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Consultation Draft of the ICDR Survey: The Effective, Expedient, and Expert Resolution of International Technology, Life Sciences, and IP Disputes

ICDR's Global Working Group on the Resolution of Technology, Life Sciences, and IP Disputes

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The International Centre for Dispute Resolution® of the American Arbitration Association® (“**ICDR**”) has established a Global Working Group on the resolution of technology, life sciences, and intellectual property (“**IP**”) disputes (“**TLI disputes**”). The Working Group is part of the ICDR’s global effort to study and obtain the feedback from experienced international practitioners in this growing area. The Working Group undertook a survey to study the most common types of TLI disputes, how they are affected by the industries in which they most often arise, the particular needs associated with such disputes, and how those needs can best be met by the dispute-resolution community. The Survey considered the multiple stages of such disputes, from the drafting of the arbitration clause to the enforcement of awards, the results of which serve as the basis for the Working Group’s making recommendations geared at resolving these disputes effectively, expediently, and expertly.

For the avoidance of doubt, this White Paper reflects the collective output of the Working Group members, and any position taken in this White Paper does not reflect, and should not be construed to reflect, the opinion or position of the ICDR, Arnold & Porter, ITechLaw, or any member of the Working Group or their law firm or company.

This is a consultation draft and should not be cited for any reason until the final version is published. The consultation period is open until March 31, 2024. We look forward to your comments.

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Consultation Draft of the ICDR Survey: The Effective, Expedient, and Expert Resolution of International Technology, Life Sciences, and IP Disputes

Executive Summary

This white paper considers the effective, expedient, and expert resolution of international technology, life sciences, and intellectual property (“**IP**”) disputes (the “**White Paper**”). After considering the scope, characteristics and predominant influences on technology, life sciences, and IP disputes, this White Paper makes initial suggestions as to how to improve the resolution of these disputes considering their unique (or not so unique) characteristics. During the consultative draft phase, the ICDR and the Global Working Group seek feedback and suggestions from professionals involved in information technology, semiconductor, life sciences, construction, energy, aviation, aerospace, and many other industries with technology, life sciences, and intellectual property disputes. We will accept comments and feedback on this consultation draft release of our survey through March 31, 2024.

The Global Working Group prepared this White Paper on the Resolution of International Technology, Life Sciences, and IP Disputes (“**Working Group**”), which was established by the International Centre for Dispute Resolution (“**ICDR**”)¹ of the American Arbitration Association, with support from ITechLaw and the law firm of Arnold & Porter.² Co-chaired by Kathleen Paisley and Maria Chedid, and with ICDR executive leadership from ICDR Vice President Steven Andersen, the Working Group, which did not meet in person and worked entirely remotely, is made up of practitioners highly experienced in the resolution of technology, life sciences, and IP disputes, including in-house and external counsel, arbitrators, and mediators, and with input from experts.³

¹ The ICDR was established in 1996 as the global component of the American Arbitration Association, and provides conflict-management services in more than 94 countries with a staff fluent in 12 languages. The ICDR provides a flexible, party-centered process over a broad range of industries and types of disputes and has a worldwide panel of hundreds of independent arbitrators and mediators.

² For the avoidance of doubt, this White Paper reflects the collective output of the Working Group members, and any position taken in this White Paper does not reflect, and should not be construed to reflect, the opinion or position of the ICDR, Arnold & Porter, ITechLaw, or any member of the Working Group, their law firm, or company.

³ **Co-chairs:** Kathleen Paisley (independent arbitrator) and Maria Chedid (Arnold & Porter) and with ICDR executive leadership by Steve Andersen. **Other distinguished members:** Ethan Berghoff (Baxter International); Cristiano Bernarde (SAP); Frances Bivens (Davis Polk); Brian Casey (Bay Street Chambers); Siegfried Elsing (Orrick); Daniel Floyd (Sony); Scott Forsyth (Microsoft); Patricia Galloway (Galloway

As a leading dispute resolution institution based in the United States, and given the significance of the United States as an important center for both the technology and life sciences industries and the public and private research and development organizations that support them, the AAA/ICDR plays an important role in the resolution of technology, life sciences, and IP disputes. Driven by its goal of continuous innovation to improve its services, and with technology, life sciences, and IP disputes forming an important part of its docket, the ICDR decided in 2020 to establish the Working Group to further explore and address the specific needs of such disputes from the drafting of the dispute resolution clause through to enforcement of the resulting award.

The ICDR's focus on these issues comes amidst a material shift in the life sciences and technology industries, and other sectors relying upon technology, IP, and artificial intelligence, towards greater use of international arbitration to resolve cross-border and multi-jurisdictional disputes. Moreover, as sophisticated technology and artificial intelligence play an ever-expanding role in all aspects of the economy, disputes in other fields not necessarily or immediately thought of as generating "technology disputes"—including, for example, construction, energy, and the environment—increasingly involve, and often turn on, technology-related issues. Further, while the White Paper focuses primarily on arbitration, it also considers the impact of mediation, dispute boards, standing mediation, process facilitation, expert proceedings and other non-binding means of resolving technology, life sciences, and IP disputes.

The ICDR's decision to cover international disputes related to technology, life sciences, and IP in a single White Paper was taken carefully after considering the many ways in which the needs of technology and life sciences disputes are similar, notwithstanding their different factual predicates, as well as the frequency with which technology and life sciences disputes raise IP issues. On the other hand, the characteristics of technology and life sciences disputes do differ, and, although many such disputes raise IP issues, others do not. This White Paper therefore considers the distinctive characteristics of these sectors and these disputes, as well as the overlap amongst them. For ease of reading, where not spelled out fully, technology, life sciences, and/or IP disputes are referred to collectively herein as "**TLI disputes.**" Moreover, while many of the issues addressed in the White Paper apply equally to domestic disputes, its intended scope is purposefully focused on international disputes.

In preparing this White Paper, in addition to the broad and deep knowledge of its members, the Working Group sought input from the wider community of those involved in resolving TLI disputes through a survey ("**Survey**"). The Survey collected views from

Arbitration); Claudia Götz Staehelin (Kellerhals Carrard); Steven Haines (Seagate Technology); Hilary Heilbron (Brick Court Chambers); Karl Hennessee, (Airbus); David Kreider (independent arbitrator); Hongseok Kim (KP & Partners); Sophie Nappert (3VB); Klaus Reichert (Brick Court Chambers); Peter Ruby (Goodmans); Jose A. Santos Jr. (Law Offices of Jose A. Santos); Maxi Scherer (Wilmer Cutler Pickering, Hale and Dorr); Robert Shives, Jr. (Shinko Electric America); Bryan Sinclair (Cisco); Jennifer Smith (JMS Arbitration); Edna Sussman (Sussman ADR); Luan Tran (International Attorney); Eric Tuchmann (ICDR/AAA); Albert Jan van den Berg (Hanotiau & van den Berg); Melanie Van Leeuwen (Derains & Gharavi International); Wolf von Kumberg (independent arbitrator and mediator); Rick Weber (Oracle); Ariel Ye (King & Wood Mallesons).

this community concerning the unique characteristics of TLI disputes, and how arbitration and various forms of non-binding dispute resolution might better assist parties in resolving such disputes. The Working Group obtained responses from over 500 participants, including in-house counsel, arbitration practitioners, arbitrators, and mediators, with participants answering distinct questions depending on their primary role in dispute resolution. A copy of the survey questionnaire is attached to this report as {Annex I}.

The Working Group was tasked with the responsibility of studying the common types of TLI disputes, the extent to which they are impacted by the industries in which they most often arise, the particular needs associated with such disputes, and how those needs can best be met by the dispute resolution community. The Survey addresses multiple stages of such disputes—from the drafting of the arbitration clause to enforcement—and aims to better understand the background, characteristics, and parameters of TLI disputes, and to identify suggested solutions to the challenges of resolving them effectively, expediently, and expertly.

After providing a background to TLI disputes, this White Paper summarizes the results of the Survey, analyzes those results, and makes practical recommendations. By applying the insights gained from the TLI specialists on the Working Group, together with the Survey results, the White Paper seeks to provide a foundation on which the dispute resolution community can build its knowledge of these disputes, continually adapt to their needs, and thereby better serve the future of dispute resolution in the new economy. The Working Group notes that it intends this White Paper to be used as a resource for the members of the international dispute resolution community, who might turn to different parts of it for different purposes at any given time. Accordingly, the White Paper errs on the side of inclusion, and therefore is lengthy and not intended to be digested in a single sitting. This White Paper is structured as follows:

Section I provides a background to TLI disputes, the scope of which has been broadly defined for these purposes, and the increasing use of arbitration and non-binding dispute resolution to resolve such disputes. It then considers why arbitration and non-binding dispute resolution are generally well suited for the resolution of TLI disputes.

Section II sets forth the results of the Survey, along the following dimensions:

1. The increasing *prevalence* of TLI disputes and the *diversity of industries* in which technology and IP issues arise; while “traditional” tech industries such as IT were the most prevalent, other industries like energy and construction were also frequently selected;
2. The *importance* of technology and IP issues to disputes when they are raised, with the vast majority of such issues being important or case determinative;
3. The use of *different means of resolving TLI disputes* and the *relative effectiveness* of those means, with a preference for the arbitration, meditation, and negotiation of TLI disputes;

4. The *diverse types of agreements* that tend to give rise to TLI disputes, with licensing and joint venture/partnership agreements being the most prevalent;
5. The *varied nature of claims* that arise in TLI disputes, with IP claims, defective products/services, and breaches of representations and warranties being the most prevalent;
6. The *importance of experts—and managing them effectively—to the resolution of* TLI disputes;
7. The *forms of relief* sought in TLI disputes, with damages and injunctive relief—particularly in IP disputes—being most prevalent;
8. The *most important attributes of an arbitrator* resolving a TLI dispute, with arbitrator experience and subject-matter expertise being the most important attributes;
9. The *main advantages of arbitration* as a means of resolving TLI disputes, with the most important being confidentiality and the ability to choose the decision-maker; and
10. The *areas where arbitration can most improve* to become a more effective means of resolving TLI disputes, with the most important being shorter time to resolution, more arbitrator expertise, and better arbitrator case management.

Section III provides ten recommendations based on the input of its expert members and the results of the Survey. The recommendations are as follows:

1. Given the importance of TLI disputes, dispute resolution institutions should consider providing transparent and comparable data about TLI disputes on their dockets.
2. Arbitral institutions, parties, in-house/external counsel, and neutrals should consider integrating non-binding dispute resolution procedures into dispute resolution agreements, institutional rules and procedures, and on-going arbitrations to encourage the settlement of TLI disputes.
3. Arbitral institutions should consider whether amendments to their emergency arbitrator, interim relief, or expedited arbitration procedures would make them better suited to the needs of TLI disputes, or adopting such procedures where they do not already exist.
4. When drafting dispute resolution clauses for TLI disputes, parties and counsel should consider referring such disputes to expedited arbitration, potentially in combination with mediation and other forms of non-binding dispute resolution intended to avoid or narrow the dispute.
5. Parties should generally avoid including carve-outs for IP claims. To facilitate this practice, up-to-date, reliable, and country-specific information about the arbitrability of IP rights should be made available by a trusted source.
6. When IP disputes arise between parties who have no contractual relationship, such parties should consider referring those disputes to mediation, arbitration, and/or expedited arbitration to maintain control over the dispute, keep it inter-parties, and avoid the high cost of multi-jurisdictional IP actions.

Further, when settling non-contractual IP disputes, parties should consider including in the settlement agreement a dispute resolution clause calling for arbitration or expedited arbitration, potentially in combination with mediation and other forms of non-binding dispute resolution intended to avoid or narrow the dispute.

7. Given the desire of parties to choose neutrals based on transparent, unbiased information about their relevant experience, arbitral institutions and other qualified bodies should consider publishing separate lists of neutrals with experience in (i) technology, (ii) life sciences, and (iii) IP that have been vetted based on transparent criteria, as well as encouraging other efforts to ensure that parties have robust information for arbitrator selection.
8. In cases involving complex technological or scientific issues, it is often beneficial to have a technology/science tutorial early in the proceedings, for example at a substantive midstream conference and arbitral institutions should consider whether it would be useful to mention this in their procedural rules or practice tips.
9. Given the need in the context of TLI disputes to develop technical, scientific, IP, and other issues requiring expert evidence, in addition to potential quantum expertise, counsel, arbitrators, and parties should put in place procedures from the outset of the arbitration to actively manage the experts. Such procedures should be designed to elicit the expert evidence expediently, potentially including substantive midstream case management conferences/Kaplan hearings, expert conferencing, Scott Schedules, and/or joint expert reports. Arbitral institutions should consider adopting protocols addressed to expert evidence.
10. Where confidential technology, life sciences, or IP assets are involved in an arbitration, or where confidentiality is otherwise important, confidentiality agreements should be entered into in the arbitration agreement or during the proceedings (or both), addressing each stage of the process, including enforcement. Those agreements should include meaningful sanctions for breach. Arbitral institutions should consider proposing model language addressing these issues.

I. Overview of Technology, Life Sciences, and Intellectual Property Disputes and Why They Are Well-Suited to Arbitration

The number of TLI disputes being resolved through arbitration and other forms of dispute resolution is increasing. The Working Group has identified several reasons for this trend. **First**, there has been significant growth in the technology and life sciences markets in recent decades, and thus increased transactions and disputes resulting therefrom. **Second**, technology and life sciences companies have become more familiar with the potential benefits offered by party-driven, efficient, and confidential dispute resolution processes in which they can choose specialized neutrals and seek enforcement through the Convention

on the Recognition and Enforcement of Foreign Arbitral Awards (“**New York Convention**”)⁴ and, in the case of mediated settlements, through the United Nations Convention on International Settlement Agreements Resulting from Mediation (“**Singapore Convention**”).⁵ **Third**, technology and life sciences companies create and protect much of their value through IP and therefore often find themselves with IP-related disputes (although IP disputes may equally be raised in a vast array of different industries and are not always highly technical or scientific). And, **finally**, in virtually every sector, technology has become essential to the business, which can lead to disputes over that technology, including in those sectors in which international arbitration has historically been the dispute resolution mechanism of choice (such as construction and energy).

Taking into account the foregoing, and in order to ensure that the results of its work are broadly relevant and useful, the Working Group’s focus was not limited solely to disputes involving companies that are naturally identified as being in the technology or life sciences industries. Rather, the Working Group sought to study and draw lessons from the wide range of disputes—across industries—that raise technology, life sciences, and IP issues. Moreover, while life sciences and IP disputes more easily lend themselves to definition, much thought and writing has gone into defining what constitutes a “technology dispute”—not surprisingly because “technology” itself is an amorphous concept, and technology drives the worldwide economy, which means technology disputes can arise virtually anywhere between companies across industries.⁶ In differentiating between technology and life sciences disputes versus IP disputes, it is also important to note that technology and life sciences disputes tend to be defined by the factual predicates that underlie them, whereas IP disputes are largely shaped by legal issues related to IP, including patents, copyright, trademarks and trade secrets, among others.

The following sections provide background to disputes related to (1) technology, (2) life sciences, (3) IP, and the increasing use of arbitration and other dispute resolution mechanisms to avoid or resolve such disputes, followed by a section (4) considering why arbitration and other forms of non-binding dispute resolution are well suited for the resolution of TLI disputes.

1. Technology Disputes

A. Background to Technology Disputes

The category of technology disputes encompasses a wide variety of international arbitration disputes. Historically, disputes involving or between IT companies—which may be considered “traditional” technology disputes—generally arose out of cornerstone agreements, like research and development agreements, licensing or distribution agreements,

⁴ Convention on the Recognition and Enforcement of Foreign Arbitral Awards, 6 June 1958, 21 U.S.T. 2517, 330 U.N.T.S. 38.

⁵ United Nations Convention on International Settlement Agreements Resulting from Mediation, 20 December 2018, 3369 U.N.T.S.

⁶ Each type of dispute was defined for purposes of the Working Group Survey; these definitions are noted in Section II, below.

and sales agreements—namely, agreements governing and establishing contractual obligations with respect to the creation, protection, licensing, or sale of technology or technological products. These disputes continue to be an important part of what constitutes a technology dispute, and often include allegations related to missed milestones, the quality of service (or lack thereof), payment obligations, or the breach of licenses or exit terms, but they represent far less than the full picture.⁷

As previously mentioned, in today’s technologically driven economy, technology disputes increasingly arise between entities not traditionally seen as technology companies. For instance, disputes in the energy and construction industries, where different forms of technology comprise an increasingly important part of the supply chain, often are, at bottom, technology disputes.⁸ Using energy as example, many, if not most, disputes related to alternative/green energy are technology disputes as defined by the Working Group, and many traditional energy disputes also turn on technology related issues. Moreover, many aviation disputes turn on technology issues.⁹

As with “traditional” technology disputes, these disputes may relate to contractual arrangements relating to the development and use of technology within these industries, including transfer and licensing agreements, but they may also involve the use of technology in core business functions—for example, problems with technology can lead to construction delays or impact the exploitation of natural resources. As another example, the distinction between a dispute in the alternative and renewable energy sector and a “technology dispute” may be virtually nonexistent: advances in technology, driven by heavy public and private investment and reliant on complex (and fragile) supply chains, are at the core of that entire sector. Accordingly, disputes arising from renewable energy projects and agreements will almost inevitably demand some understanding of the technology underlying the energy source, if not be focused entirely on it.¹⁰

Across many sectors, these technology disputes in all of their forms often comprise part of the underlying claims—and may be the central claim—of an arbitration that appears

⁷ See *Arbitration in Technology Disputes*, GLOBAL ARBITRATION REVIEW, 11 November 2022; *Technology Disputes: Global Overview*, WHITE & CASE, 1 November 2022. Although not the focus of this White Paper, we also note that this category of disputes has seen an increase in mergers & acquisitions and corresponding disputes.

⁸ See, e.g., *Future of International Energy Arbitration Survey Report*, QUEEN MARY UNIVERSITY OF LONDON & PINSENT MASONS, at 5, 20 (2022) (over a third of survey respondents noting that “changes in technology” would be the most likely cause of a dispute regarding energy infrastructure).

⁹ The issues specific to the aviation industry led to the constitution of a specialized arbitration center in the Hague expressly to address aviation disputes. See The Hague Court of Arbitration for Aviation <https://www.haguecaa.org/>.

¹⁰ See, e.g., Holly Stebbing, Amy Joan Armitage & Majdie Hajjar, *The green energy transition: Clouds on the horizon?* (2023) (“Much of the technology, design and engineering adopted for renewable sources of energy, is either: (i) new and unproven; (ii) emerging; or (iii) is being adapted from a small to a larger, untested scale in a more demanding operating environment. This increases the risk profile of a project, as unforeseen technical issues can arise during the construction phase and performance targets for the operational phase may ultimately prove unsustainable and/or unrealistic.”); see also *US-Korean fuel cell dispute settles*, 6 January 2022, GLOBAL ARBITRATION REVIEW; *Korea Hydro & Nuclear Powers and Korea Electric Power Corporation v Westinghouse Electric Company* (KCAB/IA No. 22113-0015).

on its face to be an energy or construction dispute. Similarly, disputes over artificial intelligence and digital assets will arise among companies of all types, and often will include issues related to the complexities of the technology underlying the assets at issue.

Artificial intelligence–based modelling is also playing an increasingly important role not only as the basis for an underlying claim, but also as part of the evidence. This is the case, for example, in cases presenting complex forward-looking damages claims. Among other things, Monte Carlo simulations and system dynamics modelling¹¹ may be employed as part of the proof case of the “but-for” damages claims or as part of a discounted cash flow (“DCF”) model. Moreover, this type of modelling will increasingly be used to value claims as part of settlement efforts, including in mediation. Arbitrators, mediators, in-house and external counsel and experts will need to understand the highly complex technological basis for these models and properly interpret them, a skill set that goes beyond that required even for the sophisticated financial models commonly employed today.

B. Cross-Border Nature of the Business

Technology is by its nature ubiquitous, which lends itself to international operations, commercial relationships, and transactions, leading to cross-border disputes. Under such circumstances, one party (a foreign party) may be reluctant to seek relief in the domestic courts of the other party’s jurisdiction, given that the latter will have a perceived so-called “home court advantage.” Such perceived advantage may include not only perceptions of bias, which may or may not be true, but also an unlevel playing field, given that the party who is playing at home will have more detailed knowledge and familiarity with the local legal system and its procedures. This potential imbalance was one of the driving forces that led to the establishment of the international arbitration regime, which was designed to ensure that parties of different nationalities could submit their disputes for resolution to neutral third parties through a procedure that would not favor either party and that would be enforceable internationally. Moreover, the nature and operation of the technology itself—for example, digital assets including cryptocurrency and artificial intelligence—may create uncertainties about the legal regime that applies. A neutral arbitrator appointed by the parties may be best placed to resolve such issues of trans-border governance and applicable law.

At the outset of the technological revolution in the 1980s and 1990s, the United States generally, and California specifically, were at the center of technological developments. At the time, the market leaders, including IBM and Microsoft, among many others, would typically demand US court litigation. And given their size and the importance of their

¹¹ A Monte Carlo simulation is a “computational algorithm that uses repeated random sampling to obtain the likelihood of a range of results of occurring,” first invented during World War II and named for the Monaco casino. *Monte Carlo Simulation*, IBM.com, <https://www.ibm.com/topics/monte-carlo-simulation>. System dynamics modeling is a “computer-based mathematical modeling approach for strategy development and better decision making in complex systems[, which] uses computer-aided simulation methodology based on feedback systems theory which complements the other Systems Thinking approaches.” Universitetet i Bergen, *System Dynamics*, <https://www.uib.no/en/rg/dynamics/39282/what-system-dynamics> (last updated Mar. 21, 2023).

products and services, their partners for the most part would acquiesce. Google, Facebook, Amazon, and others have now joined them as US-based market leaders, together with the major Asian and European technology players, as dominant actors in the new economy, which still leans towards the US West Coast.

Over time, though, the US-based technological giants have become more open to arbitration and other forms of alternative dispute resolution, a shift initially driven by the need to enforce the resulting decisions internationally (as occurred with financial institutions). Whereas court decisions remain difficult to enforce internationally, international arbitral awards are generally enforceable in 172 jurisdictions pursuant to the New York Convention and domestic arbitration laws implementing that treaty. Mediated settlements often do not require enforcement because, as with most settlements, they are paid or otherwise complied with. However, when they do require enforcement, the newly minted Singapore Convention seeks to provide a broad basis for enforcement (similar to the New York Convention), but that will require many more countries to ratify the Convention (as of October 2023, 56 countries had signed the Convention, while only 12 had ratified it).

C. Arbitration of Technology Disputes Is Increasing

The ICDR and other dispute resolution institutions publish annual reports providing information on the number and types of arbitrations administered by the institution, as well as identifying and analyzing trends over time. The AAA/ICDR reports on cases in the technology sector, and in 2020 reported 369 technology cases, of which 55 were ICDR cases. The AAA/ICDR had 447 technology disputes in 2021 and 499 in 2022, of which 96 were ICDR cases in 2021 and 133 in 2022. Further, the AAA/ICDR distinguishes its telecommunications, wireless, cable and satellite cases from its technology category, which adds another 64 cases in 2022 to the overall technology count for a total 563. The AAA/ICDR also had over 40 technology mediations annually from 2019 to 2022. This large docket of technology cases reflects the AAA/ICDR's position as the most active arbitral institution in the United States, together with the fact that it has a list of more than 280 arbitrators with technology expertise, rules addressing expedited procedures, emergency arbitrators, confidentiality and other issues of import to technology disputes, as well as specific dispute resolution clauses for technology disputes, life sciences, and IP.

The Working Group notes that as the AAA/ICDR and other institutions report on cases in the technology sector, their reporting significantly underestimates the true number of technology disputes before AAA/ICDR and other tribunals because the data does not include technology disputes in other industries. The Working Group was not able to identify any data that looked beyond the industry sector to consider the actual nature of the dispute itself, which would be necessary to provide meaningful information given the reality of these disputes. As set forth in the chart below, other institutions apply¹² different

¹² Like the AAA/ICDR, the London Court of International Arbitration (“LCIA”) reports on “technology” as an industry sector, and explains that “the cases are categorized by the dominant sector, that is, the sector that is most representative of the case, even though in practice disputes relate frequently to overlapping sectors. London Court of International Arbitration, 2021 Annual Casework Report, p. 8. The International

definitions and methodologies in reporting these types of disputes, which makes it difficult to draw any conclusions from the data, and some do not cover technology cases at all.

These factors substantially impact the quality of the data and observable trends for technology disputes, which makes it difficult to draw any firm conclusions. Indeed, some of the reporting indicates an increase in the arbitration of technology disputes, whereas other data remains flat. As discussed above, at the AAA/ICDR, for example, from 2018 through 2020 the number of technology disputes remained generally constant, ranging from 369 to 405 cases per year, with 55 to 62 cases before the ICDR per year;¹³ however, in 2022, the number of “technology” disputes increased more than twofold, with 133 before the ICDR.¹⁴ AAA/ICDR’s 2022 technology case filings also increased from 447 in 2021 to 499 in 2022.

In the case of the AAA/ICDR, the institution has tremendous amounts of data and information from its annual case filings, which surpass 450,000. For example, in 2022 the AAA/ICDR has data from over 10,000 commercial cases and over 600 cases categorized in the technology and life science sectors. However, the utility of the available information is often limited due to the manner in which the claims are submitted by the filing party and how the data is defined. We are left with limited descriptions of the nature of the underlying dispute and one-dimensional dispute descriptions.

Chamber of Commerce (“ICC”), for its part, lists a variety of specific sectors, including “construction and engineering,” “energy,” and “telecommunications/specialized technologies.” The Singapore International Arbitration Centre (“SIAC”) reports on the most dominant sectors of its caseload, such as “construction/engineering,” but uses a broad “Other” category to present one statistic aggregating cases in a “range of sectors” including “technology/science” and “telecommunications;” hence, notwithstanding the focus that SIAC has placed on technology disputes, it does not report specifically on them. Further, the sectors identified by the ICC in its “Dispute Resolution Statistics” reports are generally: agribusiness, business services, chemicals, construction and engineering, defence and security, education and culture, energy, environmental protection, financing and insurance, general trade and distribution, food and beverage, health/pharmaceuticals and cosmetics, industrial equipment and services, leisure and entertainment, media and publishing, metals and raw materials, packaging, public institutions and organisations, telecommunications/specialized technologies, textiles/clothing, and transportation. *See, e.g.*, International Chamber of Commerce, ICC Dispute Resolution 2020 Statistics, p. 17.

¹³ American Arbitration Association—International Centre for Dispute Resolution, 2018 ICDR Case Data Infographic, p. 1; American Arbitration Association—International Centre for Dispute Resolution, 2019 ICDR Case Data Infographic, p. 1; American Arbitration Association—International Centre for Dispute Resolution, 2020 ICDR Case Data Infographic, p. 1.

¹⁴ The same occurred at the LCIA, but at lower levels—“technology” disputes were 2% of the LCIA’s caseload in 2020 and doubled to 4% in 2022. London Court of International Arbitration, 2020 Annual Casework Report, p. 11. And London Court of International Arbitration, 2022 Annual Casework Report, p. 10. The ICC does not provide specific figures for the “telecommunications/specialized technologies” sector, but its annual reports seem to indicate that this sector has consistently represented between 4% and 8% of the ICC’s caseload, without any significant upward trend. International Chamber of Commerce, ICC Dispute Resolution Bulletin 2015, p. 15; International Chamber of Commerce, ICC Dispute Resolution Bulletin 2016, p. 17; International Chamber of Commerce, ICC Dispute Resolution Bulletin 2017, p. 56; International Chamber of Commerce, ICC Dispute Resolution Bulletin 2018, p. 61; International Chamber of Commerce, ICC Dispute Resolution Bulletin 2019, p. 22; International Chamber of Commerce, ICC Dispute Resolution Bulletin 2020, p. 26; International Chamber of Commerce, ICC Dispute Resolution 2020 Statistics, p. 17.

Given the challenges presented by the institutional data, in addition to input from its expert members, the Working Group decided to seek input from the dispute resolution community through the Survey, which provides data about the experience of practitioners in the field, as well as context for the institutional data.

The Survey results provide a map for navigating the disparate data from arbitral institutions discussed above. Survey participants and Working Group members all perceived overall growth in the use of arbitration and non-binding dispute resolution to resolve technology disputes and an expectation that this trend will continue into the future. The Survey results further suggest that the growth in disputes involving technology is being driven not only by growth in the number of disputes arising in the technology sector itself—though these remain significant—but also, and perhaps even more so, by an increase in the number of disputes in other industries that involve, to a material and important extent, an issue involving technology. For example, the institutional data shows continued strong representation of energy and construction disputes, which indubitably involve technology disputes.¹⁵

2. Life Sciences Disputes

A. Background to Life Sciences Disputes

General growth in the industry. The life sciences industry has seen extraordinary growth in recent years, both before—and then fueled by—the COVID-19 pandemic.

Increasing prevalence of cross-border supply chains and transactions. The life sciences industry has become even more collaborative and globalized in recent years, with companies seeking opportunities to develop products (i) for unmet patient needs, or to better serve patient needs, (ii) for new indications, or (iii) for combination therapies and other similarly complex treatments. For example, the successful race to develop a COVID-19 vaccine shone the spotlight on a number of innovative cross-border pharmaceutical collaborations, which made this trend more visible to the lay community. In fact, this is inherent in the life sciences business model. Smaller, venture-backed companies will take risks that the major pharmaceuticals will not, and for the relatively few of those products that have a successful Phase II trial, major returns can follow from out-licensing or other transactional activity. Additionally, life sciences industries have taken hold in emerging markets, including Mexico, India, Indonesia, and South Africa, to name a few.¹⁶

The extent of collaboration and integration in the life sciences industry has manifested itself through the emergence of intricate, high-value, cross-border contractual agreements and transactions—including complex joint development agreements, joint ventures,

¹⁵ See, e.g., International Chamber of Commerce, ICC Dispute Resolution Bulletin 2020, p. 17 (“Disputes arising from construction/engineering and energy historically generate the largest number of ICC cases. The trend was confirmed in 2020”); London Court of International Arbitration, 2021 Annual Case-work Report, pp. 8–9 (“Energy and resources” and “construction and infrastructure” were again two of the four top industry sectors “dominating the LCIA’s caseload”).

¹⁶ See *Will Life Sciences Provide a Growth Injection for International Arbitration?*, THOMSON REUTERS, 25 August 2017.

licensing arrangements, co-marketing arrangements, and funding arrangements—as well as merger and acquisition activity. The proliferation of these agreements inherently leads to disputes. Furthermore, the supply chain for pharmaceutical and biotech businesses can be complex, involving, for example, the producers of the active pharmaceutical ingredients, contract manufacturing organizations, various agents, and the distributor—some or all of which may operate in different jurisdictions, be of different sizes, or have different levels of financial wherewithal, leading to capability gaps and missed expectations. Moreover, the high potential value of these transactions—and the high likelihood of failure—make them particularly ripe for disputes.

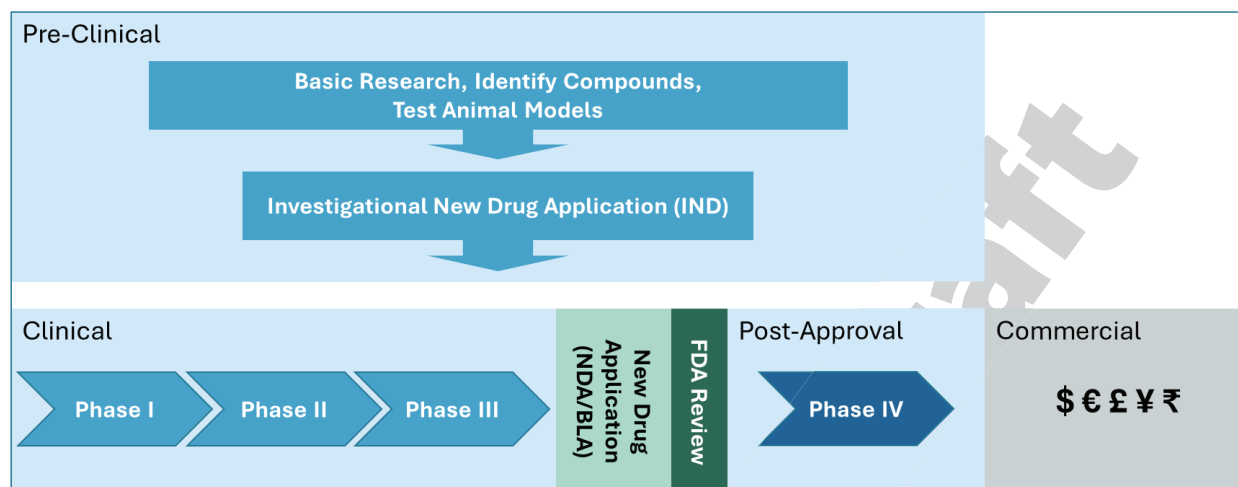
Thus, industry trends have produced more cross-border interactions amongst companies, often comprised of complex webs of agreements between various and varied entities. As described above, arbitration provides the advantage of an equal playing field with a neutral, third-party adjudicator with life sciences expertise. Moreover, the arbitral award should be enforceable in most—if not all—of the jurisdictions through which the supply chain runs based on the New York Convention.

Characterizing features of pharmaceutical development. The life cycle of a pharmaceutical product, including those developed through biotechnology, has features that impact the types and characteristics of the disputes that arise. Medical devices and other life sciences products share many, but not all, of these characteristics. For example, generally speaking, the approval process for a medical device is shorter, meaning that the risk and development costs are lower and the time to market is quicker than for a drug product.

As discussed above, the life sciences sector is exemplified by research and development agreements, joint development agreements, licenses, co-marketing arrangements, manufacturing agreements, joint ventures, and mergers and acquisitions, entered into between companies from around the world, of very different sizes and structures, who may be specialized in a particular part of the development process, or a particular indication. Given the very high costs of a Phase III trial, and the high returns if it is successful, specialized investors are also investing in the trials themselves in exchange for reaping a percentage of the benefit if they are successful, in much the same way that third-party litigation funders fund claims in arbitrations and other forms of dispute resolution. Moreover, the regulatory pathway is complex and full of hurdles, and IP protection is the holy grail given the vast resources and time expended to get a product to market.

As a result of all of these factors—and many more—the life sciences sector is rife with disputes, most of which are cross-border, and an increasing number of which go to arbitration. The Working Group observed that the nature of life sciences disputes often varies depending on the stage of the development process in which it arose. For example, while various disputes are possible at every stage of the product life cycle, early-stage development may raise disputes over missed development milestones or decisions to cease development. By contrast, disputes over marketed products may raise issues related to manufacturing, regulatory issues, and what constitutes commercially reasonable efforts to commercialize the product and related IP, among many others.

“The (Many) Phases of Pharmaceutical Development”¹⁷



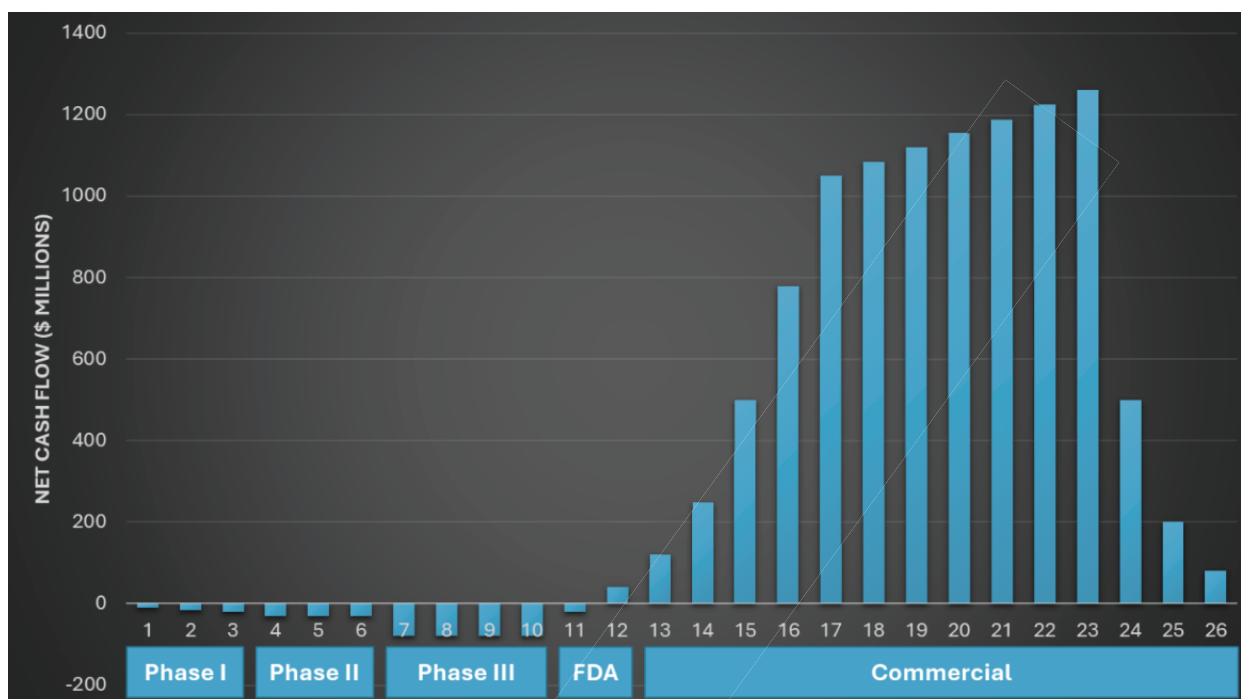
The diagram above describes at a high level the general path to market for a pharmaceutical product, the phases of which can briefly be described as follows:

- **Preclinical Studies:** Conducted on animals
- **Investigational New Drug Application:** Required before testing in humans
- **Phase I:** Very small human study for safety and dosing
- **Phase II:** Therapeutic exploratory trial of limited human subjects to determine efficacy and additional safety studies
- **Phase III:** Therapeutic large scale confirmatory trial or “Pivotal” trial(s) before drug can be submitted for regulatory approval
- **Regulatory Approval:** New drug application
- **Phase IV:** Post-approval trial to study real-life applications, as well as long-term risks and benefits
- Pricing Approval

It is also important to keep in mind that regulatory approvals are required in each market where the pharmaceutical product will be marketed, with the FDA in the US and EMEA in the EU being essential. Further, while the data from a well-structured clinical trial may often be used to support regulatory approvals in multiple jurisdictions, certain countries and regions may require either separate clinical trials or supplemental trials. Moreover, after regulatory approvals are obtained, the next step in many countries is to obtain pricing approval, and the increasing cost of medical care and the aging population is making it more difficult to achieve pricing that reflects the risks and costs of development.

The diagram below depicts the time to market, which is typically more than a decade after the product starts a Phase I trial—a step which itself typically occurs only after multiple years of pre-clinical development.

¹⁷ Adapted from Chris Stomberg, *GAR Academy: Damages in International Arbitration*, Module 5.1—Damages in Life Sciences Disputes.

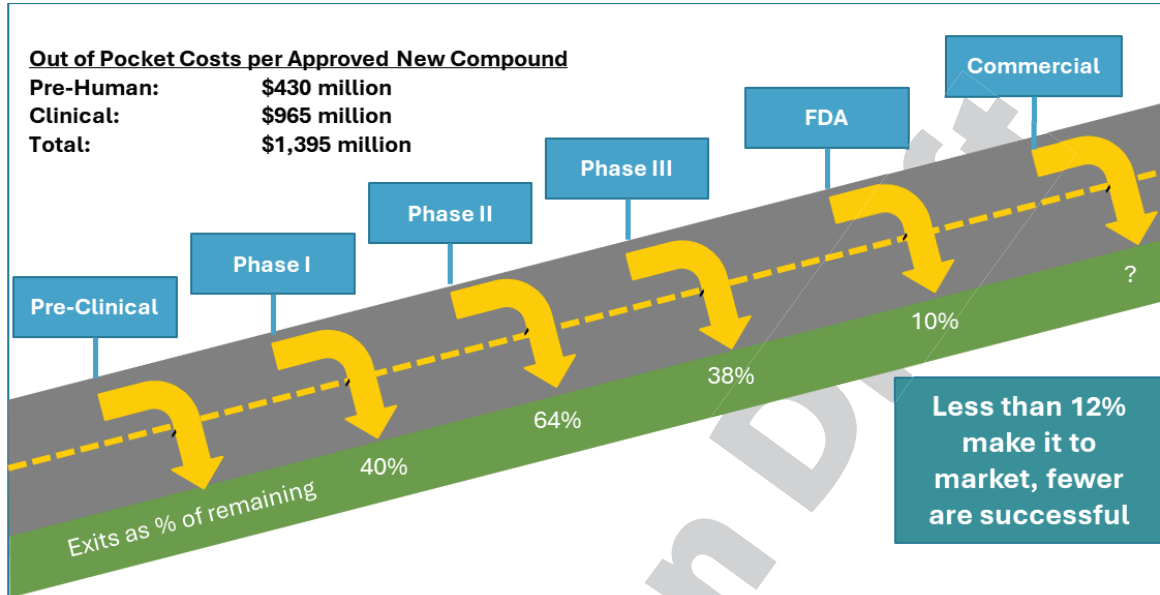
"The Lifecycle of a Blockbuster"¹⁸

The cost of bringing a new drug to market can easily exceed USD 1 billion, and thus any drug that is not a blockbuster may be a losing proposition given the time and cost involved in getting it to market. Moreover, as set forth in the figures below, only a small percentage of potential pharmaceutical products that enter pre-clinical development are approved for marketing, and even those that are approved are not always commercialized.

This dynamic emphasizes the importance of IP protection and enforcement, given that patents will typically expire before the drug is fully exploited, and companies will rely on supplemental protection to ensure adequate returns on their very high investment costs.

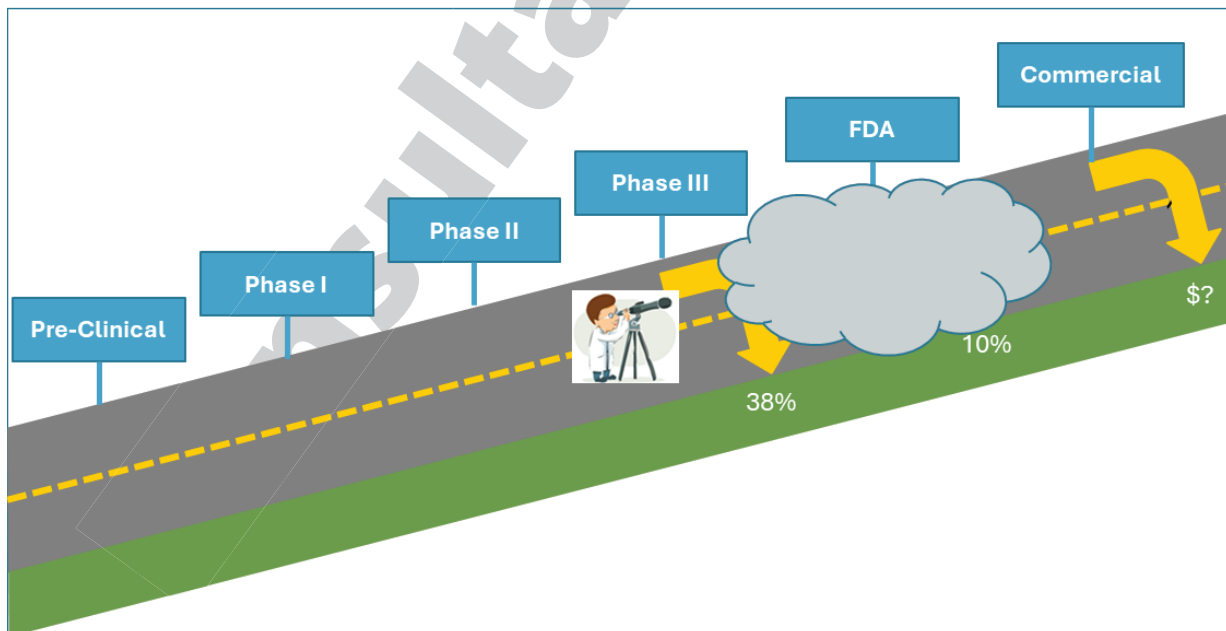
¹⁸ Adapted from Chris Stomberg, *GAR Academy: Damages in International Arbitration*, Module 5.1—Damages in Life Sciences Disputes.

“Development: A Toll Road with Many Off-Ramps”¹⁹



The very high costs of development, combined with the large chances of failure, means that the value of a pharmaceutical changes dramatically as the risks are resolved through the various phases of the development process.

“Value Changes as Risks Are Resolved”²⁰



¹⁹ Adapted from Chris Stomberg, *GAR Academy: Damages in International Arbitration*, Module 5.1—Damages in Life Sciences Disputes.

²⁰ Adapted from Chris Stomberg, *GAR Academy: Damages in International Arbitration*, Module 5.1—Damages in Life Sciences Disputes.

In sum, the high risk, high cost, high return nature of drug development, particularly through Phase II clinical trials, has led to the widespread growth of early-stage, relatively small, venture-backed biotechnology/pharmaceutical companies that take the high risk and high cost in exchange for high returns if the Phase I and Phase II trials are successful. A successful Phase II trial de-risks the asset such that larger, more risk-adverse companies are willing to either license or purchase the asset. Moreover, the nature of the manufacturing process, especially for certain biotechnology products, is so complex, that even the major pharmaceutical companies often outsource manufacturing.

As noted above, these market dynamics result in a myriad of contractual agreements (e.g., research and development, licenses, joint development, manufacturing) and transactions (e.g., mergers and acquisitions, joint ventures) between companies from all over the globe, of different sizes and capabilities. This inherently leads to disputes, many of which are cross-border, and an increasing number of which are going to arbitration.

B. Trend in Favor of Arbitration of Life Sciences Disputes

There has been an observable increase in the number of life sciences disputes submitted to arbitration in recent years. As early as 2017, reporting by various arbitral institutions reflected increases in life sciences arbitrations.²¹ Life sciences cases for the AAA/ICDR increased from 98 in 2021 to 109 in 2022, with the ICDR's numbers being 23 in 2018 (at the time called "Pharmaceutical/Biotech"), 36 in 2019, and 44 in 2020.²² The AAA/ICDR reported that the cumulative claim and counterclaim amounts for its life science disputes in 2022 was 1.397 billion USD.

Additionally, the past few years have seen international life sciences disputes with increasingly high stakes—including claims valued into the billions of dollars—resolved via arbitration.²³

²¹ See *Will Life Sciences Provide a Growth Injection for International Arbitration?*, THOMSON REUTERS, 25 August 2017 ("This industry sector is already the joint fifth biggest contributor to the LCIA's caseload. It comprises 15% of arbitrations and mediations sent to the World Intellectual Property Organization (WIPO), and various institutions (including the International Chamber of Commerce (ICC) and American Arbitration Association (AAA)) have seen steady growth in the number of life sciences disputes referred to them.").

²² American Arbitration Association—International Centre for Dispute Resolution, 2018 ICDR Case Data Infographic, p. 1; American Arbitration Association—International Centre for Dispute Resolution, 2019 ICDR Case Data Infographic, p. 1; American Arbitration Association—International Centre for Dispute Resolution, 2020 ICDR Case Data Infographic, p. 1

²³ As just two examples: In August 2023, it was reported that an ICC dispute between Bristol-Myers Squibb and a Chinese distributor had settled a USD 1.5 billion ICC claim. See *Bristol Myers Settles Billion-Dollar Cancer Drug Dispute*, GLOBAL ARBITRATION REVIEW (Aug. 7, 2023). And in August 2022, an ICDR arbitrator resolved claims between Daiichi Sankyo and Seagen reported to be worth potentially billions of dollars. See *ICDR Arbitrator Decides Multibillion Life Sciences Dispute*, GLOBAL ARBITRATION REVIEW (Aug. 15, 2022).

3. Intellectual Property Disputes

The third and final category of disputes addressed in this White Paper is that of IP disputes. As noted above, the resolution of IP disputes differs from resolution of non-IP technology and life sciences disputes because it is driven and shaped by the application of a particular form of property rights and the legal regime creating those rights—namely, IP rights and the laws applicable thereto.

The Working Group included these disputes within the scope of its work because of the importance of IP to technology and life sciences companies and TLI assets, which derive much of their value from IP rights and are dependent upon IP to maintain their competitive position and protect the prospective returns on their substantial investments. As a result, many technology and life sciences disputes raise IP issues, and many IP disputes involve technology and life sciences companies. As such, there is significant overlap between technology and life sciences disputes, on the one hand, and IP disputes on the other, and it was therefore the Working Group's view that any study of technology and life sciences disputes needed to include IP disputes as a distinct component of its work.

A. Background to Intellectual Property and Intellectual Property Disputes

Background to IP. As the name implies, IP rights are property rights; however, they differ from other forms of property rights in the sense that the property involved is a legal construct, rather than physical property. This distinction often makes the exploitation of these rights more complicated than other forms of property, and the resulting disputes more complex. The complexity of the subject matter and legal landscape is compounded by the fact that, today, much of the most valuable property is IP, raising the stakes of IP disputes.

Intellectual property describes a set of property rights that attach to particular works or products. In most jurisdictions, the laws recognize the following general categories of IP rights:²⁴ patents,²⁵ trademarks,²⁶ copyright,²⁷ and trade secrets.²⁸ IP rights generally have an effect *erga omnes*, meaning that they are enforceable against all third parties. The Convention Establishing the World Intellectual Property Organization defines IP to include rights related to: literary, artistic and scientific works; performances of performing artists, phonograms and broadcasts; inventions in all fields of human endeavor; scientific discoveries; industrial designs; trademarks, service marks, and commercial names and designations;

²⁴ ACERIS LAW LLC, *International Arbitration and Intellectual Property (IP) Disputes*, 4 May 2021.

²⁵ Per the World Intellectual Property Organization, a patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.

²⁶ A trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises.

²⁷ Copyright (or author's right) is a legal term used to describe the rights that creators have over their literary and artistic works.

²⁸ Trade secrets are IP (IP) rights on confidential information which may be sold or licensed.

protection against unfair competition; and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.²⁹

Technology and life sciences companies depend on IP rights to protect their assets, whether it be patents, trade secrets or copyright. The nature of the IP at issue obviously impacts the nature of the dispute. Although patent laws tend to be used to protect highly valuable technology and life sciences assets, certain forms of technology, including software, may not be subject to patenting or may be difficult to patent, and hence are covered by copyrights or trade secret protections instead. Trademarks apply across industries and, together with domain names, serve as a means of protecting the branding of companies and products. It remains uncertain how artificial intelligence will be protected, but the expectation is that it will be subject to a hybrid of existing laws (like software), new laws, or both.

To give but one example of the nature of these rights, as described above, a new drug product often costs in excess of USD 1 billion, and life sciences companies who develop these products rely on IP to protect their investment from intrusion by competitors. This protection is mainly achieved through patents in combination with know-how,³⁰ which may be protected by trade secret law or its equivalent. As such, life sciences agreements usually include rights and obligations related to IP.

With respect to IP in the technological context, the nature of the technology will define whether it is subject to patents, copyright or trade secret protection, and whether it is licensed, or used to produce a product or service that is in turn sold. But in either case, IP protects the technology from copying.

It goes without saying that the importance of IP to today's economy is not limited to technology and life sciences companies. Instead, companies in all industries rely on IP to protect their assets, and trademarks remain essential to their branding.

Background to IP disputes. IP disputes generally relate to the existence, ownership and exploitation of IP. These disputes generally concern: (i) infringement or misappropriation of IP rights, wherein a person or entity uses the IP without the owner's permission or exceeds that permission; (ii) questions about the ownership and validity of IP rights; (iii) breach of a contract to exploit IP rights or where the subject of the contract is protected by IP; and/or (iv) royalties to be paid for use of IP.³¹ IP disputes can be distinguished based on whether they arise out of (a) a contract to exploit those rights or in which the rights are otherwise implicated or (b) the validity and enforcement of the right itself, without reference to a contract.

As further set forth below, IP disputes were historically generally adjudicated by domestic courts, for a variety of reasons. These include the following:

²⁹ Convention Establishing the World Intellectual Property Organization, 14 July 1967, Art. 2(viii).

³⁰ Know-how typically refers to designs, plans, lists, techniques, processes, methods, skills and other information that are useful for some purpose. Like trade secrets, the value of know-how lies in its confidentiality; however, it is generally not a formally recognized type of IP right and owes its legal existence largely to agreements among parties.

³¹ Reed *et al.*, *Arbitrability of IP Disputes*, Global Arbitration Review (2022).

- The disputing parties were not in privity of contract, and thus did not consent in advance to arbitration.
- Domestic law prohibited the arbitration of IP disputes.
- Contracting parties were uncertain about the arbitrability of their IP disputes even between themselves, and thus included carve-outs in their arbitration agreements for issues related to the scope and enforcement of the IP rights.
- Owners of IP may have wanted a decision that is enforceable *erga omnes* against all parties, and, given the importance of the rights, a right of appeal. This need led to arbitration being disfavored, given that arbitration agreements are binding only on the disputing parties—although, in certain circumstances, this limited effect can also be a benefit.

As discussed further below, however, many of these barriers or perceived disadvantages have been eliminated, or at least diminished, in recent years, and there is thus an increased opportunity for arbitration of these disputes.

IP Disputes between contractual counterparties. IP disputes arising out of contract concern the rights and obligations established in contracts implicating IP rights, such as, for example, a license to IP or an agreement assigning ownership over IP rights. The parties to the contract may include an arbitration clause requiring that any disputes arising under the contract be submitted to arbitration, which is increasingly the case as agreements related to IP are becoming even more globalized.³² Deciding the claims under the contract, in turn, may require the adjudication of those IP rights. As an example, determining the rights and obligations of a licensee to a patented drug product may call into question the validity of the patents, at least to the extent validity impacts the terms of the agreement between the parties.

IP rights, however, are granted under and defined by national (or regional) laws and allow the owner of the rights to exclude competition from other third parties. The scope of IP rights are determinable by national courts, as is their enforcement. Domestic laws in a limited number of jurisdictions therefore prohibit the arbitrability of the validity and enforcement of IP rights, on the view that IP rights implicate the public interest and hence should not be subject to determination by arbitration.

The uncertainty created by these laws has sometimes led parties to licenses and other IP-related agreements to include IP carve-outs in their arbitration clauses. This choice often reflects uncertainty about the arbitrability of the underlying IP rights as such, even in the context of a dispute between the parties. However, the modern trend in many common and civil law States is to allow for the arbitration of all IP issues but recognizing that the applicability of the outcome of such proceedings is limited to the arbitrating parties only.³³

As noted above, this limitation can, in certain circumstances, actually serve as a reason *supporting* the choice of arbitration of IP disputes for some parties. As arbitration generally allows for settling of the rights and obligations, including the IP issues related thereto,

³² Celniker *et al.*, *Arbitration of Intellectual Property and Licensing Disputes*, 11 January 2021, GLOBAL ARBITRATION REVIEW.

³³ See Reed *et al.*, *Arbitrability of IP Disputes*, GLOBAL ARBITRATION REVIEW (2022).

between the parties *to the arbitration* without impacting the enforcement of the IP rights against other third parties, this limits the risk to the owner of the IP should the IP be considered invalid or unenforceable in the context of the arbitration.

IP disputes between parties not in privity of contract. This second category of IP disputes concerns parties that are not in privity of contract. Because IP is a form of property right, owners of IP rights have a distinct right to enforce those rights absent any contract. For example, a party may bring a court action claiming that another party is infringing its IP, and the alleged infringer may in turn claim that the patent is invalid, with no contractual relationship needed. If the patent is found to be invalid, the patent holder would entirely lose its right to exclude others from using or otherwise benefiting from an invention.

As technology becomes increasingly ubiquitous and sophisticated, these types of patent disputes are becoming both more common and more complex, which will be further exacerbated with the rise of artificial intelligence. For example, producing a mobile phone today requires access to the IP rights of potentially hundreds of patent holders, some of which may have blocking patents.³⁴ This means that anyone producing a mobile phone needs to enter into a variety of cross-licenses and potentially FRAND³⁵ licenses to obtain the rights to produce the phone. The economics of the licenses then turn on the strength of the respective patent portfolios. However, were a dispute over these licenses to arise, it may not be in any party's interest to bring court claims and potentially diminish the value of others' patents overall. Instead, parties may choose to submit the dispute to confidential arbitration, mediation and expert proceedings, which can provide an independent decision or view without exposing the patents to risks from third parties. Moreover, when parties enter into cross-license agreements to settle such disputes, they may include mediation and arbitration clauses in those agreements, with the result that any future disputes would be contractual and subject to the terms of the dispute settlement procedure agreed upon.

B. Trend in Favor of Arbitration of IP Disputes

Over the last three decades, there has been a demonstrable increase in the arbitration and mediation of IP disputes at the ICDR and other arbitration institutions around the world. This growth has been driven by other recent developments, including the trend in favor of arbitrability of IP rights. This particularly has been the case for contractual IP disputes, leading to the decreasing inclusion by parties of IP carve-outs in their contractual arbitration clauses. Moreover, the distinct advantages of international arbitration have arguably encouraged parties to pursue the arbitration of IP disputes, including the availability of flexible, party-driven procedures; arbitrator selection; cross-border enforcement mechanisms; stringent confidentiality regimes; limits on discovery obligations; speedy

³⁴ A blocking patent is a patent serves to prevent third parties from the practice or exploitation of a modified version of the device or process underlying the patented invention.

³⁵ FRAND refers to fair, reasonable and non-discriminatory terms in licensing agreements, which terms may give rise to disputes.

resolution; and, in certain circumstances, reduced costs.³⁶ As discussed below, Survey participants noted in particular the importance of confidentiality, enforcement, and arbitrator selection as reasons to choose arbitration of IP disputes.

It is, however, difficult to track this trend—including not just its existence but its magnitude—with any precision through the institutional data. In their caseload statistics, many arbitral institutions do not include IP among the categories of cases they measure. This demonstrates the prospective scale and complexity of IP arbitrations. Moreover, as discussed above, the existing sectors and categories used to develop caseload statistics are likely to include IP disputes; for example, the categories of technology and life sciences disputes, to the extent they exist, capture many IP disputes.

4. Technology, Life Sciences, and Intellectual Property Disputes Are Well Suited to Arbitration and Other Forms of Non-Court Dispute Resolution

With the foregoing background to TLI disputes in mind, this section considers why their common characteristics often make them particularly well suited for arbitration.

A. Complexity of the Issues

TLI disputes often involve a high degree of complexity due to the nature of the subject matter—whether it be technology, life sciences, or IP.

Technology, for example, frequently involves aspects of applied sciences, engineering, and artificial intelligence, amongst other specialties. This is particularly true of the technology involved in (for example) the aerospace, energy, biotechnology, and information technology sectors, among many others.³⁷ Thus, even where the legal issues are straightforward—e.g., interpreting and applying the terms of a commercial contract—resolving the dispute may require the adjudicator to understand the specific aspects of the underlying technological processes, the products and/or services that the disputing parties provide, the customs of the particular trade, and/or the applicable regulatory framework. Hence, deciding technology disputes may be assisted by a pre-existing knowledge of the technology at issue or the propensity to understand the technology, as well as industry and regulatory practice.

Similarly, there is no standard life sciences dispute fact pattern, and disputes can arise at any stage of a life sciences project.³⁸ Indeed, the Working Group observed that a good way to think about life science disputes is through the prism of the product life cycle discussed above. Each stage brings different risks, different expectations and often different disputes. These disputes are often contractual, arising out of licensing or joint research and development agreements.

³⁶ However, the cost of patent litigation is much less in civil law countries than in the US and the UK, for example, and arbitration can be expensive.

³⁷ *Arbitration: An Ideal Way to Resolve High-Tech Industry Disputes*, DISPUTE RESOLUTION JOURNAL, 2010.

³⁸ Chopra, *Life Sciences Arbitration Trends*, 21 April 2023.

The terms of these agreements are to some extent unique to the life sciences sector, and often involve disputes about what constitutes commercially reasonable efforts at different stages of the product life cycle. These disputes may also involve the protection of IP and trade secrets, marketing or promotional benchmarks, or the unique structures of life sciences deals, such as milestone payments or earn-out clauses.³⁹ Disputes may also (i) result from disagreements over the development, licensing and marketing of a particular drug or product, (ii) concern product liability and insurance coverage, or (iii) may be linked to change in control provisions resulting from a merger or acquisition and a shift in the new entity's priorities.⁴⁰

The sheer scope of the legal regimes and issues that may arise in a life sciences dispute tends to make arbitration more attractive than domestic court litigation. In particular, and as discussed below, the disputing parties have the advantage of being able to select arbitrators with specialized training or experience in unique fields—including, for example, in the underlying science at issue in the dispute (for example, the development of antibodies to treat diseases), the life sciences industry, IP law, and/or trade secrets. Thus, like with technology disputes, even where the legal issues are straightforward—e.g., interpreting and applying the terms of a commercial contract—resolving the dispute may require the adjudicator to understand: the specific aspects of the underlying science; the indication being treated; the economics of the transaction; manufacturing techniques; what constitutes commercially reasonable efforts under the specific facts at issue; the products and/or services that the disputing parties provide; the customs of the particular trade; and/or the applicable regulatory framework.

As with technology and life sciences disputes, resolving IP disputes often requires specialized knowledge, not only with respect to the subject matter of the IP right, but also of the applicable legal regimes. As IP rights are national rights, and the IP disputes that are likely to be subject to arbitration are likely to implicate multiple jurisdictions, resolving such disputes will often require the application of different IP regimes, as well as having an understanding of the interplay between the rights and obligations at issue. This too requires both an ability to understand the subject matter, which may be highly technical, but also significant experience and expertise in cross-border IP disputes.

B. Ability to Choose the Arbitrator

The skill sets required to properly decide these highly technical legal and factual issues amplify the importance of being able to choose the decision maker. Additionally, as discussed above, the cross-border nature of the assets and transactions means that one party will have so-called “home court advantage” in domestic courts, whereas the other party will not. Through arbitration and non-binding dispute resolution, disputing parties can prioritize and appoint neutrals with the requisite experience and knowledge, which can be highly case dependent. These skills may go beyond the legal skills of the average decision-maker, making the ability to choose the arbitrator an important drawing card for the

³⁹ See *Arbitration in the Life Sciences and Pharmaceutical Sector*, Corporate Disputes Magazine.

⁴⁰ *Arbitration in the Life Sciences and Pharmaceutical Sector*, Corporate Disputes Magazine.

arbitration of TLI disputes. Moreover, given the need for expeditious resolution discussed below, selecting the neutral allows the parties to choose those whose caseloads allow them to devote significant time to understanding the complex issues required to decide the dispute and ensuring it proceeds on pace. And when parties appoint experts to assist with the presentation of their claims and defenses, they need to be able to trust that the adjudicator is capable of critical review of the opinions provided by party-appointed experts, as well as of the remaining evidence in the case.

Therefore, the nature of TLI disputes stresses the importance of parties being able to appoint neutrals with particular educational and professional backgrounds, with specialized experience adjudicating TLI disputes, and with the time and temperament required to drill into the detail of the complex issues at stake. The AAA/ICDR has separate lists of arbitrators with significant experience in technology, life sciences, and IP disputes. For technology disputes, for example, the list includes more than 300 arbitrators with experience in litigation and/or transactions, arbitration experience as counsel or arbitrator, in-house or business ownership experience at a technology company, and relevant educational qualifications. For life sciences, meanwhile, the AAA/ICDR requires “significant and relevant industry experience,” including specifically arbitrators whose “practice for a minimum of 10 years has been significantly (typically 50% or more) devoted to Life Sciences (Pharmaceuticals, Biotechnology, Biomedical Technologies, or Medical Devices).” The AAA/ICDR Life Sciences panel of over 200 individuals also requires that that practice comprised some mix of, among other things, transactions common in life sciences, IP rights, research and development, manufacturing, and government regulation of the life sciences industry.

C. Importance of Confidentiality

The nature of technology, life science and IP assets is such that confidentiality is essential. This is one of the main reasons supporting the arbitration of TLI disputes, as well as other forms of non-binding dispute resolution.

Companies involved in the development and production of technology and life sciences assets prioritize the protection of their IP and other rights, including know-how and trade secrets, which rely on confidentiality. Indeed, as described above, many technology and life science disputes arise out of contracts that are designed to do just that—e.g., collaboration, licensing and distribution agreements. Yet in the context of a dispute, a party may be required to produce evidence (whether through documents or witness testimony) about its products, services, customers, and/or commercial relationships. The disclosure of such information call into question the validity of the know-how/trade secrets and would potentially be of significant commercial advantage to its opponents and third parties.

In this respect, as discussed above, the life sciences industry is structurally unique, in that companies must devote an extraordinary amount of resources into the research and development phase, in hopes of developing a product that can ultimately be commercialized. Such efforts may lead to enormous profits when things go well, and significant losses when they do not. Accordingly, for entities engaged in research and development, it is critical that documents and information presented during the dispute be protected from

disclosure or commercial use by the opposing party or by any third parties. IP disputes likewise create risks for companies: by way of example, the disclosure of information related to a trade secret can immediately destroy its value.⁴¹

Disputing parties typically seek to mitigate the risks associated with disclosure of commercially sensitive or confidential information, and arbitration offers the opportunity to do so. Specifically, parties can include in their arbitration agreements, and can create at the outset of the arbitration, a confidentiality regime that governs the documents produced and put on record during the proceeding. Moreover, if particular concerns arise during the course of the arbitration, such confidentiality regime can be modified or expanded at the election of the parties. The AAA/ICDR, for example, includes multiple provisions regarding confidentiality in its arbitral rules, including authorizing the tribunal to condition the exchange of sensitive information on imposition and maintenance of appropriate confidentiality protections,⁴² as well as imposing general obligations of confidentiality on the parties, tribunal, and ICDR administrators⁴³ The AAA/ICDR has also promulgated “best practices” on cybersecurity and privacy in conducting arbitrations, with a specific focus on the parties and tribunal discussing the need for appropriate protections in these areas where confidential information is likely to feature in the proceedings.

D. Need for Expeditious Resolution

As noted above, the development of technology, life sciences, and IP assets is highly competitive. These assets rapidly diminish in value over time, in many cases starting to become obsolete even before they are put on the market, and this rate of change is increasing exponentially. Moreover, with respect to life sciences assets, as discussed above, the IP that protects those assets may have expended half or more of its useful life before the product is even launched.

Thus, speedy resolution is an extremely important component of the resolution of TLI disputes. Arbitration offers the potential for quicker resolution of disputes, particularly when compared to potentially slow-moving domestic litigation, although arbitrations can also be lengthy. However, because arbitration is party driven, the disputing parties can seek to maximize efficiency, including by (*inter alia*) setting aggressive deadlines in the procedural calendar, limiting the number of procedural motions and interventions, limiting (or even dispensing with) discovery, and scheduling the hearing well in advance (to avoid conflicts). However, by the time the dispute arises it will very often be the case that one side benefits from speed and the other benefits by delay; therefore, it is advisable to include such provisions in the dispute resolution clause in order to ensure their efficacy.

One concern that was historically raised about arbitration of TLI disputes is the need for emergency measures to protect the assets before the tribunal was appointed. The ICDR

⁴¹ See Thomas D. Halket & Maria Chedid, *Introduction*, in *ARBITRATION OF INTERNATIONAL INTELLECTUAL PROPERTY DISPUTES* 1, 25–26 (2nd ed. 2021).

⁴² See ICDR Rules Art. 24(5).

⁴³ See ICDR Rules Art. 40.

was the first arbitral institution to respond to this by including emergency arbitrator rules within its arbitration rules in 2006, which were updated in 2014.

The availability of expedited arbitration for TLI disputes is critical to aiding the parties to TLI disputes in obtaining timely relief. The ICDR adopted expedited rules in 2014, and which were extended in 2021, which apply automatically in cases where the amount in dispute is less than 250,000.⁴⁴ However, unlike the mandatory expedited arbitration for low value disputes, expedited arbitration geared at TLI disputes must take into account the needs of a high value, complex case, often involving multiple experts—while ensuring speedy resolution. This has proven to be possible, provided all those involved in the dispute have the necessary bandwidth. Time has also shown the benefit of having had a mediation before the expedited arbitration, as is often the case before the WIPO, so that the parties are better prepared for the arbitration. Moreover, holding a mediation before the expedited arbitration creates a more level playing field because the participants are forewarned of the potential dispute.

In some cases, mediation may lead to settlement, which remains the fastest means of resolving any dispute, and in any case can assist the parties. The ICDR Rules, for example, provide expressly that subject to (a) any agreement of the parties otherwise or (b) the right of any party to elect not to participate in mediation, the parties shall mediate their dispute pursuant to the ICDR's International Mediation Rules concurrently with the arbitration. This automatic concurrent mediation, absent other agreement between the parties or objection, is unique among major international arbitration rules, and eliminates one of the major barriers to entry to mediation, namely, that neither party wants to be the one to suggest it, while at the same time protecting party autonomy to opt out. In the last two years, the AAA/ICDR had over 130 mediations of TLI disputes, showing a clear willingness on the part of companies in these industries to consider mediation and other “upstream” solutions.

Further, if managed properly, the increasing availability of artificial intelligence can lead to improved settlement rates as parties can more readily assess what their disputes are really worth. However, this benefit will only be fully realized to the extent that a level playing field is created for access to both the relevant data and the artificial intelligence tools so that all parties have the access to information. In this vein, the AAA/ICDR is working on various generative artificial intelligence projects geared at supporting users, arbitrators, in-house counsel, and law firms with the practical impact of artificial intelligence on all aspects of dispute resolution.

* * *

In sum, we are experiencing an ongoing proliferation of technology into all aspects of the economy, the incessant evolution and complication of life sciences (including through

⁴⁴ In 1994, the WIPO Arbitration and Mediation Centre (“**WIPO Centre**”) was the first to launch a set of expedited arbitration rules in 1994, followed by the SCA in 1995. The WIPO Centre was established in Geneva based on the belief that arbitration and mediation could provide a preferable alternative to court litigation of IP disputes. It is an administrative unit of the International Bureau of the World Intellectual Property Organization (“**WIPO**”), which is a self-funding agency of the United Nations with more than 193 members.

technology), and the frequent involvement of IP in all phases of these trends. As a result, the number of TLI disputes poised to be resolved by arbitration has grown and continues to grow. At the same time, the growing recognition of the advantages of arbitration and other forms of non-binding dispute resolution, as well as the growth in TLI disputes discussed above, creates an important opportunity for the dispute resolution community. These disputes involve complex arrangements in areas of innovation, in which confidentiality, speed of resolution, the ability to choose specialized decision makers, and the development and protection of IP are placed at a premium.

The Survey, and this White Paper, aim to contribute to that understanding, and to provide concrete recommendations to facilitate the growth and evolution of arbitration. For those with an interest in preserving and advancing the role of arbitration and non-binding dispute resolution as a preeminent means of resolving commercial disputes, it is of paramount importance to understand the unique needs, demands, and challenges of the broad swath of disputes involving technology, digital assets, artificial intelligence, life sciences, and IP. Arbitral institutions can facilitate this evolution by identifying and adapting to the needs of TLI disputes, including by adopting desired procedural mechanisms, and developing institutional and arbitral expertise in handling issues distinct to TLI disputes, starting with the publication of better data and statistics.

II. The Survey

To this end, the Working Group launched its Survey in December 2021. The Survey is the Working Group's attempt to capture, qualitatively as well as quantitatively, arbitration practitioners' views on the above-described trends in dispute resolution for technology, life sciences, and IP. The Working Group aimed to collect data that would validate, challenge, or otherwise inform the current thinking on the role of mediation, arbitration, and other forms of non-binding dispute resolution in resolving these disputes. And from the data, the Working Group would be able to develop a set of practical suggestions regarding how participants in international dispute resolution—institutions, arbitrators, mediators, counsel, experts, and parties—can make mediation, arbitration, and other forms of non-binding dispute resolution work, and work better, for technology, life sciences, and IP disputes.

With these objectives in mind, the Survey was distributed widely to practitioners in the field, in-house counsel at technology and life sciences companies, and posted in arbitration-focused publications. Survey participants were asked to identify their “primary role in dispute resolution”—either arbitrator, mediator, external disputes counsel, external transactions counsel, or in-house corporate counsel—with the participant then answering a branch of the Survey containing a tailored set of questions corresponding with their self-identified primary role. For reference, the full Survey questionnaire is available as {Annex I}. The Survey was controlled such that a participant could answer only once.

Between December 2021 and November 2023, 514 unique participants completed the Survey. Of these, 50.7% of participants identified primarily as arbitrators, 32.9% as external (law firm) counsel, 8.6% as mediators, and 7.8% as in-house counsel. Of the external

counsel, 73.6% identified that their practice primarily focused on dispute resolution, 13.8% as focused on corporate or transactions work, and 12.6% as “general practice.”

The in-house counsel participants were split nearly evenly between technology and life sciences companies, with an additional participant reporting they worked at an oil and gas company. When asked to select the business sector(s) they were involved in, in-house counsel participants most frequently selected pharmaceuticals, biotechnology, e-commerce, IT, and medical devices. In-house counsel participants also worked for a wide range of companies by size: a quarter worked at companies with more than 30,000 employees, while another quarter worked at companies with fewer than 100 employees.

The participant pool was located in 65 different countries, from every continent but Antarctica. A majority of participants (53%) were located in the United States; the United Kingdom (5%), India (5%), Switzerland (3%), and Canada (3%), were the next most frequent participant locations.

As a general matter, participants were asked to answer based on their experience with international technology, life sciences, and IP disputes, as well as their experience involving technology or life sciences companies, as opposed to their broader dispute resolution experiences.

Definitions. The Survey purposefully defined “Technology”⁴⁵ broadly as “anything technical, technological or scientific,” and asked Survey participants to apply the term as they have used and understood it, and to err on the side of inclusion. Moreover, the definition of a “Technology company,” is linked to the definition of “Technology” and includes companies that “derive a significant amount of their value from Technology, their use of Technology, or the provision of Technology-related services.” The Survey expressly included companies in the construction, energy, environmental, defense, digital, internet, telecommunications, and transportation industries, because they frequently derive significant amounts of their revenue from the use or exploitation of technology.

Turning to “Life Sciences” disputes, the Working Group also defined the term broadly to include “pharmaceuticals, bio-technology, bio-pharmaceuticals, medical devices, and other similar sectors,” as well as “the provision of services to companies engaged in those activities,” and “Life Sciences Companies” as those that derive a significant portion of their value from “Life Sciences” activities. As such, any branch of sciences that concerns the research and development of plant, animal, and human life can be described as a subdivision of the life sciences industry. Hence, for purposes of the Survey and this White Paper, the “Life Sciences” industry is comprised of companies operating in the research, development, manufacturing, and commercialization of pharmaceuticals, biotechnology-based food and medicines, medical devices, biomedical technologies, nutraceuticals, cosmeceuticals, food processing, and other products that aim to improve plant, animal, and human life.

Questions/Focus. The Survey contained two types of questions: **first**, it asked a number of descriptive questions, seeking to capture participants’ observations as to the present state of the world, focused on the participants’ past experiences with arbitration,

⁴⁵ For ease of reading, the White Paper does not capitalize the defined terms from the Survey, but the definitions of terms used in this White Paper relies on those used in the Survey.

other dispute resolution mechanisms, and TLI disputes more generally, as well as views of current trends; **and second**, the Survey asked a series of diagnostic/prescriptive questions, with the aim of understanding participants' views on how arbitration currently does or does not suit TLI disputes and how, in turn, arbitration could evolve to better do so.

Results. Overall, the results of the Survey are encouraging to those stakeholders involved in the growth of arbitration in the sectors described above: arbitration clearly possesses inherent attributes that parties facing TLI disputes find to be beneficial to resolving those disputes. They also, however, serve as a reminder that all stakeholders should continue to work toward ensuring those beneficial attributes are fully realized—in addition to the still-large number of TLI disputes that are resolved through the courts, the Survey shows that arbitration plainly can improve as a mechanism for resolving TLI disputes. And it can do so by focusing on improving and preserving the beneficial attributes arbitration already offers—time to resolution, availability of qualified technology, life sciences, and IP arbitrators and mediators, strong case management, and cost control.

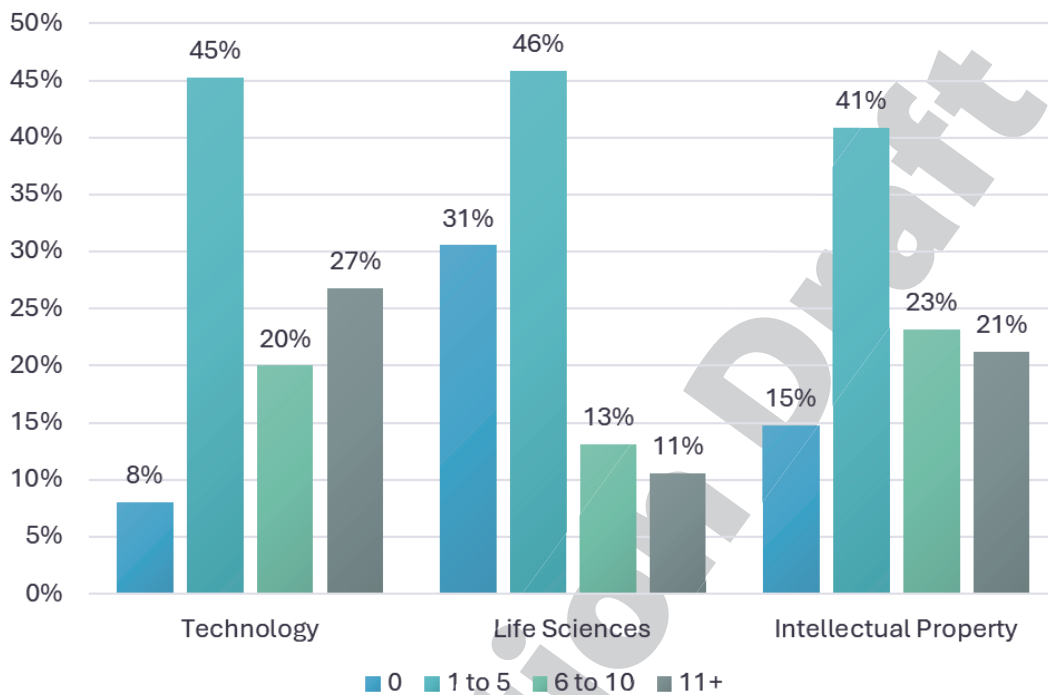
The Survey results not only revealed this broader theme, but also solicited participants' views on specific means by which arbitration can achieve these goals. Those insights, and the recommendations that stem from them, are covered in the remainder of this White Paper. The following sections provide more granular information from the Survey results.

1. Prevalence of Technology, Life Sciences, and IP Disputes

Before addressing what the survey results say about how to improve arbitration as a means of resolving technology, life sciences, and IP disputes, it is worth first considering what the Survey reveals about its participants' recent experiences with these disputes.

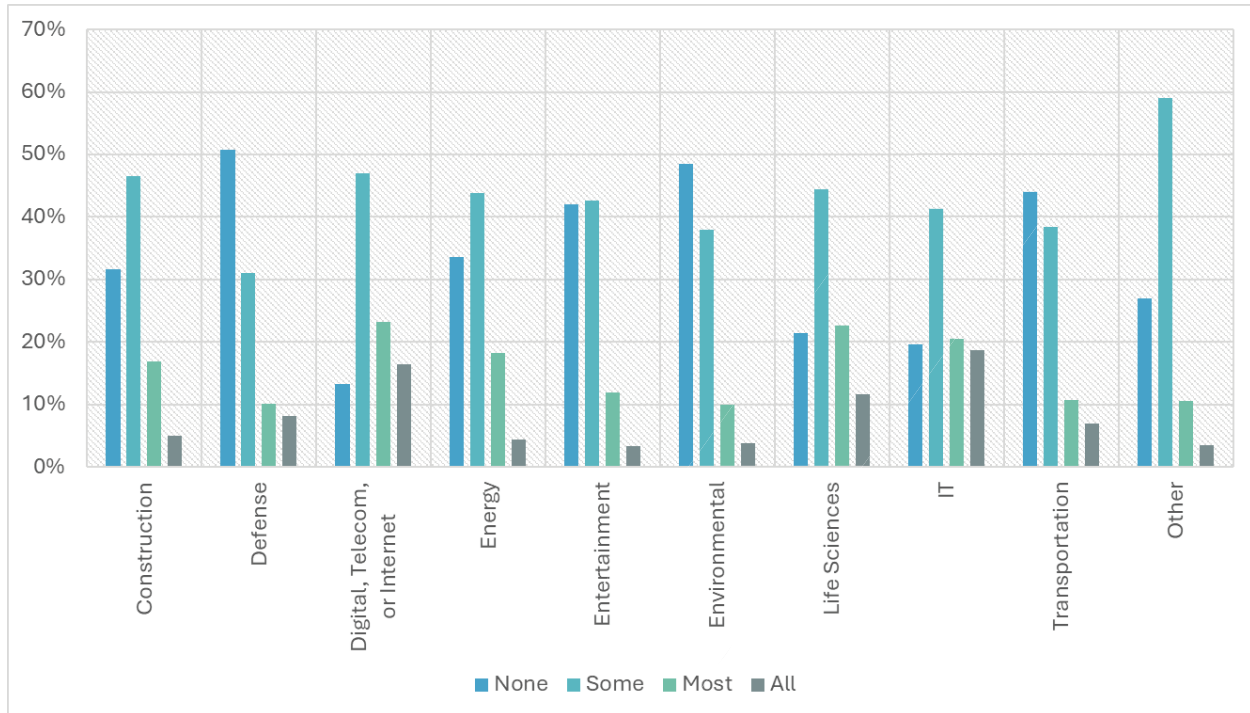
Participants were asked to identify how many technology, life sciences, and IP disputes they had encountered in the last five years, and the Survey results highlighted how prevalent technology, life sciences, and IP disputes have become. Over 90% of the participants who were asked (arbitrators, mediators, and disputes-oriented outside counsel) reported being involved in at least one dispute raising an issue of technology in the preceding five years, and—remarkably—nearly a third of these participants indicated that they had been involved in at least eleven disputes involving an issue of technology over that period.

Figure 1: Over the last 5 years, how many disputes have you been involved in that raised issues related to:



The Survey also highlighted the diversity of industries in which disputes have involved technology issues. While it is no surprise that sectors such as digital, telecommunications, or internet and IT had high percentages, roughly two-thirds of participants said that their energy and construction disputes raised technology issues, and nearly 80% of participants indicated that at least some of their life sciences disputes included issues of technology. Perhaps even more notable is the fact that approximately half or more of participants indicated that at least some of the disputes in each sector option—including defense, environmental, entertainment, and transportation—involved an issue of technology.

Figure 2: During the past five years, how many of the disputes that you have been involved in within the following industries have raised a technology issue?

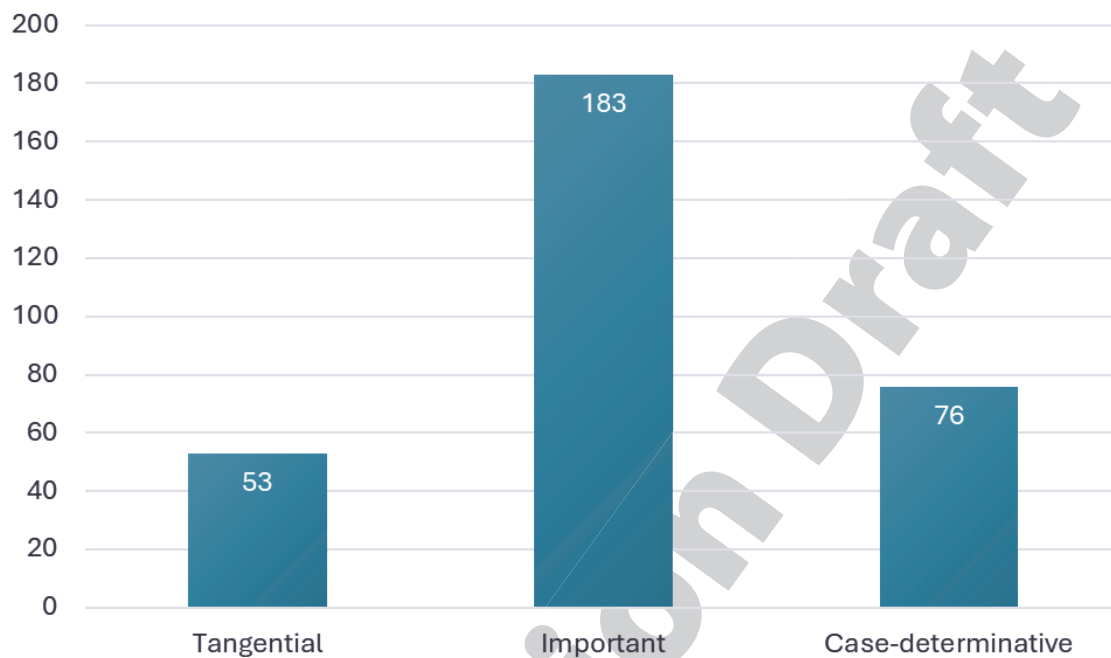


These results both highlight and make concrete one of the animating principles of the Working Group and Survey: the current reality is that issues of technology and IP arise in disputes stemming from a full range of agreements across multiple industries, rather than being limited to the “traditional” IT/telecommunications categories of the recent past—though the Survey also suggests those categories remain highly relevant.

2. Importance of Technology and IP Issues in TLI Disputes

Survey participants were also asked where a technology issue is raised in a dispute, how important is it to the outcome of the dispute. The large majority of participants indicated that such issues tended to be at least important, with nearly a quarter of participants indicating that technology issues tended to be case determinative.

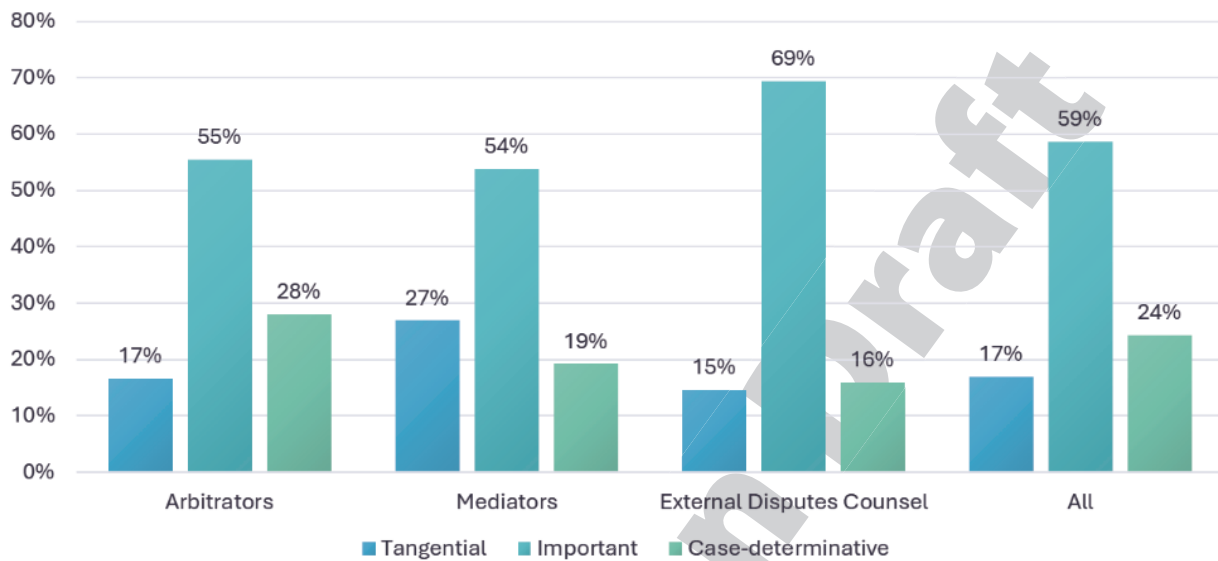
Figure 3: In your experience, generally speaking, what is the importance of technology issues to the outcome of the disputes in which they are raised?



The Survey findings reveal that technology issues are generally important in the vast majority of disputes in which they are raised, and quite frequently case-determinative. The figure above reflects this result, showing that the participants asked this question—again, those who self-identified as arbitrators, mediators, and disputes-oriented outside counsel—overwhelmingly endorsed this position: roughly 85% of participants indicated that technology issues were at least important to the outcome of the disputes in which they are raised, and nearly a quarter indicated that technology issues tended to be not just important, but case-determinative.

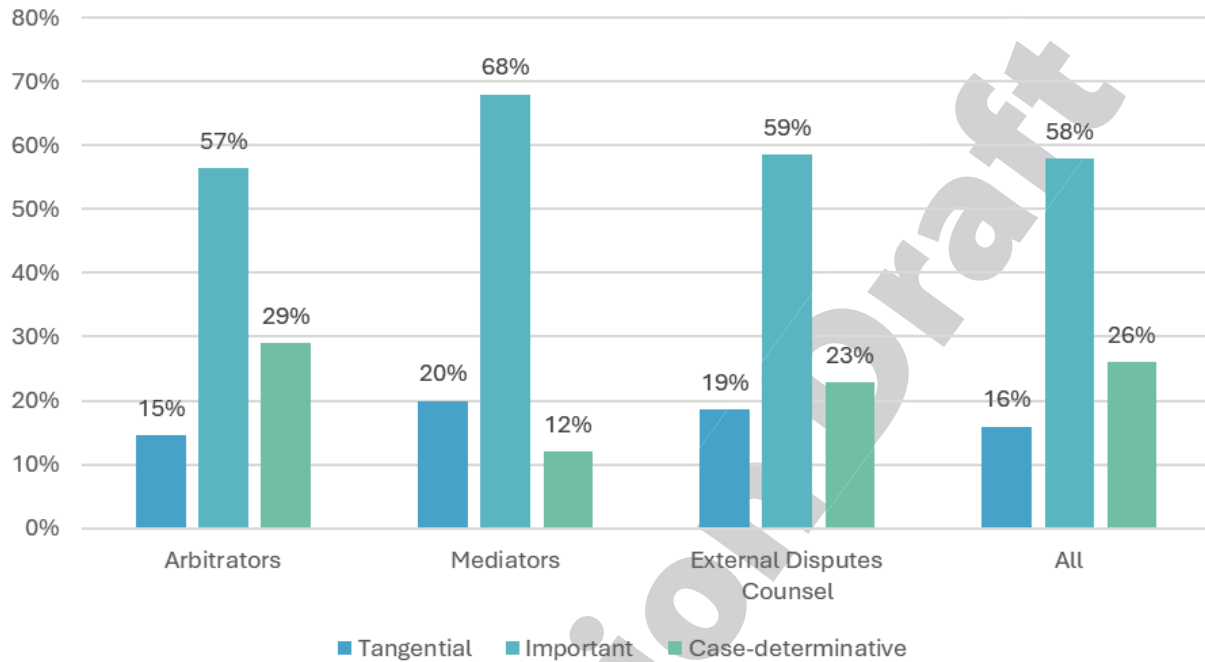
Interestingly, the proportion of those who indicated that issues of technology tended to be case determinative varied significantly across roles. As can be seen in Figure 4 below, arbitrators were more likely than mediators or external disputes counsel to indicate that such issues tended to be case-determinative, with roughly 30% of arbitrators considering technology issues to be case-determinative compared to 11% of both mediators and external dispute counsel. While this result could stem from confounding variables such as the respective participants' differing definitions of a technology issue, or of what comprises a case-determinative issue, it may also reflect disparate views among advocates and decision-makers as to the general import of technological issues when they are implicated by a dispute.

Figure 4: Importance of technology issues in the disputes in which they are raised, by self-identified primary role in dispute resolution



As shown in Figure 5 below, very similar results emerged when participants were asked about disputes involving issues of IP. 84% of the participants indicated IP issues were at least important in the disputes where such issues were raised; compared to the response for issues of technology, a slightly larger proportion of participants indicated that IP issues tended to be case determinative. And, as with technology disputes, a similar result emerged in that nearly 30% of arbitrator participants indicated that IP issues tended to be case determinative, while a small percentage of mediators and external counsel shared that sentiment; however, the gap between arbitrators and the other participants was less pronounced than with technology issues.

Figure 5: Importance of IP issues in the disputes in which they are raised, by self-identified primary role in dispute resolution

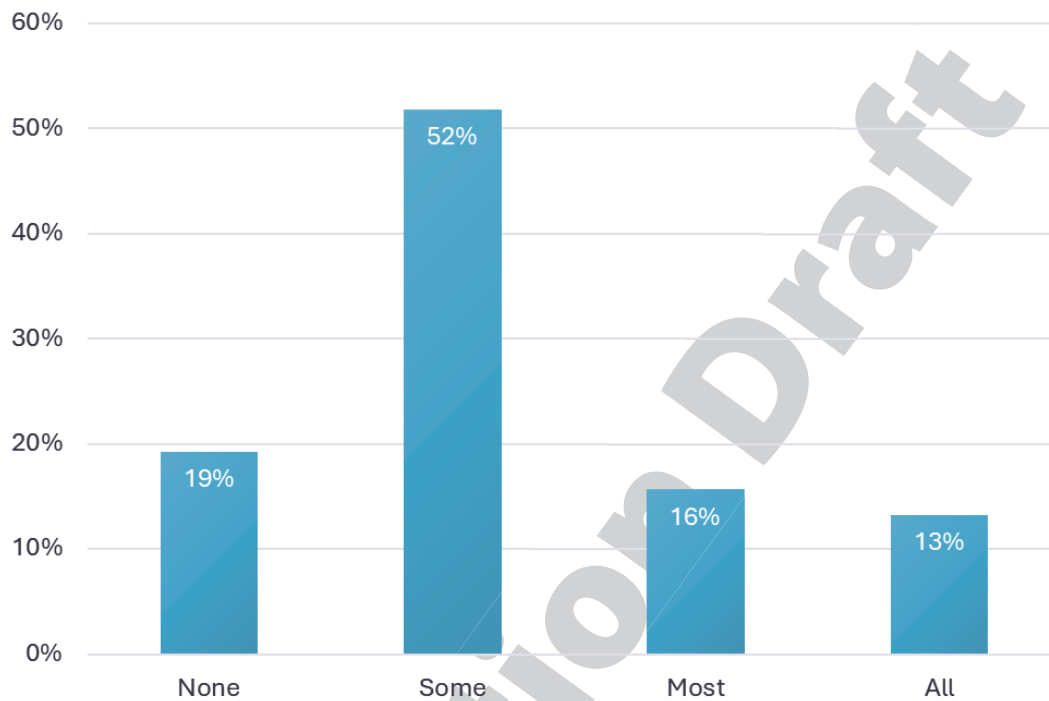


3. Use and Effectiveness of Different Means of Resolving TLI Disputes

Counsel were also specifically asked how many of their TLI disputes were arbitrated.

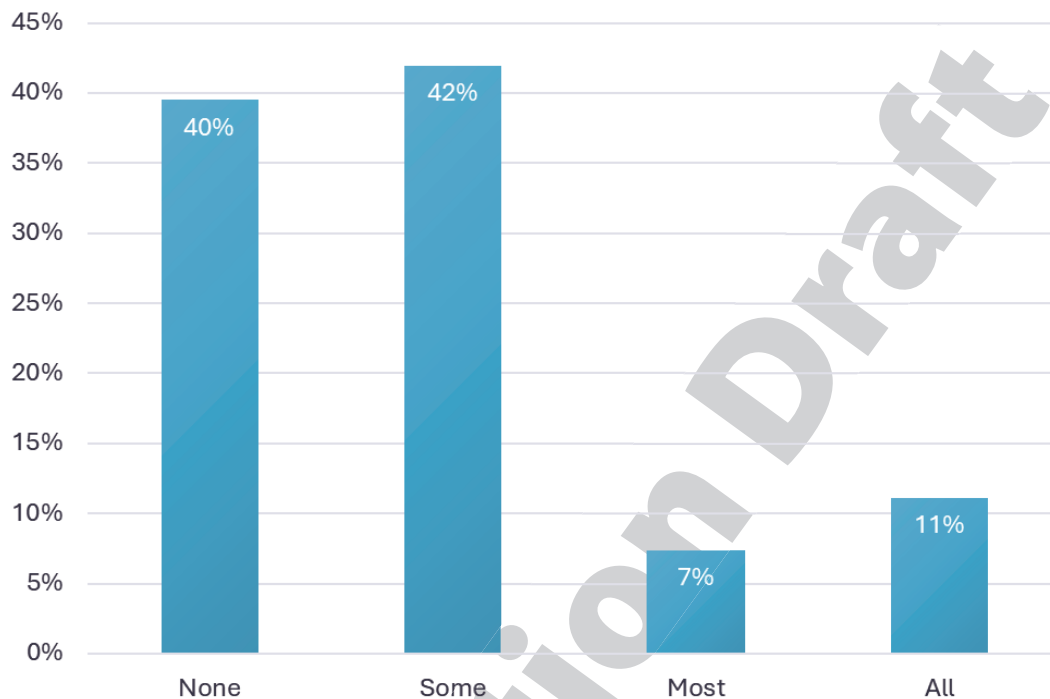
First, as shown in Figure 6, below, external disputes counsel were asked what proportion of the technology, life sciences, and IP disputes they had encountered were arbitrated: roughly 70% of counsel indicated that at least some of these disputes had been arbitrated, with around 30% of the participants indicating that most or all of their disputes had been arbitrated. When the same set of participants were asked whether they expected the proportion to grow in the next five years, 88% of participants indicated that they did.

Figure 6: How many of the Technology/Life Sciences/IP disputes you have encountered in the last 5 years were arbitrated?



Second, as shown in Figure 7 below, the results from a parallel question about IP disputes alone were more mixed: only 60% of participants indicated that at least some of their IP disputes were arbitrated. Again, however, a substantial majority 76% of participants to this question expected the proportion to grow.

Figure 7: How many of the IP disputes you have encountered in the last 5 years were arbitrated?

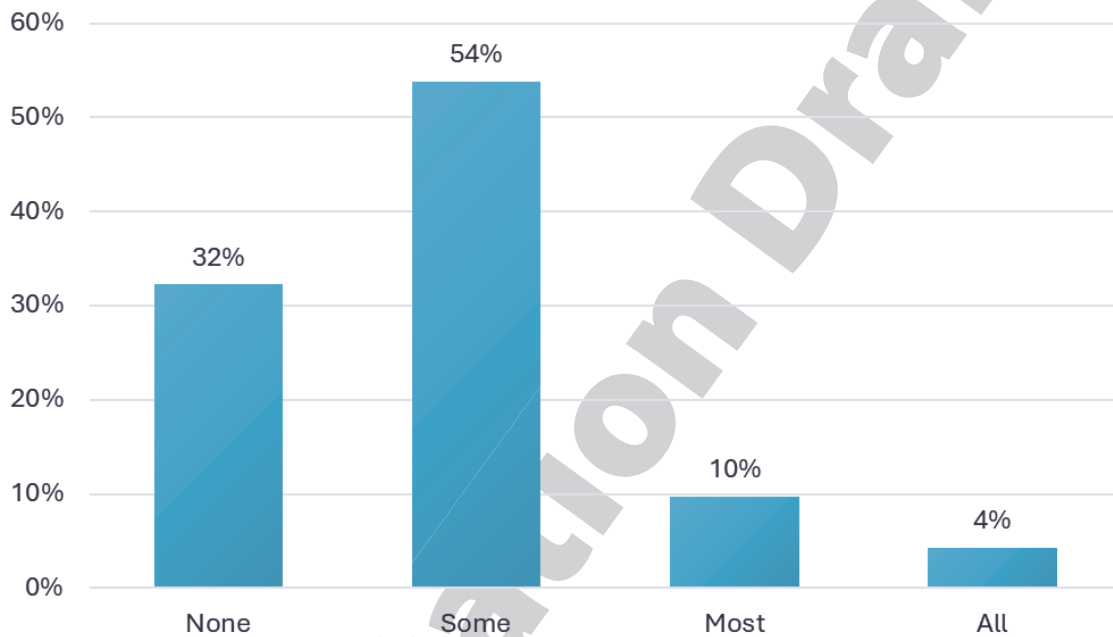


These results suggest that arbitration already has a substantial foothold in the resolution of technology, life sciences, and IP disputes, while also highlighting the potential for continued growth. With 20% of participants indicating that they had not arbitrated any technology, life sciences, or IP disputes (and over a third indicating specifically that they had not arbitrated any of their IP disputes), as well as a still-large gap between those who had arbitrated “some” of these disputes with those who arbitrated most or all of them, there is plainly room for arbitration to continue to grow in these spaces. And similarly evident in the results is an appetite for, and expectation of, this growth: as discussed in more detail below, arbitration was among the preferred forms of dispute resolution for a majority of the participants, and—likely relatedly—these participants expected arbitration to be used in an ever-higher proportion of the technology, life sciences, and IP disputes the participants encounter. There is undoubtedly a great opportunity for arbitration to expand its role in the landscape of TLI disputes; the natural follow up question is how best to seize it.

Counsel were also asked to indicate what proportion of their TLI disputes had been subject to mediation or another form of alternative dispute resolution, such as a standing mediator, dispute resolution board, or expert determination. More than 50% of the Survey participants indicated that they had had some cases subject to non-binding dispute resolution, followed by about one-third who had no cases subject to non-binding dispute resolution, with smaller numbers reporting that most or all of their cases had been subject to non-binding dispute resolution. While the number of participants who indicated that a substantial portion of their disputes had been subject to mediation or other forms of

non-binding dispute resolution was less than for arbitration, as shown in Figure 8, below, nearly 70% of participants indicated that at least some of their TLI disputes had been subject to mediation or other forms of non-binding dispute resolution.

Figure 8: How many of the Technology/Life Sciences/IP disputes you have encountered in the last 5 years were mediated or subject to another form of non-binding dispute resolution (standing mediator, dispute resolution board, expert determination)?

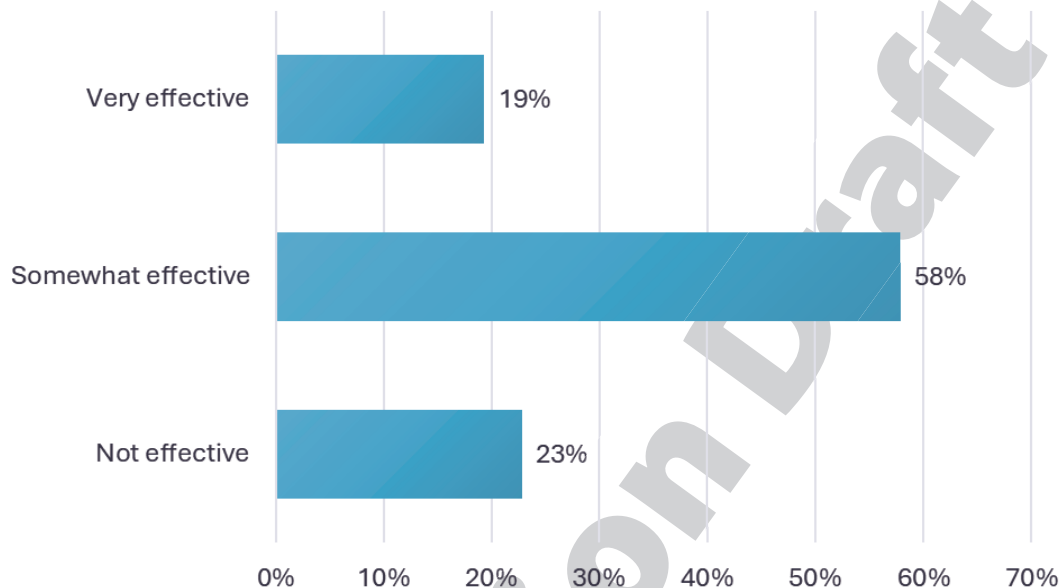


As with arbitration, moreover, Survey participants largely expected this proportion to grow: 71% of participants indicated that, over the next five years, the share of their disputes subject to mediation or other forms of non-binding dispute resolution would increase.

The arbitrator participants were also asked whether they had been involved in disputes where mediation or another dispute resolution mechanism was employed either in advance of, or in parallel with, an arbitration. Approximately 60% of participants indicated they had; of these participants who had been involved in such a combined proceeding, roughly three quarters indicated this had occurred in “some” of their disputes, with the remaining proportion indicating it was more common.

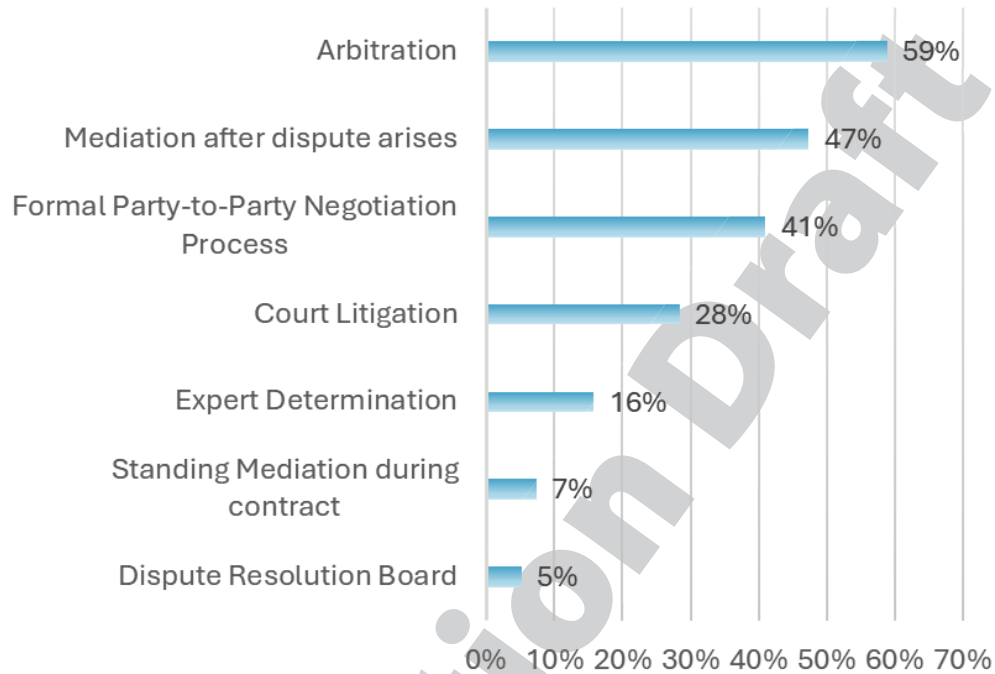
Finally, the arbitrators who had experienced an arbitration preceded by or combined with mediation or another form of non-binding dispute resolution were asked if they had found the combination of dispute resolution mechanisms to be effective. As shown in Figure 9, below, over three quarters of participants found the combination to be at least “somewhat effective,” with the remaining quarter indicating it had not been effective.

Figure 9: If you have been involved in procedures that combined different resolution mechanisms, how effective was this in narrowing the issues or expediting resolution of the dispute?



Given the importance of TLI disputes, both external disputes counsel and in-house counsel were also asked to identify which forms of dispute resolution were, in their experience, most effective in resolving TLI disputes. Arbitration was the preferred mechanism, but mediation and formal party-to-party negotiations were close second and third choices, with court litigation coming in fourth with only approximately half as many favorable responses as arbitration.

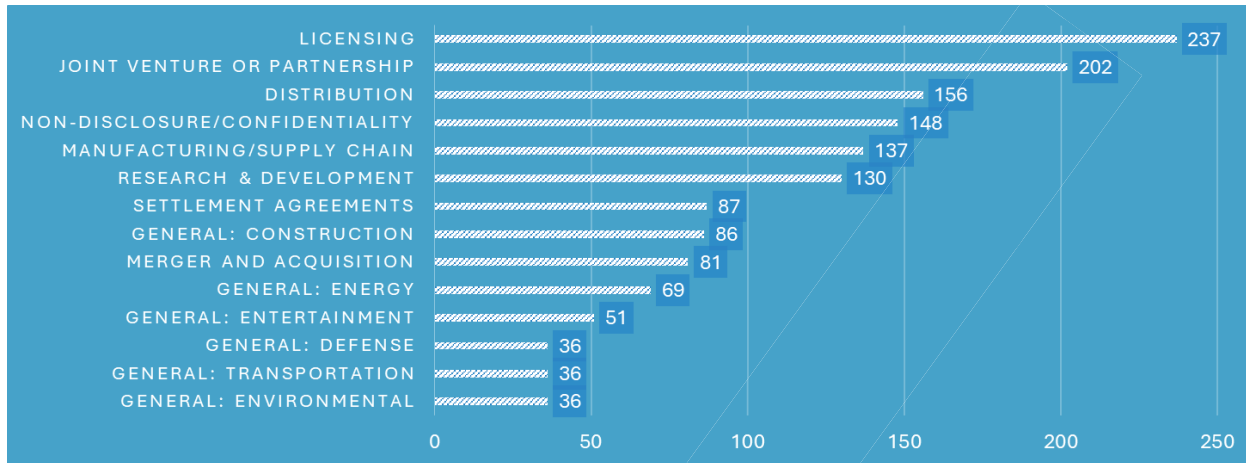
Figure 10: Which types of dispute resolution mechanisms have you found to be most effective for Technology/Life Sciences/IP disputes?



4. Types of Agreements Giving Rise to TLI Disputes

The Survey revealed interesting insight into the kinds of agreements that were most likely to be the basis for a dispute involving a technology, life sciences, or IP issue. As shown in Figure 11 below, participants indicated most frequently that they had encountered technology or IP issues in disputes stemming from licensing agreements and joint venture or partnership agreements. A large number of participants also had encountered disputes involving technology or life sciences issues in agreements related to distribution, non-disclosure/confidentiality, manufacturing/supply chain, and research and development.

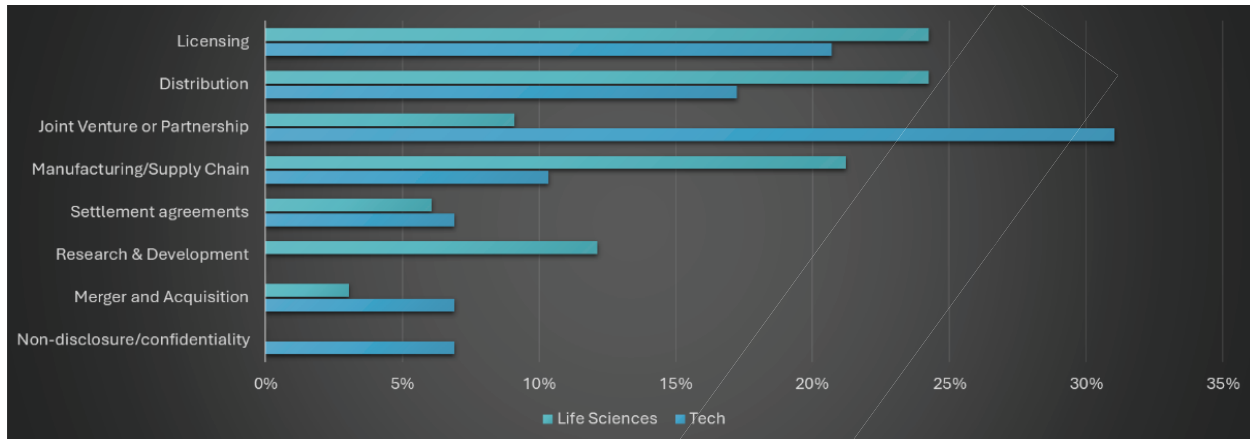
Figure 11: Please indicate whether you have encountered disputes involving a Technology or IP issue arising out of the following types of agreements in the last five years (# of respondents)



This data is generally consistent with the background understanding of disputes in the technology and life sciences sectors described above, including specifically the prevalence and importance of licensing and joint venture/partnership agreements in both sectors. Also of note is the relative frequency with which general agreements from “other” industries—including particularly construction and energy—were selected by participants as giving rise to a dispute involving a technology or IP issue.

Additionally, looking only at the responses of in-house counsel revealed potentially interesting further insight into these questions, including by allowing comparison of the types of agreements that tend to generate disputes for technology companies versus life sciences companies. As shown in Figure 12, below, while substantial numbers of in-house counsel at both technology and life sciences companies had encountered disputes related to licensing and distribution agreements, far more technology company in-house counsel had encountered disputes arising from joint venture or partnership agreements, while life sciences company in-house counsel were more likely to have seen a dispute arising from manufacturing/supply chain and research and development agreements.

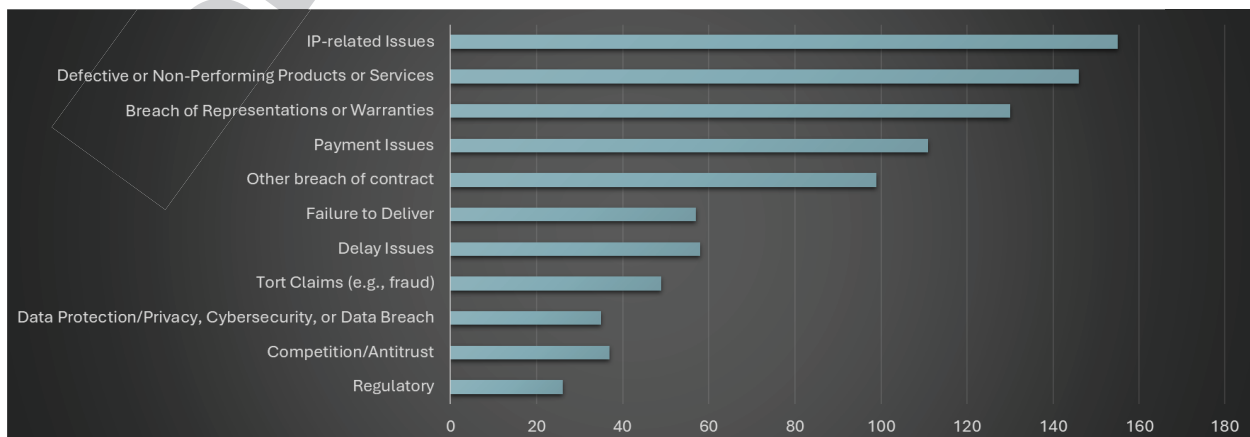
Figure 12: Relative frequency of selection by in-house counsel at technology companies and life sciences companies of agreement types giving rise to disputes involving Technology or IP issues in the last five years



5. Types of Claims Seen in TLI Disputes

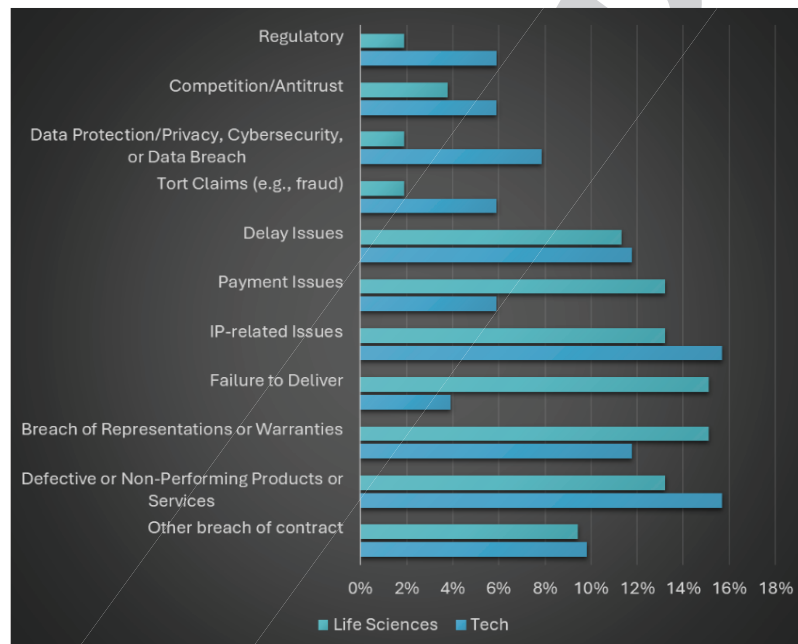
Beyond the types of agreements participants had seen give rise to disputes involving issues of technology and IP, participants were also asked which types of claims they had seen arise in technology and life sciences disputes. Participants indicated a large variety of claim types, with IP issues being an important, but not predominant, form of claim: in addition to claims involving IP, participants most commonly selected claims for defective or non-performing products and services, and breaches of representations and warranties. With these issues arising in numerous and diverse forms, stakeholders seeking to maintain and grow the role of arbitration in resolving these disputes cannot do so with simplistic across-the-board reforms or modifications. Rather, to ensure that these increasingly widespread and important issues can be dealt with within the dispute resolution process, arbitral and other forms of dispute resolution must be sufficiently limber and adaptable to accommodate the myriad forms taken by technology, life sciences, and IP issues.

Figure 13: How would you describe the nature of the claims in the Technology/Life Sciences disputes in which you have been involved? (# of respondents)



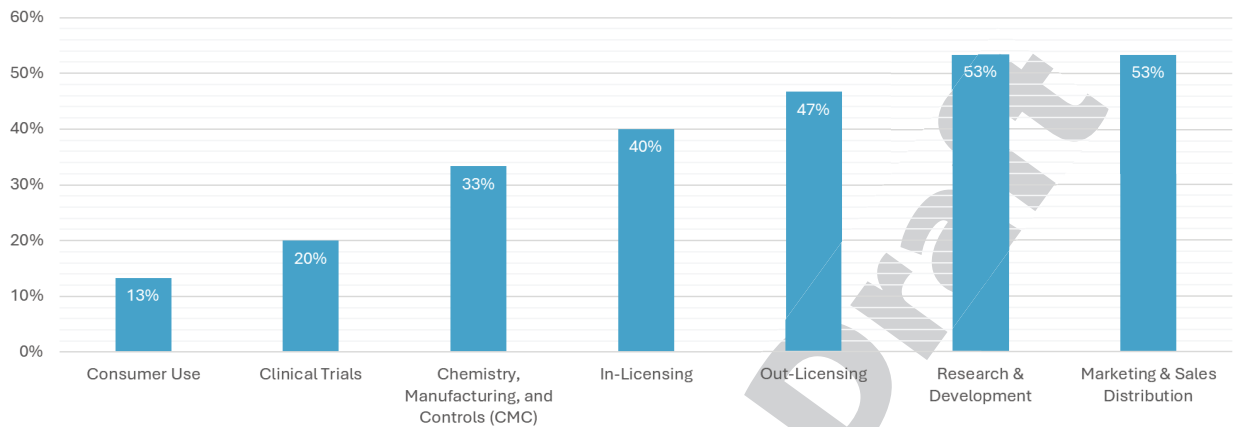
As with the above section on the types of agreements giving rise to TLI disputes, a comparison of the answers of in-house counsel at technology versus life sciences companies provided potentially useful insight. **First**, the Survey revealed the sheer variety of dispute types that in-house counsel at these companies encounter—each of the eleven dispute types included in the Survey was selected by at least one in-house counsel participant from each type of company. **Second**, from a comparative perspective, the Survey revealed that failure to deliver and payment claims arise with greater frequency for life sciences companies, while tech companies were more likely to have encountered data protection/privacy, cybersecurity, or data breach claims, as well as tort claims.

Figure 14: Relative frequency of selection by in-house counsel at technology companies and life sciences companies of types of claims involved in Technology/Life Sciences disputes



In-house counsel at each type of company were also asked distinct questions about when in their products' life cycles disputes tended to arise. Figures 15 and 16, below, show the results for in-house counsel participants from life sciences and technology companies, respectively.

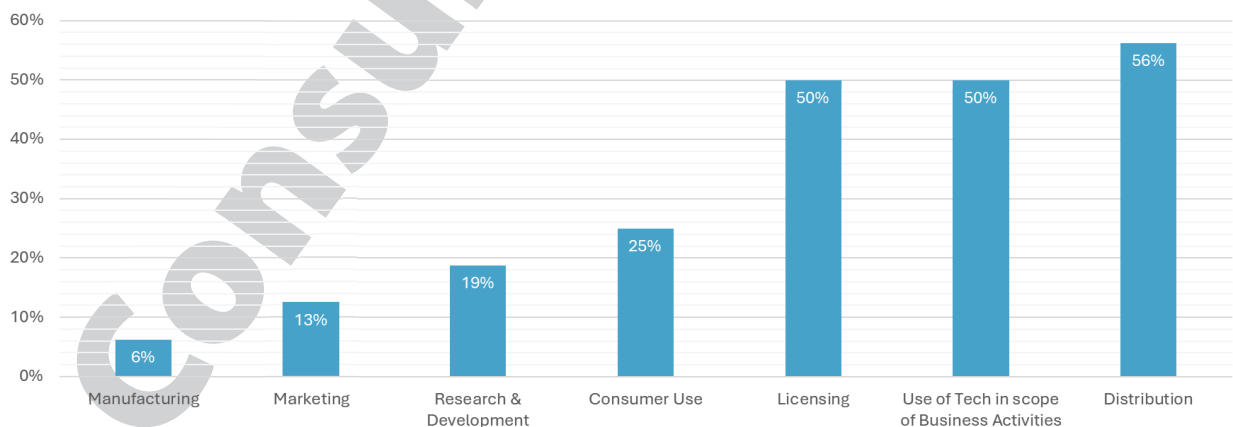
Figure 15: If you are at a Life Sciences company, at which stage of the product life cycle have you encountered disputes in the last 5 years?



For in-house counsel at life-sciences companies—displayed in Figure 15, above—marketing and sales distribution, as well as research and development, were the most frequently cited stages of product life cycle where disputes were encountered, though both in- and out-licensing also were selected by 40% or more of participants.

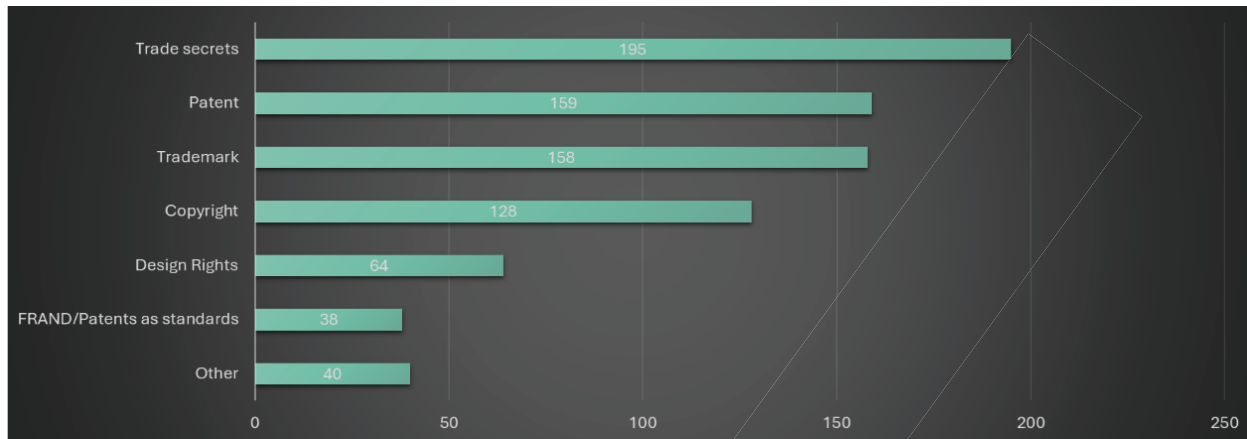
And as with life sciences counsel, in-house counsel at technology companies—shown in Figure 16, below—also most frequently selected distribution as the stage of the product life cycle giving rise to disputes, as well as licensing. In addition, half of the in-house counsel participants from technology companies identified the use of technology in other business activities as a stage that had given rise to their disputes.

Figure 16: If you are at a Technology company, at which stage of the product life cycle have you encountered disputes in the last 5 years?



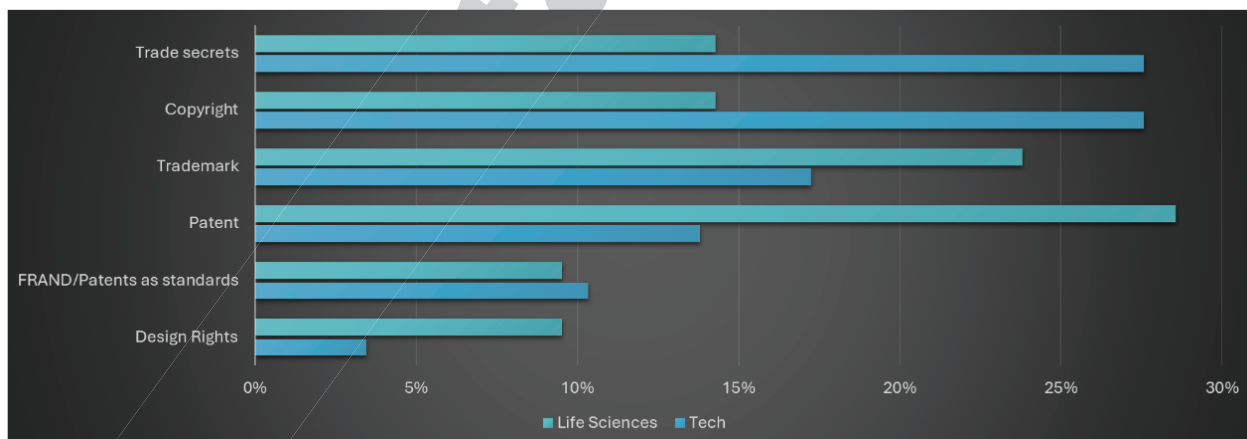
Participants were also separately asked about the types of IP claims they had encountered in the last five years. As shown in Figure 17 below, the most common types of claims encountered were claims involving trade secrets, followed by patent and trademark disputes.

Figure 17: To the extent you have been involved in an IP dispute, please indicate which types you have encountered in the last 5 years



As shown in Figure 18 below, meanwhile, the types of IP disputes encountered by in-house counsel at technology and life sciences companies varied somewhat. Over a quarter of the technology company in-house counsel participants indicated they had encountered trade secrets and copyright disputes, with a smaller proportion of life sciences company in-house counsel participants indicating the same. Conversely, nearly 30% of the life sciences in-house counsel participants indicated they had encountered a patent dispute.

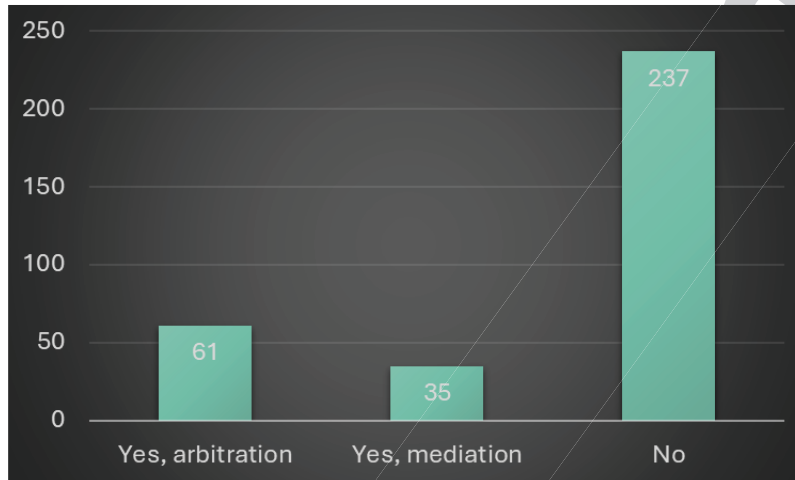
Figure 18: Relative frequency of selection by in-house counsel at technology and life sciences companies of types of IP disputes encountered



Survey participants were also asked about the extent to which they had been involved in mediation or arbitration with a party that is not using the IP at issue itself—i.e., a “non-practicing entity” or “NPE.” Given that such parties are not typically parties to any contract that would provide for arbitration or mediation, such disputes are rarely resolved by such mechanisms. Nonetheless, as seen in Figure 19, below, while the number of participants indicating they had not been involved in such a dispute was a substantial majority,

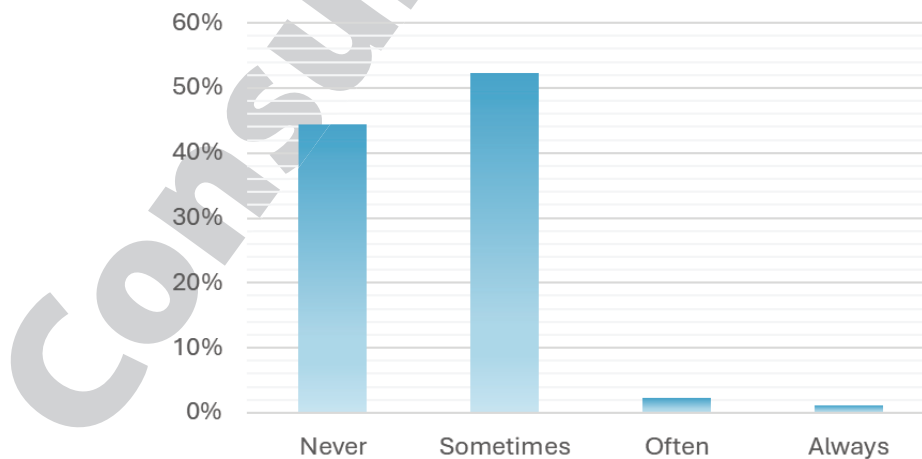
there were a surprising number of participants who stated they had. More of these participants indicated they had done so in arbitration than in mediation.

Figure 19: Have you ever been involved in an arbitration or mediation of an IP dispute with a party that is not using the IP itself (referred to as a Non-Practicing Entity/NPE)?



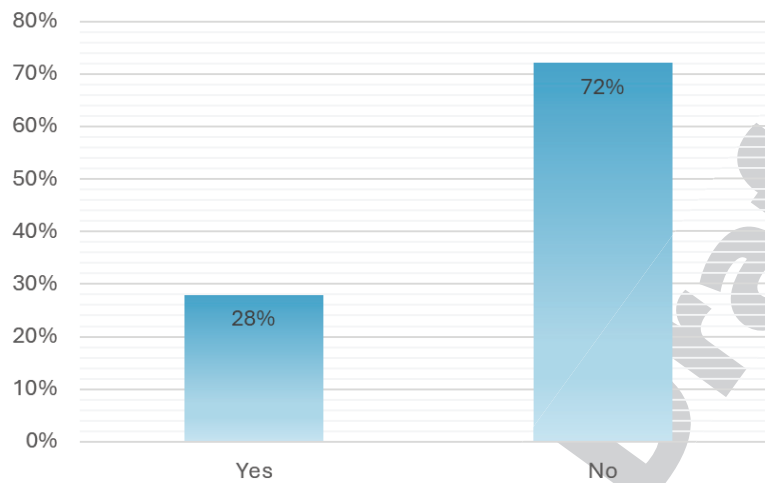
In-house and external counsel were also asked about the extent to which IP Disputes were carved out from the arbitration clause at issue. As seen in Figure 20 below, a majority of participants indicated they were at least sometimes carved out from their arbitration clause, including one in-house counsel participant who indicated they were always carved out.

Figure 20: In your disputes subject to arbitration, how often are IP Disputes carved out from the arbitration clause?



Despite the relative prevalence of these carve-outs, however, as shown in Figure 21 below, the participants indicated by nearly a three-to-one margin that they were not in favor of them.

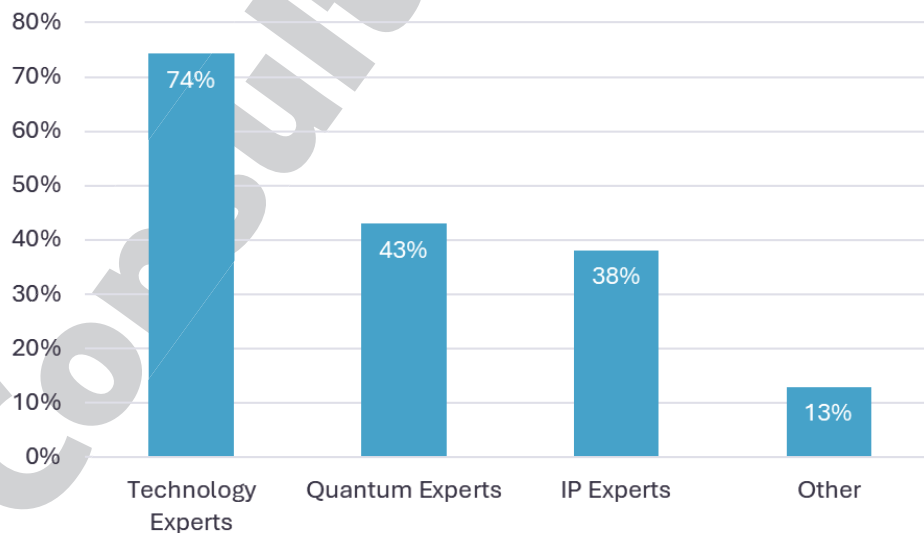
Figure 21: Do you favor such (IP dispute) carve-outs?



6. Use of Experts in TLI Disputes

Arbitrators, as well as external and in-house counsel, were asked to identify which types of experts were typically used by parties in TLI disputes. Technology experts were most frequently identified as featuring in such disputes, although quantum and IP experts were frequently seen as well.

Figure 22: In your experience, generally speaking, what types of experts do the parties typically appoint in Technology/Life Sciences/IP disputes?



But the results—specifically the qualitative comments regarding how arbitration does and does not suit TLI disputes—also highlighted how simply retaining and utilizing experts is not enough to ensure a dispute is resolved efficiently (or, for that matter, correctly). For example, several participants highlighted in their comments that, to be effective, experts

required careful and proactive management. One participant noted that their experience with experts was most successful when the tribunal was “actively using early evaluative case management techniques . . . for stimulating focus on relevant facts during the evidentiary stage.” Another participant noted the potential pitfall of “cases where both side’s experts were clearly qualified and truthful, but were not directing their testimony to the actual determinative science.” And one additional participant highlighted the opportunity to better resolve TLI disputes through “use of expert referral, agreed expert [findings], and expert ‘hot-tubbing.’”

The apparent desire of Survey participants for proactive and meaningful steering of expert testimony by the tribunal aligns with the Survey result, discussed below, that arbitration can better serve TLI disputes with “better arbitrator case management.”

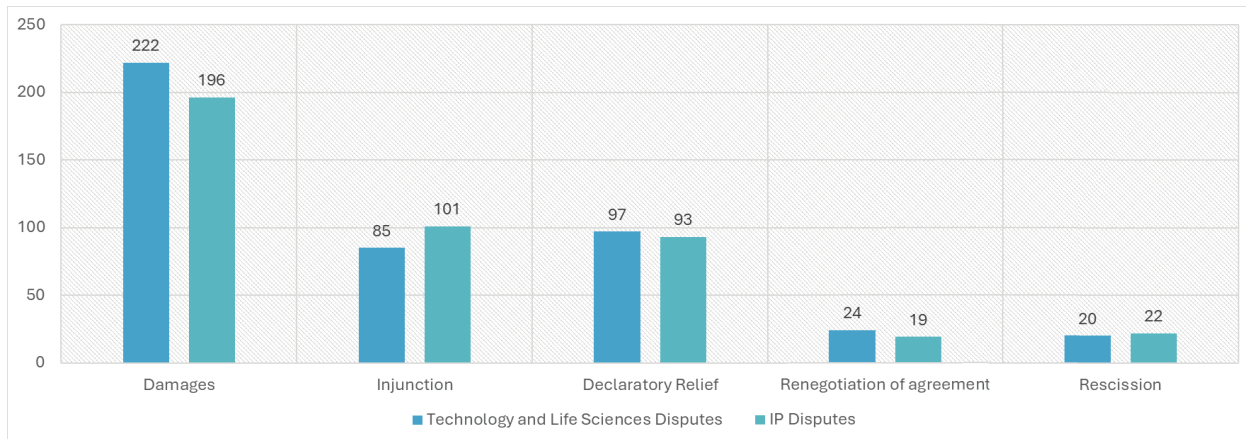
Multiple Survey participants highlighted the utility of another means of transferring knowledge to the tribunal—site visits and technology tutorials. One participant described positive experiences in arbitrations in TLI disputes where the parties and tribunal utilized “demonstrations of technology in the hearings and training for arbitrators regarding common issues.” Another participant highlighted that “site visits can be very helpful in understanding the issues at hand.”

With both types of knowledge transfer, participants noted potential pitfalls and barriers to the use of these mechanisms—the parties and their counsel are often reluctant to allow the tribunal or, more likely, opposing counsel and party representatives—into sensitive facilities or providing more insight into proprietary technology than is needed. Of course, this concern is present in any TLI dispute involving such technologies, and ensuring confidentiality provisions are designed to accommodate these potentially beneficial mechanisms is critical to mitigating some of these concerns. The trade-off of, on the one hand, enhancing the tribunal’s ability to reach a fully informed decision with, on the other, preserving confidentiality is inherent in TLI arbitrations. One of the advantages of arbitration, however, is that it provides the parties and tribunal with the ability to adopt procedures that strike an appropriate balance: as one Survey participant noted, to make arbitration most effective in a given TLI dispute, the parties and arbitrators “should determine the parties’ goals and modify the proceeding to respect those goals.”

7. Relief Sought in TLI Disputes

Arbitrators and counsel were asked how often different types of relief were sought in technology and life sciences disputes, as well as in IP disputes. As seen in Figure 23, below, while damages were the most commonly sought relief overall, they were relatively less commonly sought in IP disputes versus technology and life sciences disputes, while injunctive relief was more commonly selected in the IP dispute context.

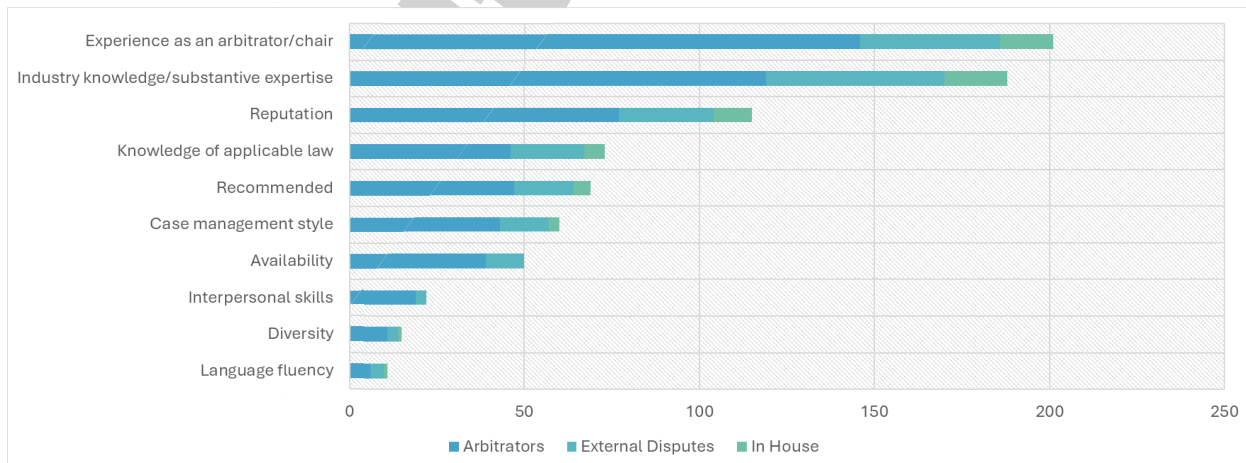
Figure 23: How often are the following forms of relief sought in the Technology/Life Sciences or IP disputes in which you have been involved?



8. Arbitrator Attributes Important to TLI Disputes

Arbitrators, external disputes counsel, and in-house counsel were asked what the most important factors were in selecting an arbitrator for a TLI dispute. The top three selections were consistent across the different roles surveyed, with experience as an arbitrator, industry knowledge and substantive expertise, and reputation comprising the three most important attributes.

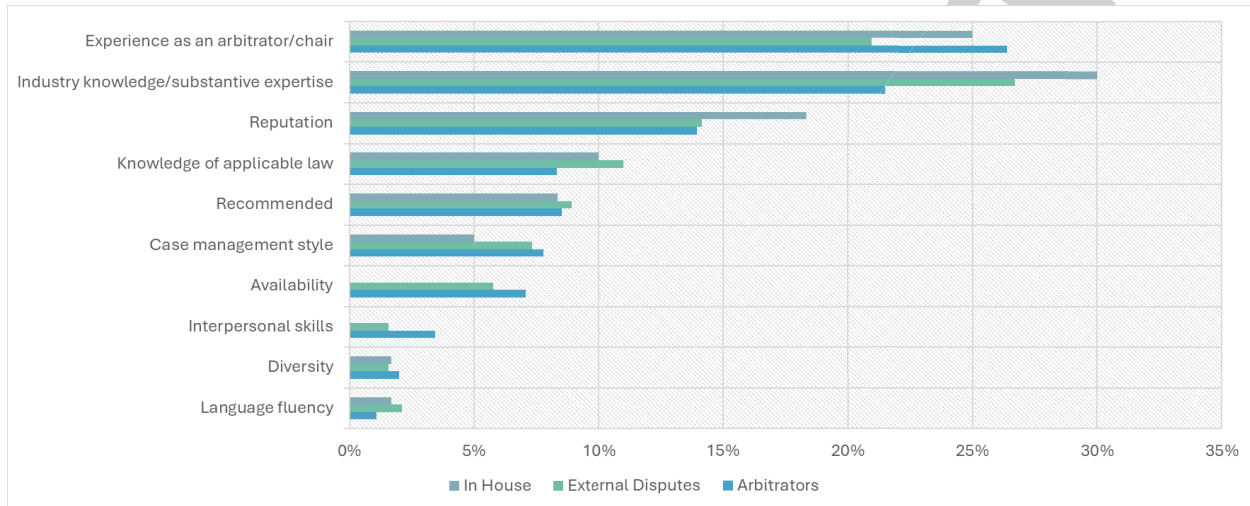
Figure 24: What are the most important attributes considered in selecting an arbitrator for Technology/Life Sciences/IP disputes?



Interestingly, but perhaps not surprisingly, the exact order of the three most important characteristics varied by participant type. As seen in Figure 25, below, both external and in-house counsel (the grey and orange lines) most frequently selected industry knowledge and substantive expertise as the most important, with over a quarter of these respondents selecting that option. Meanwhile, arbitrators (the blue lines) most frequently opted for

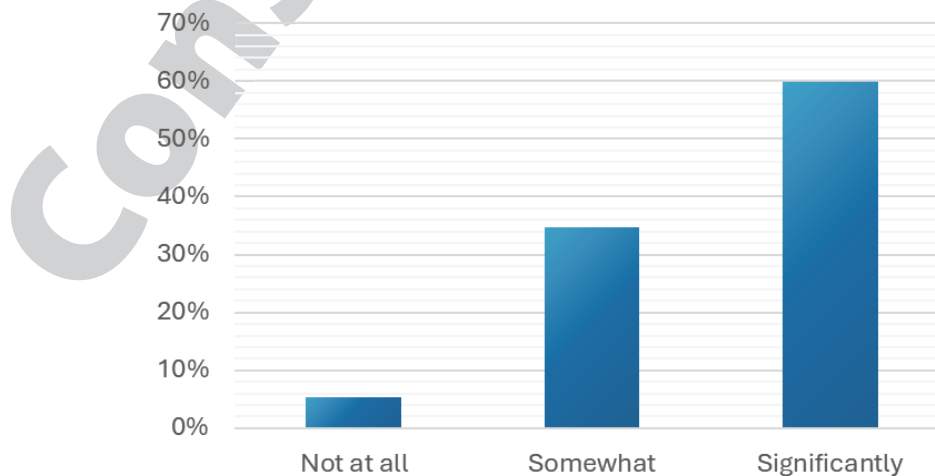
overall experience as an arbitrator, with this selection being the only option chosen by at least a quarter of arbitrator respondents.

Figure 25: Most important attributes for selecting an arbitrator, by proportion of participant type



Participants were also asked if, in disputes where a technology or IP issue was important or case-determinative, whether that fact impacted the parties' choice of tribunal, in the sense that the arbitrators' industry or subject-matter expertise would be an important attribute. Across all roles, participants overwhelmingly indicated that this would impact their choice of arbitrator. But to do so requires the person making the selection to have sufficient knowledge of the dispute to select an arbitrator with those characteristics, which will be more likely to be the case of in-house corporate counsel than external counsel; however, in-house counsel often is not involved with selecting arbitrators.

Figure 26: If the dispute raises a significant technology or IP issue, to what extent will that impact your choice of arbitrator?



The importance of arbitrator experience and industry/substantive expertise—and the division over which was most important—was apparent in the qualitative data collected as well. A substantial number of comments identified substantive knowledge on the part of the arbitrator as essential to effectively resolving technology, life sciences, and IP disputes, including the following two exemplars:

- *Arbitrator Participant*: “Arbitrators (or counsel) that lack technical expertise can lead to adverse consequences”
- *Counsel Participant*: “The single largest need in this regard is the lack of life science qualified arbitrators to choose from.... Having a larger pool of experienced arbitrators with advanced degrees and real experience is needed and, if accomplished, will result in the natural increase of such disputes being arbitrated.”
- *Arbitrator Participant*: “Arbitrator selection should focus less on the usual ‘all purpose’ generalist arbitrators who dance at all weddings and more on hands on experience in the concerned industrial sectors....”
- *Counsel Participant*: “Expertise of decision makers is the most critical point for technology and IP disputes. Genuine expertise is what makes a specialized court such as the London Technology and Construction Court so attractive. There is no equivalent for international arbitration.”

As can be seen in these comments, a number of participants emphasized that TLI disputes are best served by arbitrators who are technically trained or otherwise knowledgeable about the specific science involved in the dispute. A small number of participants went further, indicating that the lack of such arbitrators served as an affirmative barrier—or could serve as a barrier—to further growth of arbitration in TLI disputes.

However, this view was not universal among the Survey participants. Several others emphasized arbitrator experience or case management skills over pure technical knowledge, rejecting the notion that TLI disputes—or at least a substantial number of such disputes, such as those stemming from licensing agreements—could not be resolved effectively through use of the same procedural mechanisms and evidentiary processes as in any dispute:

- *Counsel Response*: “It is very important to gauge the complexity and importance of the technology/life sciences issues at issue. There are times when experience as an arbitrator is far more important than technical expertise—and usually both qualities are important.”
- *Arbitrator Response*: “More information about arbitrator experience with IP and technical fields would help facilitate arbitrator selection. I would not limit specialist panels to industry experts; good arbitrators who have some experience in the field and are good at learning should be included. I believe that some counsel prefer such arbitrators to industry experts.”

In these participants' view, the kinds of technological or scientific issues raised in TLI disputes do not necessarily require that the decision maker(s) possess specialized knowledge beyond being competent and experienced arbitrators. In this view, technical expertise can be "additive," but is a secondary attribute to the ability to manage the dispute effectively. As these comments suggest, the trade-off between technical expertise and case management experience is one that varies depending on the specifics of the dispute, as well.

In this vein, the Survey participants also made clear that IP disputes presented their own specific challenges and requirements. Beyond the potential need for arbitrators with a background in the relevant scientific or technical area of the IP, several commenters noted that an arbitrator in an IP dispute should have substantial experience with the legal framework governing the specific area of IP at issue:

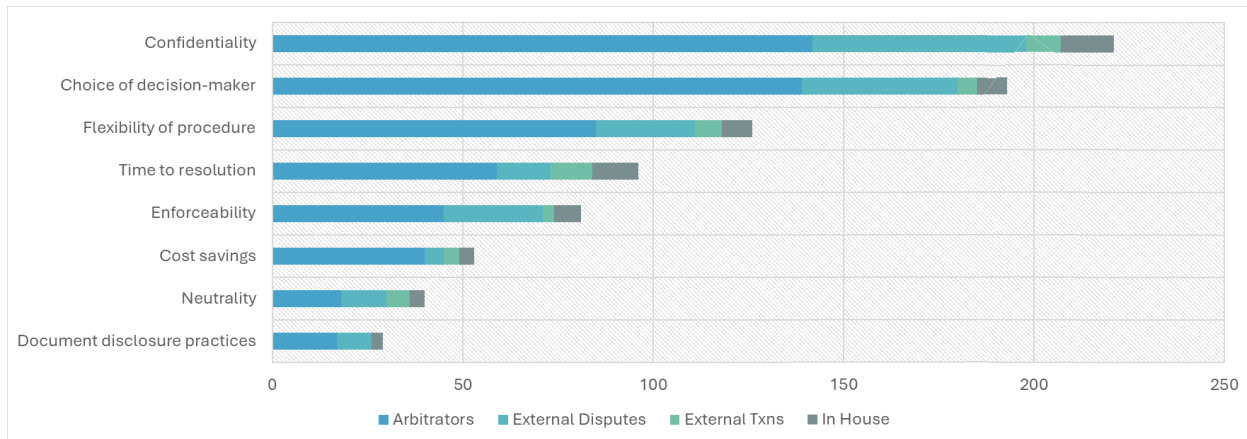
- *Arbitrator Participant*: "An arbitrator in an IP dispute should have experience in that area of IP. A panelist in a copyright case should have copyright experience, a panelist in a trademark case should have trademark experience, and a panelist in a patent case really . . . should have patent experience. Those are arcane areas of the law, loaded with doctrines that often don't make sense to the average commercial litigator (and sometimes not even to those who practice in the area)."
- *Counsel Participant*: "With the question focused on IP, the lack of additional patent qualified arbitrators to choose from is a significant problem. Many attorneys and even more arbitrators that proclaim their "IP" experience, are not patent attorneys and have no true patent experience. . . . Having a larger pool of patent experienced arbitrators is needed and, if accomplished, will result in the natural increase of such disputes being arbitrated."

Experience in the relevant IP law at issue, whether it be patents, copyright, trade secrets or trademarks, is thus considered by many to be its own criterion for an arbitrator in IP disputes. Putting aside whether the appropriate experience is being a patent attorney as opposed to a lawyer well versed in patent transactions and disputes, the responses make plain that more experienced IP arbitrators are needed to ensure arbitration grows further as a means of resolving IP disputes.

9. Main Advantages of Arbitration for TLI Disputes

Participants were asked why they preferred arbitration to litigation for resolving TLI disputes. Confidentiality and the ability to choose a decision-maker were far and away the most important factors across the different participant pools. Document disclosure practices and cost savings were relatively less-chosen options, while external counsel selected enforceability of the award much more frequently than did any other type of participant.

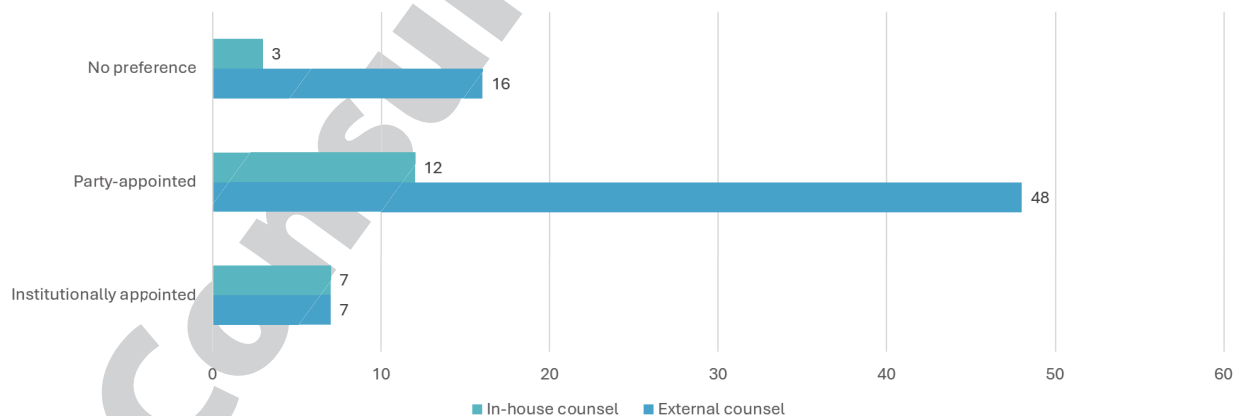
Figure 27: What currently makes arbitration more suitable for resolving technology/life sciences/IP disputes when compared to litigation?



Survey participants selected “choice of decision maker” as one of the principal advantages of arbitration for the resolution of TLI disputes, and the ability to choose the decision maker is itself plainly a standalone benefit of arbitration for TLI disputes.

The importance of choosing the decision maker is further reflected in the answers of external disputes and in-house counsel to a question of whether they prefer party- or institution-appointed arbitrators. As shown in Figure 28, below, the participants substantially favored party appointment, though the gap was less significant for in-house than external counsel.

Figure 28: Do you have a preference for institutionally appointed arbitrators or for party-appointed arbitrators?



Through the qualitative responses received, the Survey also provided insight into how best arbitral stakeholders can facilitate parties’ choice of arbitrator, further enhancing this particular advantage of arbitration.

To this end, Survey participants highlighted that arbitral institutions can and should develop and maintain rosters of arbitrators that possess the kind of deep subject knowledge

or technical expertise required at least in some TLI disputes, as well as the specialized legal knowledge pertinent to IP disputes:

- *Arbitrator Response*: “Consider establishing a specialized roster of arbitrators who are deeply experienced in patent; in Licensing; and in Life Sciences disputes.”
- *Counsel Response*: Arbitration can be further improved with availability of a “clear roster of highly qualified arbitrators with relevant technical/scientific and IP expertise/experience.”

Participants also highlighted that arbitration would benefit not only from the creation of such rosters, but also from the institutions themselves enhancing their capacity to call upon and appoint arbitrators with these attributes when required under their rules or when requested by the parties:

- *Counsel Response*: “The arbitral institution should also have a good understanding the degree to which technical expertise is need on the part of a chair, sole-arbitrator, or any other arbitrators selected by the institution or present to the parties as part of a list.”
- *Counsel Response*: “Arbitral institutions should take greater care in appointing arbitrators that have actual tech/life sciences expertise and specialization.”

This demand would require institutions not only possessing lists or rosters of qualified arbitrator candidates, but also developing (and promoting) the capacity to evaluate the particular needs of a given dispute, regardless of whether the parties have, for example, specified a particular level of expertise or background in their arbitration clause.

Participants also suggested that, while the efforts by many institutions thus far to create arbitrator rosters and lists along these lines was a step in the right direction, parties would benefit from greater information and transparency as to the criteria used to develop such rosters, as well as about other aspects of the arbitrators’ background, including data on case management or past performance/decisions:

- *Counsel Response*: “Publicly available data on case management style would help At the moment, arbitration is very much a who-you-know environment in which having connections is extremely important as a way of getting accurate data on critical decision-making criteria. I don’t mind personally, but this seems unfortunate as a systemic matter.”
- *Counsel Response*: “Identification of genuine expertise of mediators and arbitrators. Current “tech lists” or similar tend to undermine efforts to make arbitration more accessible to companies involved in technology disputes. . . . The supposed ‘tech lists’ that are published by different organisations are laudable in their efforts. Unfortunately, those named are not to be taken seriously as they nearly always claim competence in every conceivable technology and industrial and IP and construction sector listed.”

In addition to the number of comments related to the parties' choice of arbitrator, the qualitative responses also provided further color on other major advantages of arbitration as highlighted in the Survey data.

For example, several comments highlighted arbitration's confidentiality advantage as a particular selling point for TLI disputes:

- *Arbitrator Response*: "The confidentiality of arbitration is vital for both types of industries, although it is particularly crucial in life sciences development agreements."
- *Counsel Response*: "Arbitration is private and more confidential than litigation. Do you really want your disputes in the public domain?"
- *Counsel Response*: "It is important to discuss with U.S.-based clients . . . advantages of arbitration including the . . . ability to have much greater confidentiality."

Participants also emphasized enforceability in their qualitative comments. One participant referred to it as "usually the main driver" for a party opting for arbitration over litigation, while another participant noted that, "particularly for transnational disputes," the participant would emphasize "the benefits of enforcement afforded by the New York Convention" to clients choosing between arbitration and litigation for their TLI disputes.

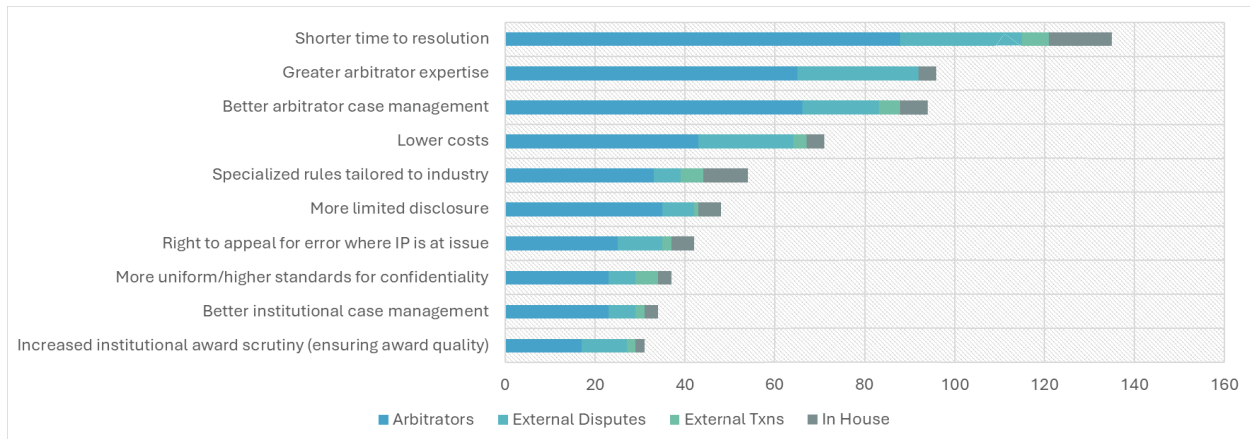
10. Areas Where Arbitration Can Improve for TLI Disputes

Participants were then asked to identify up to three "suggestions for improvement" that would, in their view, make arbitration more suitable for resolving TLI disputes as compared to litigation.⁴⁶

As seen in Figure 29, below, participants' top three selections were consistent across the different roles, with (1) shorter time to resolution, (2) greater arbitrator expertise, (3) better arbitrator case management, being the most favored selections, with lower costs coming only fourth.

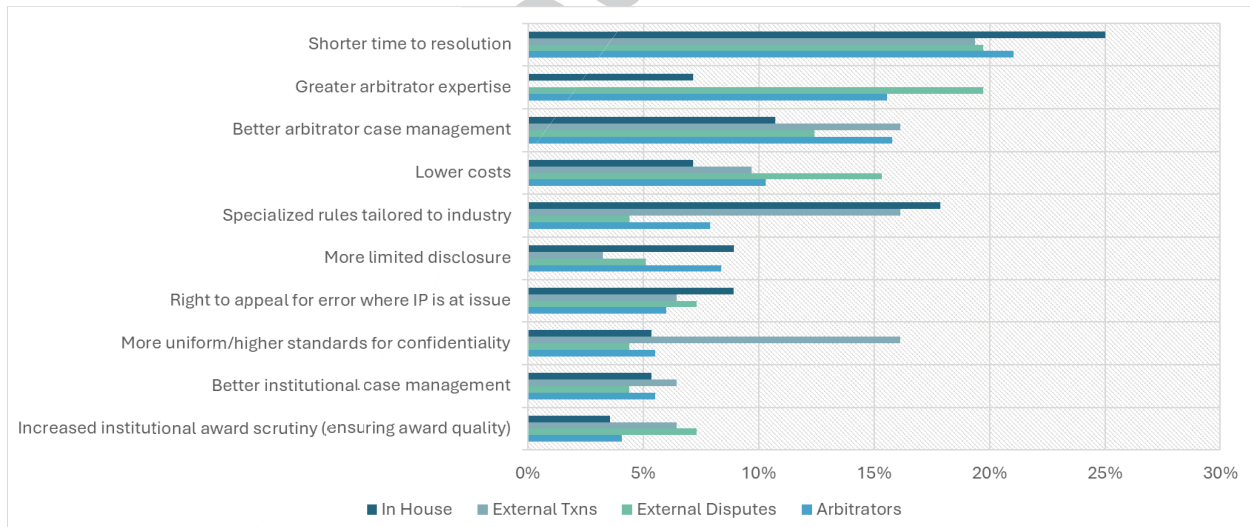
⁴⁶ The question was worded as "Suggestions for Improvement. What improvements could be made to make arbitration more suitable for resolving Technology/Life Sciences/IP disputes when compared to litigation?," and participants were asked to select up to three.

Figure 29: What improvements could be made to make arbitration more suitable for resolving Technology/Life Sciences/IP disputes when compared to litigation?



Interestingly, as can be seen in Figure 30 below, while arbitrators heavily favored shorter time to resolution, for external counsel, shorter time to resolution and greater arbitrator expertise were equally important areas for improvement. Counsel were also substantially more likely to select lower costs as an area for improvement.

Figure 30: Improvements to Arbitration, Proportion Selected by Arbitrator Participants Compared to by External Disputes Counsel Participants



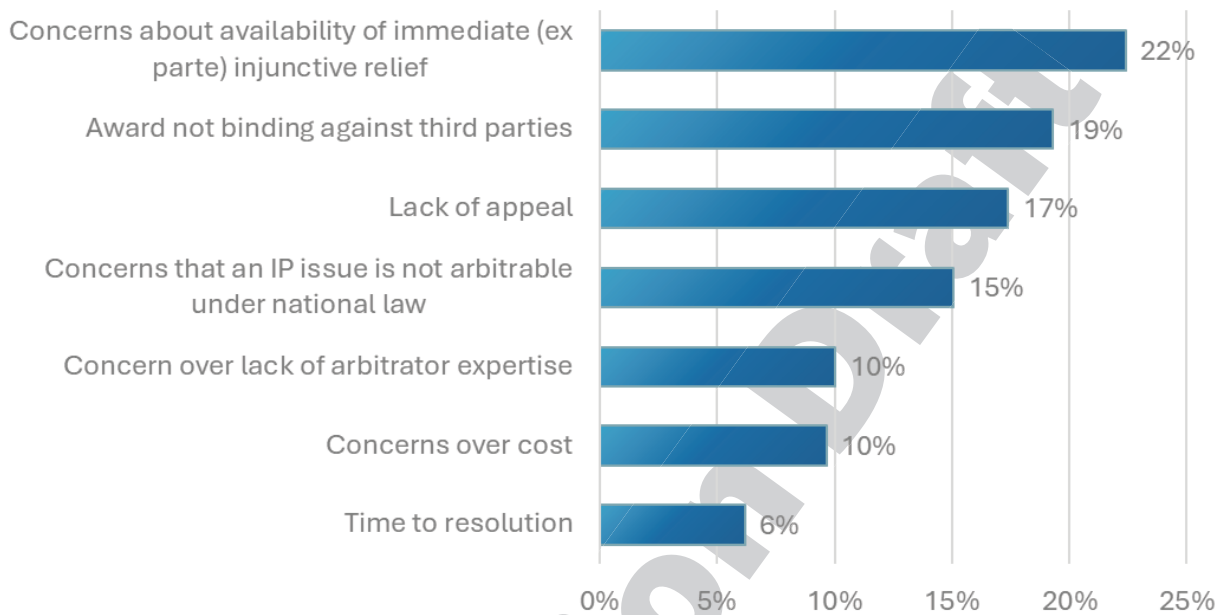
The Survey results thus show, from an alternative angle—namely the participants' views regarding where arbitration could be *improved* vis-à-vis litigation for resolving TLI disputes—that the participants would like to see arbitration become more like the arbitral archetype. The most common selection by some margin was for arbitration to achieve “shorter time to resolution,” followed by greater arbitrator expertise, better arbitrator case management, and lower costs.

Shorter time and lower costs were traditionally considered to be among the main attributes of arbitration, but with cases becoming more important and more complicated, especially in the technology, life sciences, and IP arena, they are also becoming longer and more costly. It is therefore not surprising that users are looking for improvement in these areas. And the other two most frequent selections—greater arbitrator expertise and better arbitrator case management—align with participants' view that the ability to choose a decision maker with specific expertise for the dispute is among arbitration's chief advantages, especially for complex cases like these.

On the other side of the ledger, options such as a right to appeal or institutional scrutiny of awards, as well as greater case management from the institution, rather than the chosen tribunal, were among the least selected options. To the extent that one might consider that grafting on aspects of litigation would make arbitration more suitable for technology, life sciences, and IP disputes—including a right of appeal or a greater role for the institution in scrutinizing (or reversing) the eventual award—the Survey participants, at least, appear to have rejected that approach. Instead, Survey participants appear to endorse the view that arbitration can capture more of the TLI dispute landscape if it further enhances what it is already considered to do well: ensuring parties are able to get to a resolution more quickly and less painfully, while further enhancing the benefits of employing a specifically chosen decision maker.

Counsel participating in the Survey—including external disputes and transactional counsel as well as in-house counsel—were also asked, specifically with respect to IP disputes, what aspects of litigation made it a better mechanism for resolution of IP disputes than arbitration. It is not surprising that these results differ when participants are asked specifically about IP disputes. Participants asked about the reasons they may opt for litigation over arbitration pointed to concerns over the availability of immediate injunctive relief, including ex parte, the effect of any award on third parties, and the ability to appeal an award, something that was considered to be a distinct downside in technology and life sciences cases. These concerns are not surprising given the rights granted to IP holders to exclude all others, which makes them public in nature, and the fundamental importance of IP to the viability of certain companies.

Figure 31: With respect to IP disputes specifically, what factors would weigh in favor of litigation instead of arbitration?



Taking these in turn, many arbitral institutions have, in relatively recent years, adopted increasingly flexible and meaningful procedures for seeking emergency relief. As these procedures continue to be used more expansively and evolve to be more effective, arbitration may well bridge the gap to litigation in this regard; in the interim, arbitral institutions can further educate counsel regarding these procedures to counsel, and counsel can ensure their clients are aware of these tools. Moreover, many arbitration clauses in IP agreements will allow for resort to local courts for injunctive relief, notwithstanding the arbitration agreement; relatedly, in most countries, the courts will allow a party to an arbitration to seek a court injunction.

Turning to the other two most selected responses, namely enforcement against third parties and appeals, these would require either more extensive reforms to the legal landscape in most countries⁴⁷ or specific, bespoke undertakings by parties. One participant, for example, suggested in their comments that specifically providing for the right to appeal IP awards, rather than all awards, in the parties' arbitration agreement could permit parties to capitalize on arbitration's efficiency in most cases while preserving a right considered particularly valuable in IP disputes. Arbitral institutions, too, may consider developing the capacity to accommodate such bespoke appeals processes as a means of allowing parties to pursue this option if they chose to do so by agreement. Based on the Survey results, these

⁴⁷ But note that, in Switzerland, decisions by arbitrators about the scope, validity and enforcement of IP rights can be binding on third parties, and, in Belgium, scope and enforceability decisions can have *erga omnes* effect depending on the nature of the right, with the validity of copyrights and patents generally considered arbitrable, while validity issues related to trademarks and designs are not. See, e.g., Thomas Legler, *A Look to the Future of International IP Arbitration*, in John VH Pierce & Pierre-Yves Gunter, *The Guide to IP Arbitration* 257, 261 (2d ed. 2022).

options would not be favored for all TLI disputes, rather only when decided upon by the parties in their arbitration agreement.

III. Recommendations

Notwithstanding the importance of TLI disputes to arbitration, the extent of thought leadership devoted to how best to resolve such disputes has been limited (unlike, for example, construction and energy disputes). To fill this void, the Working Group was tasked with making recommendations as to how all participants in the dispute resolution process, including institutions, neutrals, in-house and external counsel, and experts could improve their approach to arbitration and other forms of non-court dispute resolution to better serve TLI disputes.

As more disputes turn on the design, manufacture, or function of advanced technology and artificial intelligence, as well as life sciences, greater expertise in—or at least comfort with, technology and science, is required in all aspects of the arbitral process. This will increase exponentially with the increased use of AI. Moreover, even in cases where technology or science is not at issue, technological expertise is increasingly necessary to properly adjudicate cases in which artificial intelligence and other technologically based modeling is presented as evidence of the underlying claims or damages. Understanding these technologically and scientifically demanding issues will often require testifying and consulting experts, potentially including those who have expertise with the particular intersection of technology with the given industry or sector at issue. And on the legal side, many of these cases will turn on IP issues requiring expertise that in the courts is often addressed by specialized chambers. But it hardly ends there—to ensure arbitration remains a useful a dispute resolution process for the increasing number of disputes involving TLI issues, there must also be a sufficiently developed body of arbitral counsel, arbitrators, mediators and experts equipped to present and adjudicate technology issues.

The ICDR and other arbitral institutions have specifically enacted and implemented procedural mechanisms including emergency arbitrators, expedited procedures, interim measures, confidentiality, dispute resolution clauses for technology disputes, which are particularly relevant to TLI disputes. As discussed above, the ICDR has lists of both technology and life sciences arbitrators, and recruits and trains arbitrators and mediators with experience in technology and life sciences.

These steps have been important in aligning dispute resolution procedures with the needs of TLI disputes. However, given the widespread and increasing importance of TLI disputes, more remains to be done by neutrals (arbitrators, mediators, others), in-house/external counsel and the institutions to adapt and improve the process to make it more user friendly for TLI disputes, which is what led the ICDR to create this Working Group and the Working Group in turn to undertake the Survey and to publish this White Paper and the recommendations set forth in this section.

This section presents ten modest recommendations for ways the dispute resolution community could better serve TLI disputes. The Working Group recommendations are not necessarily new, and many of them mirror the adaptations just discussed, but by bringing

them together in this White Paper, the Working Group's goal is to focus the dispute resolution community, including the institutions, in-house and external counsel, neutrals, and experts on the needs of these disputes in a consistent and consolidated way at this critical time in their evolution. The proposals are of the Working Group, not the ICDR, ITechLaw, Arnold & Porter or its individual members, and are drawn from the information the Working Group garnered from the Surveys, interviews with Survey participants, and input from the expert members of the Working Group.

1. Tracking Data in a Consistent and Transparent Manner

Recommendation 1: Given the importance of TLI disputes, dispute resolution institutions should consider providing more transparent and comparable data about TLI disputes on their dockets.

As discussed above in Section I, (i) technology, (ii) life sciences and (iii) IP disputes are becoming an increasing component of the docket at dispute resolution institutions. However, the available information is often limited because of the manner in which the data is collected from the parties, the manner in which the institutions track such data can be opaque and often does not include the nature of the disputes. This lack of reliable data about the prevalence and attributes of TLI disputes limits the ability of the dispute resolution community to understand their importance and how we can better serve those disputes.

The Working Group would therefore encourage the institutions to consider modifying the way that they gather and report data about TLI disputes, including by providing more meaningful, detailed information about the nature, and industry of such disputes. The Working Group realizes that this would require a change in the way that the institutions gather data, and potentially more work, but given the importance of these disputes, the Working Group's view is that any additional effort would be warranted. More generally, our detailed review of the institutional data supports the view that it would be useful to the community for the institutions to work together and agree on all categories of data to be published, not just TLI, and the means to be applied to categorize the data.

2. Mediation and Other Forms of Non-Binding Dispute Resolution

Recommendation 2: Arbitral institutions, parties, in-house/external counsel, and neutrals should consider integrating non-binding dispute resolution procedures into dispute resolution agreements, institutional rules and procedures, and on-going arbitrations to encourage the settlement of TLI disputes.

As discussed above in Section II.3, Survey participants stressed the importance and effectiveness of party-to-party negotiation and mediation in resolving TLI disputes. Towards that end, the Working Group recommends consideration be given to including negotiation, mediation, dispute boards, standing mediators, expert proceedings, and other forms of non-binding dispute resolution into dispute resolution agreements, institutional

rules and procedures, and on-going arbitration procedures to encourage the settlement of TLI disputes.

Survey participants, particularly in-house counsel, ranked arbitration, mediation, and party-to-party negotiation roughly equally in terms of their preferred means of resolving TLI disputes. The importance of TLI assets, combined with their rapidly decreasing value and often highly confidential nature, supports the encouragement of non-binding dispute resolution to settle disputes quickly and confidentially wherever possible.

3. Institutional Rules on Emergency Arbitrators, Interim Relief and Expedited Procedures Suited for TLI Disputes

Recommendation 3: Arbitral institutions should consider whether amendments to their emergency arbitrator, interim relief, or expedited arbitration procedures would make them better suited to the needs of TLI disputes, or adopting such procedures where they do not already exist.

As discussed throughout this White Paper, a common attribute of technology, life sciences, and IP disputes is the need for expeditious resolution. As set forth above under Recommendation 2, dispute resolution procedures should therefore be crafted to encourage dispute avoidance and early settlement. Further, when dispute avoidance or settlement is not achievable, it is important that emergency and expedited procedures suited for TLI disputes are available. Making emergency and expedited procedures available for TLI disputes requires (i) the institutions to have such procedures in place and (ii) that parties include them in their dispute resolution agreements.

As previously mentioned, the ICDR was the first institution to adopt emergency arbitrator provisions, and in the last ten years, most international arbitral institutions have adopted procedures for emergency arbitrators, interim relief, and expedited arbitration (although the LCIA, for example, does not have expedited procedures).

The view from the ICDR and other institutions that have such procedures in place is that the decisions rendered under expedited procedures are well reasoned, thoughtful, and most importantly, enforceable. Therefore, the learnings from the more widespread acceptance of emergency arbitrator, interim relief, and expedited arbitration arbitral procedures is that they work, provided the parties, their counsel and the arbitrators are willing to put in the extra time required to decide these cases on a shorter time schedule, which is a significant time commitment especially for a complex TLI dispute.

With respect to expedited procedures, however, many of the rules are geared at smaller disputes and therefore do not always contemplate the procedures that would be expected for a complex TLI dispute. For example, the ICDR Expedited Arbitration rules apply automatically to cases valued at USD 250,000, and continue to apply if amended not to exceed USD 500,000. Parties can submit larger cases to those procedures, but the procedures generally are designed to reflect the needs of disputes with lower values at stake. For example, the ICDR Expedited Rules anticipate that the filings will be limited to the Notice of Arbitration and the Answer, and sets very short timelines.

The Working Group therefore recommends that the arbitral institutions that do not have expedited procedures consider adding them, and those that have expedited procedures that are geared at low value disputes, review those procedures with an eye towards the needs TLI disputes.

4. Drafting Dispute Resolution Clauses for TLI Disputes

Recommendation 4: When drafting dispute resolution clauses for TLI disputes, parties and counsel should consider referring them to expedited arbitration, potentially in combination with mediation and other forms of non-binding dispute resolution intended to avoid or narrow the dispute.

As a companion to Recommendations 2 and 3, the Working Group recommends parties to TLI agreements to consider including references to expedited arbitration as a means to achieve a speedier resolution, potentially together with mediation and other forms of non-binding dispute resolution intended to avoid or narrow the dispute. Survey participants noted that the use of mediation in combination with expedited arbitration is useful in preparing the parties for a fast-paced arbitration. Another in-house life sciences counsel noted that, as the right-holder in a license agreement, they always include mediation in combination with expedited arbitration given the need for speed, and that, if ultimately more time is required, licensees will usually agree to move more slowly, but if expedited procedures are not included in the agreement, the licensee will not agree to move more quickly once a dispute has arisen. In furtherance of the general goal of tailoring the dispute resolution process to the needs of a given contract, the AAA/ICDR has developed technology-specific clauses for use in technology disputes.

5. Avoiding IP Carve-Outs

Recommendation 5: Parties should generally avoid including carve-outs for IP claims. To facilitate this practice, up-to-date, reliable country-specific information about the arbitrability of IP rights should be made available by a trusted source.

The general view of the Working Group members and Survey participants is that, generally speaking, the use of IP carve-outs is counterproductive in that, even when well-crafted, carve-outs often lead to disputes about the scope of the carve-out, which run counter to the needs of TLI dispute resolution by causing delay. On the other hand, rather than carve-outs, it can be useful to include bespoke provisions in important IP licenses, (such as patent cross-licenses) geared at facilitating decision-making. Like IP carve-outs, however, these can be difficult to write in advance, highlighting another advantage of mediation for such disputes: even if the mediation does not settle the case, the mediator can assist the parties in narrowing the dispute.

The lack of readily accessible, up-to-date information about the arbitrability of IP disputes on a country-by-country basis was referred to as one of the reasons for including

IP carve-outs. The Working Group would therefore suggest that consideration be given to making such a resource available from a trusted source, for example, the WIPO.

6. Resolving IP Disputes Between Parties with No Contractual Relationship

Recommendation 6: When IP disputes arise between parties who have no contractual relationship, such parties should consider referring those disputes to mediation, arbitration, and/or expedited arbitration to maintain control over the dispute, keep it inter-parties, and avoid the high cost of multi-jurisdictional IP actions. Further, when settling non-contractual IP disputes, parties should consider including in the settlement agreement a dispute resolution clause calling for arbitration or expedited arbitration, potentially in combination with mediation and other forms of non-binding dispute resolution intended to avoid or narrow the dispute.

The basis for arbitration is consent, which is found in the dispute resolution agreement in the case of commercial arbitration and in the relevant treaty in the case of Investor-State arbitration.

However, in the case of many of the largest IP disputes, including, for example, worldwide patent litigations, there is no underlying contract or treaty. Therefore, the only way for the case to move out of the courts and into arbitration or non-binding dispute resolution is through a submission agreement, by which the dispute is submitted to mediation or arbitration contemporaneously. This is an option which should be proposed at the earliest time for potential agreement by the parties, as once the parties and their counsel are locked in the thick of battle—for example, a worldwide patent litigation related to a blockbuster drug—it is often very difficult for them to contemplate anything other than winning, much less agreement with opposing parties.⁴⁸

7. Need for Vetted Lists and Other Information about Neutrals with TLI Expertise and Experience

Recommendation 7: Given the desire of parties to choose neutrals based on transparent, unbiased information about their relevant experience, arbitral institutions and other qualified bodies should consider publishing separate lists of neutrals with experience in (i) technology, (ii) life sciences, and (iii) IP that have been vetted based on transparent criteria, as well as encouraging other efforts to ensure that parties have robust information for arbitrator selection.

As described above, Survey participants selected “choice of decision maker” as one of the principal advantages of arbitration for the resolution of TLI disputes. If the ability to

⁴⁸ The WIPO has indicated publicly that although it has had limited success in having parties to existing non-contractual IP disputes agree to refer them to arbitration, it has had more recent success in having the parties submit existing disputes to mediation. Moreover, when those cases settle, the settlement agreements, which often take the form of worldwide cross-license agreements, often will contain an arbitration agreement, allowing for arbitration over any future disputes arising from the settlement and underlying license.

choose the decision maker is perceived to be one of the main benefits of arbitration of TLI disputes, this raises an obvious follow-up question: what, exactly, are parties looking for in an arbitrator and how do they find them?

First, the Survey indicates that, when facing a dispute in this area, the parties' choice of arbitrator is affected. A surprising 80% of participants answered affirmatively when asked whether, in a dispute where a technology or IP issue was important or case-determinative, that fact affected the parties' choice of decision maker in the sense that subject matter or industry expertise was an important factor. This result was underscored by a similar question, which asked external disputes counsel and in-house counsel the extent to which the existence of a "significant technology or IP issue" in a dispute would impact their choice of arbitrator. Nearly 60% of participants indicated it would "significantly" impact the choice of arbitrator, while only a handful of participants indicated it would have no impact at all.

Second, in light of this finding, the Survey also sought participants' views on what were the most important attributes for an arbitrator in a technology or life sciences dispute to possess. Though attributes such as a strong reputation, recommendation, or knowledge of the applicable law received substantial numbers of selections, this question produced two clear leading selections: most participants selected arbitrator experience, including as a chair, which was closely followed by "industry knowledge / substantive expertise." As mentioned above in Section II.8, arbitrator experience was the first choice among arbitrators, while counsel (both external disputes and in-house counsel) selected industry knowledge / substantive expertise most frequently. This preference was also reflected in the results of a question about how arbitration could further improve vis-à-vis court litigation for resolving TLI disputes: The second-most commonly selected option—and the most common selection among external counsel—was to have even "greater arbitrator expertise" in the subject matter, which can help ensure better outcomes, as the parties can have some measure of confidence that the arbitrators will be sufficiently fluent in the technology to be able to understand and adjudicate the dispute, and save time. This was followed by a desire for "better arbitrator case management," a skill which would likely be correlated with an arbitrator's experience.

And third, the Survey also provided insight into how best arbitral stakeholders can facilitate parties' choice of arbitrator. To this end, Survey participants highlighted that arbitral institutions can and should develop and maintain rosters of arbitrators that possess the kind of subject-matter knowledge or technical expertise preferred by counsel, as well as the specialized legal knowledge pertinent to IP disputes.

Transparency appears to be a critical attribute of a successful roster focused on technology, life sciences, or IP expertise. Parties are not satisfied only by a curated list of potential arbitrators, but instead also desire the ability to weigh the criteria used to develop such lists, as well as greater information on other aspects of arbitrator performance such as case management. The desire of users for greater information in selecting an arbitrator is not a surprising result, but, given the importance placed by parties facing TLI disputes on the ability to choose their own decision maker, and the primacy of expertise and experience as arbitrator attributes, institutions hoping to further grow arbitration's role in TLI disputes would do well to consider how they can accommodate these user preferences. Despite the

critical advantage of having technically savvy arbitrators adjudicate TLI disputes, several participants commented that institutional arbitrator rosters give parties insufficient insight into who on the roster—if anyone—might have the requisite knowledge and experience. And a handful of participants commented that institutions did not sufficiently screen the arbitrators they put on their specialized IP and technology rosters, which can lead to unfulfilled expectations and can jeopardize institutions' attempt to encourage more parties to arbitrate TLI disputes.

It is therefore important that institutions not only create and maintain technology and IP rosters, but that they establish meaningful criteria to ensure that tech and IP arbitrators on the list have the requisite knowledge and skill and make those known. The ICDR has dedicated panels, for many industries including aviation, aerospace, national security, life sciences, and technology. The aviation and aerospace panel is available online, together with the general criteria applied for inclusion on the AAA/ICDR technology and life sciences lists.⁴⁹ There is no one way to craft selection criteria—potential possibilities include a certain amount of TLI experience in litigation and/or transactions, arbitration experience as counsel or arbitrator, in-house experience in a technology or life sciences company, engineering degrees, science degrees, or membership in the patent bar (all of which are included in the ICDR criteria, for example).

The critical point, however, is not the precise criteria applied, but rather that institutions make those criteria known so the parties can judge their relevance and importance, and then vet those they add to their technology, life sciences, and IP rosters against those identified criteria. At the same time, institutions should require greater disclosure of relevant experience and qualifications by arbitrators themselves.

8. Importance of Educating the Tribunal and Tribunal Engagement

Recommendation 8: In cases involving complex technological or scientific issues, it is often beneficial to have a tech/science tutorial early in the proceedings, for example at a substantive midstream conference and arbitral institutions should consider whether it would be useful to mention this in their procedural rules or practice tips.

Several participants observed that tribunals often struggle to understand the underlying technology—especially when tribunal members are not scientifically minded to begin with, or do not have substantial TLI experience.

TLI disputes, by definition, often turn on complex technical concepts, which means that parties and their experts will be required, sooner or later, to educate the tribunal on the underlying technology. If the tribunal does not have a reasonably firm grasp of the underlying technology or science, there is a risk that it will misconstrue the parties' positions in the arbitration. Tribunal education is therefore necessary, because even tribunals with significant experience in TLI disputes might struggle when faced with an unfamiliar or particularly complex technology or scientific issue, and even those who believe they know

⁴⁹ See the AAA-ICDR Panel for Aerospace, Aviation, and National Security Claims at https://go.adr.org/aans-panel.html?utm_source=website&utm_medium=click&utm_campaign=aans_panel.

the technology or science should be educated in the way the parties perceive it for the case at hand.

In most arbitrations, the parties' primary opportunity to educate the tribunal is in their briefs and in their experts' reports. But for complex technological and scientific issues such as those posed in many TLI disputes, the pleadings—and even the expert reports—are suboptimal educational vehicles. Pleadings and expert reports do not allow arbitrators to engage in a live question-and-answer session with counsel. They are also highly adversarial, which encourages the parties to spin even the rudiments of the underlying technology in their favor. But even without any deliberate slant, in order to fully understand and appreciate the expert reports, tribunals are often in need of a more substantial and neutral primer than parties are likely or willing to include in their pleadings and reports, which may be limited in length and which are self-evidently focused on the dispute and the specific technology at issue in the dispute—and not the background to that technology.

One possible solution is for tribunals to order (or parties to propose) so-called “tech tutorials,” which are already common in US patent litigation—indeed, in some US jurisdictions that see high numbers of patent cases, courts build the opportunity to present such a tutorial into the schedule of proceedings. Tech tutorials can take many forms: live presentations or video recordings, ex parte or joint, long or short, simple PowerPoint presentations or professional animations. Whatever form the tech tutorial takes, its purpose is to educate the tribunal on the background technology at issue, and, to that end, it should aim to be a non-argumentative presentation.

In cases where complex technological or scientific issues are likely to be important to the outcome of the arbitration, or case determinative, it is best to do a tech tutorial early and to make it live with opportunity for tribunal questions. The tribunal can then apply the knowledge it gains throughout the proceedings. This education is the basis on which the expert reports and the submissions will be built, and making sure that it happens in a timely manner is part of sound expert management, which will be discussed in the next section.

9. Managing Experts in TLI Disputes

Recommendation 9: Given the need in the context of TLI disputes to develop technical, scientific, IP, and other issues requiring expert evidence, in addition to potential quantum expertise, counsel, arbitrators, and parties should put in place procedures from the outset of the arbitration to actively manage the experts. Such procedures should be designed to elicit the expert evidence expediently, potentially including substantive midstream case management conferences/Kaplan hearings, expert conferencing, Scott Schedules, and/or joint expert reports. Arbitral institutions should consider adopting protocols addressed to expert evidence.

The Survey responses emphasized the importance of decision makers in TLI disputes having the capacity to develop a deep understanding and comfort with the science or technology (or other IP) at issue in a given dispute. Survey participants highlighted the importance of pre-existing tribunal knowledge and expertise, but such knowledge is only part of

the equation. Each case is different, and prior knowledge about the issues posed in TLI disputes is quickly obsolete. For these reasons, regardless of the tribunal's background expertise, a principal objective of the arbitral process for TLI disputes is the transfer of expertise specific to the dispute from the parties—and, often, their experts—to the tribunal.

Participants were virtually unanimous that experts play a crucial role in TLI disputes. As TLI disputes become ever more technical—as deciding disputes about agreements increasingly requires understanding the technology itself—expert evidence has become essential to the arbitral process. At the same time, some participants stated that the proliferation of expert evidence has contributed to unnecessarily long and costly arbitrations, while others complained that expert evidence, as presented, did not serve to educate the tribunal or resolve the dispute.

The uniform view was that the way to avoid this is for tribunals to actively manage and control party-appointed experts from the outset. In significant TLI disputes, technology/scientific, legal/IP and quantum expert evidence may be necessary. Further, when budgets allow, parties are incentivized to be overcautious, retaining more experts than necessary “just in case,” which, while understandable in an important case—as TLI disputes often are—adds cost and time to the proceedings.

A great many participants observed that “shorter time to resolution” and “better arbitrator case management” were important ways to improve arbitration. At the same time, Survey participants stressed the importance of arbitrators fully understanding the complex technological, scientific and legal issues that often underlie TLI disputes. This requires a tribunal that fully engages with and understands the expert evidence.

The most commonly accepted means of presenting expert evidence in international arbitration today is through the appointment of party-appointed experts, although both tribunal-appointed experts and tribunal expert consultants are seen in practice, and tribunals should proactively apply available techniques to manage and control both party-appointed and tribunal-appointed experts and tribunal expert consultants. Some such techniques are discussed below:

- (i) **Management of the Experts.** As noted above, the appointment of party appointed experts remains the most commonly accepted means of presenting expert evidence in international arbitration. Where party-appointed experts have been appointed, both the tribunal and the parties should recall that, while they are appointed by the parties, they are nonetheless neutral and independent, and their role is ultimately to assist the tribunal.

As early as possible in the proceedings, tribunals should solicit the parties' input on the experts they expect to call, and why they expect to call them. The tribunal can then work with the parties to decide how best to educate the tribunal with respect to those issues in an effective and expeditious way.

This type of expert management, like all good case management, requires the tribunal to be actively engaged from the outset of the arbitration. Importantly, it also requires a tribunal that, regardless of its previous understanding

of the issues to be presented by the experts, engages with the experts and the expert evidence early to ensure that it addresses the issues required to decide the dispute and that the experts join issue with respect to those issues.

While less ink has been spilled on the management of technical experts in TLI disputes, significant thought has gone into the management of quantum and construction experts, which is easily transferrable to technical experts in TLI disputes.⁵⁰ Such proactive management of party appointed experts is specifically contemplated by the IBA Rules, which provide for consultation between the tribunal and the parties “at the earliest appropriate time” and “with a view to agreeing on an efficient, economical and fair process for the taking of evidence.”⁵¹ Such “consultation on evidentiary issues may address the scope, timing and manner of the taking of evidence, including, to the extent applicable: (a) the preparation and submission of . . . Expert Reports.”⁵² The IBA Rules attempt to strike a balance between the tribunal’s need to manage the proceeding efficiently and economically on the one hand, and party autonomy to present its case on the other.

- (ii) **Expert Submissions.** As early as possible, and preferably before the party-appointed experts submit their reports and become entrenched, tribunals should arrange for party-appointed experts to meet, confer, and attempt to find areas of consensus, reduce the number of issues in dispute, and limit the scope of any differences that remain. This, too, is explicitly contemplated by the IBA Rules: “The Arbitral Tribunal in its discretion may order that any Party-Appointed Experts who will submit or who have submitted Expert Reports on the same or related issues meet and confer on such issues. At such meeting, the Party-Appointed Experts shall attempt to reach agreement on the issues within the scope of their Expert Reports, and they shall record in writing any such issues on which they reach agreement, any remaining areas of disagreement and the reasons therefor.”⁵³ It is also mirrored in Article 6 of the Chartered Institute of Arbitrators’ Protocol for the Use of Party-Appointed Expert Witnesses in International Arbitration.⁵⁴ The goal is to limit the scope of the experts’ reports to issues on which the experts were unable to agree—which, in turn, can form the basis of (and ideally cabin) the scope of document production. The benefits of this can be significant—shorter, more focused expert reports; experts that are not mere ships passing in the night; and quicker, less expensive hearings.

⁵⁰ See, e.g., ICCA-ASIL Task Force on Damages in International Arbitration, *Damages in International Arbitration Application*, <https://icca-asil-damages.com/>.

⁵¹ IBA Rules, Art. 2(1).

⁵² IBA Rules, Art. 2(2)(a).

⁵³ IBA Rules, Art. 5(4).

⁵⁴ See Chartered Institute of Arbitrators, *Protocol for the Use of Party-Appointed Expert Witnesses in International Arbitration*, Art. 6.

Another, less interventionist approach is for the experts first to present their initial expert reports, and thereafter for the tribunal to hold a substantive midstream conference to consider the initial submissions, including the expert reports, to understand where the differences between the experts lie, and to agree on what additional reports would be helpful to the tribunal.

One useful approach is for the experts to then meet, confer, and prepare a so-called Scott Schedule listing all the issues, each expert's position, where they agree, and, in areas where they do not agree, the basis for the difference. This allows the tribunal to understand, among other things, whether the differences between the experts are substantive or whether they instead stem, for example, from the instructions that were given by the parties. Further, even in cases where a midstream conference is not considered to be useful, the use of Scott Schedules as set forth above can still be very valuable to the tribunal.

- (iii) **Expert Testimony.** Rather than having the expert testimony presented sequentially through cross examination, another approach, commonly referred to as “hot tubbing” or “witness conferencing,” takes the oral evidence from party-appointed experts at the hearing simultaneously rather than sequentially. The tribunal, often together with counsel, examines both experts at the same time and/or has the parties' experts engage in a dialogue with the tribunal moderating the discussion. The main benefit of hot-tubbing is that it allows the tribunal to engage with opposing views directly and in an iterative fashion—which, in turn, facilitates tribunal understanding of the expert-driven issues that are truly central and truly in dispute.
- (iv) **Tribunal-Appointed Experts and Tribunal Expert Consultants.** The civil law tradition is to have a single neutral expert appointed by the tribunal at the outset of the arbitration in consultation with the parties. Other than the fact that the expert is appointed by the tribunal, the expert is otherwise treated the same as the party-appointed experts and there is no ex parte interaction between the expert and the tribunal. The benefit of a well-chosen tribunal expert is that there is less to manage; however, the downside is that the expert has no one to spar with, so the tribunal is often left in the position of either agreeing with the expert or being without expertise. More recently, in cases with party-appointed experts on quantum, tribunals have started appointing tribunal expert consultants to assist them with the expert evidence, often including ex parte communications, which creates concerns about the role of the tribunal expert consultant, which has not been selected by the parties. The best way to avoid this is to select arbitrators who can both understand the expert evidence and manage it effectively.⁵⁵

⁵⁵ See ICCA-ASIL Task Force on Damages in International Arbitration, *Damages in International Arbitration Application*, <https://icca-asil-damages.com/>.

10. Confidentiality in Practice, Not Just on Paper

Recommendation 10: Where confidential TLI assets are involved in an arbitration, or where confidentiality is otherwise important, confidentiality agreements should be entered into in the arbitration agreement or during the proceedings, or both, addressing each stage of the process including enforcement, and those agreements should include meaningful sanctions for breach. Arbitral institutions should consider proposing model language addressing these issues.

Survey participants overwhelmingly identify confidentiality as a—if not “the”—reason to arbitrate TLI disputes. This result is unsurprising given the nature of these disputes, which often involve sensitive technological or scientific assets or data and/or valuable IP, the disclosure of which would have a significant adverse impact on the parties—an impact which may outweigh the value of the dispute itself.

At the same time, many participants stated that, given the sensitivity of TLI disputes (and particularly disputes involving trade secrets), default confidentiality safeguards in international arbitration were not sufficiently protective and, in some cases, non-existent in practice. One external counsel highlighted, for example, that clients considering arbitration can be surprised by the need in some jurisdictions to disclose the award—which may contain much of the sensitive technological evidence at issue in the dispute—in order to enforce that award. And, of course, confidentiality restrictions imposed in the course of proceedings are only as good as the means of enforcing them.

Given the important role that confidentiality often plays in protecting TLI assets, Survey participants highlighted that more can be done to ensure confidentiality is maintained both in arbitral proceedings and beyond. A common misperception, even among seasoned and sophisticated parties, is that international arbitrations are, by default, confidential. This is not necessarily—and certainly not always—the case. Some default institutional confidentiality rules are quite broad and bind the parties (LCIA/WIPO), while others bind the institution and the tribunal, but not the parties (ICDR/ICC/SIAC). Institutional rules, moreover, apply only as long as the tribunal has a mandate, which means that once the arbitration is over, the tribunal has no way to enforce institutional rules.

National laws are just as diverse. Some have codified confidentiality of arbitral proceedings into law (e.g., Hong Kong), others impose on parties to an arbitration an implied duty of confidentiality (United Kingdom), and still others do not provide for default confidentiality (United States). Finally, there will always be exceptions to arbitral confidentiality—including, in some jurisdictions, enforcement actions in national courts, motions to compel arbitration, parallel actions—the scope of which will depend, as the case may be, on the law of the seat, the law of the place of enforcement, and so on. The upshot of this multi-layered legal landscape is uncertainty.

The simple solution to this uncertainty may at first blush seem to be to call on the institutions to add stronger confidentiality provisions in their rules. However, this ignores the fact that institutions cannot dictate national court treatment of awards. Further, even apart from potential national court requirements, there have been strong calls for increased transparency in arbitration, which argues against confidentiality. This is particularly the

case in investor-State arbitrations and commercial arbitrations involving State parties, but there has been some spillover effect on commercial arbitration generally, which may make it difficult for institutions to adopt default confidentiality rules that are sufficiently robust to serve TLI disputes.

For the time being, it will therefore be for parties to include provisions in their dispute resolution agreements confidentiality obligations and enforcement mechanisms that adequately address the confidentiality requirements of their sensitive information and confidential TLI assets, including the following.

(i) Incorporating confidentiality provisions into the arbitration clause.

Transactional attorneys drafting TLI agreements spend huge amounts of time on confidentiality provisions. Yet all of that work can be undone by boilerplate arbitration clauses if and when the dispute goes to arbitration. While it is true that, practically speaking, parties may not be able to draft arbitration clauses that impose airtight confidentiality requirements, the perfect should not be the enemy of the good. It is usually the case that both parties to a TLI agreement will be much more incentivized to incorporate confidentiality protections before any dispute arises than after. After a dispute arises, the parties' interests in confidentiality may not be aligned: one party, for instance, may consider it a strategic advantage to publicize the dispute or to use documents disclosed in the arbitration in a parallel or separate proceeding. Therefore, parties that are aware that an arbitration and the award arising therefrom may disclose confidential information should consider including in their dispute resolution clauses a blanket confidentiality obligation for all involved in the arbitration, potentially with the option to move the tribunal to modify that rule for good cause shown.

(ii) Seeking early arbitral confidentiality order. Early in the arbitration, parties should attempt to agree on the parameters of confidentiality applicable to the arbitration in Procedural Order No. 1 codifying their agreement. In an arbitration under the ICC Rules (or other rules that include Terms of Reference), the parties might include this in the Terms of Reference, which has the benefit of being signed by the parties. The tribunal's order should impose a blanket confidentiality rule on the parties, but with the option to move the tribunal to modify that rule for good cause shown.

(iii) Agreeing on a time to comply with award, and/or simplified or summary award or not to include certain information in the award. Where disclosure of sensitive information during enforcement proceedings or collateral proceedings is a potential concern, the parties should agree that the losing party shall have a reasonable period of time to comply with the award before enforcement proceedings can be initiated if those proceedings would expose potentially confidential information. Where justified by the risk to confidentiality, moreover, they should consider the possibility of agreeing to a more simplified or summary award, or that certain specific confidential

information will not be included in the award. Many jurisdictions' national arbitration laws do not specify the level of detail or reasoning needed for an award to be enforceable, and the parties retain autonomy in deciding the level of reasoning required. Agreement to a simplified or summary award can allow for minimizing the amount of sensitive information the tribunal puts into the award, while still ensuring that the award is sufficiently reasoned to be enforceable. Moreover, where parties are concerned about specific confidential information being revealed, they can agree with the tribunal in advance not to include that information in the award.

To assist the parties to TLI disputes, the Working Group would propose for the institutions to consider suggesting template confidentiality provisions suitable for TLI disputes.

* * *

Overall, the Survey suggests that the users of dispute resolution services favor negotiation, mediation and arbitration of TLI disputes, with a particular focus on expedited resolution and arbitrator expertise as the strongest factors favoring arbitration.

The recommendations found in this White Paper are intended to provide a framework for how the dispute resolution community might improve the way it addresses TLI disputes, but the exact means of doing so will obviously vary from case to case. Regardless of the means applied to achieve this goal, it is clear that all stakeholders in the dispute resolution process have a role to play in shaping the process to better suit the complex and often highly confidential technology, scientific and legal issues posed by TLI disputes. This includes encouraging mediation and other forms of non-binding dispute resolution to avoid or settle disputes quickly, and when cases do not settle, providing transparent, vetted information about neutrals, speedy resolution where requested, active case management, including of experts, and meaningful confidentiality. Participants did not perceive the need for appeals, more disclosure, or other aspects of a more litigation-like arbitration procedure.

Survey responses therefore indicate that the dispute resolution community can better serve TLI disputes by hewing more closely to the archetypal form of arbitration and avoiding IP carve outs. A more litigation-like arbitration will always be available in the exceptional case when it might be warranted, and will be tempting in certain circumstances, but stakeholders that want to ensure arbitration continues to grow and improve as a means of resolving TLI disputes will do so by focusing on the qualities of arbitration, set forth above, that make it so desirable.

IV. Acknowledgments

{To be completed}

V. Annexes

Annex 1: Survey Questionnaire

Introduction—All Participants

Thank you for agreeing to take this short survey, which should take no more than 15 minutes of your time. The primary objective of this survey is to obtain information concerning international disputes involving an issue of (i) technology, (ii) life sciences, or (iii) intellectual property. Your views on these issues are very important to us.

Unless indicated otherwise, please answer based on your experience with international Technology, Life Sciences, and IP disputes, and your experience involving Technology or Life Sciences companies, as opposed to broader dispute-resolution experiences. If uncertain about a question, please use your judgment—we are happy to have your views.

The following definitions apply:

- “Technology” includes anything technical, technological or scientific. We ask that you apply the term in its ordinary usage but including scientific issues, or how you have used and understood it in your experience, and when in doubt, err on the side of inclusion.
- “Technology Companies” derive a significant amount of their value from Technology, their use of Technology, or the provision of Technology-related services. Companies in the construction, energy, environmental, defense, digital, internet, telecom, and transportation industries frequently derive significant amounts of their revenue from the use or exploitation of Technology, and such companies are intended to be included in this definition.
- “Life Sciences Companies” derive a significant amount of their value from pharmaceuticals, bio-technology, bio-pharmaceuticals, medical devices, and other similar sectors, or the provision of services to companies engaged in those activities, which activities are referred to generally as “Life Sciences.”

* * *

We should also mention that you will be submitting your personal data to the Survey Monkey platform in the United States. Your data will therefore be collected and processed in accordance with the US data protections laws, which may not be as protective as those of the place you may live or work. Thereafter, your data will be consolidated into a report and you will not be identifiable from the information in the report. If you have any questions about how your data will be processed for purposes of this survey, please feel free to contact Kathleen Paisley at kathleen.paisley@amboslaw.be.

*Your Location (Country):

*Regional Focus of practice or role (check no more than two):

☐ North America

☐ South America

☐ Middle East

☐ Africa

☐ Asia

☐ European Union, EEA, and UK

☐ Russia and Central and Eastern Europe (non-EU member states)

☐ Oceania Global

☐ Other (please specify)

*Which of the following is your primary role in dispute resolution:

☐ Arbitrator

☐ Mediator

☐ Corporate Counsel

☐ Law Firm Counsel

* Does your practice focus primarily on:

☐ Dispute Resolution

☐ Corporate/Transactions

☐ General Practice

In-House Counsel Section

Primary Industry [Select One]

- ☐ Technology
- ☐ Life Sciences
- ☐ Other (please specify)

Does your company have in-house lawyers that focus primarily on disputes?

- ☐ Yes
- ☐ No

If yes, please select which you focus on more:

- ☐ Disputes
- ☐ Transactions
- ☐ General Practice
- ☐ N/A

Business Sector(s) [Check all that apply]:

- ☐ Biotechnology
- ☐ Chemicals
- ☐ Construction
- ☐ Data Security
- ☐ Defense
- ☐ E-commerce
- ☐ Electronics
- ☐ Energy
- ☐ Entertainment or Gaming
- ☐ IT
- ☐ Mechanical
- ☐ Medical Devices
- ☐ Pharmaceuticals
- ☐ Semiconductors
- ☐ Telecom
- ☐ Transportation
- ☐ Other (please specify)

Company Size in Employee Numbers [Select one]:

- ☐ Less than 100
- ☐ 100-1000
- ☐ 1000-5000
- ☐ 5000-15,000
- ☐ 15,000-30,000
- ☐ More than 30,000
- ☐ Rather not disclose

Company Size by Annual Gross Turnover or spend if development stage [Select One]:

- ☐ No product on market (pre-revenue)
- ☐ \$10M USD or less
- ☐ \$10M-50M USD
- ☐ \$50-100M USD
- ☐ \$100-500M USD
- ☐ \$500M-1B USD
- ☐ Over \$1B USD
- ☐ Rather not disclose

Your Position:

*Headquarters Location (Country):

*Your Location (Country):

***Types of Agreements.** Based on your experience, which types of agreements have most often given rise to disputes? [Select up to three]

- ☐ Distribution
- ☐ Joint Venture or Partnership
- ☐ Licensing
- ☐ Manufacturing/Supply Chain
- ☐ Merger and Acquisition
- ☐ Non-disclosure/confidentiality
- ☐ Research & Development
- ☐ Settlement agreements
- ☐ General: Construction
- ☐ General: Defense
- ☐ General: Energy
- ☐ General: Entertainment
- ☐ General: Environmental
- ☐ General: Transportation
- ☐ Other (please specify)

Nature of Dispute. How would you best describe the nature of the claims in the Technology/Life Sciences disputes in which you have been involved? [Check all that apply]:

- ☐ Defective or Non-Performing Products or Services
- ☐ Breach of Representations or Warranties
- ☐ Failure to Deliver
- ☐ IP-related Issues
- ☐ Payment Issues
- ☐ Delay Issues
- ☐ Tort Claims (e.g., fraud)
- ☐ Data Protection/Privacy, Cybersecurity, or Data Breach
- ☐ Competition/Antitrust
- ☐ Regulatory
- ☐ Other breach of contract
- ☐ Other (please specify)

Dispute Resolution and Choice of Law Clauses. For agreements entered into by your organization, how often do you include some form of the following clauses?

	Never	Sometimes	Often	Always
Dispute Resolution Clause	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choice of Law Clause	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To the extent you have been involved in an IP dispute, please indicate which types you have encountered in the last 5 years:

- ☐ Patent
- ☐ Copyright
- ☐ Trademark
- ☐ Trade secrets
- ☐ Design Rights
- ☐ FRAND/Patents as standards
- ☐ N/A

Have you ever been involved in an arbitration or mediation of an IP dispute with a party that is not using the IP itself (referred to as a Non-Practicing Entity/NPE)?

- ☐ Yes, arbitration
- ☐ Yes, mediation
- ☐ No

If you are at a Life Sciences company, at which stage of the product life cycle have you encountered disputes in the last 5 years? [Check all that apply]

- ☐ Research & Development
- ☐ In-Licensing
- ☐ Clinical Trials
- ☐ Chemistry, Manufacturing, and Controls (CMC)
- ☐ Out-Licensing
- ☐ Marketing & Sales Distribution
- ☐ Consumer Use
- ☐ N/A

If you are at a Technology company, at which stage of the product life cycle have you encountered disputes in the last 5 years? [Check all that apply]

- ☐ Research & Development
- ☐ Manufacturing
- ☐ Licensing
- ☐ Marketing
- ☐ Distribution
- ☐ Use of Technology within scope of Business Activities
- ☐ Consumer Use
- ☐ N/A

Does your organization have formal guidelines or policies for drafting dispute resolution clauses?

- ☐ Yes
- ☐ No

How many dispute resolution clauses would you estimate are actively negotiated?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

During the last 5 years, has this amount:

- ☐ Increased
- ☐ Decreased
- ☐ Stayed the Same

How many of the Technology/Life Sciences disputes you have encountered in the last 5 years were arbitrated?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

Do you expect this amount to increase in the next 5 years?

- ☐ Yes
- ☐ No

With respect to IP disputes specifically, how many of those encountered in the last five years were arbitrated?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

Do you expect this amount to increase in the next 5 years?

- ☐ Yes
- ☐ No

***Considerations in Choosing a Dispute Resolution Mechanism.** What are the most important considerations for your organization when choosing among mediation, arbitration, litigation, or other ADR? [Select up to three]

- ☐ Familiarity with procedures
- ☐ Confidentiality
- ☐ Control over process
- ☐ Costs
- ☐ Enforceability
- ☐ Availability of appeal
- ☐ Expertise of decision-maker
- ☐ Neutrality of the forum
- ☐ Predictability of outcome
- ☐ Disruption to relationship with other party
- ☐ Time to resolution
- ☐ Other (please specify)

***Advantages of Arbitration.** What currently makes arbitration more suitable for resolving Technology/Life Sciences disputes when compared to litigation? [Select up to three [Mark N/A if you disagree that arbitration is more suitable]]

- ☐ Confidentiality
- ☐ Choice of decision-maker
- ☐ Cost savings
- ☐ Document disclosure policy
- ☐ Enforceability
- ☐ Flexibility of procedure
- ☐ Neutrality
- ☐ Time to resolution
- ☐ N/A
- ☐ Other (please specify)

***Suggestions for Improvement.** What improvements could make arbitration more suitable for resolving Technology/Life Sciences disputes? [Select up to three]

- ☐ Shorter time to resolution
- ☐ Better arbitrator case management
- ☐ Better institutional case management
- ☐ Greater arbitrator expertise
- ☐ More uniform/higher standards for confidentiality
- ☐ Lower costs More limited disclosure
- ☐ Right to appeal for error where IP is at issue
- ☐ Specialized rules tailored to industry
- ☐ Increased institutional award scrutiny (ensuring award quality)
- ☐ Other (please specify)

***With respect to IP disputes specifically, what factors would weigh in favor of litigation instead of arbitration? [Select up to three]**

- ☐ Concerns about availability of immediate (ex parte) injunctive relief
- ☐ Lack of appeal
- ☐ Concerns that an IP issue is not arbitrable under national law
- ☐ Award not binding against third parties
- ☐ Concern over lack of arbitrator expertise
- ☐ Time to resolution
- ☐ Concerns over cost
- ☐ Other (please specify)

Arbitration Agreements. When you choose arbitration, which of the following issues do you address in your dispute resolution clauses as a matter of course? [Check all that apply]

- ☐ Arbitral institution or rules
- ☐ Arbitrator qualifications
- ☐ Arbitral seat
- ☐ Attorneys' fees and costs of arbitration
- ☐ Choice of arbitral procedural law
- ☐ Choice of substantive law
- ☐ Confidentiality
- ☐ Expedited procedures
- ☐ Language of the arbitration
- ☐ Method of appointing arbitrators
- ☐ Number of arbitrators
- ☐ Other (please specify)

Choice of Law versus Choice of Seat. If you were forced to choose, is the choice of substantive law or the choice of the arbitral seat more important to your clients?

	Choice of Substantive Law	Choice of Arbitral Seat
For Contract Disputes:	<input type="radio"/>	<input type="radio"/>
For IP Disputes:	<input type="radio"/>	<input type="radio"/>

Choice of Arbitral Institution. Which arbitral institutions, if any, have you included in dispute resolution clauses in the last 5 years?

- ☐ American Arbitration Association/International Centre for Dispute Resolution
- ☐ Beijing Arbitration Commission
- ☐ China International Economic and Trade Arbitration Commission
- ☐ German Institution of Arbitration
- ☐ Hong Kong International Arbitration Centre
- ☐ International Chamber of Commerce
- ☐ JAMS
- ☐ Japan Commercial Arbitration Association
- ☐ Korea Commercial Arbitration Board
- ☐ London Court of International Arbitration
- ☐ Netherlands Arbitration Institute
- ☐ Shanghai International Arbitration Center
- ☐ Singapore International Arbitration Center
- ☐ Arbitration Institute of the Stockholm Chamber of Commerce
- ☐ Vienna International Arbitration Centre
- ☐ WIPO Arbitration and Mediation Center
- ☐ Other (please specify)

***Nature of Dispute.** How would you best describe the nature of the claims in the Technology/Life Sciences disputes in which you have been involved? [Select up to three]

- ☐ Defective or Non-Performing Products or Services
- ☐ Breach of Representations or Warranties
- ☐ Failure to Deliver
- ☐ IP-related Issues
- ☐ Payment Issues
- ☐ Delay Issues
- ☐ Tort Claims (e.g., fraud)
- ☐ Data Protection/Privacy, Cybersecurity, or Data Breach
- ☐ Competition/Antitrust
- ☐ Regulatory
- ☐ Other breach of contract
- ☐ Other (please specify)

***Decision to Initiate Arbitration.** What factors are most important in deciding to initiate arbitration proceedings? [Select up to three]

- ☐ Urgent need to resolve dispute
- ☐ Cost/Benefit analysis
- ☐ Settlement negotiation leverage
- ☐ Likely award amount or other relief
- ☐ Likelihood of success
- ☐ Impact of issue in dispute on valuation/market position
- ☐ Reputational reasons
- ☐ Ease of arbitral award enforcement
- ☐ Other (please specify)

***In cases where you decide not to initiate proceedings, what factors are most likely to influence that decision?** [Select up to two]

- ☐ Cost/Benefit analysis
- ☐ Impact on settlement
- ☐ Weakness in position
- ☐ Business disruption caused by arbitration
- ☐ Disruption to parties' relationship
- ☐ Other (please specify)

Relief. How often are the following forms of relief sought in disputes you are involved in?

	Never	Sometimes	Often	Always
Damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaratory Relief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renegotiation of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rescission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IP Carve Outs. In your disputes subject to arbitration, how often are IP Disputes carved out from the arbitration clause?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

Do you favor such carveouts?

- ☐ Yes
- ☐ No

Experts. In your experience, generally speaking, what types of experts do the parties typically appoint in Technology/Life Sciences/IP disputes:

- ☐ Technology Experts
- ☐ IP Experts
- ☐ Quantum Experts
- ☐ Other
- ☐ N/A

Arbitrator Selection. Do you have a preference for institutionally-appointed arbitrators or for party-appointed arbitrators?

- ☐ Institutionally appointed
- ☐ Party-appointed
- ☐ No preference

*What are the most important attributes considered in selecting an arbitrator for Technology/Life Sciences/IP disputes? [Select up to three]

- ☐ Recommended
- ☐ Reputation
- ☐ Experience as an arbitrator/chair
- ☐ Industry knowledge/substantive expertise
- ☐ Case management style
- ☐ Diversity
- ☐ Interpersonal skills
- ☐ Language fluency
- ☐ Knowledge of applicable law
- ☐ Other (please specify)

If the dispute raises a significant Technology or IP Issue, to what extent will that impact your choice of arbitrator?

- ☐ Not at all
- ☐ Somewhat
- ☐ Significantly

Mediation and other Forms of ADR. How many of the Technology/Life Sciences/IP disputes you have encountered in the last 5 years were mediated or subject to another form of ADR (standing mediator, dispute resolution board, expert determination)?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

Do you expect this amount to increase in the next 5 years?

- ☐ Yes
- ☐ No

How many of the Technology/Life Sciences/IP disputes settled as a result of the mediation or other form of ADR?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

***Advantages of Mediation.** What are the current benefits of mediation when compared to arbitration or litigation for Technology/Life Sciences/IP disputes? [Select up to three] [Mark N/A if you disagree that mediation is more suitable]

- ☐ Time and cost savings
- ☐ Less disruption to parties' relationship
- ☐ Greater procedural flexibility
- ☐ Increased party control over process and outcome
- ☐ Wider options for resolution/relief
- ☐ Potential to narrow dispute for arbitration/litigation
- ☐ N/A
- ☐ Other (please specify)

***Most Effective Dispute Resolution Procedures for Technology/Life Sciences/IP disputes.** Which types of dispute resolution mechanisms have you found to be most effective for Technology/Life Sciences/IP disputes? [Select up to three]

- ☐ Formal Party-to-Party Negotiation Process
- ☐ Standing Mediation during life of contract
- ☐ Expert Determination
- ☐ Mediation after dispute arises (including as part of a tiered dispute resolution clause or parallel mediation)
- ☐ Arbitration
- ☐ Court Litigation
- ☐ N/A

Drafting Dispute Resolution Clauses. Where a future dispute arising under the agreement you are drafting is likely to involve a Technology or IP issue, how does that affect your choice of the following mechanisms?

	More likely to use	Less likely to use	About the same
Formal Party-to-Party Negotiation Process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standing Mediation during life of contract	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expert Determination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dispute Resolution Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mediation after dispute arises (including as part of a tiered dispute resolution clause or parallel mediation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arbitration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Court Litigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you combine different dispute resolution mechanisms, including as a tier, in your agreements?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

If you combined different resolution mechanisms, how effective was this in narrowing the issues or expediting resolution of the dispute?

- ☐ Not effective
- ☐ Somewhat effective
- ☐ Very effective
- ☐ N/A

If you have time, we would greatly appreciate your comments on the free-answer questions below, as these answers likely will provide us with the most helpful insights; of course, if you do not have time, please skip and thank you for completing the previous sections.

Please provide any additional comments about factors or influences determining your choice of dispute resolution mechanisms.

Please provide any additional comments about ways in which arbitration could be improved to be more suitable for the needs of your organization in resolving disputes, including anything specific for Technology or IP disputes.

Please provide any additional comments about ways in which mediation or other forms of ADR could be improved to be more suitable for the needs of your organization in resolving disputes.

Would you be willing to be contacted for a brief follow-up interview?

☐ Yes

☐ No

Thank you for agreeing to speak with us! Please provide your contact information below.

Name:

Employer/Company Name:

Please provide your preferred method of contact:

Email: _____

Phone Number: _____

External Counsel (Disputes Section)

Areas of Practice (Check all that apply to more than 25% of your practice):

- ☐ General Disputes
- ☐ Technology
- ☐ Life Sciences
- ☐ Other (please specify)

Over the last 5 years, how many disputes have you been involved in that raised issues related to the following:

	0	1-5	6-10	11+
Technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intellectual Property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How many of the Technology/Life Sciences/IP disputes you have encountered in the last 5 years were arbitrated?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

Do you expect this amount to increase in the next 5 years?

- ☐ Yes
- ☐ No

Technology Issues. During the past five years, how many of the disputes that you have been involved in within the following industries raised a Technology issue (answer “N/A” if you have not had a case in these industries in the last five years, and “None” if you have had cases but they did not raise a Technology issue):

	None	Some	Most	All	N/A
Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital, Telecom, or Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your experience, generally speaking, what is the importance of Technology issues to the outcome of the disputes in which they are raised?

- ☐ Tangential
- ☐ Important
- ☐ Case-Determinative
- ☐ N/A

IP Issues. During the past five years, how many of the disputes that you have been involved in within the following industries raised an IP issue (answer “N/A” if you have not had a case in these industries in the last 5 years and “None” if you have had cases but they did not raise an IP issue):

	None	Some	Most	All	N/A
Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital, Telecom, or Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your experience, generally speaking, what is the importance of IP issues to the outcome of the disputes in which they are raised?

- ☐ Tangential
- ☐ Important
- ☐ Case-Determinative
- ☐ N/A

In disputes where a Technology or IP issue was either case determinative or important, do you think it impacted the parties' choice of the tribunal in the sense that subject matter or industry expertise was an important arbitrator qualification?

- ☐ Yes
- ☐ No
- ☐ N/A

To the extent you have been involved in an IP dispute, please indicate which types you have encountered in the last 5 years:

- ☐ Patent
- ☐ Copyright
- ☐ Trademark
- ☐ Trade secrets
- ☐ Design Rights
- ☐ FRAND/Patents as standards
- ☐ Patents as standards
- ☐ N/A

How many of the IP disputes you have encountered in the last 5 years were arbitrated?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

Do you expect this amount to increase in the next 5 years?

- ☐ Yes
- ☐ No

Have you ever been involved in an arbitration or mediation of an IP dispute with a party that is not using the IP itself (referred to as a Non-Practicing Entity/NPE)?

- ☐ Yes arbitration
- ☐ Yes, mediation
- ☐ No

Experts. In your experience, generally speaking, what types of experts do the parties typically appoint in Technology/Life Sciences/IP disputes:

- ☐ Technology Experts
- ☐ IP Experts
- ☐ Quantum Experts
- ☐ Other
- ☐ N/A

Types of Agreements. Please indicate whether you have encountered disputes involving a Technology or IP issue arising out of the following types of agreements in the last 5 years [Check all that apply]:

- ☐ Distribution
- ☐ Joint venture or Partnership
- ☐ Licensing Manufacturing/Supply Chain
- ☐ Merger and acquisition
- ☐ Non-disclosure/confidentiality
- ☐ Research & Development
- ☐ Settlement agreements
- ☐ General: Construction
- ☐ General: Defense
- ☐ General: Energy
- ☐ General: Entertainment
- ☐ General: Environmental
- ☐ General: Transportation
- ☐ Other (please specify)

***Nature of Dispute.** How would you best describe the nature of the claims in the Technology/Life Sciences disputes in which you have been involved? [Select up to three]

- ☐ Defective or Non-Performing Products or Services
- ☐ Breach of Representations or Warranties
- ☐ Failure to Deliver
- ☐ IP-related Issues
- ☐ Payment Issues
- ☐ Delay Issues
- ☐ Tort Claims (e.g., fraud)
- ☐ Data Protection/Privacy, Cybersecurity, or Data Breach
- ☐ Competition/Antitrust
- ☐ Regulatory
- ☐ Other breach of contract
- ☐ Other (please specify)

***Decision to Initiate Arbitration.** What factors are most important in deciding to initiate arbitration proceedings? [Select up to three]

- ☐ Urgent need to resolve dispute
- ☐ Cost/Benefit analysis
- ☐ Settlement negotiation leverage
- ☐ Likely award amount or other relief
- ☐ Likelihood of success
- ☐ Impact of issue in dispute on valuation/market position
- ☐ Reputational reasons
- ☐ Ease of arbitral award enforcement
- ☐ Other (please specify)

*In cases where you decide not to initiate proceedings, what factors are most likely to influence that decision? [Select up to two]

- ☐ Cost/Benefit analysis
- ☐ Impact on settlement
- ☐ Weakness in position
- ☐ Business disruption caused by arbitration
- ☐ Disruption to parties' relationship
- ☐ Other (please specify)

Relief. How often are the following forms of relief sought in Technology/Life Sciences disputes in which you have been involved?

	Never	Sometimes	Often	Always
Damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaratory Relief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renegotiation of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rescission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Relief. How often are the following forms of relief sought in IP disputes in which you have been involved?

	Never	Sometimes	Often	Always
Damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaratory Relief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renegotiation of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rescission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IP Carve Outs. In your disputes subject to arbitration, how often are IP disputes carved out from the arbitration clause?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

Do you favor such carveouts?

- ☐ Yes
- ☐ No

***Arbitration Advantages.** What currently makes arbitration more suitable for resolving Technology/Life Sciences/IP disputes when compared to litigation? [Select up to three] [Mark N/A if you disagree that arbitration is more suitable]

- ☐ Confidentiality
- ☐ Choice of decision-maker
- ☐ Cost savings
- ☐ Document disclosure practices
- ☐ Enforceability
- ☐ Flexibility of procedure
- ☐ Neutrality
- ☐ Time to resolution
- ☐ N/A
- ☐ Other (please specify)

***Suggestions for Improvement.** What improvements could make arbitration more suitable for resolving Technology/Life Sciences disputes? [Select up to three]

- ☐ Shorter time to resolution
- ☐ Better arbitrator case management
- ☐ Better institutional case management
- ☐ Greater arbitrator expertise
- ☐ More uniform/higher standards for confidentiality
- ☐ Increased use of technology/virtual modality
- ☐ Lower costs
- ☐ More limited disclosure
- ☐ Right to appeal for error where IP is at issue
- ☐ Specialized rules tailored to industry
- ☐ Increased institutional award scrutiny (ensuring award quality)
- ☐ Other (please specify)

***With respect to IP disputes specifically, what factors would weigh in favor of litigation instead of arbitration? [Select up to three]**

- ☐ Concerns about availability of immediate (ex parte) injunctive relief
- ☐ Lack of appeal
- ☐ Concerns that an IP issue is not arbitrable under national law
- ☐ Award not binding against third parties
- ☐ Concern over lack of arbitrator expertise
- ☐ Time to resolution
- ☐ Concerns over cost
- ☐ Other (please specify)

Arbitrator Selection. Do you have a preference for institutionally-appointed arbitrators or for party-appointed arbitrators?

- ☐ Institutionally appointed
- ☐ Party-appointed
- ☐ No preference

***Arbitrator Selection.** What are the most important attributes considered in selecting an arbitrator for Technology/Life Sciences/IP disputes? [Select up to three]

- ☐ Recommended
- ☐ Reputation
- ☐ Experience as an arbitrator/chair
- ☐ Industry knowledge/substantive expertise
- ☐ Anticipated approach on merits
- ☐ Availability
- ☐ Case management style
- ☐ Diversity
- ☐ Interpersonal skills
- ☐ Language fluency
- ☐ Knowledge of applicable law
- ☐ Other (please specify)

If the dispute raises a significant Technology or IP issue, to what extent will that impact your choice of arbitrator?

- ☐ Not at all
- ☐ Somewhat
- ☐ Significantly

Mediation/ADR of Technology/Life Sciences disputes. How many of the Technology/Life Sciences/IP disputes you have encountered in the last 5 years were mediated or subject to another form of ADR (standing mediator, dispute resolution board, expert determination)?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

Do you expect this amount to increase in the next 5 years?

- ☐ Yes
- ☐ No

How many of the Technology/Life Sciences/IP disputes settled as a result of the mediation or other form of ADR?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

***Advantages of Mediation.** What are the current benefits of mediation when compared to arbitration or litigation for Technology/Life Sciences disputes or IP disputes? [Select up to three] [Mark “N/A” if you disagree that mediation has such benefits]

- ☐ Time and cost savings
- ☐ Less disruption to parties’ relationship
- ☐ Greater procedural flexibility
- ☐ Increased party control over process and outcome
- ☐ Wider options for resolution/relief
- ☐ Potential to narrow dispute for arbitration/litigation
- ☐ N/A
- ☐ Other (please specify)

***Choice of dispute resolution mechanisms.** Which types of dispute resolution mechanisms have you found to be most effective for Technology/Life Sciences/IP disputes? [Select up to three]

- ☐ Formal Party-to-Party Negotiation Process
- ☐ Standing Mediation during life of contract
- ☐ Expert Determination
- ☐ Dispute Resolution Board
- ☐ Mediation after dispute arises (including a part of a tiered dispute resolution clause or parallel mediation)
- ☐ Arbitration
- ☐ Court Litigation
- ☐ N/A

If you have time, we would greatly appreciate your comments on the free-answer questions below, as these answers likely will provide us with the most helpful insights; of course, if you do not have time, please skip and thank you for completing the previous sections.

Please provide any additional comments about factors or influences determining your advice to Technology/Life Sciences clients regarding the choice of dispute resolution mechanism.

With respect to Technology/Life Sciences disputes, please provide any additional comments about ways in which arbitration can be improved to be more suitable for the needs of your clients.

With respect to IP disputes specifically, please provide any additional comments about ways in which arbitration can be improved to be more suitable for the needs of your clients.

With respect to mediation, please provide any additional comments about ways in which mediation can be improved to be more suitable for the needs of your clients in resolving Technology/Life Sciences/IP disputes.

Would you be willing to be contacted for a brief follow-up interview?

☐ Yes

☐ No

Thank you for agreeing to speak with us! Please provide your contact information below.

Name:

Employer/Company Name:

Please provide your preferred method of contact:

Email: _____

Phone Number: _____

External Counsel (Transactions) Section

Areas of Practice [check all that apply to more than 25% of your practice]:

- ☐ General Transactional
- ☐ Technology
- ☐ Life Sciences
- ☐ Other (please specify)

Types of Agreements. Based on your experience in providing transactional advice to Technology/Life Sciences clients, which types of agreements most often give rise to disputes?

- ☐ Distribution
- ☐ Joint Venture or Partnership
- ☐ Licensing
- ☐ Manufacturing/Supply Chain
- ☐ Merger and Acquisition
- ☐ Non-disclosure/confidentiality
- ☐ Research & Development
- ☐ Settlement agreements
- ☐ Shareholder Agreements Supply Chain
- ☐ General: Construction
- ☐ General: Defense
- ☐ General: Energy
- ☐ General: Entertainment
- ☐ General: Environmental
- ☐ General: Transportation
- ☐ Other (please specify)

Dispute Resolution and Choice of Law Clauses. For agreements you are involved with, how often do you include some form of the following clauses?

	Never	Sometimes	Often	Always
Dispute Resolution Clause	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choice of Law Clause	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How many dispute resolution clauses would you estimate are actively negotiated?

- ☐ None
- ☐ Some
- ☐ Most
- ☐ All

During the last 5 years, has this amount:

- ☐ Increased
- ☐ Decreased
- ☐ Stayed the Same

***Considerations in Choosing a Dispute Resolution Mechanism.** What are the most important considerations for your clients when choosing between mediation, arbitration, litigation, or other ADR? [Select up to three]

- ☐ Familiarity with procedures
- ☐ Confidentiality
- ☐ Control over process
- ☐ Costs
- ☐ Enforceability
- ☐ Availability of appeal
- ☐ Expertise of decision-maker
- ☐ Neutrality of the forum
- ☐ Predictability of outcome
- ☐ Disruption to relationship with other party
- ☐ Time to resolution
- ☐ Other (please specify)

***Advantages of Arbitration.** What currently makes arbitration more suitable for resolving Technology/Life Sciences disputes when compared to litigation? [Select up to three [Mark N/A if you disagree that arbitration is more suitable]]

- ☐ Confidentiality
- ☐ Choice of decision-maker
- ☐ Cost savings
- ☐ Document disclosure practices
- ☐ Enforceability
- ☐ Flexibility of procedure
- ☐ Neutrality
- ☐ Time to resolution
- ☐ N/A
- ☐ Other (please specify)

***Suggestions for Improvement.** What improvements could make arbitration more suitable for resolving Technology/Life Sciences disputes? [Select up to three]

- ☐ Shorter time to resolution
- ☐ Better arbitrator case management
- ☐ Better institutional case management
- ☐ Greater arbitrator expertise
- ☐ More uniform/higher standards for confidentiality
- ☐ Lower costs
- ☐ More limited disclosure
- ☐ Right to appeal for error where IP is at issue
- ☐ Specialized rules tailored to industry
- ☐ Increased institutional award scrutiny (ensuring award quality)
- ☐ Other (please specify)

***With respect to IP disputes specifically, what factors would weigh in favor of litigation instead of arbitration? [Select up to three]**

- ☐ Concerns about availability of immediate (ex parte) injunctive relief
- ☐ Lack of appeal
- ☐ Concerns that an IP issue is not arbitrable under national law
- ☐ Award not binding against third parties
- ☐ Concern over lack of arbitrator expertise
- ☐ Time to resolution
- ☐ Concerns over cost
- ☐ Other (please specify)

Arbitration Agreements. When an agreement provides for arbitration, which of the following issues do you address in your dispute resolution clauses as a matter of course? [Check all that apply]

- ☐ Arbitral institution or rules
- ☐ Arbitrator qualifications
- ☐ Arbitral seat
- ☐ Attorneys' fees and costs of arbitration
- ☐ Choice of arbitral procedural law
- ☐ Choice of substantive law
- ☐ Confidentiality
- ☐ Expedited procedures
- ☐ Language of the arbitration
- ☐ Method of appointing arbitrators
- ☐ Number of arbitrators
- ☐ Other (please specify)

Substantive Law vs. Choice of Courts. If you were forced to choose, is the choice of substantive law or the choice of the arbitral seat more important to your clients?

	Choice of Substantive Law	Choice of Arbitral Seat
For Contract Disputes:	<input type="radio"/>	<input type="radio"/>
For IP Disputes:	<input type="radio"/>	<input type="radio"/>

Choice of Arbitral Institution. Which arbitral institutions, if any, have you included in dispute resolution clauses in the last 5 years?

- ☐ American Arbitration Association/International Centre for Dispute Resolution
- ☐ Beijing Arbitration Commission
- ☐ China International Economic and Trade Arbitration Commission
- ☐ German Institution of Arbitration
- ☐ Hong Kong International Arbitration Centre
- ☐ International Chamber of Commerce
- ☐ JAMS
- ☐ Japan Commercial Arbitration Association
- ☐ Korea Commercial Arbitration Board
- ☐ London Court of International Arbitration
- ☐ Netherlands Arbitration Institute
- ☐ Shanghai International Arbitration Center
- ☐ Singapore International Arbitration Center
- ☐ Arbitration Institute of the Stockholm Chamber of Commerce
- ☐ Vienna International Arbitration Centre
- ☐ WIPO Arbitration and Mediation Center
- ☐ Other (please specify)

Drafting Dispute Resolution Clauses. Where a future dispute arising under the agreement you are drafting is likely to involve a Technology or IP issue, how does that affect your choice of the following mechanisms?

	More likely to use	Less likely to use	About the same
Formal Party-to-Party Negotiation Process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standing Mediation during life of contract	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expert Determination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dispute Resolution Board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mediation after dispute arises (including as part of a tiered dispute resolution clause or parallel mediation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arbitration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Court Litigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you combine different dispute resolution mechanisms, including as a tier, in your agreements?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

If you have time, we would greatly appreciate your comments on the free-answer questions below, as these answers likely will provide us with the most helpful insights; of course, if you do not have time, please skip and thank you for completing the previous sections.

Please provide any additional comments about factors influencing your advice to Technology/Life Sciences clients regarding the choice of dispute resolution mechanism.

Please provide any additional comments about ways in which you could be assisted in advising your clients on choosing appropriate dispute resolution mechanisms when drafting contracts.

Please provide any additional comments about what could make your Technology/Life Sciences clients more likely to choose arbitration in their contracts.

Please provide any additional comments about what could make your Technology/Life Sciences clients more likely to choose mediation or another ADR mechanism in their contracts.

Would you be willing to be contacted for a brief follow-up interview?

☐ Yes

☐ No

Thank you for agreeing to speak with us! Please provide your contact information below.

Name:

Employer/Company Name:

Please provide your preferred method of contact:

Email: _____

Phone Number: _____

Arbitrator Section

Over the last 5 years, how many disputes have you been involved in that raised issues related to the following:

	0	1-5	6-10	11+
Technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intellectual Property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Technology Issues. During the past five years, how many of the disputes that you have been involved in within the following industries have raised a Technology issue (answer “N/A” if you have not had a case in these industries in the last 5 years and answer “None” if you have had cases in these industries but they did not raise a Technology issue):

	None	Some	Most	All	N/A
Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital, Telecom, or Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your experience, generally speaking, what is the importance of Technology issues to the outcome of the disputes in which they are raised?

- ☐ Tangential
- ☐ Important
- ☐ Case-determinative
- ☐ N/A

IP issues. During the past five years, how many of the disputes that you have been involved in within the following industries have raised an IP Issue (answer “N/A” if you have not had a case in these industries in the last 5 years and answer “None” if you have had cases but they did not raise an IP issue):

	None	Some	Most	All	N/A
Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital, Telecom, or Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your experience, generally speaking, what is the importance of IP issues to the outcome of the disputes in which they are raised?

- ☐ Tangential
- ☐ Important
- ☐ Case-determinative
- ☐ N/A

In disputes where a Technology or IP issue was either case determinative or important, do you think it impacted the parties’ choice of the tribunal in the sense that subject matter or industry expertise was an important arbitrator qualification?

- ☐ Yes
- ☐ No
- ☐ N/A

To the extent you have been involved in an IP dispute, please indicate which types you have encountered in the last 5 years: [Check all that apply]

- ☐ Patent
- ☐ Copyright
- ☐ Trademark
- ☐ Trade secrets
- ☐ Design Rights
- ☐ FRAND/Patents as standards
- ☐ Other
- ☐ N/A

Have you ever been involved in an arbitration or mediation of an IP dispute with a party that is not using the IP itself (referred to as a Non-Practicing Entity/NPE)?

- ☐ Yes, arbitration
- ☐ Yes, mediation
- ☐ No

Experts. In your experience, generally speaking, what types of experts do the parties typically appoint in Technology/Life Sciences/IP disputes: [Check all that apply]

- ☐ Technology Experts
- ☐ IP Experts
- ☐ Quantum Experts
- ☐ Other
- ☐ N/A

Types of Agreements. Please indicate whether you have encountered disputes involving a Technology or IP issue arising out of the following types of agreements in the last 5 years [Check all that apply]:

- ☐ Distribution
- ☐ Joint Venture or Partnership
- ☐ Licensing
- ☐ Manufacturing/Supply Chain
- ☐ Merger and Acquisition
- ☐ Non-disclosure/confidentiality
- ☐ Research & Development
- ☐ Settlement agreements
- ☐ General: Construction
- ☐ General: Defense
- ☐ General: Energy
- ☐ General: Entertainment
- ☐ General: Environmental
- ☐ General: Transportation
- ☐ Other (please specify)

***Nature of Dispute.** How would you describe the nature of the claims in the Technology/Life Sciences disputes in which you have been involved? [Select up to three]

- ☐ Defective or Non-Performing Products or Services
- ☐ Breach of Representations or Warranties
- ☐ Failure to Deliver
- ☐ IP-related Issues
- ☐ Payment Issues
- ☐ Delay Issues
- ☐ Tort Claims (e.g., fraud)
- ☐ Data Protection/Privacy, Cybersecurity, or Data Breach
- ☐ Competition/Antitrust
- ☐ Regulatory
- ☐ Other breach of contract
- ☐ Other (please specify)

Relief. How often are the following forms of relief sought in the Technology/Life Sciences disputes in which you have been involved?

	Never	Sometimes	Often	Always
Damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaratory Relief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renegotiation of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rescission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Relief. How often are the following forms of relief sought in the IP disputes in which you have been involved?

	Never	Sometimes	Often	Always
Damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaratory Relief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renegotiation of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rescission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***Advantages of Arbitration.** What currently makes arbitration more suitable for resolving Technology/Life Sciences/IP disputes when compared to litigation? [Select up to three] [Mark N/A if you disagree that arbitration is more suitable]

- ☐ Confidentiality
- ☐ Choice of decision-maker
- ☐ Cost savings
- ☐ Document disclosure practices
- ☐ Enforceability
- ☐ Flexibility of procedure
- ☐ Neutrality
- ☐ Time to resolution
- ☐ N/A
- ☐ Other (please specify)

***Suggestions for Improvement.** What improvements could be made to make arbitration more suitable for resolving Technology/Life Sciences/IP disputes when compared to litigation? [Select up to three]

- ☐ Shorter time to resolution
- ☐ Better arbitrator case management
- ☐ Better institutional case management
- ☐ Greater arbitrator expertise
- ☐ More uniform/higher standards for confidentiality
- ☐ Lower costs
- ☐ More limited disclosure
- ☐ Right to appeal for error where IP is at issue
- ☐ Specialized rules tailored to industry
- ☐ Increased institutional award scrutiny (ensuring award quality)
- ☐ Other (please specify)

***Arbitrator Selection.** What are the most important attributes considered in selecting an arbitrator for Technology/Life Sciences/IP disputes? [Select up to three]

- ☐ Recommended
- ☐ Reputation
- ☐ Experience as an arbitrator/chair
- ☐ Industry knowledge/substantive expertise
- ☐ Availability
- ☐ Case management style
- ☐ Diversity
- ☐ Interpersonal skills
- ☐ Language fluency
- ☐ Knowledge of applicable law
- ☐ Other (please specify)

Mediation in the context of Arbitral Proceedings. Have you been involved in Technology/Life Sciences/IP disputes as an arbitrator where mediation or another dispute resolution mechanisms were employed either in advance of, or in parallel with, the arbitration?

- ☐ Yes
- ☐ No

If yes, how often has this occurred in your Technology/Life Sciences/IP disputes?

- ☐ N/A
- ☐ Some
- ☐ Most
- ☐ All

If you have been involved in procedures that combined different resolution mechanisms, how effective was this in narrowing the issues or expediting resolution of the dispute?

- ☐ Not effective
- ☐ Somewhat effective
- ☐ Very effective
- ☐ N/A

If you have time, we would greatly appreciate your comments on the free-answer questions below, as these answers likely will provide us with the most helpful insights; of course, if you do not have time, please skip and thank you for completing the previous sections.

Please provide any additional comments about ways in which Technology issues have arisen in your cases and the impact this had on the process.

In your view, does this differ based on the type of industry involved?

Please provide any additional comments about ways in which the arbitration process can be improved to better facilitate the resolution of Technology/Life Sciences disputes.

Please provide any additional comments about ways in which IP issues have arisen in your cases and the impact this had on the process.

In your view, does this differ based on the type of industry involved?

Please provide any additional comments about ways in which the arbitration process can be improved to better facilitate the resolution of IP disputes.

Would you be willing to be contacted for a brief follow-up interview?

- ☐ Yes
- ☐ No

Thank you for agreeing to speak with us! Please provide your contact information below.

Name:

Employer/Company Name:

Please provide your preferred method of contact:

Email: _____

Phone Number: _____

Consultation Draft

Mediator Section

Over the last 5 years, how many disputes have you been involved in that raised issues related to the following:

	0	1-5	6-10	11+
Technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intellectual Property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Technology Issues. During the past five years, how many of the disputes that you have been involved in within the following industries raised a Technology issue (answer “N/A” if you have not had a case in these industries in the last 5 years and “None” if you have had cases but they did not raise a Technology issue):

	None	Some	Most	All	N/A
Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital, Telecom, or Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your experience, generally speaking, what is the importance of Technology issues to the outcome of the disputes in which they are raised?

- ☐ Tangential
- ☐ Important
- ☐ Case-Determinative
- ☐ N/A

IP Issues. During the past five years, how many of the disputes that you have been involved in within the following industries raised an IP issue (answer “N/A” if you have not had a case in these industries in the last 5 years and “None” if you have had cases but they did not raise an IP issue):

	None	Some	Most	All	N/A
Construction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital, Telecom, or Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Entertainment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your experience, generally speaking, what is the importance of IP issues to the outcome of the disputes in which they are raised?

- ☐ Tangential
- ☐ Important
- ☐ Case-Determinative
- ☐ N/A

In disputes where a Technology or IP issue was either case determinative or important, do you think it impacted the parties’ choice of mediator in the sense that subject matter or industry expertise was an important mediator qualification?

- ☐ Yes
- ☐ No

To the extent you have been involved in an IP dispute, please indicate which types you have encountered in the last 5 years:

- ☐ Patent
- ☐ Copyright
- ☐ Trademark
- ☐ Trade secrets
- ☐ Design Rights
- ☐ FRAND/Patents as standards
- ☐ N/A

Experts. In a typical Technical/Life Sciences/IP mediation, in your experience, do the parties present expert evidence whether by way of report or orally from:

	Yes	No
Technology Experts	<input type="radio"/>	<input type="radio"/>
IP Experts	<input type="radio"/>	<input type="radio"/>
Quantum Experts	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>
N/A	<input type="radio"/>	<input type="radio"/>

Types of Agreements. Please indicate whether you have encountered disputes involving a Technology or IP issue arising out of the following types of agreements in the last 5 years [Check all that apply]:

- ☐ Distribution
- ☐ Joint Venture or Partnership
- ☐ Licensing
- ☐ Manufacturing/Supply chain
- ☐ Merger and Acquisition
- ☐ Non-disclosure/confidentiality
- ☐ Research & Development
- ☐ Settlement agreements
- ☐ General: Construction
- ☐ General: Defense
- ☐ General: Energy
- ☐ General: Entertainment
- ☐ General: Environmental
- ☐ General: Transportation
- ☐ Other (please specify)

***Nature of Dispute.** How would you best describe the nature of the claims in the Technology/Life Sciences disputes in which you have been involved? [Select up to three]

- ☐ Defective or Non-Performing Products or Services
- ☐ Breach of Representations or Warranties
- ☐ Failure to Deliver
- ☐ IP-related Issues
- ☐ Payment Issues
- ☐ Delay Issues
- ☐ Tort Claims (e.g., fraud)
- ☐ Data Protection/Privacy, Cybersecurity, or Data Breach
- ☐ Competition/Antitrust
- ☐ Regulatory
- ☐ Other breach of contract
- ☐ Other (please specify)

Relief in Technology/Life Sciences Mediations. How often are the following forms of relief sought in the Technology/Life Sciences mediations in which you have been involved?

	Never	Sometimes	Often	Always
Damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaratory Relief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renegotiation of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rescission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Relief in IP Mediations. How often are the following forms of relief sought in the IP mediations in which you have been involved?

	Never	Sometimes	Often	Always
Damages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injunction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaratory Relief	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Renegotiation of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rescission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

***Advantages of Mediation.** What are the current benefits of mediation when compared to arbitration or litigation for Technology/Life Sciences/IP disputes? [Select up to three] [Mark N/A if you disagree that mediation has such benefits].

- ☐ Time and cost savings
- ☐ Less disruption to parties' relationship
- ☐ Greater procedural flexibility
- ☐ Increased party control over process and outcome
- ☐ Wider options for resolution/relief
- ☐ Potential to narrow dispute for arbitration/litigation
- ☐ N/A
- ☐ Other (please specify)

***Suggestions for Improvement.** What improvements could make mediation more suitable for resolving Technology/Life Sciences/IP disputes? [Select up to three]

- ☐ Increased use of standing mediators during life of contract
- ☐ Increased focus on cost and time to resolution
- ☐ Increased use of technology/virtual modality
- ☐ Increased support for mediation and use of mediation windows by arbitrators
- ☐ Maintaining mediator on standby throughout arbitration
- ☐ Continued involvement of mediator to facilitate documentation of settlement terms
- ☐ Increased enforceability of settlement through Singapore Convention
- ☐ Other (please specify)

Timing of Mediator Involvement. When do you think it is optimal for a mediator to become involved in Technology/Life Science/IP disputes?

- ☐ Standing mediator available over course of the relationship
- ☐ Before the arbitration through tiered dispute resolution clause
- ☐ During arbitration through mediation window or otherwise
- ☐ Other (please specify)

***Mediator Selection.** What are the most important attributes considered in selecting a mediator for Technology/Life Sciences/IP disputes? [Select up to three]

- ☐ Recommended
- ☐ Reputation
- ☐ Strong mediation skills/experience
- ☐ Interpersonal skills
- ☐ Settlement track record
- ☐ Industry knowledge/substantive expertise
- ☐ Knowledge of applicable law
- ☐ Availability
- ☐ Language fluency
- ☐ Diversity
- ☐ Other (please specify)

Mediation in the Context of Arbitral Proceedings. Have you been involved in disputes as a mediator where an arbitration was brought either after or in parallel with the mediation?

- ☐ Yes
- ☐ No

If yes, in how many of your mediations has this occurred?

- ☐ Some
- ☐ Most
- ☐ All
- ☐ N/A
- ☐ None of the above

If you have been involved in procedures that combined different resolution mechanisms, how effective was this in narrowing the issues or expediting resolution of the dispute?

- ☐ Not effective
- ☐ Somewhat effective
- ☐ Very effective
- ☐ N/A

If you have time, we would greatly appreciate your comments on the free-answer questions below, as these answers likely will provide us with the most helpful insights; of course, if you do not have time, please skip and thank you for completing the previous sections.

Please provide any additional comments about ways in which Technology issues have arisen in your mediations and the impact this had on the process.

In your view, does this differ based on the type of industry involved?

Please provide any additional comments about ways in which the mediation process can be improved to better facilitate the resolution of Technology/Life Sciences disputes.

Please provide any additional comments about ways in which IP issues have arisen in your mediations and the impact this had on the process.

In your view, does this differ based on the type of industry involved?

Please provide any additional comments about ways in which the mediation process can be improved to better facilitate the resolution of IP disputes.

Would you be willing to be contacted for a brief follow-up interview?

☐ Yes

☐ No

Thank you for agreeing to speak with us! Please provide your contact information below.

Name:

Employer/Company Name:

Please provide your preferred method of contact:

Email: _____

Phone Number: _____

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