

# Aetha Consulting

Introduction to our services and expertise



# What sets Aetha apart?

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We offer a **wide range of tailored services to the telecoms industry**



We have completed **over 200 projects** globally in the last seven years for **leading multi-national operators and regulators**



We have supported transactions (M&A and spectrum) worth **in excess of EUR15 billion**



Our team has **unrivalled experience in the industry** and **can explain complex matters in understandable terms** to senior executives



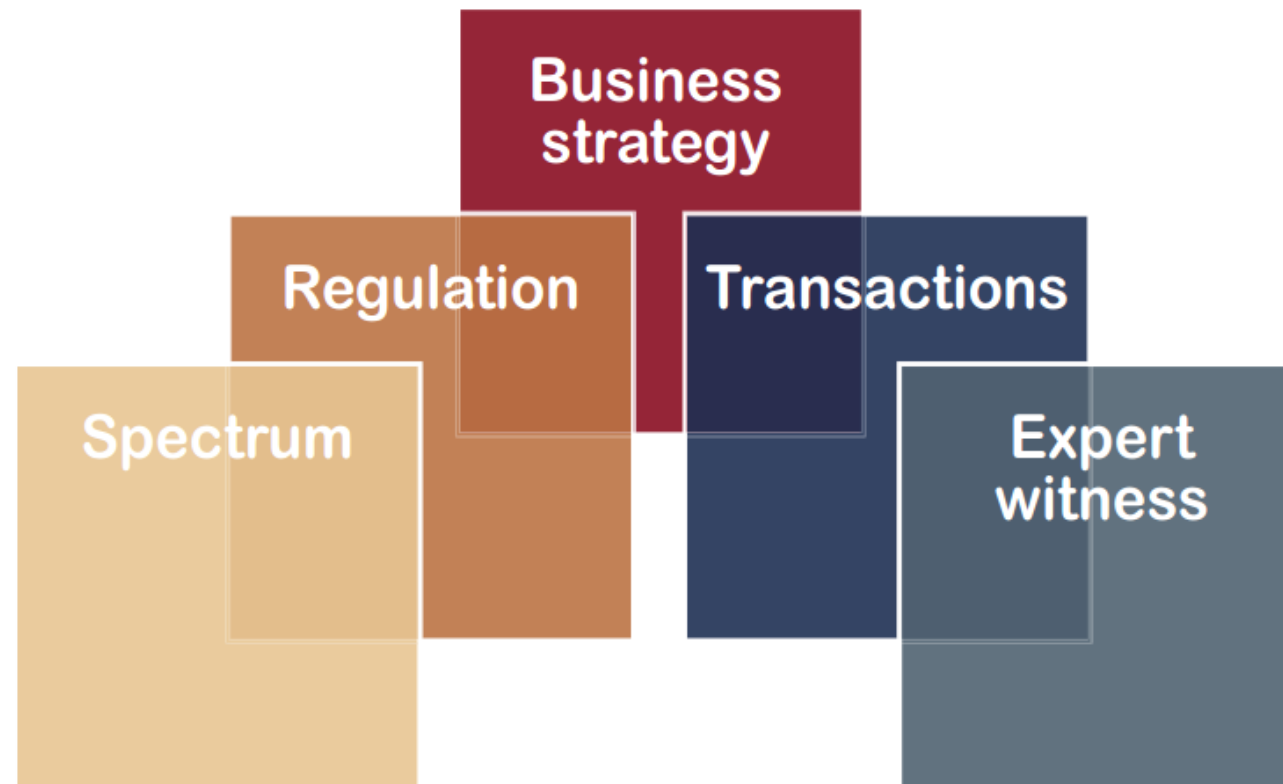
We are recognised for our **quantitative rigour** and the **robustness of our analyses**



Having worked with us and achieved successful project outcomes, **our clients readily vouch for the quality of our work** and regularly hire us for further projects

## ✚ Tailored consulting services to the telecoms industry

Across our five service areas, we undertake rigorous quantitative assessments supporting major strategic and regulatory decisions



# Global project work on important issues for the telecoms sector



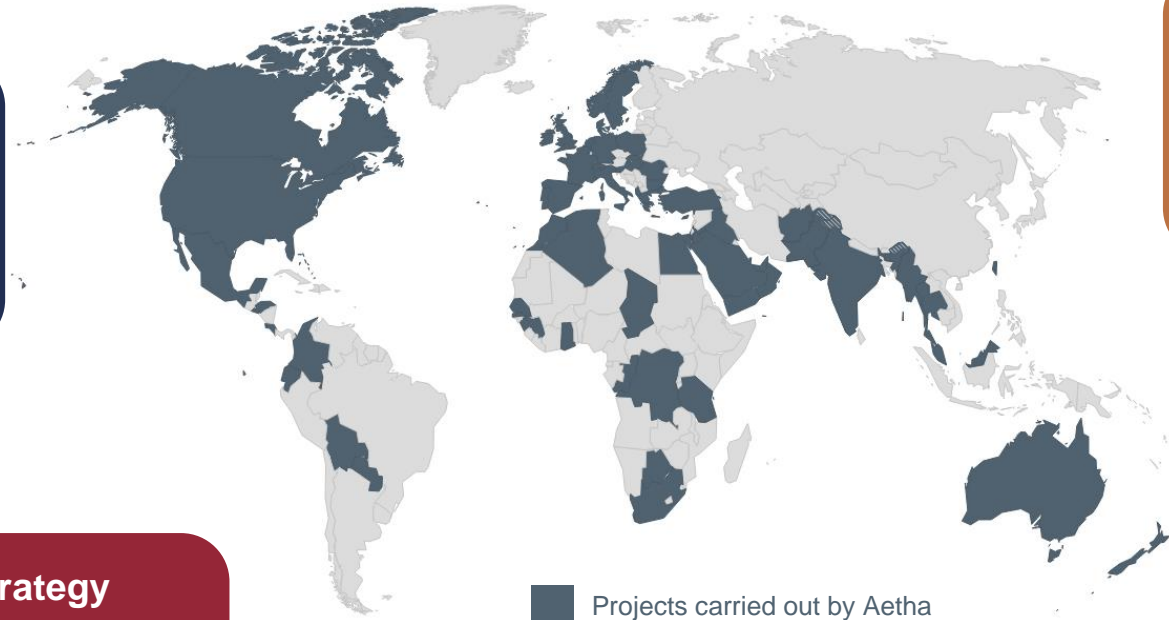
## Transactions

**Sprint (USA):** Independent valuation of spectrum assets to support first-of-a-kind debt transaction of USD3.5 billion



## Business strategy

**Network operator (Europe):** Development of detailed models to maximise the monetisation of data growth and optimise data network investments.



## Regulation

**European Commission:** Study for the EC's competition unit to assess the impact of zero-rating practices across Europe from a competition perspective



## Spectrum

**Telstra (Australia):** End-to-end support across several complex multi-band auction processes (consultation support, spectrum valuation, bid strategy development, on-site auction support)



## Expert witness

**MTN (South Africa):** Expert witness support to our client in its successful opposition to a proposed merger of two of its competitors

# Supporting key industry players on a wide range of projects

Since Aetha was founded in July 2011, we have worked for ~70 clients in over 65 countries across the world

## Operators

- Albtelcom
- Bofinet
- Cellcom
- EE
- eircom
- Hutchison 3G
- KPN
- Millicom
- Oger
- Orange
- Ooredoo
- P4
- Sky
- TDC
- TalkTalk
- Telecom Italia
- Telecom New Zealand
- Telefónica
- Telenor
- Telstra
- Türk Telecom
- Zain

## Regulatory bodies

- ANRT
- APEK
- BIPT
- ComReg
- European Commission
- Ofcom
- Min. Econ. Affairs – Netherlands
- TRA - UAE

## Other organisations

- Abertis
- Arqiva
- BBC
- BNE
- Channel 4
- EBU
- GSM Association
- QinetiQ
- TDF
- UK Mobile operators' association

## Examples of projects completed

- Auction reserve price analysis
- Appeal against wholesale price decision
- Audit of cost accounts (postal)
- Cost models for fixed and mobile services
- Digital dividend case studies
- Independent review of spectrum valuation
- International benchmarking of cellular spectrum fees
- IPTV business plan for a broadband operator
- Mobile money business plan review
- MVNO business plan support
- NGA wholesale pricing advice
- Number portability
- Premium TV content valuation
- Rural broadband strategy (LTE and FTTx)
- Spectrum policy and strategy advice
- Spectrum valuation for multi-band awards
- Strategy review for fixed operators
- Support to industry stakeholders on regulatory consultations
- Target and budget setting

## A senior team with in-depth experience in the telecoms sector



**Amit Nagpal** specialises in complex wireless transactions and strategy projects, and regularly advises regulators and operators on all aspects of spectrum policy



**Marc Eschenburg** is an expert on spectrum management issues, and has also worked on next generation broadband, business planning, as well as TV and media-related projects



**Andrew Wright** has advised on all aspects of wireless communications for 20+ years, including regulatory policy, spectrum, network sharing, pricing & product development

**Graham Johnson** has carried out sector strategy studies, market reviews, consultation support, expert valuation reports and service costing models during his 20+ years of consulting



**Pierre Blanc** has over 15 years of experience and a strong track record of helping operators, strategic and financial investors evaluate and close deals, and carry out post-deal integration



**Graham Louth** has been working at on telecoms and spectrum regulation for more than 20 years, as both a consultant and a regulator



**Matthew Fried** develops sophisticated models for a variety of purposes such as spectrum valuation, bid tracking, broadband network optimisation and analysis of customer behaviour



**Lee Sanders** has been at the forefront of spectrum policy in recent years, helping operators to value spectrum and bid in auctions and regulators to develop award processes



## Our clients vouch for the quality of our work

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*“The working atmosphere between Aetha and our team was excellent, ensuring that the knowledge within both companies could be leveraged in as effective a manner as possible to achieve comprehensive results within the shortest timescale possible.”*

Magnus Friden, Head of Mobile Networks, Telenor Sverige AB

*“Aetha was able to put its skills and knowledge together with that of Zain’s internal team, working collaboratively and intensively to produce high quality outputs on a wide range of topics. I was very pleased with the support provided by the Aetha project team, and would recommend them to other operators and regulators.”*

Hassan Kabbani, CEO, Zain Saudi Arabia

*“[Aetha] conveyed complex issues in a clear and understandable manner to senior management and to our CEO. Moreover, their team integrated seamlessly into our own project team and worked together very efficiently thereby ensuring that all project timelines could be met.”*

John Wesley-Smith, General Manager Regulation, Spark (formerly Telecom New Zealand)

*“[Aetha] are knowledgeable across a range of costing and network issues, and quantitative in their analysis and they are adept at anticipating regulatory implications of business proposals.”*

Jim Maxwell, Chief Legal & Regulatory Officer, Ooredoo

*“I was very impressed at how the whole Aetha team conducted themselves during the project. This was from their juniors, who seamlessly interacted with our staff to understand our network/strategy and to gather information; right through to their senior staff, who are extremely adept at communicating their results to board level executives.”*

Dorin Odiatu, Public Affairs, Partnerships and Wholesale Director, Orange Romania

*We were delighted with the support provided by Aetha, who once again displayed their spectrum valuation/auction expertise, professionalism and personal commitment to ensure that the auction was a success. We would highly recommend Aetha to other mobile operators.”*

Sri Amirthalingam, Executive Director, Network Construction & Commercial Engineering, Telstra

*“They are responsive, conscientious, passionate about their work and always deliver quality work on time.”*

Jørgen Bang-Jensen, CEO, Play

# Annex

Further information about Aetha's service areas



# Business strategy

## We apply rigorous quantitative analysis to assist operators in evaluating business opportunities

Business planning • Infrastructure sharing • Market entry strategy • MVNO launch support • Product and service launch • Wholesale strategy • Technology strategy

We assist operators in appraising the **feasibility of proposed strategies** and/or supporting their implementation.

Our consultants help operators to assess **incremental revenue-generating opportunities**, such as new service launches, and achieve **operational efficiency improvements**, for example through network sharing.

*"They are adept at explaining complex issues, in understandable terms to others. [They became] trusted by both our board members and our shareholders."*

Antoine Caffin, Strategy Director, Orange Switzerland

### Recent strategy assignments and reference projects

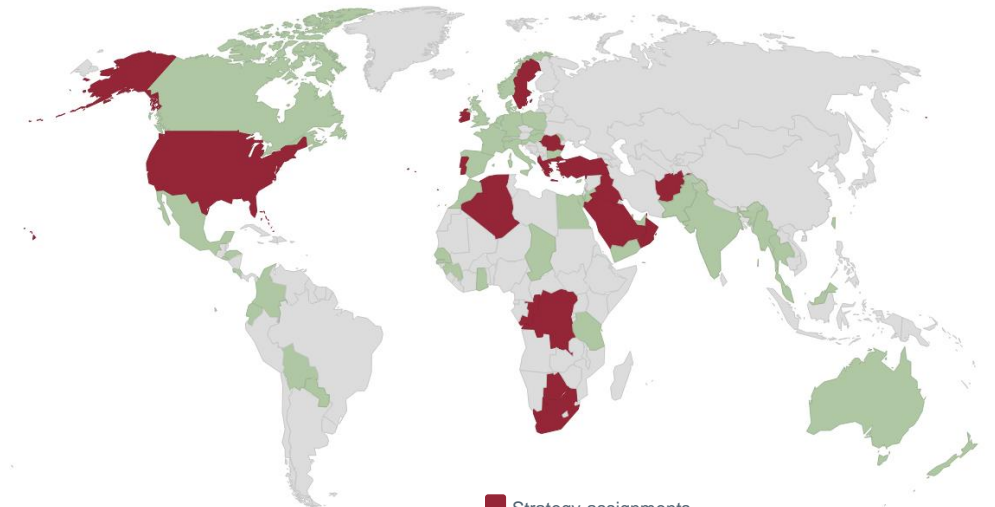
**Ireland:** Assessment of wireless and wireline broadband strategy

**UK:** Network sharing assessment and support to create a new joint venture

**Spain:** Assessment of convergence for regional cable operator

**Chad:** Development of the technology strategy for Millicom

**Botswana:** Assessment of the business case to develop a standalone backbone network for Bofinet



■ Strategy assignments  
■ Other countries where Aetha has undertaken projects

**Iraq:** Development of strategic plan to deploy 3G services following licence acquisition

**Albania:** 2G and 3G network rollout strategy for Albtelecom

**Turkey:** Budget and long-term strategic plan for Türk Telekom Group

**Afghanistan:** Assessment of international roaming scenarios

**Global:** Assessment of the feasibility of mobile money for a global operator

# Regulation

## We work with regulators and governments to develop policies or help operators to influence them

Cost models • Regulatory accounting • Margin squeeze models • Comparative benchmarking • Sector strategic reviews • Number portability • Universal service obligation

Our consultants help regulators to undertake, and operators to respond to, **consultations** of all kinds, from **costing methodologies** and **market analyses**, right through to **forward-looking sector studies**.

We develop and audit **cost models** for both regulators and regulated firms. We identify key issues in regulatory processes, and critically appraise **comparative benchmarking data**.

*"In addition to their in-depth knowledge and significant experience of cost accounting, accounting separation and LRIC modelling, they have a deep understanding of the theory and practice of margin squeeze analysis."*

*Ilir Zela, Chief Compliance Officer, Albtelecom*

### Recent regulatory assignments and reference projects

**Mexico:** report on cost-orientation, equivalence of inputs and replicability

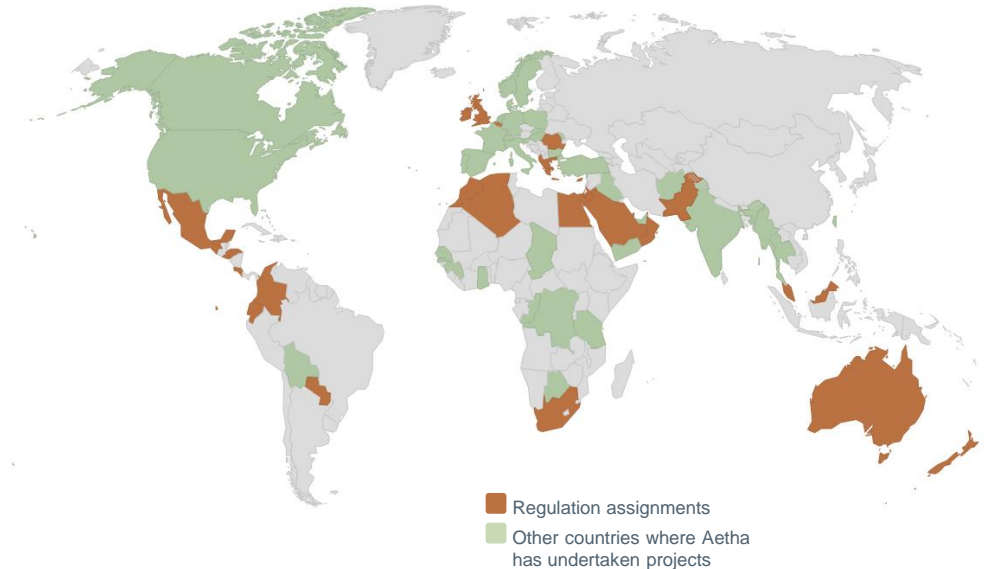
**Colombia:** Asymmetry in interconnection tariffs, for Telefonica

**Paraguay:** Development of a bottom-up LRIC model of mobile voice and data services

**EU:** Competition assessment of zero-rating practices within net neutrality framework

**UK:** Support TalkTalk to appeal a regulatory decision regarding Local Loop Unbundling

**Ireland:** Support to a bidder on the National broadband plan



**Romania:** Supported Orange to review the LRIC model developed by the regulator

**Israel:** Review of next generation core network cost model and response to consultation

**Middle East:** Two major reviews of market conditions and sector competitiveness

**New Zealand:** Modelling support, wholesale broadband access and unbundling

**Australia:** Assessment of proposed national roaming obligation

**Switzerland:** Assisted Orange during a consultation on next generation access service costing

## We support operators and regulators in managing, buying and selling a key telecoms resource

Spectrum policy • Spectrum strategy • Consultation support • Spectrum pricing • Spectrum valuation • Award design • Auction support

We support operators to understand their **spectrum needs, value spectrum and bid in auctions**. Our consultants have supported bidders in over 80 spectrum awards worldwide.

We also assist regulators in **developing and implementing spectrum policy, awarding spectrum and setting spectrum fees**. Our consultants have conducted several high-profile spectrum-related studies for regulators.

*"We found [Aetha] to be very knowledgeable regarding spectrum valuations, mobile technologies, and auction dynamics. Their support, professionalism and ease to work with contributed to the overall success of the project."*

Mike Wright, Executive Director, Networks & Access Technologies, Telstra

### Recent spectrum assignments and reference projects

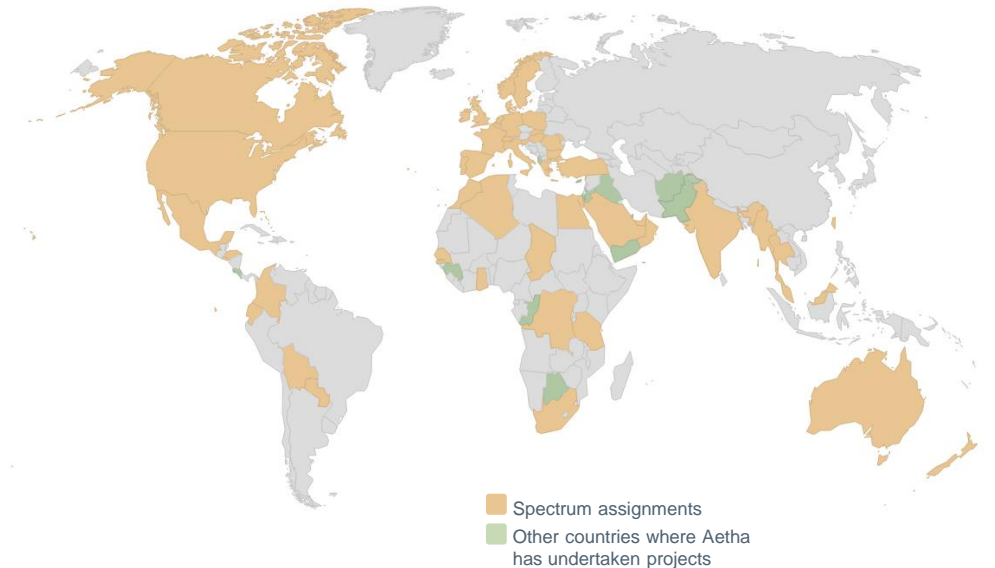
**India:** Multi-band spectrum valuation model in preparation for 2015 auction process

**Africa:** Report on appropriate (best practice) spectrum auction formats in emerging markets

**UK:** Supported Ofcom to set the reserve price for the 800MHz and 2.6GHz auction

**Colombia:** Spectrum valuation and auction support for Telefónica for the AWS and 2.5GHz auction

**Australia:** Valuation and auction support for Telstra during the 700MHz and 2.6GHz auction



**UAE:** Support to the TRA to set the price of annual cellular licence fees

**Morocco:** Study on future spectrum demand for mobile and broadcasting services

**UK:** Support to the BBC and Channel 4 to respond to a consultation regarding Administrative Incentive Pricing

**Belgium:** Support to BIPT in the award design and reserve price setting ahead of the 800MHz auction

**Bulgaria:** Multi-band spectrum valuation model to inform operator's future spectrum strategy

# Transactions

## We use our market, technical and regulatory knowledge to support telecoms transactions

Commercial & technical due diligence • Vendor due diligence • Asset & firm valuation • Synergy analysis

With our expert knowledge of network economics and global telecoms experience, we apply sound business modelling to **independently quantify** commercial opportunities.

Our team has been involved in a wide range of **M&A and debt transaction-support** assignments across the world, including a first-of-a-kind debt transaction over several billion US dollars, involving spectrum as a security.

*"In addition to their robust valuation approach, Aetha's team presented complex interrelations in a clear and concise manner. This was especially helpful to get important stakeholders at CxO level briefed on key decisions within a short period of time."*

Magne Pettersen, SVP, Head of Spectrum Strategy, Telenor Group

### Recent transaction assignments and reference projects

**North America:** Independent valuation of spectrum assets in a USD3.5 billion debt transaction

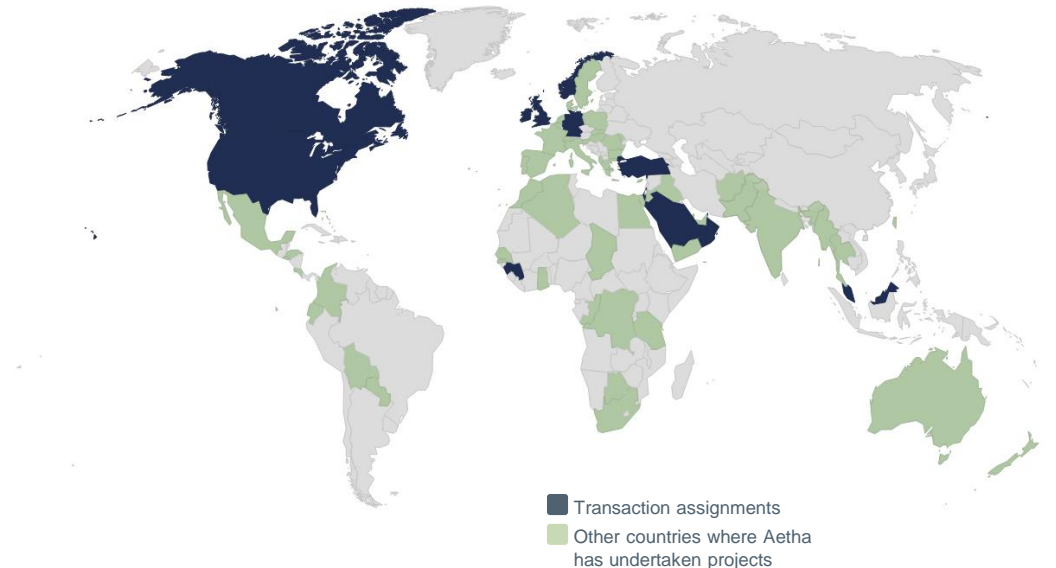
**North America:** Network synergy analysis ahead of merger of two major MNOs

**Canada:** Due diligence of WIND Mobile ahead of its acquisition by Shaw Communications for over CAD1.6 billion

**Bolivia:** Commercial and technical due diligence of mobile operator (Viva)

**Guinea Conakry:** Technical due diligence of mobile operator for a potential investor

**Turkey:** Valuation of sport content rights for integrated telecoms operator



**UK:** Support (market and technical) to an operator during due diligence on major mobile market transaction

**New Zealand:** Commercial and technical due diligence of mobile operator (2degrees)

**South-East Asia:** Detailed review of client bid book ahead of a licence bid for 700MHz spectrum

**Global:** Support to a satellite operator with an in-flight connectivity services partnership

**India:** Supported mobile operator with a detailed assessment of the value of potential partners for M&A activity

# Expert witness

We use our deep understanding of the telecoms industry to support in arbitration and litigation

Industry expert testimony • Regulatory expert testimony • Quantum expert testimony • Expert valuer's report

We act as **expert witnesses** using our understanding of both industry issues and valuations of telecoms operators to **guide counsel through complex industry issues** and to **quantify losses**.

Our technical knowledge combined with our **rigorous valuation modelling approach** ensures that our testimony and damages calculations are seen as credible by the arbitral tribunal or court.

*"The support we received from the Aetha team was first rate."*

Frank Klausz III, Chief Corporate Development Officer, Telenor Hungary

## Recent expert witness assignments and reference projects

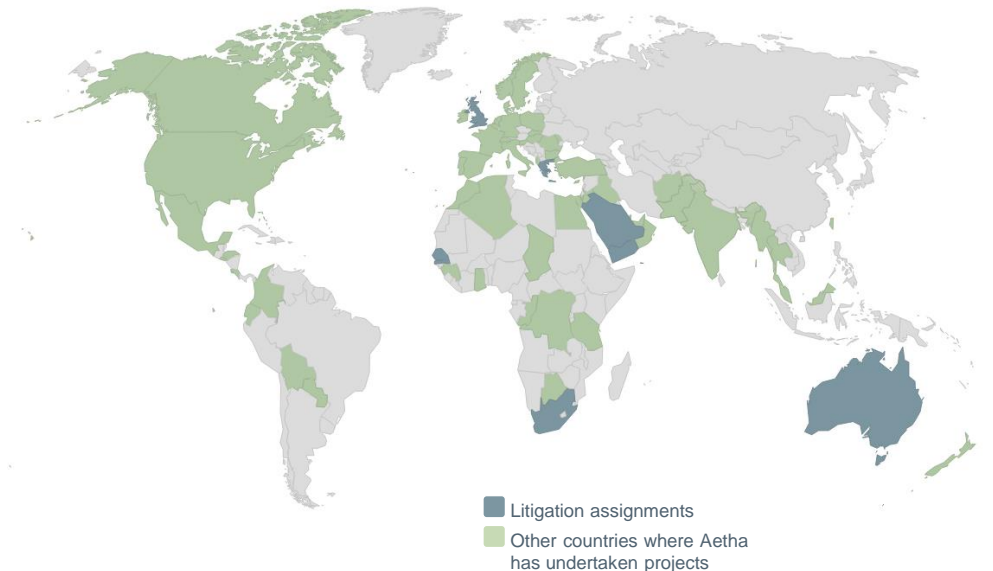
**Mexico:** Expert witness report regarding interconnection on behalf of Telefonica in an ICSID arbitration

**South Africa:** Economic & technical witness of the potential impact of a national roaming deal on market competition

**Australia:** Expert report to support the client's consultation response regarding National Roaming regulation

**Greece:** Expert witness report regarding GSM licence prices

**Saudi Arabia:** Expert review of counterfactual calculations on retail and wholesale mobile prices, spectrum assignments and number portability



**Egypt:** Expert witness report for an arbitration between operators regarding interconnection

**MENA:** Expert review of counterfactual calculations on retail and wholesale mobile prices, spectrum assignments and number portability

**Yemen:** Detailed analysis and modelling to develop an expert report supporting a client in its arbitration proceedings against Government of Yemen, regarding discriminatory measures

**UK:** Forensic cost modelling to appeal against the regulated prices for local loop unbundling and related services

## Contact details

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Strategic advice to the telecommunications industry 

