use and host their solutions. The Pexip Private Cloud seems to be yet another example of that business philosophy in action. Pexip gives its customers a range of options to choose from when it comes to where and how they want their data stored and/or processed.

One option is to go with a private self-hosted on-premise solution that is tightly integrated within the organization's own network. This provides obvious advantages when it comes to data control and security, but the flip side is that it can hinder an organization's ability to scale up or down quickly or without buying additional hardware and deploying new capacity.

Another option is for an organization to deploy its data to a self-hosted cloud of its choice. While this model gives customers more scaling flexibility, they're required to consider redundancy models, deploy additional VMs when they want to scale, and force step upgrades to capacity since it's not possible to buy single ports at a time. It definitely remains more complex to deploy and manage than Pexip's Private Cloud offering.


A third option is for an organization to simply leverage Pexip as a Shared Service. This option is the simplest way to get started and provides the easiest scaling flexibility, particularly for organizations that need to scale up and down quickly and who want minimal hands-on IT management when it comes to their cloud deployments.

There is no right or wrong solution here, only a menu of options that allows organizations to choose the environment(s) that works best for their individual needs. The beauty of the Pexip Private

Cloud offering is that doesn't force organizations to choose between operational flexibility and data security — it combines the best of both worlds.



Geographic specificity and portability. One of the most intriguing features of Pexip's private cloud is that it allows organizations to take complete control of their data and decide where they want to host it. If they want their data to only exist in a specific country or be dispersed across several locations that can guarantee a high degree of data protection, they can. Data can stay local and remain entirely private, or organizations can add data centers in whichever geographies they choose when the time comes to support international growth. This capability can allow organizations operating in countries that require data to be stored or processed within its borders to more easily comply, or, conversely, store and process data securely outside of a country's borders if its data centers or political regimes are deemed less than trustworthy. Once again, this feature highlights the extent to which Pexip's Private Cloud gives organizations complete control over where their data lives, who can access it, and when and how they decide to move it.



SECURE DEPLOYMENTS IN REGIONS OF CHOICE

- Private single tenant solution with data storage and processing within your control and regions of choice
- Utilize the world's most advanced cloud platforms (Google and Microsoft*) to provide fast and reliable connections to users around the world
- Interconnected with one of the largest backbone networks in the world to ensure fast, scalable, and consistent performance
- When inside the network, no transit of the public internet to reduce exposure.

*Microsoft Azure support coming in 2021

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PEXIP SMART SCALE



Easy to manage and scale

Manage capacity with the click of a mouse. Scale to meet demand within one region or across geographies with a few simple clicks.



Automated deployment and redundancy

Deploy your conference resources with confidence. Conference resources are deployed reliably and successfully with automation. High availability is supported through built-in redundancy.



Additional data privacy

Additional data privacy is built-in with secure channel automation of your conference resources.

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Scale-on-demand. Pexip's Private Cloud also allows organizations to bypass the complexity of micromanaging Google Cloud and Microsoft Azure virtual machines while enjoying the benefits of using their best-in-class data centers. Pexip's dedicated platform gets automatically deployed in the data center of the customer's choice, where vertical and/or horizontal scaling can take place in a matter of minutes. Organizations retain complete control of their video meeting data, which always remains completely self-contained and separate from Pexip's other customers.

Encryption and security. Pexip's Private Cloud ensures that organizations' most confidential and critical data (customer data, employee data, intellectual property, etc.) is never exposed to third parties and remains under the organization's own control. Customers can securely connect the self-hosted management nodes to the cloud-based media nodes via VPN and decide if they want to require the use of a VPN for their employees, as needed.

It is increasingly incumbent on solutions vendors to take a holistic approach to data security and privacy and offer a solution architecture built to support stringent privacy demands from every relevant angle. This is far more effective than relying primarily on end-to-end encryption (E2EE) to help secure data transmission, which is not the holy grail of data security that it is made out to be. The risk whenever solutions vendors offer shared infrastructure services hosted on the public internet is that data from all users could be exposed to hackers. E2EE or not, any successful attack or breach against a shared cloud solution could expose every customer using that shared cloud to a potential data breach. Not so when a vendor offers a private, dedicated solution. Pexip's Private Cloud allows a vendor to operate a dedicated service on non-shared infrastructure that is not exposed to the internet. And because Pexip's Private Cloud ensures that no two companies ever occupy the same space, the risk of widespread data breaches like the ones mentioned above are extremely slim.

Transparency is another key security feature of Pexip's new Private Cloud. Organizations can audit their data at any time to ensure that it is secure. Most shared cloud providers don't allow audits because it's not possible to separate customer-specific data. The ability for Pexip Private Cloud customers to do this is an important value-add.

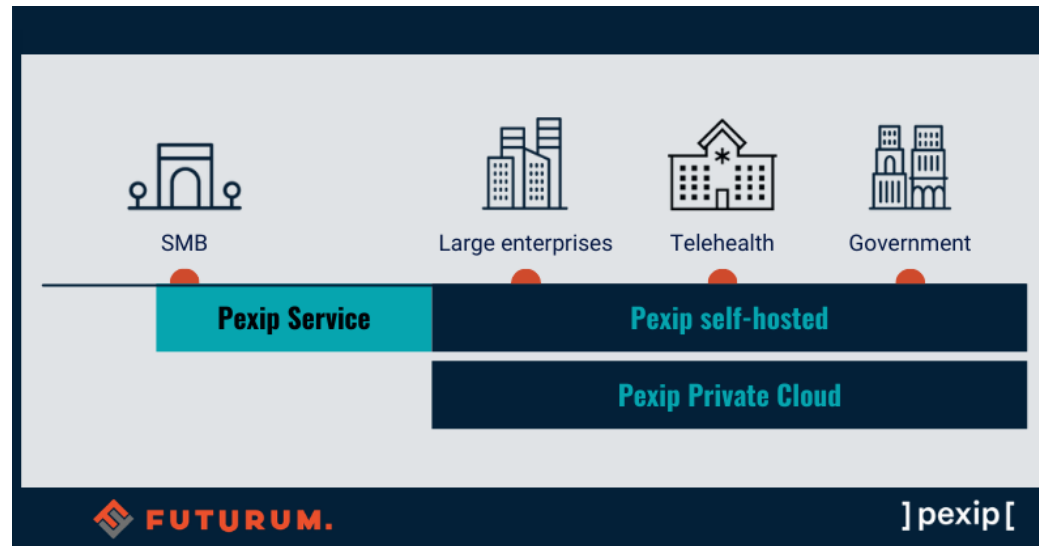
Applying the value of secure communications and data privacy to business considerations. In an age where the majority of our collaboration, brainstorming, strategic planning, pitches, internal training, and project management meetings happens (at least partially) online, and increasingly via video conferencing and video team meetings, secure communications features of this type are essential.

Consumer goods companies, for instance, need to trust that their product ideation meetings cannot be intercepted by their competitors. Creative agencies and movie studios need to trust that their next ad campaign ideas, salary negotiations, and talent hires remain confidential. Engineering firms and technology companies need to trust that hostile actors, competitors, and foreign governments cannot snoop in on critical IP-related discussions. The list of reasons why organizations in virtually every industry need to be able to control where their data lives and trust that their communications remain secure and confidential is endless.

Additionally, financial institutions, healthcare and telecare service providers, and government services agencies are often required by regulatory bodies to abide by certain rules when it comes to protecting and storing data and ensuring that security protocols are applied to their communications. Patients must trust that their telehealth meetings with their healthcare provider remain entirely confidential in accordance with HIPAA regulations for instance, and that their video communications will not be breached or hacked. It is therefore incumbent on healthcare service providers to ensure that their video communications are hosted in the most

secure, private cloud environment available. The same is true of financial institutions, whether their video communications focus on internal discussions about commercial investments or on private banking consultations.

As for government communications, the scope of reasons why video communications must be kept confidential ranges from national security considerations to ensuring the confidentiality of personnel management discussions. Government agencies also fall under regulatory frameworks like Federal Information Processing Standards guidelines (FIPS), Joint Interoperability Testing Certification (JITC), and ISO standards. These require them to seek vendors and solutions that will help them be compliant. Pexip's Private Cloud, by virtue of providing such high levels of data security and empowering organizations to control where and how their data is stored, can help them achieve compliance as needed.



Summary and Closing Considerations

Pexip's new Private Cloud is the first of its kind to deliver to the video conferencing market the scalability, speed of deployment, and cost efficiencies typically associated with best-in-class public cloud solutions, with the secure, private, data ownership usually associated with a self-hosted, on-premises solution. This new offering complements Pexip's existing deployment solutions, providing organizations with an additional layer of operational flexibility not offered anywhere else.

Pexip's Private Cloud also offers organizations the freedom to store and/or process their data in their region or country of choice. This can allow customers to take advantage of local data protection legislation, comply with stringent industry regulations, and/or to benefit from the optimal compute power they need to ensure high-quality or otherwise reliable video conferencing experiences regardless of their geographic footprint.

What Pexip essentially offers here is a dedicated, private, easily deployable, customer manager cloud solution that can be scaled up or down globally as needed, and that gives organizations full control over their own sensitive meeting data. And because it leverages Google Cloud and Microsoft Azure, Pexip can guarantee the global reach and multilayered security of enterprise-grade infrastructure while delivering both simple dashboard controls and a high degree of customization that together eliminate the usual complexity of working with virtual machines in those environments.

All of this, combined with the already slick interoperability of Pexip's platform, gives organizations the ability to easily optimize, customize, secure, merge and quickly scale their ecosystem of video collaboration platforms, no matter how complex or widespread, across multiple geographic regions. This new offering not only solves a real market need but manages to do so at a time when video conferencing capacity and organizations' data security needs are more critical than they ever have been.

Every organization that was looking for a way to quickly scale its video conferencing deployments but didn't have confidence that public clouds could provide adequate levels of data security and privacy, no longer has to choose between scalability and security. They can have both. For organizations that need to control where in the world their data lives (and doesn't), Pexip's new private cloud solution addresses that need as well. By all accounts, Pexip's Private Cloud for video conferencing appears to be the right solution at the right time, delivered in precisely the right way. As the world continues to adjust to the new paradigms of remote work and virtualized collaboration, Pexip may have just delivered the most important missing piece in the security versus scalability conundrum facing IT decision-makers today.

PEXIP PRIVATE CLOUD

How many public clouds are you connected to?
How much of your data do others control?

Benefits of "Pexip Private Cloud"

- **Dedicated Resources**
 - Dedicated deployment
 - Your cloud
- **Easy Consumption**
 - No data centers to manage
 - Flexible scaling (up/down)
 - Linear pricing
- **Automation**
 - Deployment reduced to minutes
 - New sites
 - Added capacity
- **Redundancy**
 - Redundant Pexip services for high availability
 - Resiliency
- **Security**
 - VPN connection from premise

Dedicated and private Cloud Meeting Service on your terms

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IMPORTANT INFORMATION ABOUT THIS PAPER

CONTRIBUTORS:

Daniel Newman

Founding Partner + Principal Analyst, Futurum Research

Shelly Kramer

Founding Partner + Lead Analyst, Futurum Research

Olivier Blanchard

Research Director + Senior Analyst, Futurum Research

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ABOUT PEXIP

Pexip simplifies complex video conferencing to empower teams to meet, regardless of location or technology. Our scalable, cloud-native platform enables high-quality video meetings, interoperability with Microsoft and Google solutions, and video system device registration. Customers can deploy Pexip on their own privately hosted servers, in their own cloud subscription of choice (Azure, Google Cloud or AWS), as a hybrid, or as a service. With a diverse set of APIs, Pexip can be customized to fit customers' unique needs. The solution is sold through 300 channel partners in 75 countries and used in more than 190 countries.

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CONTACT INFORMATION

Futurum Research, LLC | futurumresearch.com | 817-480-3038 | info@futurumresearch.com | Twitter: @FuturumResearch

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