Hogan Lovells

TMT Horizons

2018

Welcome

2018 will be another dramatic year for TMT.

Beyond convergence in TMT, convergence with other sectors is well underway. Technology, content and connectivity are now driving forces across the global economy - from digital health and fintech to autonomous vehicles.

As disruptive technologies continue to advance, 2018 will see AI, blockchain and 3D printing in an increasing range of business "applications" and ever increasing focus on distilling the value of data as the key commodity of the digital economy.

Dramatic changes in the dynamics of content distribution will continue apace whilst new forms of content like virtual and artificial reality will start to come into their own.

Connectivity is central. Infrastructure and spectrum will remain real pressure points.

These changes are driving ever more rapid evolution, and in some cases revolution, for business models.

And all this is being played out against an equally turbulent political and regulatory landscape.

Our job is to help TMT businesses to chart a course through by bringing together the insights of over 800 lawyers who focus on the sector across six continents.

That is why we have asked some of our top thinkers globally to provide a snapshot of their vision for the coming year.

A single publication cannot analyze every issue in detail – we do that elsewhere. But we hope this will help you to plot some key features on the map of the future.

Peter Watts
Partner
London

Winston Maxwell
Partner
Paris

Michele Farquhar
Partner
Washington, D.C.

Over 800 TMT sector lawyers across six continents

Asia

Fintech in Asia

2017 saw tremendous growth for fintech in Asia; we can expect more of the same in 2018.

Innovation in financial services will continue at pace with greater urgency from established institutions investing heavily in digital offerings to meet twin threats: rapidly evolving market demands and regulators moving deliberately to enhance competition.

Asia sees itself at the centre of the cryptocurrency boom. Sharp reversals, in China and South Korea's bans on ICOs, have done little to deter interest in distributed ledgers and other forms of financial innovation.

We see 2018 as a year of regulatory recalibration in the financial hubs. A Payment Services Directive inspired comprehensive regulatory framework for payments in Singapore. An Open Banking initiative and a re-launch of Virtual Banking licensing model in Hong Kong.

There is much to play for in Asia's flourishing fintech ecosystems. Growing middle classes seek out more sophisticated financial services. Later developing economies leverage technology to address the persistent challenge of the unbanked.

Through all this, the common theme is the need to be a centre of technological innovation, to attract investment and nurture talent.

Mark Parsons
Partner
Hong Kong

Media industry China

It is an accepted fact in the industry that major films are now manufactured for two markets: the U.S. and China. Chinese box office statistics are beginning to dominate worldwide distribution takes.

As a result, most Hollywood and other studios are acting on, or looking closely at, strategic investments inbound to China.

Warner Brothers, Legendary, Sony, Dreamworks, Lionsgate, are among those engaged in a range of options - from mere presence in the country and Sino-foreign co-productions to joint ventures and onshore film funds. Some, such as STX Entertainment, are even looking at Hong Kong capital markets listings to bring them closer to China.

2018 will likely see an intensification of this process. This will leave global media players faced with multiple challenges: structuring their engagement in China, the particular issues that come with the entertainment sector and navigating investment inbound to China and data localization issues.

Larry Sussman
Partner
Beijing

Chinese global TMT investment

Chinese outbound investment in global TMT will be driven by the need to acquire technologies China currently does not have with a clear eye on Chinese government policy.

There will be heavy emphasis on outbound investments related to the "Belt & Road" development strategy. The announcement in August 2017 of categorization of Chinese outbound investments provides clear pointers for likely trends.

Investing in overseas hi-tech businesses is positively encouraged whilst outbound investment in movie theatres and entertainment industries is "restricted" (suggesting it will be very difficult to fund Chinese outbound investments in those assets).

At the other extreme, many projects involving exports of technology, processes or products from China are already "prohibited". In 2018 we can expect to see even tougher curbs on exports of technology which China considers to be obsolete or sensitive.

Andrew McGinty
Partner
Shanghai

China TMT: Band 1

Chambers, 2018

Europe

The Digital Single Market comes of age

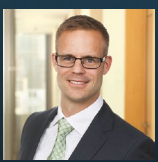
The European Commission's Digital Single Market (DSM) strategy launched in May 2015, with a range of individual legislative initiatives.

The implementation of a true single market for the digital sector goes far beyond the specific issues of platforms, e-commerce or cross-border access to online content. It extends the harmonization of online tax issues, a new media and broadcasting approach, end-to-end parcel delivery, a copyright reform, and the roll-out of a pan-European 5G mobile and wireless communications network.

Brexit offers a new dynamic for 2018. The UK has been a cheerleader for a "light touch" approach to many of the DSM's most high profile workstreams. 2018 will start to reveal whether the direction of travel starts to change as Brexit really starts to take shape.

For the DSM, 2017 was about streamlining the legal initiatives, 2018 will be the year when new directives and regulations really start to come into force. For business the work moves beyond monitoring and lobbying and implementation of directly applicable laws.

2018 will be the year when the DSM becomes unavoidable for businesses in TMT and beyond.



Nils Rauer
Partner
Frankfurt

France, Italy and Spain TMT: Band 1
Chambers, 2017

E-commerce in Europe

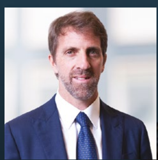
The Final Report on the e-commerce sector inquiry recently issued by the EU Commission confirms the significant growth of e-commerce over the years and the associated impact on companies' distribution strategies and consumer behaviour.

In 2018 we can expect competition and consumer protection authorities to take strong action on contractual restrictions which are aimed at controlling product distribution (pricing restrictions, platform bans, control of price comparison tools) bolstered by the selective distribution principles set out in the European Courts judgment in Coty, issued in December 2017.

2018 will also see the coming into force of a new regulation on geo-blocking, prohibiting the blocking of access to websites and other online interfaces for reasons related to the place of residence of a customer, or rerouting customers from one country version to another. Under the new rules, a trader may not refuse a transaction based on the domicile of customers.

Finally, the GDPR, which will govern the collection and transfer of data of European customers from May 2018, will have an impact on contractual arrangements particularly in the cloud and outsourcing area.

A highly dynamic market and active regulatory evolution promises an interesting 12 months.



Marco Berliri
Partner
Rome

General Data Protection Regulation

To say that the EU General Data Protection Regulation (GDPR) will change the existing data protection framework in Europe is an understatement. In 2018, an ambitious, complex and strict law will transform the way in which personal information is collected, shared and used globally.

The GDPR aims to take data protection compliance to a new level. So it is essential to appreciate what is significant about the GDPR.

The overall aim is to put people in control of their data. This is a theme that is present throughout the law and emphasized by the strengthening of 'consent' in relation to the use of data. When relied on as a justification for the use of data, consent will need to meet very high standards and overcome certain conditions.

Transparency, erasure and portability in particular are likely to emerge as crucial tools for individuals in the face of an ever growing hunger for our digital data. These rights will become more meaningful than ever, so greater uptake should be expected. From a practical perspective, one of the most notable novelties of the GDPR is the various requirements to make businesses more accountable for their data practices.

The early months of 2018 will be critical to prepare for compliance with a game-changing piece of legislation.

Whatever its imperfections, the GDPR is here to stay. The time for action is now.

Eduardo Ustaran
Partner
London

UK TMT Firm of the Year 2018

Legal 500

Disruptive technologies

Big Data

Big data drives efficiency gains, energy savings, and development of new customer relationships. It is the fuel for a data-centric economy. But, like oil, data can create pollution. As with environmental regulation in the 1970s, governments worldwide are increasing their scrutiny of data - often looking to the European GDPR as a model.

As 2017 draws to an end, big data is starting to shape regulatory policy well beyond TMT – in areas like life science, automobile, and financial services. Policy makers balance the "privacy threats" of big data against social gains – safer roads, personalized medicine, reduced energy consumption. Competition authorities see data as a new potential source of market power and anticompetitive practices. Banking regulators envisage data as a new compliance tool, driving banks' adoption of data lakes to track suspicious activity and manage risks.

Looking forward, we see new patterns developing which look beyond mere compliance and focus on managing regulation as part of an integrated strategy to manage and protect data as a new asset class.

If data is the oil of the digital economy, 2018 promises to be the year in which we start to move beyond ad hoc exploration and towards far more organized production and distribution processes which maximize value whilst respecting society's expectations.

Winston Maxwell
Partner
Paris

Global Data Protection: Band 1
Chambers, 2017

Blockchain beyond Fintech

Blockchain will undoubtedly have a profound impact within the Fintech industry in 2018, as numerous financial institutions look to collaborate with Fintech start-ups to deliver innovative cost cutting solutions.

Beyond the Fintech space, however, many other industries appear primed to benefit from blockchain in 2018. In life sciences, for example, blockchain has the potential to reduce the risk of counterfeit medicines, offering the ability to track medicine batches in real time from manufacture to supply. This capability is also likely to be invaluable to other sectors, such as retail and logistics. Blockchain may also increase transparency by granting unprecedented access to medical records for both medical professionals and patients.

Blockchain also has potential within the energy and commodity trading sectors. The use of smart contract technology may enable the automation of commodity trading contracts, reducing administrative cost and increasing the accuracy of cargo ownership data. This technology is already being leveraged by industry leaders including Statoil, BP and Shell, with an initiative that seeks to go live in 2018.

While the regulatory, data privacy and security areas still cause concern across all industries, blockchain looks set to accelerate during the course of 2018.

John Salmon
Partner
London

Artificial Intelligence

2017 was the year that the AI genie leapt out of the bottle and exploded into mainstream public consciousness. In 2018, adoption of AI technologies and platforms will continue to increase as AI becomes increasingly ubiquitous – those that don't ride this wave will be left behind.

AI will start being embedded everywhere, in everything. From greater insight through pattern matching at tremendous scale to more advanced NLP and deep learning, organizations will look to leverage AI to drive their business forward – AI promises increased speed and efficiency, the ability to hyper target or contextualize content for users, and remove friction.

We expect to see increasingly tailored, practical solutions coming to market at ever lower price points; AI will effectively become accessible to everyone from start-ups through to Fortune 500 companies.

As organizations rush to embrace this change how will legal and regulatory frameworks keep pace? We will see.

Richard Diffenthal
Partner
London

Global Fintech: Band 1
Chambers Professional Advisers, 2017

M&A

UK Corporate and Commercial Firm of the Year 2017

Legal 500

M&A in Silicon Valley

Tech sector activity in California continued apace in Q4 2017, with Broadcom's $100bn+ unsolicited bid for Qualcomm, and Marvell Technology Group's pending acquisition of Cavium (valued at more than US$6bn), on which Hogan Lovells is advising.

The Silicon Valley giants – including Apple, Google, Cisco, Oracle, Facebook and eBay – are sitting on more than half a trillion dollars in cash, so 2018 is shaping up to be another big year for tech M&A in Silicon Valley.

Tech M&A activity has not been restricted to strategic tech sector buyers; volume is also being driven by "cross-industry" and private equity buyers. In some cases financial sponsors have been able to outbid their strategic counterparts to do "take-private" deals.

Acquisitions of tech companies by China-based buyers have slowed considerably, however, both because of CFIUS challenges and the toughening of China's regulatory restrictions on capital outflows.

Rick Climan
Partner
Silicon Valley

Two Band 1 Silicon Valley Corporate M&A Partners

Chambers, 2017

M&A – the view from London

2017 was not a bumper year for M&A but it was the year fintech really hit the M&A headlines with Worldpay, Nets and Paysafe, the largest London public to private for 10 years. In all likelihood fintech will continue to be fertile deal territory in 2018 as banks and other financial services companies scramble to get ahead of the curve.

There are signs of life elsewhere too with Cineworld's bid for Regal and continued activity around Telefonica's 02 mobile asset. As Disney/21st Century Fox/Sky reminds us, the fundamental forces shaping the deals market are global and the UK is far from immune to them.

That said, there is little doubt that, at the margins, Brexit has had a dampening effect in 2017 and it will no doubt still be a factor in the next 12 months. Moreover, the question of greater protectionism of 'critical' industries continues to be debated and may neatly slip into the Brexit timetable.

Optimism that trade talks with Europe, will provide a better idea of the future landscape is likely to buoy the equity markets and private equity "dry powder" this combined with relatively cheap debt should provide the funding for the best start-ups and development phase opportunities.

Overall, the prospect of a strengthening market as 2018 progresses.

Don McGown
Partner
London

Japan Intellectual Property International Expertise: Band 1

Chambers, 2017

The view from Tokyo

TMT remains a key focus for Japanese companies.

Bursts of activity across fields including robotics, drone technology, VR, and autonomous driving is an opportunity for Japan to refresh its reputation as a global leader in technological innovation and quality.

Domestic investment in the TMT sector is high whilst Japanese tech companies also remain focused on outward expansion given demographic projections of a shrinking domestic market.

The strategic outbound M&A market is active, although potential Japanese buyers are mindful of the challenges of cross-border acquisition and integration. Japanese strategic investors pay attention to both fit and quality in evaluating potential targets and are prepared to pull back if a deal cannot be had on terms that make economic sense.

Inbound investment is mostly driven by financial investors such as KKR's, successful tender offer for Hitachi Kokusai. By contrast, strategic inbound investments in Japanese technology companies remain relatively rare apart from the occasional dramatic exception — like Foxconn's acquisition of Sharp.

With that transaction rated a success, Sharp's improving financial health enabled it to return to the First Section of the Tokyo Stock Exchange in early December. In 2018, the climate may become more hospitable to deals of this type.

Lisa Yano
Partner
Tokyo

Global Dispute Resolution: Band 1
Chambers, 2017

Emerging markets

The view from Latin America

Latin America continues to be a growing market with burgeoning opportunities.

Topics of importance for 2018 include net neutrality, cybersecurity and mobile broadband penetration.

Changes in the U.S. in net neutrality regulations, may drive new discussions in Latam about local regulation and the role of OTT in local markets in a year when the 2018 World Cup promises to be an important moment for the media and OTT industries.

Cybersecurity is a major concern in the region as it is in the rest of the world and we expect to see plans and new initiatives issued from governments and the private sector across the region to tackle cyber threats.

The region needs to grow mobile broadband penetration. According to the GSMA, Latin America is the world's second fastest growing mobile region in the world. We have seen a rise of smartphone adoption and new apps and start-ups to flourish. Increasing digital inclusion, skills and local content will be a main driver.

Finally, we expect to see spectrum auctions around the region to improve the deployment of 4G and even towards 5G networks.

Federico Hernandez
Partner
Mexico City

Blockchain – unlocking Africa?

We expect to see Blockchain technology adopted more rapidly in Africa in 2018, leveraging the strengths of the technology - particularly the decentralized nature of the network that makes third party trust in the system non-essential. Financial sectors have taken the lead in this respect and we expect this trend to continue.

But beyond finance look out for health care and insurance providers whilst manufacturers should continue exploring Blockchain solutions in supply chain management, including responding to the sale of illicit counterfeit goods. Batches of goods can be stored on a Blockchain, the authenticity of which can be verified by the purchaser at the point of sale.

Africa's geographical challenges, including vast distances between populated areas make the use of Blockchain for record-keeping a viable and attainable near term solution for issues including property records, identity documents and driver and vehicle registration verification.

Whilst Blockchain has been referenced as a potential solution to address rampant corruption and fraud in Africa, creative methods of implementation may be required to overcome an incumbents' lack of incentive to implement solutions bringing accountability.

Accompanying these technological deployments, expect a rise in government regulations targeted at regulating Blockchain's potential uses to circumvent restrictions on cross border financial flows, and the anonymity that the Blockchain can give individual users.

Leishen Pillay
Partner
Johannesburg

The role of innovation in Africa's resurgence

Can the march of technology help Africa leap to first world status?

Universal connectivity, AI, mobile payments and drones are seen by some as the social and economic saviours of the continent.

Real time information can change the way businesses make decisions enabling farmers to have instantaneous weather updates. Technology can democratize and distribute information breaking down traditional geographic boundaries in a vast continent. The shift to asset light business models like car sharing is potentially well suited to Africa. WhatsApp is being used to conduct business transactions. Drones are being used to deliver critical medical supplies to remote regions in Rwanda. Innovation can support education in Africa, slashing the costs of providing access to educational content.

The potential is genuinely transformational for Africa.

But, for technology to make a difference, Africa needs infrastructure, skills and local content. Looking into 2018, businesses need to focus on the opportunities to use their existing landscape as the starting point for disruptive transformation. And Governments need to recognize that technology will only provide economically transformative effects if it can be harnessed and managed in ways that persuades consumers that the technology is not simply reliable and can meet their needs but also that it is secure and is operated with genuine integrity.

Andrew Skipper
Partner
London

Global regulatory trends

U.S. telcos and convergence

The elevation of Republican FCC Chair Ajit Pai in January ushered in new trends toward telecom, Internet and media deregulation and a greater focus on rural broadband and infrastructure deployment. Continuing FCC efforts to spur new wireless and satellite services – as well as ongoing convergence and consolidation trends in the TMT sector - will also impact the 2018 landscape.

December's controversial repeal of the previous Administration's net neutrality rules will likely launch an ongoing fight over Internet regulation that will move to the courtroom and Congress. The Commission also launched efforts to streamline telecom carrier regulations, create new universal service funding models for unserved rural areas, liberalize media ownership rules and start proceedings to free up additional spectrum for new 5G and satellite services.

Convergence accelerated as cable companies continued to move into wireless through expanded unlicensed WiFi offerings and acquisitions of mobile spectrum. In parallel, tech companies and mobile carriers focused on content and seeking out new partnerships, with AT&T's bid for Time Warner an early example. The Department of Justice surprised many by opposing AT&T-Time Warner but, with the year ending with Disney's deal with 21st Century Fox and the pending Sinclair-Tribune broadcast deal, as well as speculation that Sprint and T-Mobile may renew their terminated merger discussions, there are few signs that 2018 will see any let-up in convergence and consolidation.

Michele Farquhar
Partner
Washington, D.C.

USA Telecoms, Broadcast and Satellite: Band 1
Chambers, 2017

Competition law – the real disruptor?

Disruption.

A buzzword when talking about the tech sector. But until recently few talked about tech disruption in the context of competition law.

In fact, increasingly, the challenge is the other way around. Competition law is a force for disruption in the world of tech. Multi-billion fines for online platforms which are not considered to be sufficiently neutral. Dawn raids for denied access to data. Transactions blocked or unwound if a unicorn is acquired by the wrong player.

IT-based business models have challenged the old economy at an unexpected pace. Global scalability has generated tremendous growth in a short time-frame for platforms which now find themselves in a new role. No longer the consumer-friendly insurgent; now established giants face allegations of unfairness, a lack of neutrality or an abuse of dominance. Some players have been fined, and, more importantly, have had to change the business model which has been the very secret of their success.

2018 will see a continuation of this pattern of aggressive enforcement, particularly in Europe at a time when the antitrust approach of the U.S. administration seems less clear than ever. A recipe for continued global disruption. More than ever, the tech sector needs to plan its competition law strategy for the road ahead.

Falk Schöning
Partner
Brussels

The future of cross-border data transfers

Ensuring the seamless transfer of data across borders continues to be one of the most significant challenges businesses face as they navigate between differing privacy and data security systems around the globe.

In the U.S. the impact of the ECJ's 2015 Schrem decision invalidating the Safe Harbor Framework, a mechanism for the transfer of personal information from the EU to the U.S., which on the ground failed to provide "essentially equivalent" privacy protections to EU law, continues to reverberate.

The replacement program, Privacy Shield, though it provides stronger protections, faces on-going legal challenges. The Irish High Court expressed concerns about the validity of "standard contractual clauses," another frequently used mechanism to transfer data out of the EU, and referred the issue to the ECJ for resolution. Moving into 2018, the validity of SCCs will remain in serious doubt pending a ruling by the ECJ.

In recent years, an increasing number of jurisdictions that have imposed "data localization" requirements - requiring data be maintained within their borders, arguing these restrictions are necessary to enhance privacy protections. We can expect to see that trend continuing into 2018 and beyond.

Edith Ramirez
Partner
Washington, D.C.

USA Cyber Law: Band 1

Legal 500, 2017

On the horizon

What's hot in Silicon Valley

The big trend is set to remain cross sector deals.

Silicon Valley's technology companies are no longer confining their deal making to their “traditional” sectors. Enterprise software companies look well beyond software when seeking opportunities to take the next step and consumer internet companies no longer confine themselves to their peers.

Similarly, as technology becomes all pervasive, businesses from across the global economy – from automotive to entertainment and from consumer to infrastructure are seeking out tech solutions.

This vigorous search for new market opportunities and paths to serve existing markets in new ways is making increasingly interesting combinations and ratcheting up the competition for good opportunities.

Looking forward into 2018 there is no sign of this trend slowing. It will drive deals but not just traditional M&A with minority investments, licensing arrangements and joint development deals are set to be an increasing focus.

John Brockland
Partner
Silicon Valley

Space: Exploring new frontiers data transfers

The global space industry has been going through a tremendous shift to focus on larger constellations, smaller satellites, and a broader array of innovative offerings, including satellite refuelling, orbital debris removal, asteroid mining, and alternatives to RF spectrum (i.e. laser, optical, radar).

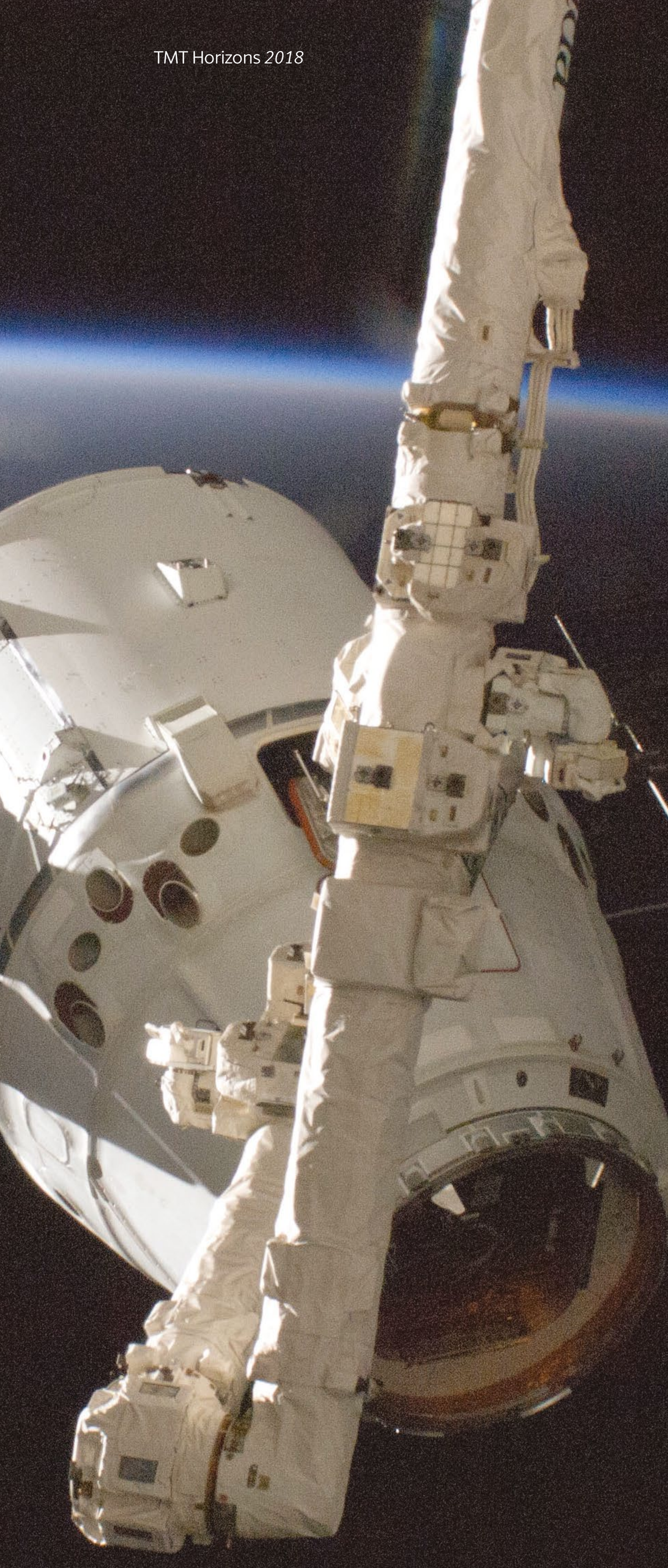
The industry successfully deployed “reusable” launch vehicles and is embracing innovative technologies like AI, Big Data Analytics, Internet of Things, 3D printing, and Robotics. Even commercial spaceflight is under development by at least two companies, backed by major investors, with an expectation that 2018 could be the year that this is successfully demonstrated.

2017 saw billions of dollars of investments in the industry by sovereign wealth funds, innovation funds, and venture capital as well as a significant number of new players, with quite a few start-ups with huge multi-billion dollar business plans. 2018 is likely to bring “repositioning” of many existing satellite companies to figure out how to remain relevant in the market and to redefine their business to offer competitive offerings.

The inevitable result will be winners and some losers as well as consolidations and teaming arrangements between “traditional space” players and new innovative entrants and among different industry participants.

As “NewSpace” moves from infancy to adolescence, there is little doubt 2018 will bring some twists and turns.

Randy Segal
Partner
Northern Virginia



Drones: Flying high

2018 will bring an increase in the pace of both regulation and market development across the globe.

In the U.S. this increase in rule-making will not simply be to enable expanded operations of drones commercially; it will also reflect the need to address remote identification of drones to satisfy recent U.S. federal security agency requirements.

We expect large industries to adopt drone technology as testing begins on expanded operations across the U.S.. Through the Trump Administration and Department of Transportation's UAS Integration Pilot Program, states, local governments and the commercial drone industry will come together to solve some of these complex issues.

Meanwhile, 2017 closed with similar developments on the other side of the Atlantic with both the EU and the UK plotting out enhanced regulatory plans for the future focused on drone identification and registration a central pillar.

Both the technology and understanding of users' needs are maturing fast and the development of a coherent rule book can only help to expand commercial drone use. Expect 2018 to bring a quickening of the pace of investment and the market consolidation through M&A.

Lisa Ellman
Partner
Washington, D.C.

USA Transportation and Air Travel: Band 1
Legal 500, 2017

Applied technologies

3D Printing

3D Printing is upending the way we produce products, and the entire manufacturing and distribution chain as we have come to know it. 3D Printing technology reduces barriers to entry, increases customization and impacts numerous complex issues, such as export classification and even taxation – where is the value added? All industries are being impacted by 3D printing – human body parts are being printed, as are medications and medical devices. Toys are being printed, food is printed, and scores of component parts used in every day manufacturing processes are now being printed onsite, and in the quantities needed at that particular moment.

Academic institutions, government bodies and private businesses are teaming up in efforts to further develop the technology. Companies are investing in 3D printing infrastructure and technology. And the profile of our workforce is changing as a result. There are myriad legal issues that companies must confront and view through the prism of 3D printing technology – how do we protect the IP? What are the governmental regulations that speak to the issues, and are we in compliance? What are the cybersecurity risks and how do we protect against them? Does our present insurance portfolio adequately protect us? Are we now a product manufacturer? Do our licensing and other contracts sufficiently indemnify us from the unknown legal landscape ahead?

The growth and use of 3D printing has been exponential in the past few years. While the opportunities are immense and seemingly limitless, so too are the unknown legal issues that come with such a revolutionary change in the way in which we operate. 2018 will only see this continue.

Phoebe Wilkinson
Partner
New York

Telehealth – connectivity is key

By combining state-of-the-art medical care with advanced telecommunications, telehealth promises to revolutionize virtually every form of medical service delivery. From primary care and dental care to behavioural health and emergency medicine, telehealth offers new, cost-effective tools to overcome barriers to access and improve patient outcomes.

However, the reliability of network services – and the security of data riding on those networks – remain the two main impediments to widespread deployment of telehealth. In 2018, expect to see communications companies and health providers focusing on overcoming these critical barriers to entry.

Telecommunications carriers will race to expand coverage and improve network performance and reliability. And medical service providers will insist on robust data-protection safeguards that keep personal information private and secure.

Trey Hanbury
Partner
Washington, D.C.

Global Intellectual Property: Band 1
Chambers, 2017

Autonomous Vehicles

Most major companies pursuing autonomous vehicles anticipate using LIDAR (light detection and ranging) sensors, vehicular radar sensors, and vehicle-based cameras to map out the immediate geographic surroundings of the vehicle, including any objects in its path.

The supplier markets for vehicular radar and cameras are fairly competitive, although Bosch has led the effort to develop short range vehicular radar sensors - in response to a 2015 International Telecommunications Union (ITU) decision to create a large, globally harmonized radio frequency allocation for the safe operation of such devices in the 77-81 GHz band.

By contrast, LIDAR, which maps objects in 3-D in the vehicle's very immediate surroundings by bouncing laser beams off the objects, is still a relatively niche and expensive product. Its suppliers have not yet ramped up production to the point where the equipment can be quickly and efficiently manufactured at low cost.

The competition between automotive OEMs and companies like Google, Uber and Apple in bringing autonomous vehicles to market is rightly drawing the headlines. But in 2018 it will be equally important to focus on the broader ecosystem — including the race to make the cost of producing LIDAR equipment cheaper.

The LIDAR manufacturers and automotive OEMs that crack that code will end up in a preferred position as the autonomous vehicle market develops.

Ari Fitzgerald
Partner
Washington, D.C.

Geopolitics

Brexit: A disruption too far?

2017 ended on an optimistic note with the UK and EU agreeing to start discussions on their post-March 2019 relationship. But this is no more than the end of the beginning.

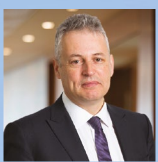
The UK is the European leader in many parts of the TMT economy with a highly developed ecosystem. There is a strong sense that additional friction (and cost) between the UK and EU is unlikely to fundamentally undermine the benefits of operating in that ecosystem, provided that friction is relatively minimal.

Whilst there are a host of details – from product standards to broadcast country of origin rules – two immediate concerns stand out: Movement of talented individuals between the UK and the EU in such an innovative sector; and the flow of data through networks which know no boundary at the English Channel.

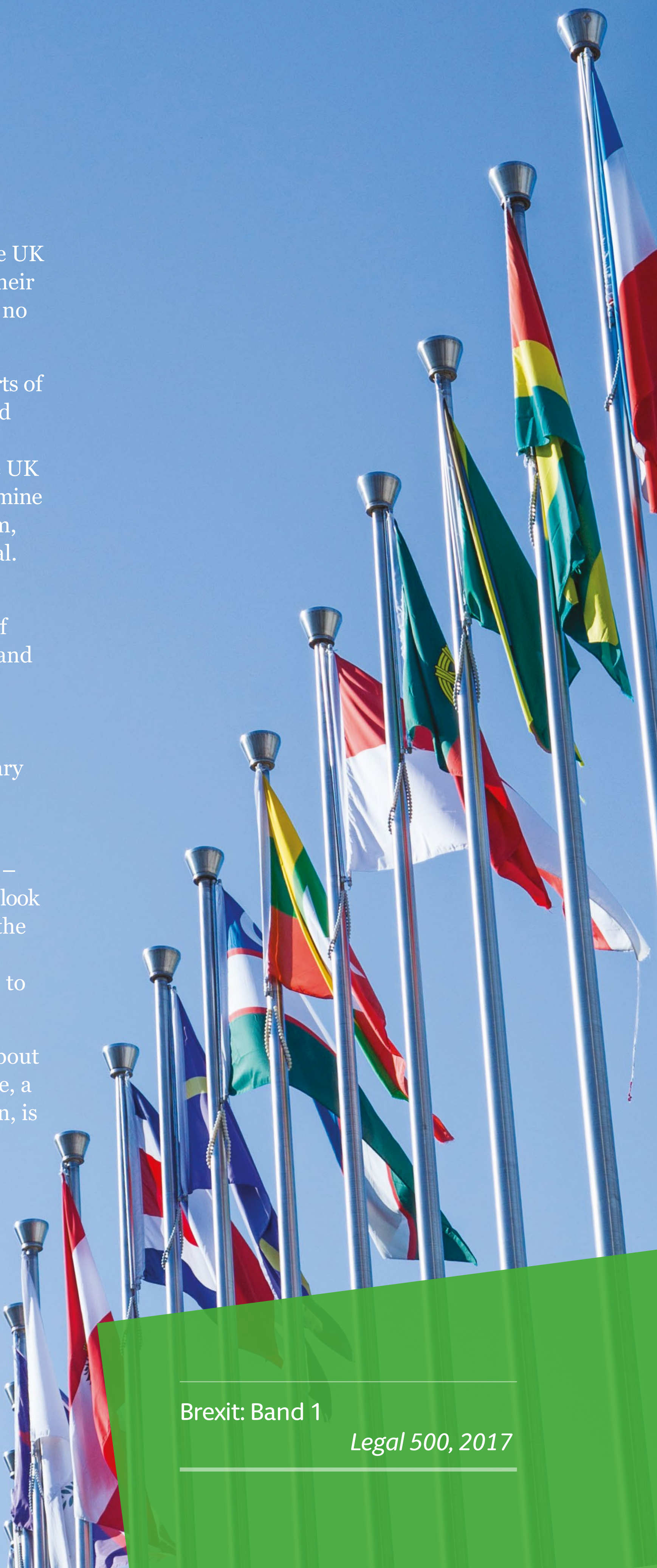
All the signs suggest that negotiators appreciate the importance of these issues – not just for the UK but for Europe - and will look for solutions to mitigate Brexit. However, the complexity of the US/EU "privacy shield" debate and the politics that have taken us to this point warn us it will not be easy.

Looking ahead, there remain questions about the direction of EU policy if the UK's voice, a powerful advocate of pragmatic regulation, is no longer heard.

With the clock ticking and the risks of stumbling over a "cliff-edge" real, 2018 promises to be the defining act of the Brexit drama.



Peter Watts
Partner
London



Brexit: Band 1
Legal 500, 2017

Transfer Pricing for the TMT sector

Transfer Pricing has made it to the boardroom and is there to stay. As TMT businesses continue to evolve, adopt new technologies and seek new growth opportunities, Transfer Pricing and supply chain planning will continue to be important in 2018.

New technologies are driving soaring IP values in the TMT sector and beyond.

These technologies present risk and opportunity for companies. The world post BEPS has seen more aggression from tax authorities looking at the blurring of the location of value creation between different tax jurisdictions in technology rich businesses. Looking forward, businesses should expect new legislation on digital economy, other measures to curb tax avoidance and an increased number of audits.

Those who engage in carefully planning, aligned with commercial strategy will be able to manage Transfer Pricing to achieve their objectives, but there will be increasing risks of cost and reputational damage.

Fabrizio Lolliri
Global Director
Hogan Lovells Transfer Pricing
London

Data Privacy – seen from Moscow

In 2017, the TMT industry continued its dialogue with the Russian DPA Roskomnadzor in the face of planned and unplanned audits and checks. These audits and checks have been mostly focused on compliance with Russian data privacy laws, including data localization requirements, cross-border data transfers rules and metadata storage requirements.

Roskomnadzor also followed with guidance for data operators on the drafting of privacy policies. This guidance, although non-binding, emphasizes the regulator's compliance expectations. As they move into 2018, companies need to factor this guidance in to their compliance strategies. The Russian legislator also introduced differentiation in the types of privacy violations and increased penalties.

1 July 2018 will bring the coming into force of a new legal requirement to store the content of processed messages (a part of so called "Yarovaya Law") applicable to all Internet services providing an exchange of messages.

With the Roskomnadzor's plans for 2018 inspections also published, we expect a busy year ahead.

Natalia Gulyaeva
Partner
Moscow

Russia TMT: Band 1

Chambers, 2017

For more information

TMT Horizons is a snapshot of just some of the issues the industry will face in 2018. Our team is working on those and many other issues to provide clients around the globe with valuable and innovative solutions to their most complex challenges – present and future.

If you want to know more about our team contact one of the global leads or explore some of our additional resources.

Additional resources

www.hoganlovells.com where you can find information on everything from satellite to digital health and links to our blogs on everything from privacy to drones.

www.hlmediacomms.com our global blog for everything TMT.

www.dsmwatch.com the home of digital single market insight.

www.hlengage.com where you can find detailed analysis of fintech, blockchain and payments.

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